



# Cisco Discovery Protocol (CDP) Commands

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This module 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, see the *Implementing CDP on Cisco IOS XR Software* module in *System Management Configuration Guide for Cisco CRS Routers* .

- [cdp](#), on page 2
- [cdp advertise v1](#), on page 4
- [cdp holdtime](#), on page 6
- [cdp log adjacency changes](#), on page 7
- [cdp timer](#), on page 8
- [clear cdp counters](#), on page 9
- [clear cdp table](#), on page 10
- [show cdp](#), on page 12
- [show cdp entry](#), on page 14
- [show cdp interface](#), on page 16
- [show cdp neighbors](#), on page 18
- [show cdp traffic](#), on page 21

# cdp

To enable the Cisco Discovery Protocol (CDP) globally or on an 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**

|                           |  |
|---------------------------|--|
| <b>Syntax Description</b> | This command has no keywords or arguments. |
|---------------------------|--|

|                        |                  |
|------------------------|------------------|
| <b>Command Default</b> | CDP is disabled. |
|------------------------|------------------|

|                      |                         |
|----------------------|-------------------------|
| <b>Command Modes</b> | Interface configuration |
|----------------------|-------------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>   |
|------------------------|----------------|---|
|                        | Release 2.0    | This command was introduced.                                |
|                        | Release 3.2    | The <b>enable</b> and <b>disable</b> keywords were removed. |

|                         |   |
|-------------------------|---|
| <b>Usage Guidelines</b> | To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance. |
|-------------------------|---|

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.

The following interface types do not support CDP:

- 802.1Q VLAN subinterfaces
- ATM interfaces and ATM subinterfaces
- Bundle Interfaces
- Loopback interfaces
- Service interfaces
- Tunnel Interfaces

| <b>Task ID</b> | <b>Task ID</b> | <b>Operations</b> |
|----------------|----------------|-------------------|
|                | cdp            | read,<br>write    |

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 an interface:

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

### Related Topics

[show cdp](#), on page 12

## 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 the appropriate 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]**

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

**Command Default** Version 2 is enabled.

**Command Modes** Global Configuration mode

| Command History | Release     | Modification                       |
|-----------------|-------------|------------------------------------|
|                 | Release 2.0 | This command was introduced.       |
|                 | Release 3.0 | The <b>v2</b> keyword was removed. |

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

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.

| Task ID | Task ID | Operations     |
|---------|---------|----------------|
|         | cdp     | read,<br>write |

The following example shows how to set a networking device to send and receive only CDPv1 advertisements:

```
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 Topics**

[cdp](#), on page 2

[show cdp](#), on page 12

# 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 the appropriate configuration mode. To remove the **cdp holdtime** 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> Holdtime to be sent in the CDP update packets, in seconds. Range is 10 to 255. |
|---------------------------|---|

|                        |                      |
|------------------------|----------------------|
| <b>Command Default</b> | <i>seconds</i> : 180 |
|------------------------|----------------------|

|                      |                      |
|----------------------|----------------------|
| <b>Command Modes</b> | Global configuration |
|----------------------|----------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|------------------------|----------------|------------------------------|
|                        | Release 3.2    | This command was introduced. |

|                         |   |
|-------------------------|---|
| <b>Usage Guidelines</b> | To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance. |
|-------------------------|---|

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

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

| <b>Task ID</b> | <b>Task ID</b> | <b>Operations</b> |
|----------------|----------------|-------------------|
|                | cdp            | read,<br>write    |

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 holdtime 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
```

## Related Topics

[cdp timer](#), on page 8

[show cdp](#), on page 12

# cdp log adjacency changes

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

**cdp log adjacency changes**  
**no cdp log adjacency changes**

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

**Command Default** CDP adjacency table logging is disabled.

**Command Modes** Global Configuration mode

| Command History | Release       | Modification                 |
|-----------------|---------------|------------------------------|
|                 | Release 3.3.0 | This command was introduced. |

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

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

| Task ID | Task ID | Operations     |
|---------|---------|----------------|
|         | cdp     | read,<br>write |

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 neighbor 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 Topics

[show cdp](#), on page 12

# cdp timer

To specify how often the software sends Cisco Discovery Protocol (CDP) updates, use the **cdp timer** command in the appropriate configuration mode. To remove the **cdp timer** 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, in seconds. Range is 5 to 254. The default is 60. |
|---------------------------|--|

|                        |                     |
|------------------------|---------------------|
| <b>Command Default</b> | <i>seconds</i> : 60 |
|------------------------|---------------------|

|                      |                           |
|----------------------|---------------------------|
| <b>Command Modes</b> | Global Configuration mode |
|----------------------|---------------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|------------------------|----------------|------------------------------|
|                        | Release 2.0    | This command was introduced. |

|                         |   |
|-------------------------|---|
| <b>Usage Guidelines</b> | To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance. |
|-------------------------|---|

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,<br>write    |

The following example shows how to set the CDP timer to 80 seconds, which is less frequent than the default setting of 60 seconds:

```
RP/0/RP0/CPU0:router (config) # cdp timer 80
```

## Related Topics

[cdp holdtime](#), on page 6

[show cdp](#), on page 12



# 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**

| <b>Syntax Description</b> | <b>location node-id</b> Clears CDP traffic counters for the designated node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.  |         |              |             |                              |
|---------------------------|---|---------|--------------|-------------|------------------------------|
| <b>Command Default</b>    | The counters are set to zero.   |         |              |             |                              |
| <b>Command Modes</b>      | EXEC  |         |              |             |                              |
| <b>Command History</b>    | <table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 2.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>   | Release | Modification | Release 2.0 | This command was introduced. |
| Release                   | Modification  |         |              |             |                              |
| Release 2.0               | This command was introduced.  |         |              |             |                              |
| <b>Usage Guidelines</b>   | To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance. |         |              |             |                              |
| <b>Task ID</b>            | <table border="1"> <thead> <tr> <th>Task ID</th> <th>Operations</th> </tr> </thead> <tbody> <tr> <td>cdp</td> <td>read,<br/>write</td> </tr> </tbody> </table>  | Task ID | Operations   | cdp         | read,<br>write               |
| Task ID                   | Operations  |         |              |             |                              |
| cdp                       | read,<br>write  |         |              |             |                              |

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 Topics

[show cdp traffic](#), on page 21

[clear cdp table](#), on page 10

## 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*

| <b>Syntax Description</b> | <b>location</b> <i>node-id</i> 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.   |         |              |             |                              |
|---------------------------|--|---------|--------------|-------------|------------------------------|
| <b>Command Default</b>    | No default behavior or values  |         |              |             |                              |
| <b>Command Modes</b>      | EXEC   |         |              |             |                              |
| <b>Command History</b>    | <table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 2.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>  | Release | Modification | Release 2.0 | This command was introduced. |
| Release                   | Modification   |         |              |             |                              |
| Release 2.0               | This command was introduced.   |         |              |             |                              |
| <b>Usage Guidelines</b>   | <p>To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.</p> <p>Use the <b>clear cdp table</b> 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 <b>show cdp</b> command output.</p> |         |              |             |                              |
| <b>Task ID</b>            | <table border="1"> <thead> <tr> <th>Task ID</th> <th>Operations</th> </tr> </thead> <tbody> <tr> <td>cdp</td> <td>read,<br/>write</td> </tr> </tbody> </table>   | Task ID | Operations   | cdp         | read,<br>write               |
| Task ID                   | Operations   |         |              |             |                              |
| cdp                       | read,<br>write   |         |              |             |                              |

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 Topics

[show cdp](#), on page 12

[show cdp neighbors](#), on page 18

# show cdp

To display global Cisco Discovery Protocol (CDP) information, including CDP version, timer, and holdtime information, use the **show cdp** command in

EXEC

mode.

## show cdp

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

**Command Default** No default behavior or values

**Command Modes** EXEC

| Release       | Modification                 |
|---------------|------------------------------|
| Release 2.0   | This command was introduced. |
| Release 3.0   | No modification.             |
| Release 3.2   | No modification.             |
| Release 3.3.0 | No modification.             |
| Release 3.4.0 | No modification.             |
| Release 3.5.0 | No modification.             |
| Release 3.6.0 | No modification.             |
| Release 3.7.0 | No modification.             |
| Release 3.8.0 | No modification.             |
| Release 3.9.0 | No modification.             |

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

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

| Task ID | Task ID | Operations |
|---------|---------|------------|
|         | cdp     | read       |

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

```
RP/0/RP0/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: 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 Topics

- [cdp advertise v1](#), on page 4
- [cdp holdtime](#), on page 6
- [cdp timer](#), on page 8
- [show cdp entry](#), on page 14
- [show cdp neighbors](#), on page 18
- [show cdp traffic](#), on page 21
- [clear cdp table](#), on page 10
- [show cdp interface](#), on page 16

## 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.  |

**Command Default** This command displays information about a particular device that has been discovered by CDP.

**Command Modes** EXEC

| Command History | Release     | Modification                 |
|-----------------|-------------|------------------------------|
|                 | Release 2.0 | This command was introduced. |

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

| Task ID | Task ID | Operations     |
|---------|---------|----------------|
|         | cdp     | read,<br>write |

The following example shows sample output from the **show cdp entry** command. Information about device ID, address, platform, interface, holdtime, 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: 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 in <i>rack / slot / module / port</i> notation.   |
| 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 Topics**

- [show cdp](#), on page 12
- [show cdp neighbors](#), on page 18
- [show cdp traffic](#), on page 21
- [show cdp interface](#), on page 16

# show cdp interface

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

**show cdp interface** [{*type interface-path-id* | **location** *node-id*}]

|                           |                                |   |
|---------------------------|--------------------------------|---|
| <b>Syntax Description</b> | <i>type</i>                    | (Optional) Interface type. For more information, use the question mark (?) online help function.  |
|                           | <i>interface-path-id</i>       | (Optional) Physical interface or virtual interface.   |
|                           | <b>Note</b>                    | Use the <b>show interfaces</b> command to see a list of all interfaces currently configured on the router.  |
|                           |                                | For more information about the syntax for the router, use the question mark (?) online help function.   |
|                           | <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. |

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

**Command Modes** EXEC

|                        |                |                              |
|------------------------|----------------|------------------------------|
| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|                        | Release 2.0    | This command was introduced. |

**Usage Guidelines** To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

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.

|                |                |                   |
|----------------|----------------|-------------------|
| <b>Task ID</b> | <b>Task ID</b> | <b>Operations</b> |
|                | cdp            | read,<br>write    |

The following example shows sample output from the **show cdp interface** command. Information about the status, CDP timer, and holdtime 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 example shows sample output from the **show cdp interface** command with an interface specified. Information about the status, CDP timer, and holdtime settings is displayed for Packet-over-SONET/SDH (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: show cdp interface Field Descriptions**

| Field                                | Description   |
|--------------------------------------|---|
| 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 Topics

- [show cdp](#), on page 12
- [show cdp entry](#), on page 14
- [show cdp neighbors](#), on page 18
- [show cdp traffic](#), on page 21

# 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 interface-path-id* | **location** *node-id*] [**detail**]

## Syntax Description

*type* (Optional) Interface type. For more information, use the question mark ( ? ) online help function.

*interface-path-id* (Optional) Physical interface or virtual interface.

**Note** Use the **show interfaces** command to see a list of all interfaces currently configured on the router.

For more information about the syntax for the router, use the question mark ( ? ) online help function.

**location** *node-id* (Optional) Displays detailed CDP information for the designated node. The *node-id* argument is entered in the *rack/slot/module* notation.

**detail** (Optional) Displays detailed information about a neighbor or neighbors, including network address, enabled protocols, holdtime, and software version. The output includes information about both IPv4 and IPv6 addresses.

## Command Default

No default behavior or values

## Command Modes

EXEC

## Command History

| Release     | Modification   |
|-------------|--|
| Release 2.0 | This command was introduced.   |
| Release 3.2 | When used with the <b>detail</b> keyword, the output was modified to display IPv6 neighbors. |

## Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

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

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

| Task ID | Task ID | Operations |
|---------|---------|------------|
|         | cdp     | read       |

The following example shows 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
TBA04110127       Gi0/7/0/0      173        T S          WS-C6506   3/9
cisco_1           Gi0/7/0/2      171        R            CRS-1
                  Gi0/4/0/2
```

**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.  |
| Capability       | Type of the device listed in the CDP Neighbors table. Values are as follows:<br>R—Router<br>T—Transparent bridge<br>B—Source-routing bridge<br>S—Switch<br>H—Host<br>I—Internet Group Management Protocol (IGMP) device<br>r—Repeater |
| Platform         | Product number of the device.   |
| Port ID          | Protocol and port number of the device.   |

The following examples illustrates sample output for IPv4 and IPv6 neighbors from the **show cdp neighbors** command with the **detail** keyword:

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

```

-----
Device ID: uut-user
SysName : uut-user
Entry address(es):
IPv4 address: 10.0.0.1
IPv6 address: 1::1
IPv6 address: 2::2
Platform: cisco 12008/GRP, Capabilities: Router
Interface: Gi0/4/0/3
Port ID (outgoing port): Gi0/2/0/3
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: 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 in Connectionless Network Service (CLNS) protocol conventions.                           |
| Platform              | Product name and number of the neighbor device.   |
| 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 Topics**

- [show cdp](#), on page 12
- [show cdp entry](#), on page 14
- [show cdp traffic](#), on page 21
- [show cdp interface](#), on page 16

# 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</b> <i>node-id</i> (Optional) Displays CDP information for the CDP packets sent and received on the designated node only. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.                 |                              |
| <b>Command Default</b>    | Displays CDP information aggregated across all nodes.   |                              |
| <b>Command Modes</b>      | EXEC  |                              |
| <b>Command History</b>    | <b>Release</b>  | <b>Modification</b>          |
|                           | Release 2.0   | This command was introduced. |
| <b>Usage Guidelines</b>   | To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance. |                              |
| <b>Task ID</b>            | <b>Task ID</b>  | <b>Operations</b>            |
|                           | cdp   | read                         |

The following example illustrates 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: show cdp traffic Field Descriptions

| Field                               | Definition  |
|-------------------------------------|---|
| 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 field and the CDP version 2 advertisements output field.  |
| Input                               | Number of CDP advertisements received by the local device. Note that this value is the sum of the CDP version 1 advertisements input field and the CDP version 2 advertisements input field.  |
| 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 Topics**

- [show cdp](#), on page 12
- [show cdp entry](#), on page 14
- [show cdp neighbors](#), on page 18
- [show cdp interface](#), on page 16