



## CDP Commands on Cisco IOS XR Software

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This chapter describes the Cisco IOS XR software commands for monitoring the networking device and network using Cisco Discovery Protocol (CDP).

For detailed information about CDP concepts, configuration tasks, and examples, refer to the *Implementing CDP on Cisco IOS XR Software* module.

# cdp

To enable the Cisco Discovery Protocol (CDP) globally or on a interface, use the **cdp** command in the appropriate configuration mode. To disable CDP globally or on an interface, use the **no** form of this command.

**cdp**

**no cdp**

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

**Defaults** CDP is disabled.

**Command Modes** Global configuration  
Interface configuration

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router. The <b>enable</b> and <b>disable</b> keywords were removed.
	Release 3.3.0	No modification.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

By default, CDP is disabled globally. To enable CDP, CDP must be enabled globally and then enabled for each interface.

To enable CDP globally, use the **cdp** command in global configuration mode. To disable CDP globally, use the **no** form of this command in global configuration mode.

To enable CDP on a specific interface, use the **cdp** command in interface configuration mode. To disable CDP on a specific interface, use the **no** form of this command in interface configuration mode.

Task ID	Task ID	Operations
	cdp	read, write

**Examples** The following example shows how to globally enable CDP:

```
RP/0/RP0/CPU0:router (config)# cdp
```

The following example shows how to enable CDP on Packet-over-SONET (POS) interface 0/0/0/1:

```
RP/0/RP0/CPU0:router(config)# interface POS 0/0/0/1  
RP/0/RP0/CPU0:router(config-if)# cdp
```

The following example shows how to disable CDP on Packet-over-SONET (POS) interface 0/0/0/1:

```
RP/0/RP0/CPU0:router(config)# interface POS 0/0/0/1  
RP/0/RP0/CPU0:router(config-if)# no cdp
```

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**Related Commands**

<b>Command</b>	<b>Description</b>
<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.

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# cdp advertise v1

To change the version of Cisco Discovery Protocol (CDP) that is used to communicate with neighboring devices to version 1 (CDPv1), use the **cdp advertise v1** command in global configuration mode. To remove the **cdp advertise v1** command from the configuration file and restore the system to its default condition with respect to this command, use the **no** form of this command.

**cdp advertise v1**

**no cdp advertise [v1]**

<b>Syntax Description</b>	<b>v1</b>	Configures CDP to send and receive version 1 (CDPv1) advertisements only.
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<b>Defaults</b>	Version 2 is enabled.
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<b>Command Modes</b>	Global configuration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	The <b>v2</b> keyword was removed.	
Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.	
Release 3.3.0	No modification.	

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the <i>Configuring AAA Services on Cisco IOS XR Software</i> module of the <i>Cisco IOS XR System Security Configuration Guide</i> .
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CDPv2 packets are sent by default. CDP also sends and receives CDPv1 packets if the device with which CDP is interacting does not process CDPv2 packets.

CDPv2 adds device information over CDPv1. The additional information that is contained in the CDPv2 messages relates to Native VLAN, VLAN Trunking Protocol (VTP) Management Domain, Ethernet Duplex, and other features.

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	cdp	read, write

<b>Examples</b>	The following example shows how to set a networking device to send and receive only CDPv1 advertisements:
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```
RP/0/RP0/CPU0:router (config)# cdp advertise v1
```

The following example shows how to restore the default condition (sending and receiving CDPv2 advertisements):

```
RP/0/RP0/CPU0:router(config)# no cdp advertise
```

**Related Commands**

Command	Description
<a href="#">cdp</a>	Enables CDP on a supported interface.
<a href="#">show cdp</a>	Displays global CDP information.

# cdp holdtime

To specify the time for which the receiving device should hold a Cisco Discovery Protocol (CDP) packet from your networking device before discarding it, use the **cdp holdtime** command in global configuration mode. To remove the **cdp holdtime** global configuration command from the configuration file and restore the system to its default condition with respect to this command, use the **no** form of this command.

**cdp holdtime** *seconds*

**no cdp holdtime**

<b>Syntax Description</b>	<i>seconds</i>	Hold time to be sent in the CDP update packets. Range is 10 seconds to 255 seconds. The default is 180 seconds.
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<b>Defaults</b>	<i>seconds</i> : 180 seconds
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<b>Command Modes</b>	Global configuration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

**Usage Guidelines**

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

CDP packets are sent with a time-to-live value, or hold time, that is nonzero after an interface is enabled.

The CDP hold time must be set to a higher number of seconds than the time between CDP transmissions, which is set using the **cdp timer** command.

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	cdp	read, write

**Examples**

The following example shows how to specify that the CDP packets sent from the networking device are held by the receiving device for 60 seconds before being discarded. You might want to set the hold time lower than the default setting of 180 seconds if information about your networking device changes often and you want the receiving devices to purge this information more quickly.

```
RP/0/RP0/CPU0:router(config)# cdp holdtime 60
```

The following example shows how to use the **no** form of the command to set the hold time to the default of 180 seconds:

```
RP/0/RP0/CPU0:router(config)# no cdp holdtime
```

**Related Commands**

Command	Description
<a href="#">cdp timer</a>	Specifies how often the software sends CDP updates.
<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.

# cdp log adjacency changes

To log changes to the Cisco Discovery Protocol (CDP) adjacency table, use the **cdp log adjacency changes** command in global configuration mode. To disable the logging, use the **no** form of this command.

**cdp log adjacency changes**

**no cdp log adjacency changes**

**Syntax Description** No keywords or arguments.

**Defaults** CDP adjacency table logging is disabled.

**Command Modes** Global configuration

Command History	Release	Modification
	Release 3.3.0	This command was first supported on the Cisco CRS-1 and Cisco XR 12000 Series Routers.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

When CDP adjacency table logging is enabled, a syslog is generated each time a CDP neighbour is added or removed.

Task ID	Task ID	Operations
	cdp	read, write

**Examples** The following example shows how to enable CDP adjacency table logging.

```
RP/0/RP0/CPU0:router# configure
RP/0/RP0/CPU0:router(config)# cdp log adjacency changes
```

When CDP adjacency table logging is enabled, a syslog is generated each time a CDP neighbour is added or removed. The following is an example of the log entry:

```
LC/0/5/CPU0:Jun  5 10:51:18.081 : cdp[109]: %L2-CDP-6-DELETED_NEIGHBOR :
CDP Neighbour TBA04110127 on interface GigabitEthernet0/5/0/0 has been deleted, remote
interface 3/2
```

```
LC/0/5/CPU0:Jun  5 10:51:33.120 : cdp[109]: %L2-CDP-6-NEW_NEIGHBOR : New CDP neighbor
TBA04110127 detected on interface GigabitEthernet0/5/0/0, remote interface 3/2
```

Related Commands	Command	Description
	<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.

# cdp timer

To specify how often the software sends Cisco Discovery Protocol (CDP) updates, use the **cdp timer** command in global configuration mode. To remove the **cdp timer** global configuration command from the configuration file and restore the system to its default condition with respect to this command, use the **no** form of this command.

**cdp timer** *seconds*

**no cdp timer**

<b>Syntax Description</b>	<i>seconds</i>	Frequency with which the Cisco IOS XR software sends CDP updates. Range is 5 seconds to 254 seconds. The default is 60 seconds.
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<b>Defaults</b>	<i>seconds</i> : 60 seconds
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<b>Command Modes</b>	Global configuration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

<b>Usage Guidelines</b>	To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the <i>Configuring AAA Services on Cisco IOS XR Software</i> module of the <i>Cisco IOS XR System Security Configuration Guide</i> .
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A lower timer setting causes CDP updates to be sent more frequently.

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	cdp	read, write

<b>Examples</b>	The following example shows how to set the CDP timer to 80 seconds, which is less frequent than the default setting of 60 seconds:
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```
RP/0/RP0/CPU0:router (config)# cdp timer 80
```

Related Commands	Command	Description
	<a href="#">cdp holdtime</a>	Specifies the time for which the receiving device should hold a CDP packet sent by your networking device before discarding it.
	<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.

# clear cdp counters

To reset Cisco Discovery Protocol (CDP) traffic counters to zero (0), use the **clear cdp counters** command in EXEC mode.

**clear cdp counters** [*location node-id*]

Syntax Description	<b>location</b> <i>node-id</i>	(Optional) Clears CDP traffic counters for the designated node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
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**Defaults** The counters are set to zero.

**Command Modes** EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID	Task ID	Operations
	cdp	read, write

**Examples** The following example shows how to clear CDP counters. The **show cdp traffic** output shows that all traffic counters have been reset to zero (0).

```
RP/0/RP0/CPU0:router# clear cdp counters
RP/0/RP0/CPU0:router# show cdp traffic
```

```
CDP counters:
  Packets output: 0, Input: 0
  Hdr syntax: 0, Chksum error: 0, Encaps failed: 0
  No memory: 0, Invalid packet: 0, Truncated: 0
  CDP version 1 advertisements output: 0, Input: 0
  CDP version 2 advertisements output: 0, Input: 0
  Unrecognize Hdr version: 0, File open failed: 0
```

Related Commands	Command	Description
	<a href="#">clear cdp table</a>	Clears the table that contains CDP information about neighbors.
	<a href="#">show cdp traffic</a>	Displays traffic information between devices gathered using CDP.

# clear cdp table

To clear and automatically resize the table that contains Cisco Discovery Protocol (CDP) information about neighbors, use the **clear cdp table** command in EXEC mode.

**clear cdp table** [*location node-id*]

Syntax Description	<b>location</b> <i>node-id</i>	(Optional) Clears and resizes the CDP table for the designated node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
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**Defaults** No default behavior or values

**Command Modes** EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **clear cdp table** command to clear and resize the CDP table that contains the neighbor entries. The new table size is calculated according to the recommended hash table size, as seen in the **show cdp** command output.

Task ID	Task ID	Operations
	cdp	read, write

**Examples** The following example shows how to clear and resize the CDP table. The output of the **show cdp neighbors** command before and after use of the **clear cdp table** command shows that all information has been deleted from the table:

```
RP/0/RP0/CPU0:router# show cdp neighbors
```

```
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater
```

```
Device ID          Local Intrfce    Holdtme    Capability  Platform  Port ID
TBA04341195(151a  Mg0/RP1/CPU0/0  171        T S         WS-C2924  0/1
```

```
RP/0/RP0/CPU0:router# clear cdp table
RP/0/RP0/CPU0:router# show cdp neighbors
```

Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge  
 S - Switch, H - Host, I - IGMP, r - Repeater  
 Device ID            Local Intrfce    Holdtme    Capability   Platform   Port ID

The **show cdp** command shows that the table has been resized:

```
RP/0/RP0/CPU0:router# show cdp
```

```
Global CDP information:
  Sending CDP packets every 60 seconds
  Sending a holdtime value of 180 seconds
  Sending CDPv2 advertisements is enabled
```

### Related Commands

Command	Description
<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.
<a href="#">show cdp neighbors</a>	Displays information about neighboring devices using CDP.

# show cdp

To display global Cisco Discovery Protocol (CDP) information, including CDP version, timer, and hold-time information, use the **show cdp** command in EXEC mode.

**show cdp**

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

**Command Modes** EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show cdp** command to display CDP version, timer, and hold-time information relative to CDP operations.

Task ID	Task ID	Operations
	cdp	read

**Examples** The following example shows how to use the **show cdp** command to verify the CDP global settings:

```
RP/0/0/CPU0:router# show cdp
```

```
Global CDP information:
  Sending CDP packets every 20 seconds
  Sending a holdtime value of 30 seconds
  Sending CDPv2 advertisements is not enabled
```

[Table 1](#) describes the significant fields shown in the display.

**Table 1** *show cdp Field Descriptions*

Field	Definition
Sending CDP packets every 20 seconds	Interval between transmissions of CDP advertisements. This field is controlled by the <b>cdp timer</b> command.
Sending a holdtime value of 30 seconds	Time for which the device directs the neighbor to hold a CDP advertisement before discarding it. This field is controlled by the <b>cdp holdtime</b> command.
Sending CDPv2 advertisements is not enabled	State of being enabled or disabled for the transmission of CDP version 2-type advertisements. This field is controlled by the <b>cdp advertise v1</b> command.

**Related Commands**

Command	Description
<b>cdp advertise v1</b>	Changes the version of CDP that is used to communicate with neighboring devices to CDPv1.
<b>cdp holdtime</b>	Specifies the time for which the receiving device should hold a CDP packet sent by your networking device before discarding it.
<b>cdp timer</b>	Specifies how often the Cisco IOS XR software sends CDP updates.
<b>clear cdp table</b>	Clears and resizes the table that contains CDP information about neighbors.
<b>show cdp entry</b>	Displays information about a specific neighbor device listed in the CDP table.
<b>show cdp interface</b>	Displays information about the interfaces on which CDP is enabled.
<b>show cdp neighbors</b>	Displays information about neighboring devices using CDP.
<b>show cdp traffic</b>	Displays traffic information between devices gathered using CDP.

# show cdp entry

To display information about a specific neighboring device or all neighboring devices discovered using Cisco Discovery Protocol (CDP), use the **show cdp entry** command in EXEC mode.

```
show cdp entry [* | entry-name] [protocol | version]
```

Syntax	Description
<b>*</b>	Displays all CDP neighbors.
<i>entry-name</i>	Name of a neighbor about which you want information.
<b>protocol</b>	(Optional) Displays protocol information associated with CDP neighbor entries.
<b>version</b>	(Optional) Displays version information associated with CDP neighbor entries.

**Defaults** This command displays information on a particular device that has been discovered by CDP.

**Command Modes** EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Task ID	Task ID	Operations
	cdp	read, write

**Examples** The following is sample output from the **show cdp entry** command. Information about device ID, address, platform, interface, hold time, and version is displayed.

```
RP/0/RP0/CPU0:router# show cdp entry TBA04341195

-----
Device ID: TBA04341195(sys-235)
SysName : sys-235
Entry address(es):
  IP address: 172.16.23.9
```

```
Platform: WS-C6006, Capabilities: Trans-Bridge Switch
Interface: MgmtEth0/RP1/CPU0/0
Port ID (outgoing port): 4/18
Holdtime : 157 sec
```

```
Version :
WS-C6006 Software, Version McpSW: 7.2(2) NmpSW: 7.2(2)
Copyright (c) 1995-2002 by Cisco Systems
```

```
advertisement version: 2
VTP Management Domain: 'sys'
Native VLAN: 125
Duplex: full
```

Table 2 describes the significant fields shown in the display.

**Table 2** *show cdp entry Field Descriptions*

Field	Description
Device ID	ID code assigned during installation of the router.
Entry address(es)	Addresses of the platform, selected interface, and port ID.
Platform	Platform name.
Capabilities	Special functions that the platform can perform (in this case the platform is a trans-bridge switch).
Interface	Interface location expressed as rack/slot/instance module/port.
Port ID (outgoing port)	Location of the port in use by the interface.
Holdtime	Time (in seconds) for which the device directs the neighbor to hold a CDP advertisement before discarding it. This field is controlled by the <b>cdp holdtime</b> command.
Version	Software version.
advertisement version	Version number of the advertising protocol.
VTP Management Domain	VLAN Trunking Protocol (VTP) domain name of neighbor device.
Native VLAN	VLAN ID.
Duplex	Duplex setting: half or full.

#### Related Commands

Command	Description
<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.
<a href="#">show cdp interface</a>	Displays information about the interfaces on which CDP is enabled.
<a href="#">show cdp neighbors</a>	Displays information about neighboring devices discovered by CDP.
<a href="#">show cdp traffic</a>	Displays traffic information between devices gathered using CDP.

# show cdp interface

To display information about the interfaces on which Cisco Discovery Protocol (CDP) is enabled, use the **show cdp interface** command in EXEC mode.

**show cdp interface** [*type instance* | **location** *node-id*]

Syntax Description		
<i>type</i>		Interface type. For more information, use the question mark (?) online help function.
<i>instance</i>		<p>Either a physical interface instance or a virtual interface instance as follows:</p> <ul style="list-style-type: none"> <li>Physical interface instance. Naming notation is <i>rack/slot/module/port</i> and a slash between values is required as part of the notation. <ul style="list-style-type: none"> <li><i>rack</i>: Chassis number of the rack.</li> <li><i>slot</i>: Physical slot number of the modular services card or line card.</li> <li><i>module</i>: Module number. A physical layer interface module (PLIM) is always 0.</li> <li><i>port</i>: Physical port number of the interface.</li> </ul> </li> </ul> <p><b>Note</b> In references to a Management Ethernet interface located on a route processor card, the physical slot number is alphanumeric (RP0 or RP1) and the module is CPU0. Example: interface MgmtEth0/RP1/CPU0/0.</p> <ul style="list-style-type: none"> <li>Virtual interface instance. Number range varies depending on interface type.</li> </ul> <p>For more information about the syntax for the router, use the question mark (?) online help function.</p>
<b>location</b> <i>node-id</i>		(Optional) Displays detailed CDP information for the designated node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

**Defaults** This command displays information about the interfaces on which CDP has been enabled.

**Command Modes** EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was first supported on the Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.

**Usage Guidelines**

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show cdp interface** command to display information about any CDP interfaces. When an interface is specified in the command syntax, information is displayed about the specific interface. Not specifying the interface displays information about all interfaces.

**Task ID**

Task ID	Operations
cdp	read, write

**Examples**

The following is sample output from the **show cdp interface** command. Information about the status, CDP timer, and hold-time settings is displayed for all interfaces on which CDP is enabled.

```
RP/0/RP0/CPU0:router# show cdp interface

POS0/2/0/0 is Up
  Encapsulation HDLC
  Sending CDP packets every 120 seconds
  Holdtime is 240 seconds
POS0/2/0/1 is Up
  Encapsulation HDLC
  Sending CDP packets every 120 seconds
  Holdtime is 240 seconds
POS0/2/0/2 is Up
  Encapsulation HDLC
  Sending CDP packets every 120 seconds
  Holdtime is 240 seconds
POS0/2/0/3 is Up
  Encapsulation HDLC
  Sending CDP packets every 120 seconds
  Holdtime is 240 seconds
MgmtEth0/RP1/CPU0/0 is Up
  Encapsulation ARPA
  Sending CDP packets every 120 seconds
  Holdtime is 240 seconds
```

The following is sample output from the **show cdp interface** command with an interface specified. Information about the status, CDP timer, and hold time settings is displayed for Packet-over-SONET (POS) interface 0/2/0/1 only.

```
RP/0/RP0/CPU0:router# show cdp interface POS 0/2/0/1

POS0/2/0/1 is Up
  Encapsulation HDLC
  Sending CDP packets every 60 seconds
  Holdtime is 180 seconds
```

[Table 3](#) describes the significant fields shown in the display.

**Table 3**      *show cdp interface Field Descriptions*

<b>Field</b>	<b>Description</b>
POS0/2/0/1 is Up	Current condition of POS interface 0/0/2/1.
Encapsulation HDLC	Interface is encoding packets using the Cisco HDLC layer 2 encapsulation.
Sending CDP packets every 60 seconds	Interval between transmissions of CDP advertisements. This field is controlled by the <b>cdp timer</b> command.
Holdtime is 180 seconds	Time for which the device directs the neighbor to hold a CDP advertisement before discarding it. This field is controlled by the <b>cdp holdtime</b> command.

**Related Commands**

<b>Command</b>	<b>Description</b>
<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.
<a href="#">show cdp entry</a>	Displays information about a specific neighbor device or all neighboring devices discovered using CDP.
<a href="#">show cdp neighbors</a>	Displays information about neighboring devices using CDP.
<a href="#">show cdp traffic</a>	Displays traffic information between devices gathered using CDP.

# show cdp neighbors

To display detailed information about neighboring devices discovered using Cisco Discovery Protocol (CDP), use the **show cdp neighbors** command in EXEC mode.

**show cdp neighbors** [*type instance* | **location** *node-id*] [**detail**]

Syntax Description	
<i>type</i>	Interface type. For more information, use the question mark (?) online help function.
<i>instance</i>	<p>Either a physical interface instance or a virtual interface instance as follows:</p> <ul style="list-style-type: none"> <li>Physical interface instance. Naming notation is <i>rack/slot/module/port</i> and a slash between values is required as part of the notation. <ul style="list-style-type: none"> <li><i>rack</i>: Chassis number of the rack.</li> <li><i>slot</i>: Physical slot number of the modular services card or line card.</li> <li><i>module</i>: Module number. A physical layer interface module (PLIM) is always 0.</li> <li><i>port</i>: Physical port number of the interface.</li> </ul> </li> </ul> <p><b>Note</b> In references to a Management Ethernet interface located on a route processor card, the physical slot number is alphanumeric (RP0 or RP1) and the module is CPU0. Example: interface MgmtEth0/RP1/CPU0/0.</p> <ul style="list-style-type: none"> <li>Virtual interface instance. Number range varies depending on interface type.</li> </ul> <p>For more information about the syntax for the router, use the question mark (?) online help function.</p>
<b>location</b> <i>node-id</i>	(Optional) Displays detailed CDP information for the designated node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
<b>detail</b>	(Optional) Displays detailed information about a neighbor or neighbors, including network address, enabled protocols, hold time, and software version.

**Defaults** No default behavior or values

**Command Modes** EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	No modification.
	Release 3.3.0	Revised output for the <b>detail</b> keyword to display IPv6 neighbors.

**Usage Guidelines**

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **show cdp neighbors** command to display information on any CDP neighbors. When a location is specified in the command syntax, information on the neighbor is displayed for the specified node. Not specifying the location displays information about the neighbor for all interfaces.

Use the **show cdp neighbors** command with the **detail** keyword to display additional information, including IPv6 neighbors.

**Task ID**

Task ID	Operations
cdp	read

**Examples**

The following is sample output from the **show cdp neighbors** command:

```
RP/0/RP0/CPU0:router# show cdp neighbors
```

```
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater
```

Device ID	Local Intrfce	Holdtme	Capability	Platform	Port ID
cisco_1	Mg0/0/CPU0/0	139	T S	WS-C2924M	Fa0/6
cisco_2	PO0/3/0/0	173	R	CRS-1	PO0/3/0/0
TBA04110127	Gi0/7/0/0	173	T S	WS-C6506	3/9
cisco_3	Gi0/7/0/2	171	R	CRS-1	Gi0/4/0/2

[Table 4](#) describes the significant fields shown in the display.

**Table 4** show cdp neighbors Field Descriptions

Field	Description
Capability Codes	Type of device that can be discovered.
Device ID	Name of the neighbor device.
Local Intrfce	Protocol being used by the connectivity media and the interface number.
Holdtme	Remaining time, in seconds, for which the current device holds the CDP advertisement from a sending router before discarding it.

**Table 4** *show cdp neighbors Field Descriptions*

Field	Description
Capability	Type of the device listed in the CDP Neighbors table. Values are as follows: <ul style="list-style-type: none"> <li>• R—Router</li> <li>• T—Transparent bridge</li> <li>• B—Source-routing bridge</li> <li>• S—Switch</li> <li>• H—Host</li> <li>• I—Internet Group Management Protocol (IGMP) device</li> <li>• r—Repeater</li> </ul>
Platform	Product number of the device.
Port ID	Protocol and port number of the device.

The following is sample output for IPv4 and IPv6 neighbors from the **show cdp neighbors detail** command:

```
RP/0/0/CPU0:router# show cdp neighbor detail

-----
Device ID: uut-user
SysName : uut-user
Entry address(es):
IPv4 address: 1.1.1.1
IPv6 address: 1::1
IPv6 address: 2::2
Platform: cisco 12008/GRP, Capabilities: Router
Interface: POS0/4/0/3
Port ID (outgoing port): POS0/2/0/3
Holdtime : 177 sec

Version :
Cisco IOS XR Software, Version 0.0.0[Default]
Copyright (c) 2005 by cisco Systems, Inc.

advertisement version: 2
```

[Table 5](#) describes the significant fields shown in the display.

**Table 5** *show cdp neighbors detail Field Descriptions*

Field	Definition
Device ID	Name of the neighbor device.
Entry address(es)	List of network addresses of neighbor devices. The address can be in IP, or Connectionless Network Service (CLNS) protocol conventions.
Platform	Product name and number of the neighbor device.

**Table 5** *show cdp neighbors detail Field Descriptions (continued)*

Field	Definition
Capabilities	Device type of the neighbor. This device can be a router, a bridge, a transparent bridge, a source-routing bridge, a switch, a host, an IGMP device, or a repeater.
Interface	Interface being used by the connectivity medium.
Port ID	Port number of the port on the current device.
Holdtime	Remaining time (in seconds) for which the current device holds the CDP advertisement from a sending router before discarding it.
Version	Software version of the neighbor device.
advertisement version	Version number of the advertising protocol.

**Related Commands**

Command	Description
<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.
<a href="#">show cdp entry</a>	Displays information about a specific neighbor device listed in the CDP table.
<a href="#">show cdp interface</a>	Displays information about the interfaces on which CDP is enabled.
<a href="#">show cdp traffic</a>	Displays traffic information between devices gathered using CDP.

# show cdp traffic

To display information about the traffic gathered between devices using Cisco Discovery Protocol (CDP), use the **show cdp traffic** command in EXEC mode.

```
show cdp traffic [location node-id]
```

<b>Syntax Description</b>	<b>location node-id</b>	(Optional) Displays detailed CEF information for the designated node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
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<b>Command Modes</b>	EXEC
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	No modification.
	Release 3.3.0	No modification.

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

<b>Task ID</b>	<b>Task ID</b>	<b>Operations</b>
	cdp	read

**Examples** The following is sample output from the **show cdp traffic** command:

```
RP/0/RP0/CPU0:router# show cdp traffic

CDP counters :
  Packets output: 50662, Input: 40414
  Hdr syntax: 0, Chksum error: 0, Encaps failed: 0
  No memory: 0, Invalid packet: 0, Truncated: 0
  CDP version 1 advertisements output: 0, Input: 0
  CDP version 2 advertisements output: 50662, Input: 40414
  Unrecognize Hdr version: 0, File open failed: 0
```

Table 6 describes the significant fields shown in the display.

**Table 6** *show cdp traffic Field Descriptions*

<b>Field</b>	<b>Definition</b>
Packets output	Number of CDP advertisements sent by the local device. Note that this value is the sum of the CDP version 1 advertisements output and CDP version 2 advertisements output fields.
Input	Number of CDP advertisements received by the local device. Note that this value is the sum of the CDP version 1 advertisements input and CDP version 2 advertisements input fields.
Hdr syntax	Number of CDP advertisements having bad headers that have been received by the local device.
Chksum error	Number of times the checksum (verifying) operation failed on incoming CDP advertisements.
Encaps failed	Number of times CDP failed to send advertisements on an interface because of a failure caused by the bridge port of the local device.
No memory	Number of times that the local device did not have enough memory to store the CDP advertisements in the advertisement cache table when the device was attempting to assemble advertisement packets for transmission and parse them when receiving them.
Invalid packet	Number of invalid CDP advertisements received and sent by the local device.
Truncated	Number of times truncated CDP advertisements were sent because there was not enough space in the CDP packet to hold all CDP Type-Length-Values (TLVs).
CDP version 1 advertisements output	Number of CDP version 1 advertisements sent by the local device.
Input	Number of CDP version 1 advertisements received by the local device.
CDP version 2 advertisements output	Number of CDP version 2 advertisements sent by the local device.
Input	Number of CDP version 2 advertisements received by the local device.
Unrecognize Hdr version	Number of packets received from a CDP version that was outside the current configuration.
File open failed	Number of times that CDP failed to connect to one of the underlying services it uses.

Related Commands	Command	Description
	<a href="#">show cdp</a>	Displays global CDP information, including timer and hold-time information.
	<a href="#">show cdp entry</a>	Displays information about a neighbor device listed in the CDP table.
	<a href="#">show cdp interface</a>	Displays information about the interfaces on which CDP is enabled.
	<a href="#">show cdp neighbors</a>	Displays information about neighboring devices using CDP.

■ show cdp traffic