



CHAPTER 2

Configuring Interface Parameters

This chapter describes how to configure the basic interface parameters or the parameters that are shared by multiple interfaces.

This chapter includes the following sections:

- [Information About the Basic Interface Parameters, page 2-1](#)
- [Guidelines and Limitations, page 2-4](#)
- [Configuring the Basic Interface Parameters, page 2-5](#)
- [Verifying the Basic Interface Parameters, page 2-20](#)
- [Feature History for Basic Interface Parameters, page 2-20](#)



Note

To configure Layer 2 access or trunking interfaces, see [Chapter 2, “Configuring Interface Parameters.”](#)

Information About the Basic Interface Parameters

This section includes the following topics:

- [Description Parameter, page 2-2](#)
- [Speed and Duplex Modes, page 2-2](#)
- [Port MTU Size, page 2-3](#)
- [Administrative Status, page 2-3](#)
- [Cisco Discovery Protocol, page 2-3](#)
- [Port Channel Parameter, page 2-3](#)

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Description Parameter

For the vEthernet, Ethernet, and management interfaces, you can configure the description parameter to provide a recognizable name for the interface. Using a unique name for each interface allows you to quickly identify the interface when you are looking at a listing of multiple interfaces.

For information about setting the description parameter for port channel interfaces, see the [“Configuring a Port Channel Description”](#) section on page 5-22.

For information about configuring this parameter for other interfaces, see the [“Configuring a Description”](#) section on page 2-6.

Speed and Duplex Modes

The speed and duplex modes are interrelated for each Ethernet and management interface. By default, each of these interfaces autonegotiates its speed and duplex modes with the other interface, but you can change these settings. If you change the settings, be sure to use the same speed and duplex mode settings on both interfaces, or use autonegotiation for at least one of the interfaces. [Table 2-1](#) shows the settings that work for each type of Ethernet and management interface.

Table 2-1 *Speed and Duplex Mode Settings Used for Ethernet and Management Interfaces*

Module Type	Speed Mode Setting	Duplex Mode Setting	Operational Speed (Mbps)	Operational Duplex Mode
32-port 10 GE Ethernet	Auto ¹	Auto ¹	10,000	Full
48-port 10/100/1000 Ethernet	Auto ¹		1000	Full
			10 or 100	Half
	1000	Auto ¹ or full	1000	Full
	100	Auto ¹ or half	100	Half
		Full	100	Full
	10	Auto ¹ or half	10	Half
Full		10	Full	
Management	Auto ¹		1000	Full
			10 or 100	Half
	1000	Auto ¹ or full	1000	Full
	100	Auto ¹ or half	100	Half
		Full	100	Full
	10	Auto ¹ or half	10	Half
Full		10	Full	

1. Default setting

For information about setting the speed and duplex modes for port channel interfaces, see the [“Configuring the Speed and Duplex Settings for a Port Channel Interface”](#) section on page 5-27.

For information about setting the speed and duplex modes for other interfaces, see the [“Configuring the Interface Speed and Duplex Modes”](#) section on page 2-9.

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Port MTU Size

The maximum transmission unit (MTU) size specifies the maximum frame size that an Ethernet port can process. For transmissions to occur between two ports, you must configure the same MTU size for both ports. A port drops any frames that exceed its MTU size.

If you configure an MTU size of other than 1500 (the default) for a port that connects to the Cisco Nexus 1000V, then you must configure the **system mtu** in the system uplink port profile. If you do not, then a reboot of the ESX causes the MTU for the physical NIC to revert to the default setting.

For information about configuring the MTU in the system port profile, see the *Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.0(4)SV1(3)*.

For a Layer 2 port, you can configure an MTU size as the system default of 1500 bytes or the system default jumbo MTU size of 9000 bytes.



Note

If you change the system jumbo MTU size, Layer 2 ports automatically use the system default MTU size of 1500 bytes unless you specify differently for some or all of those ports.

For information about setting the MTU size, see the [“Configuring the MTU Size” section on page 2-12](#).

Administrative Status

The administrative-status parameter determines whether an interface is up or down. When an interface is administratively down, it is disabled and unable to transmit data. When an interface is administratively up, it is enabled and able to transmit data.

For more information, see the following sections:

- [Shutting Down and Restarting a Port Channel Interface, page 5-21](#).
- [Shutting Down and Activating an Interface, page 2-16](#).

Cisco Discovery Protocol

The Cisco Discovery Protocol (CDP) is a Layer 2 protocol that enables two devices that run CDP to learn about each other. You can use CDP to troubleshoot the network by displaying information about the neighboring devices that are linked through each interface. By default, CDP is enabled.

To configure CDP, see the [“Enabling or Disabling CDP” section on page 2-18](#).

Port Channel Parameter

A port channel is an aggregation of physical interfaces that comprise a logical interface. You can bundle up to eight individual interfaces into a port channel to provide increased bandwidth and redundancy. Port channeling also load balances traffic across these physical interfaces. The port channel stays operational if at least one physical interface within the port channel is operational.

Any configuration changes that you apply to the port channel are applied to each interface member of that port channel.

To configure port channels, see the [“Configuring Port Channels” section on page 5-1](#).

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Guidelines and Limitations

Interface parameters have the following guidelines and limitations:



Caution

Reboots of the ESX can result in an MTU mismatch and failure of the VSM and VEM. If you use an MTU other than 1500 (the default), for example in networks with jumbo frames, then you must configure the MTU in the system port profile so that it is preserved across reboots of the ESX.

For information about configuring the MTU in the system port profile, see the *Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.0(4)SV1(3)*.

- Fiber-optic Ethernet ports must use Cisco-supported transceivers. To verify that the ports are using Cisco-supported transceivers, use the **show interface transceivers** command. Interfaces with Cisco-supported transceivers are listed as functional interfaces.
- You usually configure Ethernet port speed and duplex mode parameters to auto to allow negotiation of the speed and duplex modes between ports. If you decide to configure the port speed and duplex modes manually for these ports, consider the following:
 - If you set the Ethernet port speed to auto, the device automatically sets the duplex mode to auto.
 - If you enter the **no speed** command, the device automatically sets both the speed and duplex parameters to auto (the **no speed** command produces the same results as the **speed auto** command).
 - If you configure an Ethernet port speed to a value other than auto (for example, 10, 100, or 1000 Mbps), you must configure the connecting port to match. Do not configure the connecting port to negotiate the speed.



Note

The device cannot automatically negotiate the Ethernet port speed and duplex modes if the connecting port is configured to a value other than auto.



Note

Changing the Ethernet port speed and duplex mode configuration might shut down and reenables the interface.

- Flow control, that is using IEEE 802.3x pause frames for controlling flow, is not supported.
- To specify an interface in the CLI, use the following guidelines:
 - For an Ethernet port— use **ethernet slot/port**, where *slot* is the module slot number and *port* is the port number.
 - For the management interface—use **mgmt 0** or **mgmt0**.
 - For a vEthernet port— use **veternet number**, where *number* is a number from 1 to 1048575.
 - A space is not required between the interface type and the slot/port or interface number. For example, for the Ethernet slot 4, port 5 interface, you can specify either of the following:
ethernet 4/5
ethernet4/5

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Configuring the Basic Interface Parameters

This section includes the following topics:

- [Specifying an Interface to Configure, page 2-5](#)
- [Configuring a Description, page 2-6](#)
- [Dedicating Bandwidth to One Port, page 2-7](#)
- [Configuring the Interface Speed and Duplex Modes, page 2-9](#)
- [Configuring the System Jumbo MTU Size, page 2-11](#)
- [Configuring the MTU Size, page 2-12](#)
- [Configuring Bandwidth, page 2-14](#)
- [Configuring the Throughput Delay, page 2-15](#)
- [Shutting Down and Activating an Interface, page 2-16](#)
- [Enabling or Disabling CDP, page 2-18](#)

Specifying an Interface to Configure

You can use this procedure to specify an interface to configure.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.

SUMMARY STEPS

1. **config t**
2. **interface** *interface*
3. **show interface** *interface*

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.

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	Command	Purpose
Step 2	<pre>interface <i>interface</i></pre> <p>Example: n1000v(config)# interface ethernet 2/1 n1000v(config-if)#</p>	Enters interface configuration mode for the specified interface.
Step 3	<pre>show interface <i>interface</i></pre> <p>Example: n1000v(config-if)# show interface ethernet 2/1</p>	Displays the current configuration of interfaces. The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> • For an Ethernet port, use ethernet <i>slot/port</i>, where <i>slot</i> is the module slot number and <i>port</i> is the port number. • For the management interface, use mgmt 0 or mgmt0. • For a vEthernet port, use vethernet <i>number</i>, where <i>number</i> is a number from 1 to 1048575.

Configuring a Description

You can use this procedure to add a description to a vEthernet, or management interface.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- A description is case-sensitive and can be up to 80 alphanumeric characters in length.

SUMMARY STEPS

1. **config t**
2. **interface** *interface*
3. **description** *string*
4. **show interface** *interface*
5. **copy running-config startup-config**

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DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface interface Example: n1000v(config)# interface ethernet 2/1 n1000v(config-if)#	Enters interface configuration mode for the specified interface.
Step 3	description string Example: n1000v(config-if)# description Ethernet port 3 on module 1. n1000v(config-if)#	Adds a description of up to 80 alphanumeric characters for the interface and saves it in the running configuration.
Step 4	show interface interface Example: n1000v(config)# show interface ethernet 2/1	Displays the interface status, which includes the description.
Step 5	copy running-config startup-config Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to set the interface description to Ethernet port 24 on module 3:

```
n1000v# config t
n1000v(config)# interface ethernet 3/24
n1000v(config-if)# description server1
n1000v(config-if)#
```

Dedicating Bandwidth to One Port

You can use this procedure to dedicate bandwidth to one port by doing the following:

1. Administratively shutting down the four interfaces in the group.
2. Changing the rate mode to dedicated.
3. Administratively bringing the dedicated port up.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.

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SUMMARY STEPS

1. **config t**
2. **interface ethernet *slot/port*, ethernet *slot/port*, ethernet *slot/port*, ethernet *slot/port***
3. **shutdown**
4. **interface ethernet *slot/port***
5. **rate-mode dedicated**
6. **no shutdown**
7. **show interface ethernet *slot/port***
8. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface ethernet <i>slot/port</i>, ethernet <i>slot/port</i>, ethernet <i>slot/port</i>, ethernet <i>slot/port</i> Example: n1000v(config)# interface ethernet 3/1, ethernet 3/3, ethernet 3/5, ethernet 3/7 n1000v(config-if)#	Enters interface configuration mode for the specified interface. The example shows how to specify one port for the dedicated mode.
Step 3	shutdown Example: n1000v(config)# shutdown	Administratively shuts down the ports in the running configuration.
Step 4	interface ethernet <i>slot/port</i> Example: n1000v(config)# interface ethernet 3/1 n1000v(config)#	Specifies the first Ethernet interface in a group of interfaces.
Step 5	rate-mode dedicated Example: n1000v(config-if)# rate-mode dedicated n1000v(config-if)#	Dedicates the full bandwidth of 10 Gb is to one port in the running configuration. When you dedicate the bandwidth, all subsequent commands for the port are for dedicated mode.
Step 6	no shutdown Example: n1000v(config-if)# no shutdown	Brings the port administratively up in the running configuration.

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	Command	Purpose
Step 7	<code>show interface ethernet slot/port</code> Example: n1000v(config-if)# show interface ethernet 3/1	Displays the configuration.
Step 8	<code>copy running-config startup-config</code> Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to configure the dedicated mode for Ethernet port 4/17 in the group that includes ports 4/17, 4/19, 4/21, and 4/23:

```
n1000v# config t
n1000v(config)# interface ethernet 4/17, ethernet 4/19, ethernet 4/21, ethernet 4/23
n1000v(config-if)# shutdown
n1000v(config-if)# interface ethernet 4/17
n1000v(config-if)# rate-mode dedicated
n1000v(config-if)# no shutdown
n1000v(config-if)#
```

Configuring the Interface Speed and Duplex Modes

You can use this procedure to configure the interface speed and duplex modes.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- The interface speed and duplex modes are interrelated, so you should configure both at the same time. To see the speeds and duplex modes that you can configure together for Ethernet and management interfaces, see the [“Speed and Duplex Modes” section on page 2-2](#).



Note

The interface speed that you specify can affect the duplex mode used for an interface, so you should set the speed before setting the duplex mode. If you set the speed for autonegotiation, the duplex mode is automatically set to be autonegotiated. If you specify a speed of 10 Mbps or 100 Mbps, the port is automatically configured to use half-duplex mode, but you can specify full-duplex mode instead. If you specify a speed of 1000 Mbps (1 Gbps) or faster, full duplex is automatically used.

- Make sure that the remote port has a speed setting that supports your changes for the local port. If you want to set the local port to use a specific speed, you must set the remote port for the same speed or set the local port to autonegotiate the speed.

SUMMARY STEPS

- `config t`
- `interface interface`
- `speed {{10 | 100 | 1000 | {auto [10 100 [1000]]}} | {10000 | auto}}`
- `duplex {full | half | auto}`

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5. `show interface interface`
6. `copy running-config startup-config`

DETAILED STEPS

	Command	Purpose
Step 1	<code>config t</code> Example: n1000v# <code>config t</code> n1000v(config)#	Enters the global configuration mode.
Step 2	<code>interface interface</code> Example: n1000v(config)# <code>interface ethernet 2/1</code> n1000v(config-if)#	Enters interface configuration mode for the specified interface.
Step 3	<code>speed {{10 100 1000 {auto [10 100 [1000]]}} {10000 auto}}</code> Example: n1000v(config-if)# <code>speed 1000</code> n1000v(config-if)#	Designates the port speed. <ul style="list-style-type: none"> • For Ethernet ports on the 48-port 10/100/1000 modules, sets the speed at 10 Mbps, 100 Mbps, or 1000 Mbps, or sets the port to auto negotiate its speed with the other 10/100/1000 port on the same link. • For Ethernet ports on the 32-port 10-Gigabit Ethernet modules, sets the speed at 10,000 Mbps (10 Gbps) or sets the port to autonegotiate its speed with the other 10-Gigabit Ethernet port on the link. • For management interfaces, sets the speed as 1000 Mbps or sets the port to autonegotiate its speed.
Step 4	<code>duplex {full half auto}</code> Example: n1000v(config-if)# <code>duplex full</code>	Specifies the duplex mode as full, half, or autonegotiate.
Step 5	<code>show interface interface</code> Example: n1000v(config)# <code>show interface mgmt0</code>	Displays the configuration
Step 6	<code>copy running-config startup-config</code> Example: n1000v(config)# <code>copy running-config startup-config</code>	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to set the speed of Ethernet port 1 on the 48-port 10/100/1000 module in slot 3 to 1000 Mbps and full-duplex mode:

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```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# speed 1000
n1000v(config-if)# duplex full
n1000v(config-if)#
```

Configuring the System Jumbo MTU Size

You can use this procedure to configure the system jumbo MTU size, which can be used to specify the MTU size for Layer 2 interfaces.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- You can specify an even number of bytes between 1500 and 9000. If you do not configure the system jumbo MTU size, it defaults to 1500 bytes.
- When you configure the **system mtu** on a system uplink port profile, it takes precedence over an MTU you may have configured on the interface.

For more information, see the *Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.0(4)SV1(3)*.

SUMMARY STEPS

1. **config t**
2. **system jumbomtu *size***
3. **show running-config**
4. **interface ethernet *slot/port***
5. **mtu *size***
6. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	system jumbomtu <i>size</i> Example: n1000v(config)# system jumbomtu 8000	Specifies the system jumbo MTU size. Use an even number between 1500 and 9000.
Step 3	show running-config Example: n1000v(config)# show running-config	Displays the current operating configuration, including the system jumbo MTU size.

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	Command	Purpose
Step 4	<code>interface ethernet slot/port</code> Example: n1000v(config)# interface ethernet 2/2 n1000v(config-if)#	Specifies an interface to configure and enters interface configuration mode.
Step 5	<code>mtu size</code> Example: n1000v(config-if)# mtu 8000	Specifies either the default MTU size of 1500 or the system jumbo MTU size that you specified earlier.
Step 6	<code>copy running-config startup-config</code> Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to configure the system jumbo MTU as 8000 bytes and how to change the MTU specification for an interface that was configured with the previous jumbo MTU size:

```
n1000v# config t
n1000v(config)# system jumbomtu 8000
n1000v(config)# show running-config
n1000v(config)# interface ethernet 2/2
n1000v(config-if)# switchport
n1000v(config-if)# mtu 8000
n1000v(config-if)#
```

Configuring the MTU Size

Use this section to configure the size of the maximum transmission unit (MTU) for Layer 2 Ethernet interfaces.

This section includes the following topics:

- [Configuring the Interface MTU Size, page 2-12](#)
- [Configuring the System Jumbo MTU Size, page 2-11](#)

Configuring the Interface MTU Size

You can use this procedure to configure the MTU for all interfaces.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- You can specify either of the following for MTU size:
 - The system default MTU size of 1500 bytes.
 - A system jumbo MTU size between 1500 and 9000 bytes.
 - a **system mtu** for the uplink port profile.
- To configure the jumbo MTU size, see the “[Configuring the System Jumbo MTU Size](#)” section on [page 2-11](#).

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- When you configure the **system mtu** on a system uplink port profile, it takes precedence over an MTU you may have configured on the interface.

For more information, see the *Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.0(4)SV1(3)*.

SUMMARY STEPS

- config t**
- interface ethernet *slot/port***
- mtu *size***
- show interface ethernet *slot/port***
- copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface ethernet <i>slot/port</i> Example: n1000v(config)# interface ethernet 3/1 n1000v(config-if)#	Specifies an Ethernet interface to configure, and enters interface configuration mode.
Step 3	mtu <i>size</i> Example: n1000v(config-if)# mtu 9216	Specifies either the default MTU size (1500) or the system jumbo MTU size (9000) unless you have changed the system jumbo MTU size.
Step 4	show interface ethernet <i>slot/port</i> Example: n1000v(config-if)# show interface <i>type slot/port</i>	Displays the interface status, which includes the MTU size.
Step 5	copy running-config startup-config Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to configure the Ethernet interface 3/1 with the default MTU size of 1500 bytes:

```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# mtu 1500
n1000v(config-if)#
```

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Configuring Bandwidth

You can use this procedure to configure bandwidth for Ethernet interfaces.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- The physical level uses an unchangeable bandwidth of 1 GB, but you can configure a value from 1 to 10,000,000 Kb for Level 3 protocols.

SUMMARY STEPS

1. **config t**
2. **interface ethernet *slot/port***
3. **bandwidth *value***
4. **show interface ethernet *slot/port***
5. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface ethernet <i>slot/port</i> Example: n1000v(config)# interface ethernet 3/1 n1000v(config-if)#	Specifies an Ethernet interface to configure, and enters interface configuration mode.
Step 3	bandwidth <i>value</i> Example: n1000v(config-if)# bandwidth 1000000	Assigns the specified bandwidth to the interface in the running configuration. The bandwidth is an information-only value from 1 to 10,000,000.
Step 4	show interface ethernet <i>slot/port</i> Example: n1000v(config-if)# show interface ethernet <i>slot/port</i>	Displays the interface status, which includes the bandwidth value.
Step 5	copy running-config startup-config Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

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EXAMPLES

The following example shows how to configure an informational value of 1,000,000 Kb for the Ethernet slot 3, port 1 interface bandwidth parameter:

```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# bandwidth 1000000
n1000v(config-if)#
```

Configuring the Throughput Delay

You can use this procedure to configure throughput delay for the Ethernet interface informational display.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.

SUMMARY STEPS

- config t**
- interface ethernet** *slot/port*
- delay** *value*
- show interface ethernet** *slot/port*
- copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface ethernet <i>slot/port</i> Example: n1000v(config)# interface ethernet 3/1 n1000v(config-if)#	Specifies an interface to configure, and enters interface configuration mode.
Step 3	delay <i>value</i> Example: n1000v(config-if)# delay 10000	Assigns the delay time to the interface in the running configuration. The delay time is specified in tens of microseconds.

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	Command	Purpose
Step 4	<code>show interface ethernet slot/port</code> Example: n1000v(config)# show interface ethernet 3/1	Displays the interface status, which includes the throughput-delay time.
Step 5	<code>copy running-config startup-config</code> Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to configure the throughput-delay time to 100,000 microseconds for the Ethernet port 3/1:

```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# delay 10000
n1000v(config-if)#
```

Shutting Down and Activating an Interface

You can use this procedure to shut down and restart Ethernet or management interfaces.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- When you shut down an interface, it becomes disabled. As a result, the following occurs:
 - The output of monitoring commands show it as being down.
 - Dynamic routing protocols relay this information to other network servers.
 - The interface is not included in routing updates.
 - When the interfaces are shut down.
- To activate an interface that has been shut down, you must restart the device.
- If you shut down a vEthernet port that is inheriting a system port profile, the VEM continues to pass traffic. In this case, you must also shut down the port by unchecking the active NIC on the VM itself.

SUMMARY STEPS

1. `config t`
2. `interface interface`
3. `shutdown`
4. `show interface interface`
5. `no shutdown`
6. `show interface interface`
7. `copy running-config startup-config`

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DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface interface Example 1: n1000v(config)# interface ethernet 2/1 n1000v(config-if)#	Specifies the interface that you are configuring. The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> For an Ethernet port, use ethernet slot/port, where <i>slot</i> is the module slot number and <i>port</i> is the port number. For the management interface, use mgmt 0 or mgmt0.
Step 3	shutdown Example: n1000v(config-if)# shutdown	Disables the interface in the running configuration. Note If you shut down a vEthernet port that is inheriting a system port profile, the VEM continues to pass traffic. In this case, you must also shut down the port by unchecking the active NIC on the VM itself.
Step 4	show interface interface Example: n1000v(config-if)# show interface ethernet 2/1	Displays the interface status, which includes the administrative status.
Step 5	no shutdown Example: n1000v(config-if)# no shutdown	Reenables the interface in the running configuration.
Step 6	show interface interface Example: n1000v(config-if)# show interface ethernet 2/1	Displays the interface status, which includes the administrative status. The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> For an Ethernet port, use ethernet slot/port, where <i>slot</i> is the module slot number and <i>port</i> is the port number. For the management interface, use mgmt 0 or mgmt0.
Step 7	copy running-config startup-config Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to change the administrative status for Ethernet port 3/1 from disabled to enabled:

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```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# shutdown
n1000v(config-if)# no shutdown
n1000v(config-if)#
```

Enabling or Disabling CDP

You can use this procedure to enable or disable the Cisco Discovery Protocol (CDP) for Ethernet and management interfaces.

BEFORE YOU BEGIN

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in EXEC mode.
- Make sure that CDP is enabled at both ends of the link.

SUMMARY STEPS

1. **config t**
2. **interface** *interface*
3. **cdp enable**
no cdp enable
4. **show cdp interface** *interface*
5. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: n1000v# config t n1000v(config)#	Enters global configuration mode.
Step 2	interface <i>interface</i> Example 1: n1000v(config)# interface ethernet 3/1 n1000v(config-if)#	Specifies the interface that you are configuring. The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> • For an Ethernet port, use ethernet <i>slot/port</i>, where <i>slot</i> is the module slot number and <i>port</i> is the port number. • For the management interface, use mgmt 0 or mgmt0.

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	Command	Purpose
Step 3	cdp enable Example: n1000v(config-if)# cdp enable	Enables CDP for the interface in the running configuration. To work, this parameter must be enabled for both interfaces on the same link.
	no cdp enable Example: n1000v(config-if)# no cdp enable	Disables CDP for the interface in the running configuration. As soon as you disable CDP for one of two interfaces, CDP is disabled for the link.
Step 4	show cdp interface interface Example: n1000v(config-if)# show cdp interface interface	Displays the CDP status for the interface in the running configuration. The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> • For an Ethernet port, use ethernet slot/port, where <i>slot</i> is the module slot number and <i>port</i> is the port number. • For the management interface, use mgmt 0 or mgmt0.
Step 5	copy running-config startup-config Example: n1000v(config)# copy running-config startup-config	(Optional) Saves the running configuration persistently through reboots and restarts by copying it to the startup configuration.

EXAMPLES

The following example shows how to enable CDP for Ethernet port 3/1:

```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# cdp enable
n1000v(config-if)#
```

The following example shows how to disable CDP for Ethernet port 3/1:

```
n1000v# config t
n1000v(config)# interface ethernet 3/1
n1000v(config-if)# no cdp enable
n1000v(config-if)#
```

Clearing the Interface Counters

You can use this procedure to clear the Ethernet and management interface counters. You can perform this task from the EXEC mode, configuration mode, or interface configuration mode.

SUMMARY STEPS

1. **clear counters interface**
2. **show interface interface**

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DETAILED STEPS

	Command	Purpose
Step 1	clear counters <i>interface</i> Example: n1000v# clear counters ethernet 2/1 n1000v#	Clears the Ethernet or management counters for the specified interface: The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> For an Ethernet port, use ethernet slot/port, where <i>slot</i> is the module slot number and <i>port</i> is the port number. For the management interface, use mgmt 0 or mgmt0.
Step 2	show interface <i>interface</i>	Displays the interface status, which includes the counters. The <i>interface</i> argument is defined as follows: <ul style="list-style-type: none"> For an Ethernet port, use ethernet slot/port, where <i>slot</i> is the module slot number and <i>port</i> is the port number. For the management interface, use mgmt 0 or mgmt0.

EXAMPLES

The following example shows how to clear and reset the counters on Ethernet port 5/5:

```
n1000v# clear counters ethernet 5/5
n1000v#
```

Verifying the Basic Interface Parameters

Use the commands listed here to display and verify the basic interface parameters.

Command	Purpose
show cdp	Displays the CDP status.
show interface <i>interface</i>	Displays the configured states of one or all interfaces.
show interface brief	Displays a table of interface states.
show interface switchport	Displays the status of Layer 2 ports.

Feature History for Basic Interface Parameters

This section provides the feature history for basic interface parameters.

Feature Name	Releases	Feature Information
Basic interface parameters	4.0	This feature was introduced.