



I Commands

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

interface breakout

To configure the Linecard Expansion Module (LEM) in 10G mode, use the **interface breakout** command. To configure the Linecard Expansion Module (LEM) in 40G mode, use the **no** form of this command.

interface breakout slot *slot-number* port *port-range* map 10g-4x

no interface breakout slot *slot-number* port *port-range* map 10g-4x

Syntax Description		
	<i>slot-number</i>	The range is from 1 to 8.
	<i>port-range</i>	The range is from 1 to 12.

Command Default 40G mode

Command Modes Global configuration mode

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

Usage Guidelines You can use this command to configure a LEM in 10G mode and 40G mode.

Examples This example shows how to configure a LEM in 40G mode:

```
switch# configure terminal
switch(config)# interface breakout slot 1 port 1-12 map 10g-4x
```

This example shows how to configure a LEM in 10G mode:

```
switch# configure terminal
switch(config)# no interface breakout slot 1 port 1-12 map 10g-4x
```

Related Commands	Command	Description
	show interface capabilities	Displays detailed information about the capabilities of an interface.

interface ethernet

To enter interface configuration mode for an Ethernet IEEE 802.3 interface, use the **interface ethernet** command.

```
interface ethernet [chassis_ID] slot [QSFP-module]/port
```

Syntax Description		
<i>chassis_ID</i>	(Optional) Fabric Extender chassis ID. The chassis ID is from 100 to 199.	Note This argument is not optional when addressing the host interfaces of a Cisco Nexus 2000 Series Fabric Extender.
<i>slot</i>	Slots from 1 to 8. The following list defines the slots available:	<ul style="list-style-type: none"> • Slots 1 to 4 are fixed Linecard Expansion Modules (LEMs). • Slots 5 to 8 are hot-swappable LEMs.
<i>QSFP-module</i>	(Optional) The Linecard Expansion Module that has been set to 10G mode. The <i>QSFP-module</i> number is from 1 to 12.	
<i>port</i>	Port number within a particular slot. The <i>port</i> number is from 1 to 128.	

Command Default None

Command Modes Global configuration mode

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

Examples This example shows how to enter configuration mode for Ethernet interface 1/4:

```
switch(config)# interface ethernet 1/4
switch(config-if)#
```

This example shows how to enter configuration mode for a host interface on a Fabric Extender:

```
switch(config)# interface ethernet 101/1/1
switch(config-if)#
```

This example shows how to enter configuration mode for LEM 1/2/1:

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

Related Commands	Command	Description
	interface vethernet	Configures a virtual Ethernet interface.
	show fex	Displays all configured Fabric Extender chassis connected to the switch.

Command	Description
show interface ethernet	Displays various parameters of an Ethernet IEEE 802.3 interface.
speed	Sets the speed on the interface.
ntp (interface)	Enables VLAN Trunking Protocol (VTP) on an interface.

interface ethernet (Layer 3)

To configure a Layer 3 Ethernet IEEE 802.3 routed interface, use the **interface ethernet** command.

```
interface ethernet [chassis_ID] {slot[/QSFP-module]/port[.subintf-port-no]}
```

Syntax Description		
<i>chassis_ID</i>	(Optional) Fabric Extender chassis ID. The chassis ID is from 100 to 199.	Note This argument is not optional when addressing the host interfaces of a Cisco Nexus 2000 Series Fabric Extender.
<i>slot</i>	Slots from 1 to 8. The following list defines the slots available:	<ul style="list-style-type: none"> • Slots 1 to 4 are fixed Linecard Expansion Modules (LEMs). • Slots 5 to 8 are hot-swappable LEMs.
QSFP-module	(Optional) Linecard Expansion Module (LEM) that has been set to 10G mode.	
<i>port</i>	Port number within a particular slot. The port number is from 1 to 128.	
.	(Optional) Subinterface separator.	
<i>subintf-port-no</i>	(Optional) Port number for the subinterface. The range is from 1 to 48.	

Command Default None

Command Modes Global configuration mode
Interface configuration mode

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

Usage Guidelines You must use the **no switchport** command in the interface configuration mode to configure the interface as a Layer 3 routed interface. When you configure the interface as a Layer 3 interface, all Layer 2-specific configurations on this interface are deleted.

Use the **switchport** command to convert a Layer 3 interface into a Layer 2 interface. When you configure the interface as a Layer 2 interface, all Layer 3-specific configurations on this interface are deleted.

Examples This example shows how to enter configuration mode for Layer 3 Ethernet interface 1/5:

```
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# ip address 10.1.1.1/24
switch(config-if)#
```

This example shows how to configure a Layer 3 subinterface for Ethernet interface 1/5 in the global configuration mode:

```
switch(config)# interface ethernet 1/5.2
switch(config-if)# no switchport
switch(config-subif)# ip address 10.1.1.1/24
switch(config-subif)#
```

This example shows how to configure a Layer 3 subinterface in interface configuration mode:

```
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# interface ethernet 1/5.1
switch(config-subif)# ip address 10.1.1.1/24
switch(config-subif)#
```

This example shows how to convert a Layer 3 interface to a Layer 2 interface:

```
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# ip address 10.1.1.1/24
switch(config-if)# switchport
switch(config-if)#
```

Related Commands

Command	Description
bandwidth	Sets the bandwidth parameters for an interface.
delay	Configures the interface throughput delay value.
encapsulation	Sets the encapsulation type for an interface.
ip address	Sets a primary or secondary IP address for an interface.
inherit	Assigns a port profile to an interface.
interface vethernet	Configures a virtual Ethernet interface.
no switchport	Configures an interface as a Layer 3 interface.
service-policy	Configures a service policy for an interface.
show fex	Displays all configured Fabric Extender chassis connected to the switch.
show interface ethernet	Displays various parameters of an Ethernet IEEE 802.3 interface.

interface loopback

To create a loopback interface and enter interface configuration mode, use the **interface loopback** command. To remove a loopback interface, use the **no** form of this command.

interface loopback *number*

no interface loopback *number*

Syntax Description	<i>number</i>	Interface number. The range is from 0 to 1023.
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Command Default	None
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Command Modes	Global configuration mode
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Command History	Release	Modification
	6.0(2)N1(1)	This command was introduced.

Usage Guidelines	<p>Use the interface loopback command to create or modify loopback interfaces.</p> <p>From the loopback interface configuration mode, the following parameters are available:</p> <ul style="list-style-type: none"> • description—Provides a description of the purpose of the interface. • ip—Configures IP features, such as the IP address for the interface, Address Resolution Protocol (ARP) attributes, load balancing, Unicast Reverse Path Forwarding (RPF) or IP Source Guard. • logging—Configures logging of events. • shutdown—Shuts down traffic on the interface.
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Examples This example shows how to create a loopback interface:

```
switch(config)# interface loopback 50
switch(config-if)# ip address 10.1.1.1/24
switch(config-if)#
```

Related Commands	Command	Description
	show interface loopback	Displays information about the traffic on the specified loopback interface.

interface mgmt

To enter the management interface configuration mode, use the **interface mgmt** command.

```
interface mgmt mgmt-intf-num
```

Syntax Description	<i>mgmt-intf-num</i>	Management interface number. The interface number is 0.
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Command Default	None
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Command Modes	Global configuration mode
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Command History	Release	Modification
	6.0(2)N1(1)	This command was introduced.

Examples This example shows how to enter the management interface configuration mode:

```
switch# configure terminal
switch(config)# interface mgmt 0
switch(config-if)#
```

Related Commands	Command	Description
	show interface mgmt	Displays information about the management interface.
	cdp enable	Enables the Cisco Discovery Protocol (CDP) on an interface.
	description (interface)	Adds a description to an interface configuration.
	duplex	Configures the duplex mode for an interface.
	lldp (interface)	Enables the reception or transmission of Link Layer Discovery Protocol (LLDP) packets on an interface.
	rate-limit cpu direction	Configures the packet per second (PPS) rate limit for an interface.
	snmp trap link-status	Enables Simple Network Management Protocol (SNMP) link trap generation on an interface.
	speed	Configures the transmit and receive speed for an interface.
	vrf member	Adds an interface to a virtual routing and forwarding (VRF) instance.

interface port-channel

To create an EtherChannel interface and enter interface configuration mode, use the **interface port-channel** command. To remove an EtherChannel interface, use the **no** form of this command.

```
interface port-channel channel-number[.subintf-channel-no]
```

```
no interface port-channel channel-number[.subintf-channel-no]
```

Syntax Description		
<i>channel-number</i>		Channel number that is assigned to this EtherChannel logical interface. The range is from 1 to 4096.
.		(Optional) Subinterface separator.
		Note Applies to Layer 3 interfaces.
<i>subintf-channel-no</i>		(Optional) Port number of the EtherChannel subinterface. The range is from 1 to 4093.
		Note Applies to Layer 3 interfaces.

Command Default None

Command Modes Global configuration mode
Interface configuration mode

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

Usage Guidelines A port can belong to only one channel group.

When you use the **interface port-channel** command for Layer 2 interfaces, follow these guidelines:

- If you are using CDP, you must configure it only on the physical interface and not on the EtherChannel interface.
- If you do not assign a static MAC address on the EtherChannel interface, a MAC address is automatically assigned. If you assign a static MAC address and then later remove it, the MAC address is automatically assigned.
- The MAC address of the EtherChannel is the address of the first operational port added to the channel group. If this first-added port is removed from the channel, the MAC address comes from the next operational port added, if there is one.

You must use the **no switchport** command in the interface configuration mode to configure the EtherChannel interface as a Layer 3 interface. When you configure the interface as a Layer 3 interface, all Layer 2-specific configurations on this interface are deleted.

Use the **switchport** command to convert a Layer 3 EtherChannel interface into a Layer 2 interface. When you configure the interface as a Layer 2 interface, all Layer 3-specific configurations on this interface are deleted.

You can configure one or more subinterfaces on a port channel made from routed interfaces.

Examples

This example shows how to create an EtherChannel group interface with channel-group number 50:

```
switch(config)# interface port-channel 50
switch(config-if)#
```

This example shows how to create a Layer 3 EtherChannel group interface with channel-group number 10:

```
switch(config)# interface port-channel 10
switch(config-if)# no switchport
switch(config-if)# ip address 192.0.2.1/24
switch(config-if)#
```

This example shows how to configure a Layer 3 EtherChannel subinterface with channel-group number 1 in interface configuration mode:

```
switch(config)# interface port-channel 10
switch(config-if)# no switchport
switch(config-if)# interface port-channel 10.1
switch(config-subif)# ip address 192.0.2.2/24
switch(config-subif)#
```

This example shows how to configure a Layer 3 EtherChannel subinterface with channel-group number 20.1 in global configuration mode:

```
switch(config)# interface port-channel 20.1
switch(config-subif)# ip address 192.0.2.3/24
switch(config-subif)#
```

Related Commands

Command	Description
encapsulation	(Layer 3 interfaces) Sets the encapsulation type for an interface.
ip address	(Layer 3 interfaces) Sets a primary or secondary IP address for an interface.
no switchport	(Layer 3 interfaces) Configures an interface as a Layer 3 interface.
show interface	Displays configuration information about interfaces.
show lacp	Displays LACP information.
show port-channel summary	Displays information about the EtherChannels.
vtp (interface)	Enables VLAN Trunking Protocol (VTP) on an interface.