



# I Commands

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

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# 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/port[.subintf-port-no]
```

Syntax Description	
<i>chassis_ID</i>	(Optional) Specifies the Fabric Extender chassis ID. The chassis ID is from 100 to 199.  <b>Note</b> This argument is not optional when addressing the host interfaces of a Cisco Nexus 2000 Series Fabric Extender.
<i>slot</i>	Slot from 1 to 3. The following list defines the slots available: <ul style="list-style-type: none"> <li>Slot 1 includes all the fixed ports. A Fabric Extender only has one slot.</li> <li>Slot 2 includes the ports on the upper expansion module (if populated).</li> <li>Slot 3 includes the ports on the lower expansion module (if populated).</li> </ul>
<i>port</i>	Port number within a particular slot. The port number is from 1 to 128.
.	(Optional) Specifies the 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 a 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 enter configuration mode for a host interface on a Fabric Extender:

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

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

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# 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*

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

**Usage Guidelines**

Use the **interface loopback** command to create or modify loopback interfaces.

From the loopback interface configuration mode, the following parameters are available:

- **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**—Configure logging of events.
- **shutdown**—Shut down traffic on the interface.

This command does not require a license.

**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)#
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show interface loopback</b>	Displays information about the traffic on the specified loopback interface.

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# 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) Specifies the subinterface separator.
	<b>Note</b>	Applies to Layer 3 interfaces.
<i>subintf-channel-no</i>		(Optional) Port number of the EtherChannel subinterface. The range is from 1 to 4093.
	<b>Note</b>	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.

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