Configure Link Layer Discovery Protocol (LLDP) Media Endpoint Discovery (MED) Port Settings on a Switch

Objective

Link Layer Discovery Protocol (LLDP) Media Endpoint Discovery (MED) provides additional capabilities to support media endpoint devices such as to enable the advertisement of network polices for applications like voice or video, device location discovery, and troubleshooting information. LLDP and Cisco Discovery Protocol (CDP) are both similar protocols, the difference is that LLDP facilitates vendor interoperability and CDP is Cisco proprietary. LLDP can be used in scenarios where the user needs to work between devices which are not Cisco proprietary and devices which are Cisco proprietary.

The LLDP protocol is useful to network administrators for troubleshooting purposes. The switch gives all the information about the current LLDP status of ports. The network administrator can use this information to fix connectivity problems within the network.

Note: The Network Policy configuration is a prerequisite for this configuration. To know how to configure network policy, click here for instructions.

This article provides instructions on how to configure the LLDP MED port settings on a switch.

Applicable Devices

- Sx250 Series
- Sx300 Series
- Sx350 Series
- SG350X Series
- Sx500 Series
- Sx550X Series

Software Version

- 1.4.7.05 — Sx300, Sx500
- 2.2.5.68 — Sx250, Sx350, SG350X, Sx550X

Configure LLDP MED Port Settings on your Switch

Configure LLDP MED Port Settings

The LLDP MED Port Settings page enables the selection of LLDP-MED Type-Length Values (TLVs) and/or the network policies that are to be included in the outgoing LLDP advertisement for each interface. LLDP TLVs are used to describe individual pieces of information that the protocols transfer.

This page displays the following LLDP MED settings for all ports:

- User Defined Network Policy — Policies are defined for types of traffic called application. This is defined in the LLDP MED Network Policy. In this case, the following information is displayed for the policy on the port:

  - Active — Is the type of traffic active on the port.

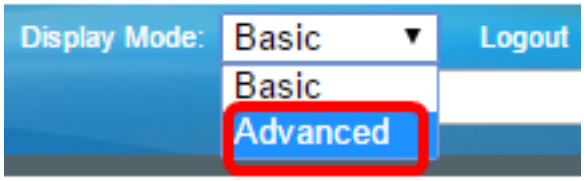
  - Application — Type of traffic for which the policy is defined.

- Location — Whether Location TLV is transmitted.
- PoE — Whether PoE-PSE TLV is transmitted.
- Inventory — Whether Inventory TLV is transmitted.

To configure LLDP MED port settings on your switch, follow these steps:

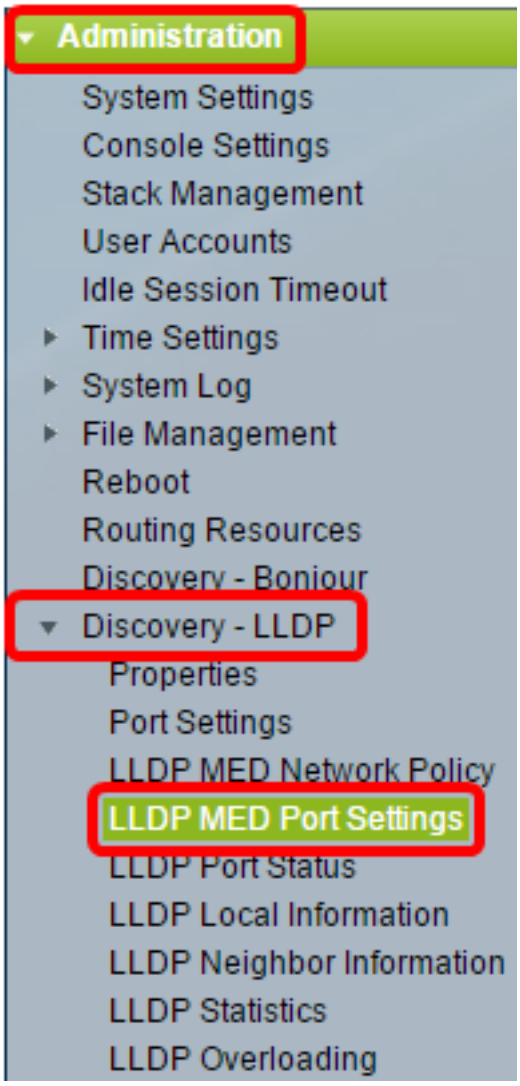
Step 1. Log in to the web-based utility of your switch then choose **Advanced** in the Display Mode drop-down list.

Note: In this example, SG350X-48MP switch is used.

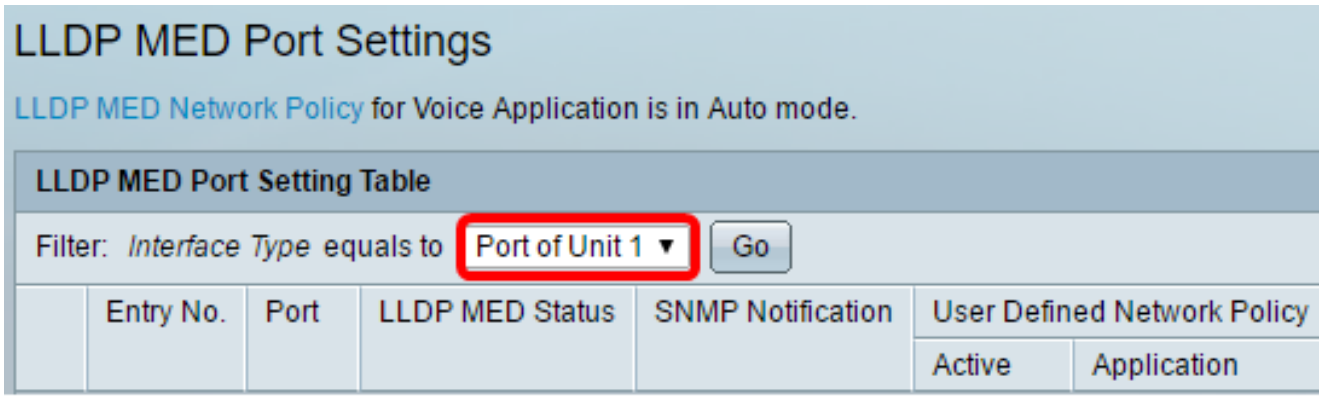


Note: If you have an Sx300 or Sx500 Series switch, skip to Step 2.

Step 2. Choose **Administration > Discover – LLDP > LLDP MED Port Settings**.

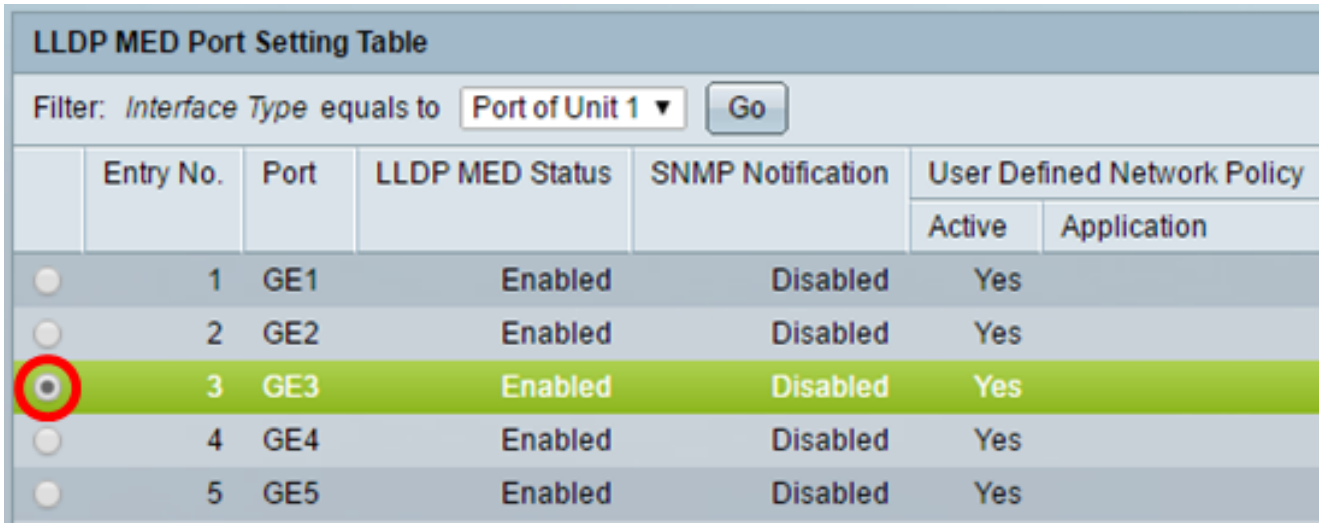


Step 3. Choose the desired interface type from the Interface Type drop-down list then click **Go**.



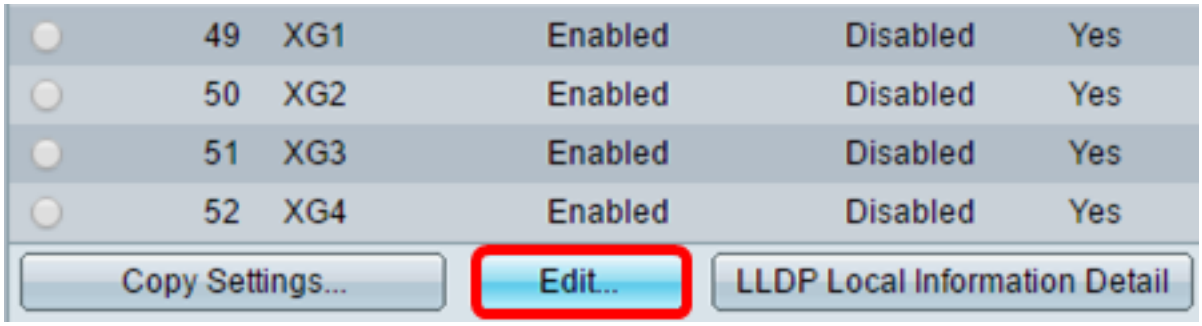
Note: In this example, Port of Unit 1 is chosen.

Step 4. Click the radio button next to the interface number.



Note: In this example, GE3 is chosen.

Step 5. Scroll down then click **Edit** to associate additional LLDP MED TLVs to the interface.



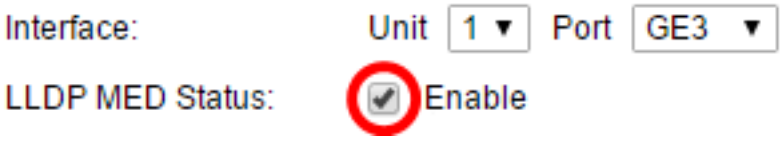
Step 6. (Optional) Choose the desired interface to configure from the Interface drop-down list.

Note: In this example, port GE3 of unit 1 is chosen.

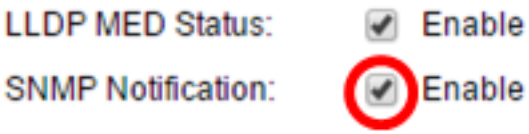


Note: If you have an Sx500 switch, this option will show as Unit/Slot.

Step 7. (Optional) In the LLDP MED Status area, check the **Enable** check box to enable LLDP MED on the current interface.



Step 8. (Optional) In the SNMP Notification area, check the **Enable** check box so that the log notification is sent on a per port basis when an end station that supports MED has been discovered.



Step 9. Highlight the TLVs that you would like the switch to publish and click the **Right Arrow** icon to transfer them to the Selected Optional TLVs list. TLVs are short information elements which are used to communicate complex data. Each TLV advertises a single type of information such as its device ID, type or management addresses.

Note: Alternatively, you can remove the TLVs by choosing the desired option and clicking the **Left Arrow** icon.



Note: In this example, Inventory is chosen.

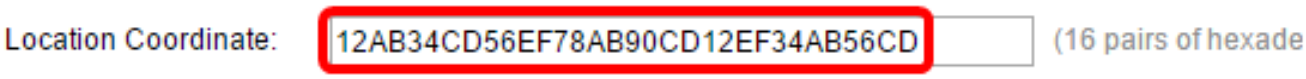
Step 10. Highlight the LLDP MED policies you would like the switch to publish by LLDP and click the **Right Arrow** icon to transfer them to the Selected Network Policies list. Since Voice Application is in Auto Mode, it is not available in this list and cannot be selected manually under Available Network Policies.

Note: Alternatively, you can remove the Network Policy by choosing the desired option and clicking the **Left Arrow** icon. To include one or more user defined network policies in the advertisement, choose Network Policy from the Available Optional TLVs.



Note: In this example, 2 (Voice Signaling) is chosen.

Step 11. Enter the coordinate location that you would like LLDP to publish in the *Location Coordinate* field. This gives the coordinate location such as ID, latitude, altitude, longitude, altitude type and so on. You must enter 16 pairs of hexadecimal numbers in this field.



Note: In this example, 12AB34CD56EF78AB90CD12EF34AB56CD is used.

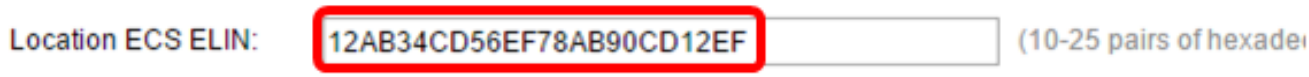
Step 12. Enter the civic address that you would like LLDP to publish in the *Location Civic Address* field. This gives the location civic addresses such as Name, Postal code, Building number, Unit, Floor, Landmark and so on. You must enter 6 to 160 pairs of hexadecimal numbers in this field.



Note: In this example, 12AB34CD56EF is used.

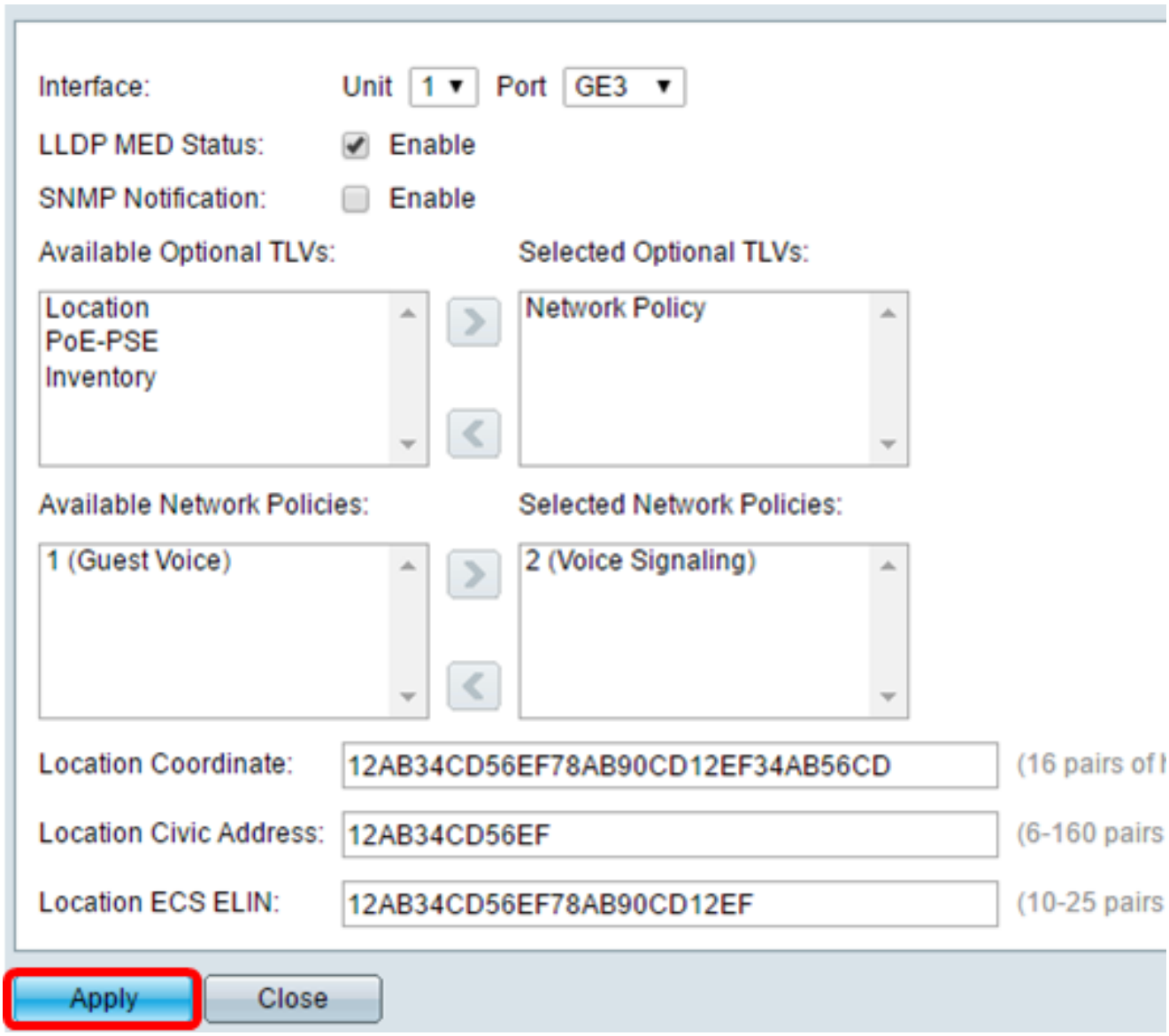
Step 13. Enter the Emergency Call Service (ECS) ELIN that you would like LLDP to publish in the *Location ECS ELIN* field. This is used to specify the location of the network device by its Emergency Location Identification Number (ELIN). You must enter 10 to 25 pairs of hexadecimal numbers in this field.

Note: In this example, 12AB34CD56EF78AB90CD12EF is used.

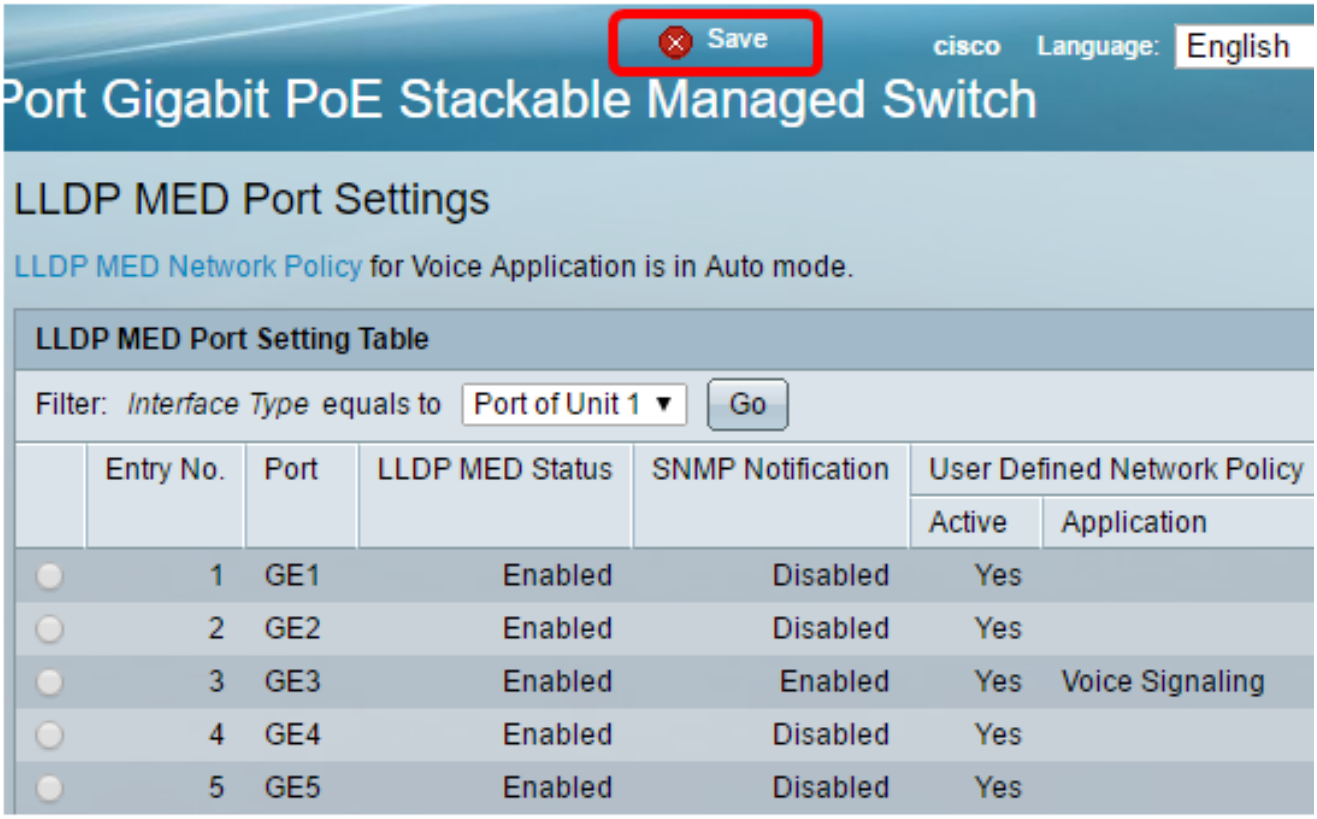


Note: The Location TLV must be in the Selected Optional TLV list for location information to be published. Also, the location information must be entered in hexadecimal characters. The format for the data input is found in the LLDP-MED standard ANSI/TIA-1057.

Step 14. Click **Apply** then click **Close**.



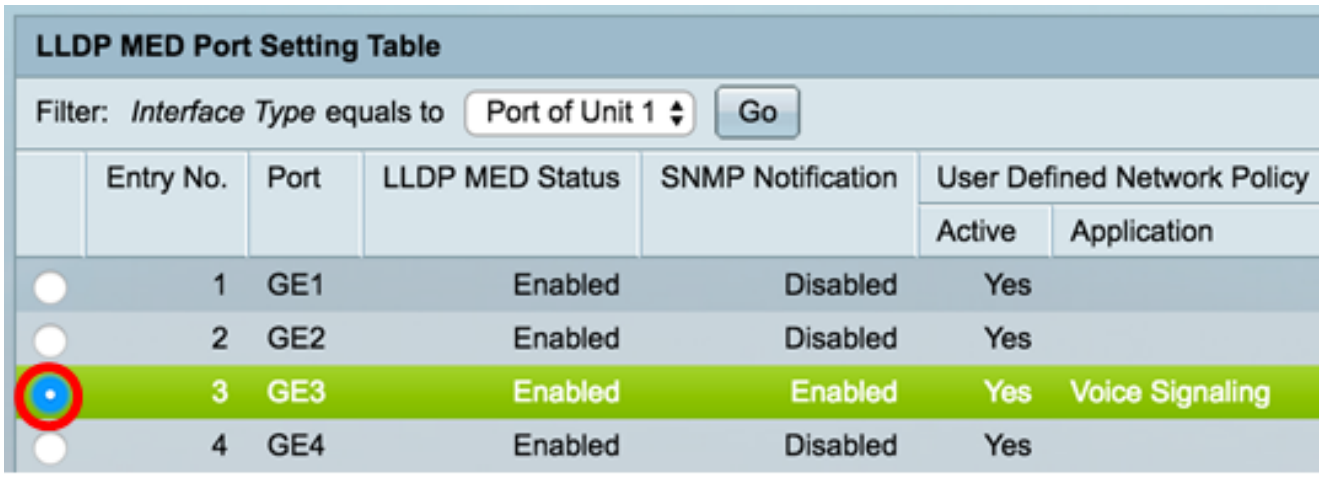
Step 15. (Optional) Click **Save** to save to settings to the startup configuration file.



You should now have successfully configured the LLDP MED port settings on your switch.

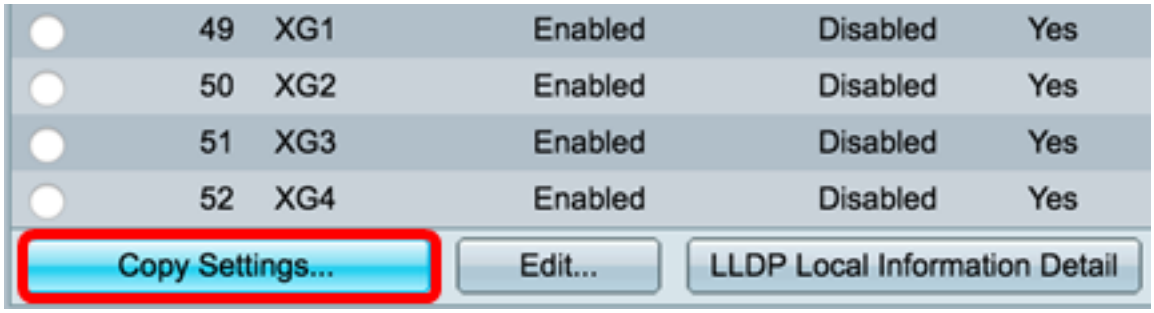
Copy LLDP MED Port

Step 1. Click an entry which needs to be copied.



Note: In this example, GE3 is chosen.

Step 2. Click **Copy Settings** to copy the configuration settings from one port to another.



Step 3. (Optional) Click the **LLDP Local Information Detail** button to know the current LLDP status of the port. To know more about this feature, click here.

Step 4. Enter the interface or interfaces to which the chosen configuration needs to be copied in the provided field.

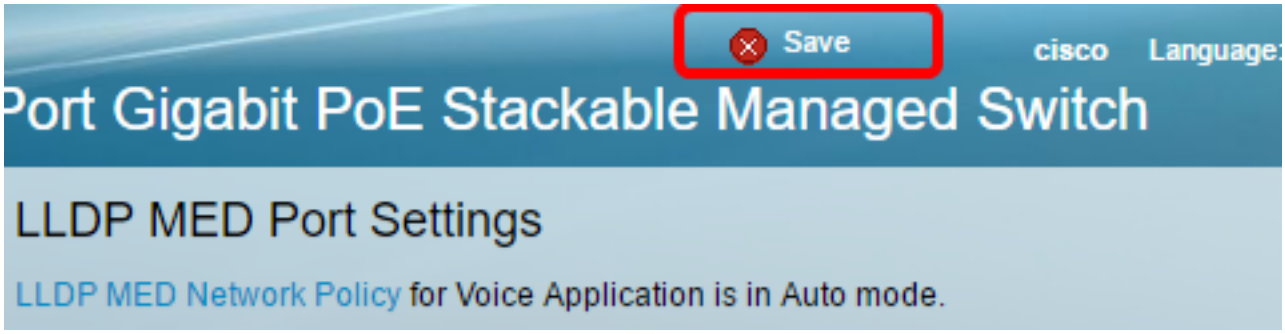


Note: In this example, GE48 is used.

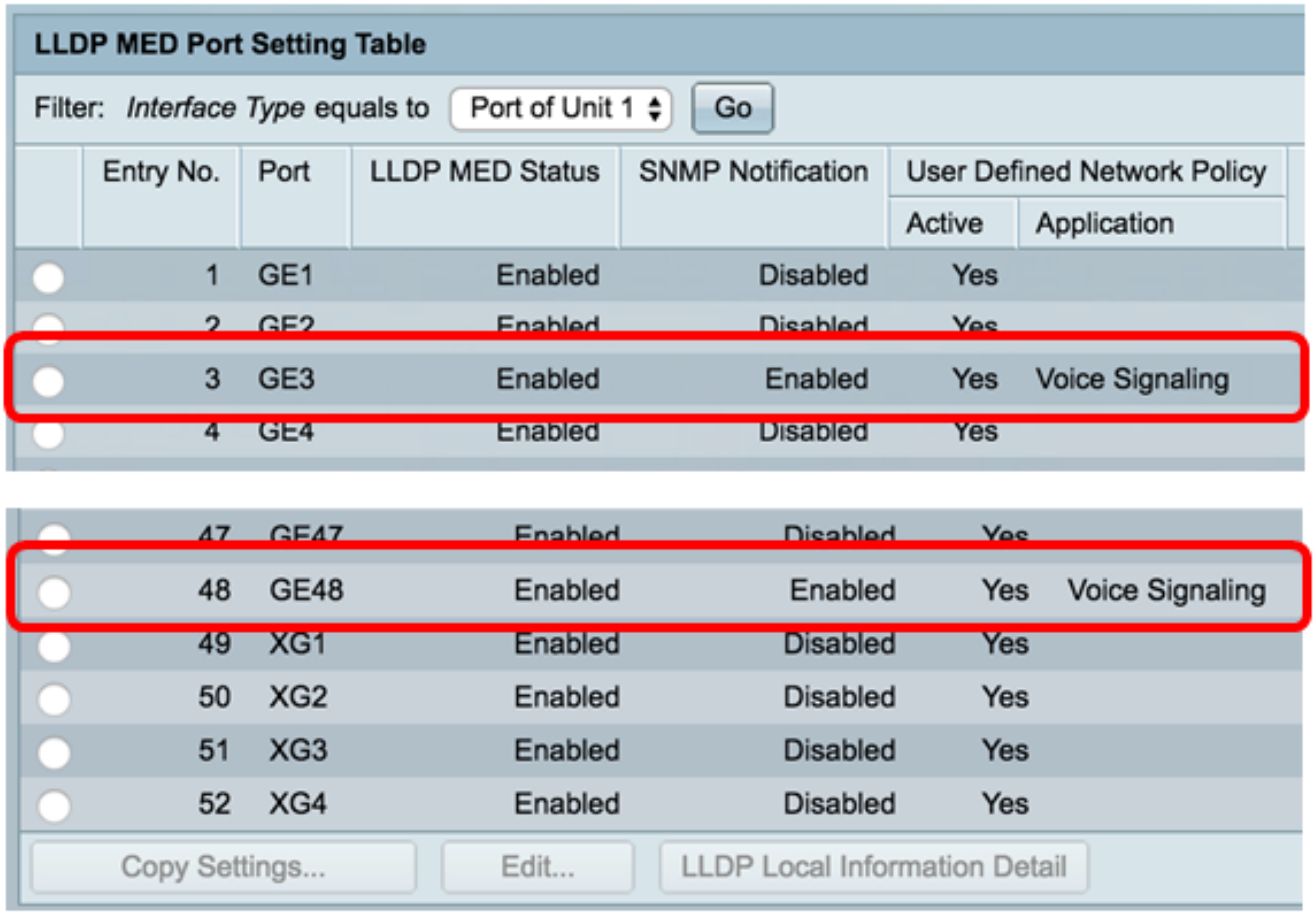
Step 5. Click **Apply** then click **Close**.



Step 6. (Optional) Click **Save** to save to settings to the startup configuration file.



You should now have successfully copied the settings of one port to another.


LLDP MED Port Setting Table
Filter: Interface Type equals to
Port of Unit 1
Go
Entry No.
Port
LLDP MED Status
SNMP Notification
User Defined Network Policy
Active
Application
1 GE1 Enabled Disabled Yes
2 GE2 Enabled Disabled Yes
3 GE3 Enabled Enabled Yes Voice Signaling
4 GE4 Enabled Disabled Yes

47 GE47 Enabled Disabled Yes
48 GE48 Enabled Enabled Yes Voice Signaling
49 XG1 Enabled Disabled Yes
50 XG2 Enabled Disabled Yes
51 XG3 Enabled Disabled Yes
52 XG4 Enabled Disabled Yes
Copy Settings...
Edit...
LLDP Local Information Detail