Cisco IOS Cisco Discovery Protocol Command Reference

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cdp advertise-v2

To enable Cisco Discovery Protocol Version 2 advertising functionality on a device, use the **cdp advertise-v2** command in global configuration mode. To disable advertising Cisco Discovery Protocol Version 2 functionality, use the **no** form of the command.

cdp advertise-v2

no cdp advertise-v2

Syntax Description

This command has no arguments or keywords.

Command Default

Enabled

Command Modes

Global configuration

Command History

Release	Modification
12.0(3)T	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

Cisco Discovery Protocol Version 2 has three additional type, length, values (TLVs): VTP Management Domain Name, Native VLAN, and full/half-Duplex.

Examples

In the following example, Cisco Discovery Protocol Version 2 advertisements are disabled on the router:

```
Router# show cdp

Global CDP information:
        Sending CDP packets every 60 seconds
        Sending a holdtime value of 180 seconds
        Sending CDPv2 advertisements is  enabled
Router# configure terminal
Router(config)# no cdp advertise-v2
Router(config)# end

Router# show cdp

Global CDP information:
        Sending CDP packets every 60 seconds
        Sending a holdtime value of 180 seconds
        Sending CDPv2 advertisements is not enabled
```

Related Commands

Command	Description
cdp enable	Enables Cisco Discovery Protocol on a supported interface.
cdp run	Reenables Cisco Discovery Protocol on a Cisco device.

cdp enable

To enable Cisco Discovery Protocol on an interface, use the **cdp enable** command in interface configuration mode. To disable Cisco Discovery Protocol on an interface, use the **no**form of this command.

cdp enable

no cdp enable

Syntax Description

This command has no arguments or keywords.

Command Default

This command is enabled at the global configuration level and is supported on all interfaces.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.1(2)SNG	This command was implemented on Cisco ASR 901 Series Aggregation Services Routers.
15.2(02)SA	This command was implemented on the Cisco ME 2600X Series Ethernet Access Switches.

Usage Guidelines

Cisco Discovery Protocol is enabled by default at the global level and on each supported interface in order to send or receive Cisco Discovery Protocol information. However, some interfaces, such as ATM interfaces, do not support Cisco Discovery Protocol.

Note The **cdp enable**, **cdp timer**, and **cdp run** commands affect the operation of the IP on demand routing feature (that is, the **router odr** global configuration command). For more information on the **router odr** command, see the "On-Demand Routing Commands" chapter in the *Cisco IOS IP Command Reference* , *Volume 2 of 3: Routing Protocols* document.

Examples

In the following example, Cisco Discovery Protocol is disabled on Ethernet interface 0 only:

```
Router# show cdp

Global CDP information:
        Sending CDP packets every 60 seconds
        Sending a holdtime value of 180 seconds
        Sending CDPv2 advertisements is  enabled
Router# configure terminal
Router(config)# interface ethernet 0
Router(config-if)# no cdp enable
```

Related Commands

Command	Description
cdp run	Reenables Cisco Discovery Protocol on a Cisco device.
cdp timer	Specifies how often the Cisco IOS software sends Cisco Discovery Protocol updates.
router odr	Enables on-demand routing on a hub router.

cdp filter-tlv-list

To apply a Cisco Discovery Protocol type, length, value (TLV) list globally or on an interface, use the **cdp filter-tlv-list** command in global or interface configuration mode. To remove a list, use the **no** form of this command.

cdp filter-tlv-list *list-name*

no cdp filter-tlv-list *list-name*

Syntax Description

list-name	Name of the TLV list.

Command Default

A TLV list is not applied.

Command Modes

Global configuration (config)

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Release 3.10S	This command was introduced.

Usage Guidelines

Two Cisco Discovery Protocol TLV lists cannot be configured on the same interface.

To configure a new TLV list, remove the previously configured TLV list to avoid error messages.

If a TLV list is configured globally and at an interface level, the TLV list configured on the interface has a higher priority.

Examples

The following example shows how to configure a Cisco Discovery Protocol TLV list globally:

```
Device> enable
Device# configure terminal
Device(config)# cdp filter-tlv-list AList
```

The following example shows how to configure a Cisco Discovery Protocol TLV list at the interface level:

```
Device> enable
Device# configure terminal
Device(config)# interface ethernet 0/9
Device(config-if)# cdp filter-tlv-list AList
```

Related Commands

Command	Description
cdp tlv-list	Creates a list of Cisco Discovery Protocol TLV fields that can be filtered during Cisco Discovery Protocol transmission.
show cdp tlv-list	Displays information about Cisco Discovery Protocol TLV lists.

cdp holdtime

To specify the amount of time the receiving device should hold a Cisco Discovery Protocol packet from the router before discarding it, use the **cdp holdtime** command in global configuration mode. To revert to the default setting, use the **no**form of this command.

cdp holdtime *seconds*

no cdp holdtime

Syntax Description

seconds	Specifies the hold time to be sent in the Cisco Discovery Protocol update packets. The default is 180 seconds.

Command Default

180 seconds

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

Cisco Discovery Protocol packets are sent with a time to live, or hold time, value. The receiving device will discard the Cisco Discovery Protocol information in the Cisco Discovery Protocol packet after the hold time has elapsed.

You can set the hold time lower than the default setting of 180 seconds if you want the receiving devices to update their Cisco Discovery Protocol information more rapidly.

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

Examples

In the following example, the Cisco Discovery Protocol packets being sent from the router are configured with a hold time of 60 seconds.

```
Router(config)# cdp holdtime 60
```

Related Commands

Command	Description
cdp timer	Specifies how often the Cisco IOS software sends Cisco Discovery Protocol updates.
show cdp	Displays global Cisco Discovery Protocol information, including timer and hold-time information.

cdp log mismatch duplex

To display the log of duplex mismatches generated by the Cisco Discovery Protocol on Ethernet interfaces, use the **cdp log mismatch duplex** command in global configuration mode or in interface configuration mode. To disable the display of duplex messages, use the **no** form of this command.

cdp log mismatch duplex

no cdp log mismatch duplex

Syntax Description

This command has no arguments or keywords.

Command Default

Duplex mismatches are displayed for all Ethernet interfaces by default.

Command Modes

Global configuration

Interface configuration

Command History

Release	Modification
12.0	This command was introduced.

Usage Guidelines

Duplex mismatches can occur only on Ethernet interfaces.

When you enter the **cdp log mismatch duplex** command in global configuration mode, duplex mismatches are displayed for all Ethernet interfaces on the device. If the command is disabled in global configuration mode, the command cannot be configured in interface configuration mode. When you enter the **cdp log mismatch duplex** command in interface configuration mode, only duplex mismatches for the specified Ethernet interface are displayed.

To enable reporting of duplex mismatches, issue the **cdp log mismatch duplex** command in global configuration mode. If the command was previously disabled under a specified interface, issue the command in interface configuration mode for that interface.

To disable reporting of duplex mismatches globally, issue the **no cdp log mismatch duplex** command in global configuration mode. To disable reporting duplex mismatches for a specified Ethernet interface, use the **no cdp log mismatch duplex** command in interface configuration mode.

Examples

The following example shows how to enable the display of duplex messages from all Ethernet interfaces on a router:

```
Router(config)# cdp log mismatch duplex
```

The following example shows how to enable the display of duplex messages that may be generated from only Ethernet interface 2/1:

```
Router(config)# interface ethernet2/1
Router(config-if)# cdp log mismatch duplex
```

The following is sample output from the **show running-config** command. The bold text in the output shows that the **cdp log mismatch duplex**command is disabled globally.

```
Router# show running-config

version 12.2
hostname Router
!
interface Ethernet2/0
no ip address
duplex half
interface Ethernet2/1
no ip address
duplex half
!
no cdp log mismatch duplex
!
line con 0
line aux 0
```

The following is sample output from the **show running-config** command. The bold text in the output shows that the **cdp log mismatch duplex** command is disabled under a specific interface.

```
Router# show running-config

version 12.2
hostname Router
!
interface Ethernet2/0
no ip address
duplex half
no cdp log mismatch duplex
interface Ethernet2/1
no ip address
duplex half
!!
line con 0
line aux 0
line vty 0 4
```

Related Commands

Command	Description
cdp enable	Enables Cisco Discovery Protocol on a supported interface.
cdp run	Reenables Cisco Discovery Protocol on a Cisco device.

cdp run

To enable Cisco Discovery Protocol, use the **cdp run**command in global configuration mode. To disable Cisco Discovery Protocol, use the **no**form of this command.

cdp run

no cdp run

Syntax Description

This command has no arguments or keywords.

Command Default

This command is enabled on all the platforms except for the Cisco 10000 Series Edge Services Router platform.

Command Modes

Global configuration (config)

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.1(2)SNG	This command was implemented on the Cisco ASR 901 Series Aggregation Services Routers.
15.2(02)SA	This command was implemented on the Cisco ME 2600X Series Ethernet Access Switches.

Usage Guidelines

Cisco Discovery Protocol is enabled by default on all platforms except the Cisco 10000 Series Edge Services Router, which means Cisco IOS software receives Cisco Discovery Protocol information. Cisco Discovery Protocol also is enabled on supported interfaces by default. To disable Cisco Discovery Protocol on an interface, use the **no cdp enable** command in interface configuration mode.

The **show running-config** command lists **no cdp run** when Cisco Discovery Protocol is disabled globally, which is not the default behavior. As a result of changes made for the Cisco 10000 platform, the **show running-config** command will list the **cdp run** command when Cisco Discovery Protocol is enabled globally.

Note Because on-demand routing (ODR) uses Cisco Discovery Protocol, the **cdp enable**, **cdp timer**, and **cdp run** commands affect the operation of the **router odr** global configuration command. For more information about the **router odr** command, see the *Cisco IOS IP Command Reference, Volume 2 of 3: Routing Protocols* document.

Examples

In the following example, Cisco Discovery Protocol is disabled globally, and then the user attempts to enable it on the Ethernet interface 0:

```
Router(config)# no cdp run
Router(config)# end
Router# show cdp

% CDP is not enabled
Router# configure terminal
Router(config)# interface ethernet0
Router(config-if)# cdp enable
% Cannot enable CDP on this interface, since CDP is not running
```

Related Commands

Command	Description
cdp enable	Enables Cisco Discovery Protocol on a supported interface.
cdp holdtime	Specifies the amount of time that a receiving device should hold a Cisco Discovery Protocol packet before discarding it.
cdp timer	Specifies how often the Cisco IOS software sends Cisco Discovery Protocol updates.
router odr	Enables ODR on the hub router.

cdp source-interface

To configure the Cisco Discovery Protocol source interface, use the **cdp source-interface** command in global configuration mode.

cdp source-interface *type number*

no cdp source-interface

Syntax Description

type	Type of interface to be configured.
number	Port, connector, or interface card number. These numbers were assigned at the time of installation or when added to a system, and can be displayed with the **show interfaces** command.

Command Default

No Cisco Discovery Protocol source-interface is specified.

Command Modes

Global configuration

Command History

Release	Modification
12.2(11)T	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Usage Guidelines

Use of this command ensures that Cisco Discovery Protocol packets use the IP address that has been previously assigned to an interface. Without this command, Cisco Discovery Protocol uses the IP address of the first available interface.

The conditions that an interface should satisfy to be the source interface are as follows:

- It should have an IP address.
- Its status should be UP.
- It should not be an IP unnumbered interface.

When Cisco Discovery Protocol is enabled and the Cisco Discovery Protocol source interface has not been configured, then Cisco Discovery Protocol uses the IP address of the first available interface.

Examples

The following example configures Cisco Discovery Protocol to use the IP address that has been assigned to interface loopback 1.

```
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# cdp source-interface loopback 1
Router(config)# exit
Router#
```

Related Commands

Command	Description
cdp enable	Enables Cisco Discovery Protocol on a supported interface.
cdp run	Reenables Cisco Discovery Protocol on a Cisco device.

cdp timer

To specify how often the Cisco IOS software sends Cisco Discovery Protocol updates, use the **cdp timer** command in global configuration mode. To revert to the default setting, use the **no**form of this command.

cdp timer *seconds*

no cdp timer

Syntax Description

seconds	Integer that specifies how often, in seconds, the Cisco IOS software sends Cisco Discovery Protocol updates. The default is 60 seconds.

Command Default

The default setting is 60 seconds.

Command Modes

Global configuration

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Usage Guidelines

The trade-off with sending more frequent Cisco Discovery Protocol updates to provide up-to-date information, is that bandwidth is used more often.

Note The **cdp enable**, **cdp timer**, and **cdp run** commands affect the operation of the IP on demand routing feature (that is, the **router odr** global configuration command). For more information on the **router odr** command, see the "On-Demand Routing Commands" chapter in the Cisco IOS IP Command Reference, Volume 2 of 3: Routing Protocols document.

Examples

In the following example, Cisco Discovery Protocol updates are sent every 80 seconds, less frequently than the default setting of 60 seconds. You might want to make this change if you are concerned about preserving bandwidth.

```
cdp timer 80
```

Related Commands

Command	Description
cdp enable	Enables Cisco Discovery Protocol on a supported interface.
cdp holdtime	Specifies the amount of time the receiving device should hold a Cisco Discovery Protocol packet from your router before discarding it.
cdp timer	Specifies how often the Cisco IOS software sends Cisco Discovery Protocol updates.
router odr	Enables ODR on the hub router.
show cdp	Displays global Cisco Discovery Protocol information, including timer and hold-time information.

cdp tlv-list

To create a list of Cisco Discovery Protocol type, length, value (TLV) fields that can be filtered during Cisco Discovery Protocol transmission, use the **cdp tlv-list** command in global configuration mode. To remove the list, use the **no** form of this command.

cdp tlv-list *list-name*

no cdp tlv-list *list-name*

Syntax Description

list-name	Name of the TLV list.

Command Default

A TLV list is not configured.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Release 3.10S	This command was introduced.

Usage Guidelines

Use the **cdp tlv-list** command to create a TLV list and enter TLV list configuration mode.

A TLV list can be filtered during Cisco Discovery Protocol transmission when the list is applied globally or on an interface.

If a TLV list is configured on an interface or globally and is changed, the change is reflected when the next Cisco Discovery Protocol packet is sent.

If a TLV is configured in TLV list submode, execute the **?** (Help) command to display TLVs that are supported in the Cisco software release and that can be blocked. The **?** command also displays TLVs that are not yet added in the TLV list.

The number of TLVs that can be blocked depends on the TLVs supported on a particular Cisco software release.

Examples

The following example shows how to create a list of Cisco Discovery Protocol TLV fields:

```
Device> enable
Device# configure terminal
Device(config)# cdp tlv-list AList
```

The following example shows how to add TLVs to the list:

```
Device> enable
Device# configure terminal
```

```
Device(config)# cdp tlv-list AList
Device(config-tlv-list)# cos
Device(config-tlv-list)# platform
Device(config-tlv-list)# capability
```

Related Commands

Command	Description
cdp filter-tlv-list	Applies a Cisco Discovery Protocol TLV list globally or on an interface.
show cdp tlv-list	Displays information about Cisco Discovery Protocol TLV lists.

cdp tlv

To configure location support in Cisco Discovery Protocol, use the **cdp tlv** command in global configuration mode or interface configuration mode. To disable the location support configuration, use the **no** form of this command.

Command Syntax in Global Configuration Mode

cdp tlv {**app**| **location**| **location-server**}

no cdp tlv {**app**| **location**| **location-server**}

Command Syntax in Interface Configuration Mode

cdp tlv {**app** [**tlvtype** *tlvtype* **value** *value*]| **location**| **location-server**}

no cdp tlv {**app** [**tlvtype** *tlvtype* **value** *value*]| **location**| **location-server**}

Syntax Description

app	Enables application type, length, values (TLVs).
location	Enables location TLVs on Cisco Discovery Protocol messages.
location-server	Enables location-server TLVs on Cisco Discovery Protocol messages.
tlvtype *tlvtype*	(Optional) Configures application TLV type information. The range is from 1001 to 65535.
value *value*	Configures application TLV value information.

Command Default

Application TLVs, location TLVs, and location-server TLVs in Cisco Discovery Protocol are enabled.

Command Modes

Global configuration (config) Interface configuration (config-if)

Command History

Release	Modification
12.2(55)SE	This command was introduced.

Usage Guidelines

To enable location-based services, information on the exact location of endpoint devices in the network is very essential. The information on the location of endpoint devices is delivered through Cisco devices using the Cisco Discovery Protocol mechanism. To enable location support at the global level, use the **cdp tlv** command in global configuration mode. To enable location support on interfaces, use the **cdp tlv** command

in interface configuration mode. If application TLVs are enabled on all interfaces, the TLVs are sent on all interfaces. Location TLVs in v are enabled by default. You can disable the storage of location TLVs by using the **no cdp tlv location** command. When you use the **cdp tlv location** command in global configuration mode, Cisco Discovery Protocol starts sending periodic location information when the location TLV is enabled and the location information is available. When you use the **cdp tlv location** command in interface configuration mode, TLVs are sent along with the Cisco Discovery Protocol messages periodically.

Examples

The following example shows how to configure location support for application TLVs in Cisco Discovery Protocol at the global level:

```
Router(config)# cdp tlv app
```

The following example shows how to configure location support for application TLVs in Cisco Discovery Protocol at an interface level:

```
Router(config)# interface fastethernet 0
Router(config-if)#cdp tlv app tlvtype 1002 value loc1
```

Related Commands

Command	Description
show cdp tlv	Displays information about Cisco Discovery Protocol TLVs.

clear cdp counters

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

clear cdp counters

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Examples

The following example clears the Cisco Discovery Protocol counters. The **show cdp traffic**output shows that all of the traffic counters have been reset to zero.

```
Router# clear cdp counters
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, Fragmented: 0
```

Related Commands

Command	Description
clear cdp table	Clears the table that contains Cisco Discovery Protocol information about neighbors.
show cdp traffic	Displays traffic information from the Cisco Discovery Protocol table.

clear cdp table

To clear the table that contains Cisco Discovery Protocol information about neighbors, use the **clear cdp table** command in privileged EXEC mode.

clear cdp table

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC(#)

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Examples

The following example clears the Cisco Discovery Protocol table. The output of the **show cdp neighbors** command shows that all information has been deleted from the table.

```
Router# clear cdp table
CDP-AD: Deleted table entry for neon.cisco.com, interface Ethernet0
CDP-AD: Deleted table entry for neon.cisco.com, interface Serial0
Router# show cdp neighbors

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

Device ID        Local Intrfce     Holdtme    Capability  Platform  Port ID
```

Related Commands

Command	Description
show cdp neighbors	Displays information about neighbors.

show cdp

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

show cdp [**vlan** *vlan*]

Syntax Description

vlan *vlan*	(Optional) Specifies a VLAN. Limits the display of switch port information to the specified VLAN. Range: 1 to 4094.

Command Default

No default behavior or values.

Command Modes

EXEC (#) Privileged EXEC (>)

Command History

Release	Modification
10.3	This command was introduced.
12.0(3)T	The output of this command was modified to include Cisco Discovery Protocol Version 2 information.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
12.2(33)SXI	This command was changed to add the optional **vlan** *vlan* keyword and argument.

Usage Guidelines

Cisco IOS Release 12.2(33)SXI and later releases allow you to limit the display of switch port information to the specified VLAN.

Examples

The following example shows that the current router is sending Cisco Discovery Protocol advertisements every 1 minute (the default setting for the **cdp timer**global configuration command). Also shown is that the current router directs its neighbors to hold its Cisco Discovery Protocol advertisements for 3 minutes (the

default for the **cdp holdtime**global configuration command), and that the router is enabled to send Cisco Discovery Protocol Version 2 advertisements:

```
Router# show cdp

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

The following example shows how to limit the displayed Cisco Discovery Protocol information to a specific VLAN:

```
Router# show cdp vlan 11

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

The table below describes the significant fields shown in the display.

Table 1: show cdp Field Descriptions

Field	Definition
Sending Cisco Discovery Protocol packets every XX seconds	The interval (in seconds) between transmissions of Cisco Discovery Protocol advertisements. This field is controlled by the **cdp timer** command.
Sending a holdtime value of XX seconds	The amount of time (in seconds) the device directs the neighbor to hold a Cisco Discovery Protocol advertisement before discarding it. This field is controlled by the **cdp holdtime** command.
Sending Cisco Discovery Protocol Version 2 advertisements is enabled	The state of whether Cisco Discovery Protocol Version 2 type advertisements are enabled to be sent. Possible states are enabled or disabled. This field is controlled by the **cdp advertise v2** global configuration command.

Related Commands

Command	Description
cdp advertise-v2	Enables Cisco Discovery Protocol Version 2 advertising functionality on a device.
cdp holdtime	Specifies the amount of time the receiving device should hold a Cisco Discovery Protocol packet from your router before discarding it.
cdp timer	Specifies how often the Cisco IOS software sends Cisco Discovery Protocol updates.

Command	Description
show cdp entry	Displays information about a specific neighbor device listed in the Cisco Discovery Protocol table.
show cdp interface	Displays information about the interfaces on which Cisco Discovery Protocol is enabled.
show cdp neighbors	Displays detailed information about neighboring devices discovered using Cisco Discovery Protocol.
show cdp traffic	Displays information about traffic between devices gathered using Cisco Discovery Protocol.

show cdp entry

To display information about a specific neighboring device discovered using Cisco Discovery Protocol, use the **show cdp entry**command in privileged EXEC mode.

show cdp entry {*| *device-name* **[*]**} **[version] [protocol]**

Syntax Description

*	Displays all Cisco Discovery Protocol neighbors.
device-name *	Name of the neighbor about which you want information. You can enter an optional asterisk (*) at the end of a *device-name* as a wildcard. For example, entering **show cdp entry dev*** will match all device names that begin with **dev**.
version	(Optional) Limits the display to information about the version of software running on the router.
protocol	(Optional) Limits the display to information about the protocols enabled on a router.

Command Modes

Privileged EXEC

Command History

Release	Modification
10.3	This command was introduced.
12.2(8)T	Support for IPv6 address and address type information was added.
12.2(14)S	This command was integrated into Cisco IOS Release 12.2(14)S.
12.2(28)SB	This command was integrated into Cisco IOS Release 12.2(28)SB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(33)SXH	This command was integrated into Cisco IOS Release 12.2(33)SXH.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.

Examples

The following is sample output from the **show cdp entry**command. Information about the neighbor *device.cisco.com* is displayed, including device ID, protocols and addresses, platform, interface, hold time, and version.

```
Router# show cdp entry device.cisco.com

Device ID: device.cisco.com
Entry address(es):
  IP address: 10.1.17.24
  IPv6 address: FE80::203:E3FF:FE6A:BF81  (link-local)
  IPv6 address: 4000::BC:0:0:C0A8:BC06  (global unicast)
  CLNS address: 490001.1111.1111.1111.00
Platform: cisco 3640,  Capabilities: Router
Interface: Ethernet0/1,  Port ID (outgoing port): Ethernet0/1
Holdtime : 160 sec
Version :
Cisco Internetwork Operating System Software
IOS (tm) 3600 Software (C3640-A2IS-M), Experimental Version 12.2
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Wed 08-Aug-01 12:39 by joeuser
```

The table below describes the significant fields shown in the example.

Table 2: show cdp entry Field Descriptions

Field	Definition
Device ID: device.cisco.com	Name or ID of the device.
Entry address(es):	The IP, IPv6 link-local, IPv6 global unicast, and CLNS addresses.
Platform:	Platform information specific to the device.
Interface: Ethernet0/1, Port ID (outgoing port): Ethernet0/1	Information about the interface and port ID interface.
Holdtime:	Holdtime length in seconds.
Version:	Information about the software version.

The following is sample output from the **show cdp entry version** command. Only information about the version of software running on *device.cisco.com* is displayed.

```
Router# show cdp entry device.cisco.com version

Version information for device.cisco.com:
 Cisco Internetwork Operating System Software
IOS (tm) 3600 Software (C3640-A2IS-M), Experimental Version 12.2
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Wed 08-Aug-01 12:39 by joeuser
```

The following is sample output from the **show cdp entry protocol** command. Only information about the protocols enabled on *device.cisco.com* is displayed.

```
Router# show cdp entry device.cisco.com protocol
```

```
Protocol information for device.cisco.com:
  IP address: 10.1.17.24
  IPv6 address: FE80::203:E3FF:FE6A:BF81  (link-local)
  IPv6 address: 4000::BC:0:0:C0A8:BC06  (global unicast)
  CLNS address: 490001.1111.1111.1111.00
```

Related Commands

Command	Description
show cdp	Displays global Cisco Discovery Protocol information, including timer and hold-time information.
show cdp interface	Displays information about the interfaces on which Cisco Discovery Protocol is enabled.
show cdp neighbors	Displays detailed information about neighboring devices discovered using Cisco Discovery Protocol.
show cdp traffic	Displays traffic information from the Cisco Discovery Protocol table.

show cdp interface

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

show cdp interface [*type number*]

Syntax Description

type	(Optional) Type of interface about which you want information.
number	(Optional) Number of the interface about which you want information.

Command Modes

Privileged EXEC

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.2(02)SA	This command was implemented on the Cisco ME 2600X Series Ethernet Access Switches.

Examples

The following is sample output from the **show cdp interface**command. Status information and information about Cisco Discovery Protocol timer and hold-time settings is displayed for all interfaces on which Cisco Discovery Protocol is enabled.

```
Router# show cdp interface

Serial0 is up, line protocol is up, encapsulation is SMDS
  Sending CDP packets every 60 seconds
  Holdtime is 180 seconds
Ethernet0 is up, line protocol is up, encapsulation is ARPA
  Sending CDP packets every 60 seconds
  Holdtime is 180 seconds
```

The following is sample output from the **show cdp interface**command with an interface specified. Status information and information about Cisco Discovery Protocol timer and hold-time settings is displayed for Ethernet interface 0 only.

```
Router# show cdp interface ethernet 0

Ethernet0 is up, line protocol is up, encapsulation is ARPA
  Sending CDP packets every 60 seconds
  Holdtime is 180 seconds
```

Related Commands

Command	Description
show cdp	Displays global Cisco Discovery Protocol information, including timer and hold-time information.
show cdp entry	Displays information about a specific neighbor device or all neighboring devices discovered using Cisco Discovery Protocol
show cdp neighbors	Displays detailed information about neighboring devices discovered using Cisco Discovery Protocol
show cdp traffic	Displays traffic information from the Cisco Discovery Protocol table.

show cdp neighbors

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

show cdp neighbors [*type number*] **[detail]**

Syntax Description

type	(Optional) Interface type that is connected to the neighbors about which you want information; possible valid values are **ethernet**, **fastethernet**, **gigabitethernet**, **tengigabitethernet**, **port-channel**, and **vlan**.
number	(Optional) Number of the interface connected to the neighbors about which you want information.
detail	(Optional) Displays detailed information about a neighbor (or neighbors) including network address, enabled protocols, hold time, and software version.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
10.3	This command was introduced.
12.0(3)T	This command was modified. The output of this command using the **detail** keyword was expanded to include Cisco Discovery Protocol Version 2 information.
12.2(8)T	This command was modified. Support for IPv6 address and address type information was added.
12.2(14)S	This command was integrated into Cisco IOS Release 12.2(14)S. Support for IPv6 address and address type information was added.
12.2(14)SX	This command is supported in the Cisco IOS Release 12.2(14)SX. Support for this command was introduced on the Supervisor Engine 720.
12.2(17d)SXB	This command was modified. Support for this command was introduced on the Supervisor Engine 2.
12.2(28)SB	This command was integrated into Cisco IOS Release 12.2(28)SB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.

Release	Modification
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
12.4(25d)JAX01	This command was modified. The output of this command was modified to display the neighbor wireless LAN-Gigabit Ethernet port of the host device as "WGi" instead of "Gig."
15.2(02)SA	This command was implemented on the Cisco ME 2600X Series Ethernet Access Switches.

Usage Guidelines

The **vlan** keyword is supported in Cisco 7600 series devices that are configured with a Supervisor Engine 2.

The **port-channel** values are from 0 to 282; values from 257 to 282 are supported on the call switching module (CSM) and the firewall services module (FWSM) only.

Examples

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

```
Device# 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
device1      Eth 0          133      R           4500      Eth 0
device2      Eth 0          152      R           AS5200    Eth 0
device3      Eth 0          144      R           3640      Eth0/0
device4      Eth 0          141                  RP1       Eth 0/0
device5      Eth 0          164                  7206      Eth 1/0
```

The following sample output from the **show cdp neighbors** command displays details of the wireless LAN-Gigabit Ethernet port:

```
Device# 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
device6    Gig 0          157      R S I       C887VA-W- WGi 0
```

The table below describes the fields shown in the sample output.

Table 3: show cdp neighbors Field Descriptions

Field	Definition
Capability Codes	The type of device that can be discovered.
Device ID	The name of the neighbor device and either the MAC address or the serial number of this device.
Local Intrfce	The local interface through which this neighbor is connected.

Field	Definition
Holdtime	The remaining amount of time (in seconds) the current device will hold the Cisco Discovery Protocol advertisement from a sending device before discarding it.
Capability	The type of the device listed in the Cisco Discovery Protocol Neighbors table. Possible values are as follows: • R--Router • T--Transparent bridge • B--Source-routing bridge • S--Switch • H--Host • I--IGMP device • r--Repeater
Platform	The product number of the device.
Port ID	The interface and port number of the neighboring device.

The following is sample output for one neighbor from the **show cdp neighbors detail** command. Additional detail is shown about neighbors, including network addresses, enabled protocols, and software version.

```
Device# show cdp neighbors detail

Device ID: device.cisco.com
Entry address(es):
  IPv6 address: FE80::203:E3FF:FE6A:BF81  (link-local)
  IPv6 address: 4000::BC:0:0:C0A8:BC06  (global unicast)
Platform: cisco 3640,  Capabilities: Router
Interface: Ethernet0/1,  Port ID (outgoing port): Ethernet0/1
Holdtime : 160 sec
Version :
Cisco Internetwork Operating System Software
IOS (tm) 3600 Software (C3640-A2IS-M), Version 12.2(25)SEB4, RELE)
advertisement version: 2
Duplex Mode: half
Native VLAN: 42
VTP Management Domain: ‘Accounting Group’
```

The table below describes the fields shown in the display.

Table 4: show cdp neighbors detail Field Descriptions

Field	Definition
Device ID	The name of the neighbor device and either the MAC address or the serial number of this device.
Entry address(es)	A list of network addresses of neighbor devices.
IPv6 address: FE80::203:E3FF:FE6A:BF81 (link-local)	The network address of the neighbor device. The address can be in IP, IPv6, IPX, AppleTalk, DECnet, or Connectionless Network Service (CLNS) protocol conventions. IPv6 addresses are followed by one of the following IPv6 address types: • global unicast • link-local • multicast • site-local • V4 compatible **Note** For Cisco IOS Releases12.2(33)SXH3, Release 12.2(33)SXI and later releases, the command will not display the AppleTalk address.
Platform	The product name and number of the neighbor device.
Capabilities	The device type of the neighbor. This device can be a device, a bridge, a transparent bridge, a source-routing bridge, a switch, a host, an IGMP device, or a repeater.
Interface	The local interface through which this neighbor is connected.
Port ID	The interface and port number of the neighboring device.
Holdtime	The remaining amount of time (in seconds) the current device will hold the Cisco Discovery Protocol advertisement from a sending device before discarding it.
Version	The software version of the neighbor device.
advertisement version:	Version of Cisco Discovery Protocol that is being used for Cisco Discovery Protocol advertisements.

Field	Definition
Duplex Mode	The duplex state of connection between the current device and the neighbor device.
Native VLAN	The ID number of the VLAN on the neighbor device.
VTP Management Domain	A string that is the name of the collective group of VLANs associated with the neighbor device.

Related Commands

Command	Description
show cdp	Displays global Cisco Discovery Protocol information, including timer and hold-time information.
show cdp entry	Displays information about a specific neighbor device listed in the Cisco Discovery Protocol table.
show cdp interface	Displays information about the interfaces on which Cisco Discovery Protocol is enabled.
show cdp traffic	Displays information about traffic between devices gathered using Cisco Discovery Protocol.

show cdp tlv-list

To display information about a Cisco Discovery Protocol type, length, value (TLV) list, use the **show cdp tlv-list** command in privileged EXEC mode.

show cdp tlv-list { *list-name* | ***** }

Syntax Description

list-name	Name of a TLV list.
*****	Displays the configuration details of all TLV lists.

Command Modes

Privileged EXEC(#)

Command History

Release	Modification
Cisco IOS XE Release 3.10S	This command was introduced.

Examples

The following is sample output from the **show cdp tlv-list** command:

```
Device> enable
Device# show cdp tlv-list AList

Tlv-list : AList
 Cos
 Platform
 Capability
Applied on: Globally
Et0/9

Device# show cdp tlv-list *

Tlv-list : AList
 Cos
 Platform
 Capability
Applied on: Globally
Et0/9
Tlv-list : BList
 Version
 Platform
 Capability
Applied on: Globally
```

Table 5: show cdp tlv-list Field Descriptions

Field	Description
Tlv-list	List of Cisco Discovery Protocol TLV lists.

Field	Description
Applied on	List of interfaces on which the TLV lists are applied.

Related Commands

Command	Description
cdp filter-tlv-list	Applies a Cisco Discovery Protocol TLV list globally or on an interface.
cdp tlv-list	Creates a list of Cisco Discovery Protocol TLV fields that can be filtered during Cisco Discovery Protocol transmission.

show cdp tlv

To display information about Cisco Discovery Protocol type, length, values (TLVs), use the **show cdp tlv**command in privileged EXEC mode.

show cdp tlv {**app interface** *type number*| **location** [**all**| **civic**| **elin**] [**interface** *type number*]| **location-server** [**interface** *type number*]}

Syntax Description

app	Displays application TLVs stored in Cisco Discovery Protocol messages.
interface *type number*	Specifies the interface type and number.
location	Displays location information for TLVs.
all	(Optional) Displays location information for all TLVs.
civic	(Optional) Displays civic location information.
elin	(Optional) Displays emergency location identifier number (ELIN) location information.
location-server	Displays location-server information stored in Cisco Discovery Protocol for one interface or for all interfaces.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
12.2(55)SE	This command was introduced.

Usage Guidelines

You can use the **show cdp tlv** command to verify the TLVs configured on Cisco Discovery Protocol. The **show cdp tlv** command displays location-specific information for an interface, if an interface is specified; otherwise, it displays location-specific information for all interfaces. You can also choose to display location-specific information for civic, ELIN, or all TLVs.

Examples

The following example shows how to display location-specific information for all TLVs:

```
Router# show cdp tlv location civic interface gigabitEthernet 3/0/2

No CIVIC Location received from neighbor(switch1)
```

```
Interface (GigabitEthernet3/0/2), Civic country code: US
    CA type: 3, Len: 9, Value: bangalore
    CA type: 24, Len: 6, Value: 560087
    CA type: 25, Len: 18, Value: CessnaBusinessPark
    CA type: 34, Len: 13, Value: OuterRingRoad
```

The table below describes the significant fields shown in the display.

Table 6: show cdp tlv Field Descriptions

Field	Description
Interface	Displays the interface on which location support is configured.
CA type	Displays the civic address (CA) type.
Len	Displays the variable length of the civic address.
Value	Displays the application TLV value information.

Related Commands

Command	Description
cdp tlv	Configures location support in Cisco Discovery Protocol.

show cdp traffic

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

show cdp traffic

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Release	Modification
10.3	This command was introduced.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
15.2(02)SA	This command was implemented on the Cisco ME 2600X Series Ethernet Access Switches.

Examples

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

```
Router# show cdp traffic

Total packets output: 543, Input: 333
Hdr syntax: 0, Chksum error: 0, Encaps failed: 0
No memory: 0, Invalid: 0, Fragmented: 0
CDP version 1 advertisements output: 191, Input: 187
CDP version 2 advertisements output: 352, Input: 146
```

The table below describes the significant fields shown in the display.

Table 7: show cdp traffic Field Descriptions

Field	Definition
Total packets output	The number of Cisco Discovery Protocol advertisements sent by the local device. Note that this value is the sum of the Cisco Discovery Protocol Version 1 advertisements output and Cisco Discovery Protocol Version 2 advertisements output fields.

Field	Definition
Input	The number of Cisco Discovery Protocol advertisements received by the local device. Note that this value is the sum of the Cisco Discovery Protocol Version 1 advertisements input and Cisco Discovery Protocol Version 2 advertisements input fields.
Hdr syntax	The number of Cisco Discovery Protocol advertisements with bad headers, received by the local device.
Chksum error	The number of times the checksum (verifying) operation failed on incoming Cisco Discovery Protocol advertisements.
Encaps failed	The number of times Cisco Discovery Protocol failed to send advertisements on an interface because of a failure caused by the bridge port of the local device.
No memory	The number of times the local device did not have enough memory to store the Cisco Discovery Protocol advertisements in the advertisement cache table when the device was attempting to assemble advertisement packets for transmission and parse them when receiving them.
Invalid	The number of invalid Cisco Discovery Protocol advertisements received and sent by the local device.
Fragmented	The number of times fragments or portions of a single Cisco Discovery Protocol advertisement were received by the local device instead of the complete advertisement.
CDP version 1 advertisements output	The number of Cisco Discovery Protocol Version 1 advertisements sent by the local device.
Input	The number of Cisco Discovery Protocol Version 1 advertisements received by the local device.
CDP version 2 advertisements output	The number of Cisco Discovery Protocol Version 2 advertisements sent by the local device.
Input	The number of Cisco Discovery Protocol Version 2 advertisements received by the local device.

Related Commands

Command	Description
show cdp	Displays global Cisco Discovery Protocol information, including timer and hold-time information.
show cdp entry	Displays information about a specific neighbor device listed in the Cisco Discovery Protocol table.
show cdp interface	Displays information about the interfaces on which Cisco Discovery Protocol is enabled.
show cdp neighbors	Displays detailed information about neighboring devices discovered using Cisco Discovery Protocol.