

Cisco Discovery Protocol (CDP) Properties on Sx500 Series Stackable Switches

Objective

Cisco Discovery Protocol (CDP) is primarily used to obtain protocol addresses of neighboring devices and discover the platform of those devices. CDP can also be used to show information about the interface your router uses.

The objective of this document is to help configure Cisco Discovery Protocol Properties on Sx500 Series Stackable Switches.

To configure CDP on the switch the following configurations need to be completed:

1. Configure CDP properties, which is covered in this article.
2. Configure CDP for each interface, which can be done in the *Interface Settings* page.
3. Configure Smartport properties, which are covered in the article [Smartport Configuration on Sx500 Series Stackable Switches](#) (this is necessary if Auto Smartport is used to determine the capabilities of CDP devices).

Applicable Devices

- Sx500 Series Stackable Switches

Software Version

- 1.3.0.62

Cisco Discovery Protocol (CDP) Properties

Step 1. Log in to the web based configuration utility and choose **Administration > Discovery-CDP > Properties**. The *Properties* page opens:

CDP Status:	<input checked="" type="checkbox"/> Enable
CDP Frames Handling:	<input checked="" type="radio"/> Bridging <input type="radio"/> Filtering <input type="radio"/> Flooding
CDP Voice VLAN Advertisement:	<input checked="" type="checkbox"/> Enable
CDP Mandatory TLVs Validation:	<input type="checkbox"/> Enable
CDP Version:	<input type="radio"/> Version 1 <input checked="" type="radio"/> Version 2
⚠ CDP Hold Time:	<input type="radio"/> Use Default <input checked="" type="radio"/> User Defined <input type="text" value="150"/> sec. (Range: 10 - 255, Default: 180)
⚠ CDP Transmission Rate:	<input type="radio"/> Use Default <input checked="" type="radio"/> User Defined <input type="text" value="50"/> sec. (Range: 5 - 254, Default: 60)
Device ID Format:	<input checked="" type="radio"/> MAC Address <input type="radio"/> Serial Number
Source Interface:	<input type="radio"/> Use Default <input checked="" type="radio"/> User Defined
Interface:	Unit/Slot <input type="text" value="1/1"/> Port <input type="text" value="GE1"/>
Syslog Voice VLAN Mismatch:	<input checked="" type="checkbox"/> Enable
Syslog Native VLAN Mismatch:	<input checked="" type="checkbox"/> Enable
Syslog Duplex Mismatch:	<input checked="" type="checkbox"/> Enable

Step 2. (Optional) To enable CDP on the switch, check the **Enable** check box in the CDP Status field.

CDP Status:	<input checked="" type="checkbox"/> Enable
CDP Frames Handling:	<input checked="" type="radio"/> Bridging <input type="radio"/> Filtering <input type="radio"/> Flooding

Timesaver: If you follow Step 2, CDP Frame Handling Settings are disabled automatically. Skip to Step 4.

Step 3. In the CDP Frame Handling field, click the radio button which indicates the action to be taken if a packet is received with the selected criteria:

- Bridging — Forwards incoming CDP packets based on the VLAN.
- Filtering — Deletes incoming CDP packets.
- Flooding — Forwards incoming CDP packets to all the ports other than ingress ports.

Step 4. In the CDP Voice VLAN Advertisement field, check the **Enable** check box to enable the voice VLAN advertisements on all enabled CDP ports.

CDP Voice VLAN Advertisement:	<input checked="" type="checkbox"/> Enable
CDP Mandatory TLVs Validation:	<input type="checkbox"/> Enable
CDP Version:	<input type="radio"/> Version 1 <input checked="" type="radio"/> Version 2
⚙️ CDP Hold Time:	<input type="radio"/> Use Default <input checked="" type="radio"/> User Defined <input type="text" value="150"/> sec. (Range: 10 - 255, Default: 180)
⚙️ CDP Transmission Rate:	<input type="radio"/> Use Default <input checked="" type="radio"/> User Defined <input type="text" value="50"/> sec. (Range: 5 - 254, Default: 60)
Device ID Format:	<input checked="" type="radio"/> MAC Address <input type="radio"/> Serial Number

Step 5. In the CDP Mandatory TLV's Validation field, check the **Enable** check box to discard the incoming CDP packets that do not contain the mandatory Type Length Values (TLVs) and to increment the invalid error counter.

Step 6. In the CDP Version field, click the radio button of the desired CDP version.

- Version 1 — This is the first version of CDP which was used for the discovery of Cisco devices in the network. This version is mainly used for backward compatibility.
- Version 2 — This is the most recent version of CDP which has enhanced features such as rapid reporting mechanism, which is used to track down errors and minimize costly downtime. It allows you to track instances even if the native VLAN ID or port duplex states do not match between connecting devices. This is the default version on all switches.

Step 7. In the CDP Hold Time field, click the radio button of the desired way to assign time for holding CDP packets before discarding them:

- Use Default — This assigns the default value. The default time is 180 seconds.
- User Defined — Allows you to enter the desired time in seconds. It should be between 10 and 255 seconds.

Step 8. In the CDP Transmission Rate field, click the radio button of the desired way to assign the rate at which CDP advertisements should be sent.

- Use Default — This assigns the default value. The default rate is 60 seconds.
- User Defined — Allows you to enter the desired rate in seconds. It should be between 5 and 254 seconds.

Step 9. In the Device ID format field, click the radio button of the desired format of the device ID.

Step 10. In the Source Interface field, click the radio button of the desired way to give the IP address to be used in the TLV of the frames.

Source Interface:	<input type="radio"/> Use Default <input checked="" type="radio"/> User Defined
Interface:	Unit/Slot <input type="text" value="1/1"/> Port <input type="text" value="GE1"/>

- Use Default — The IP address of the outgoing interface is used.
- User Defined — This uses the IP address of the interface defined in the interface field in

Step 11.

Note: If you choose Use Default, skip to Step 12.

Step 11. In the Interface field, choose the port from the unit/slot and the port drop-down lists.

Step 12. (Optional) To send a syslog message when there is a voice VLAN mismatch, check the **Enable** check box in the Syslog Voice VLAN Mismatch field.

Syslog Voice VLAN Mismatch:	<input checked="" type="checkbox"/> Enable
Syslog Native VLAN Mismatch:	<input checked="" type="checkbox"/> Enable
Syslog Duplex Mismatch:	<input checked="" type="checkbox"/> Enable

Step 13. (Optional) To send a syslog message when there is a native VLAN mismatch, check the **Enable** check box in the Syslog Native VLAN Mismatch field.

Step 14. (Optional) To send a syslog message when there is a duplex information mismatch, check the **Enable** check box in the Syslog Duplex Mismatch field.

Step 15. Click **Apply**.