Configure Green Ethernet Port Settings on a Switch

Objective

Green Ethernet is a common name for a set of features that is designed to be environmentally friendly and reduce the power consumption of a device. Unlike Energy Efficient Ethernet (EEE), Green Ethernet energy-detection is enabled on all ports whereas only devices with Gigabit ports are enabled with EEE.

The Green Ethernet feature can reduce overall power usage in the following ways:

- Energy Detect Mode — On an inactive link, the port moves into inactive mode and saves power while keeping the Administrative status of the port Up. Recovery from this mode to full operational mode is fast, transparent, and no frames are lost. This mode is supported on both Gigabit Ethernet (GE) and Fast Ethernet (FE) ports. This mode is disabled by default.
- Short Reach Mode — This feature provides power savings on a short length of cable. After cable length is analyzed, the power usage is adjusted for various cable lengths. If the cable is shorter than 30 meters for Ten-Gigabit ports and 50 meters for other type of ports, the device uses less power to send frames over the cable, thus saving energy. This mode is only supported on RJ45 GE ports and does not apply to Combo ports. This mode is disabled by default.

The Port Settings page of the web-based utility of the switch displays the current Green Ethernet and EEE modes per port, and allows the configuration of Green Ethernet settings on a port.

Note: For the Green Ethernet modes to operate on a port, the corresponding modes must be activated globally in the Green Ethernet Properties page. For instructions, click here.

This article provides instructions on how to configure the Green Ethernet port settings on a switch.

Applicable Devices

- Sx200 Series
- Sx250 Series
- Sx300 Series
- Sx350 Series
- SG350X Series
- Sx500 Series
- Sx550X Series

Software Version

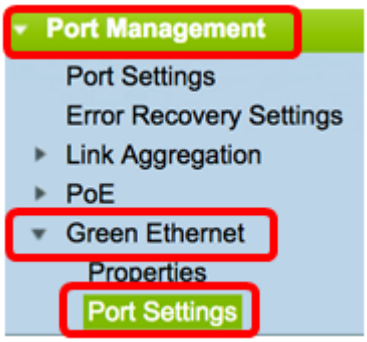
- 1.4.7.06 — Sx200, Sx300, Sx500
- 2.2.8.04 — Sx250, Sx350, SG350X, Sx550X

Configure Green Ethernet Port Settings on a Switch

Configure Green Ethernet Settings on a Port

Step 1. Log in to the web-based utility of your switch then choose **Port Management > Green Ethernet > Port Settings**.

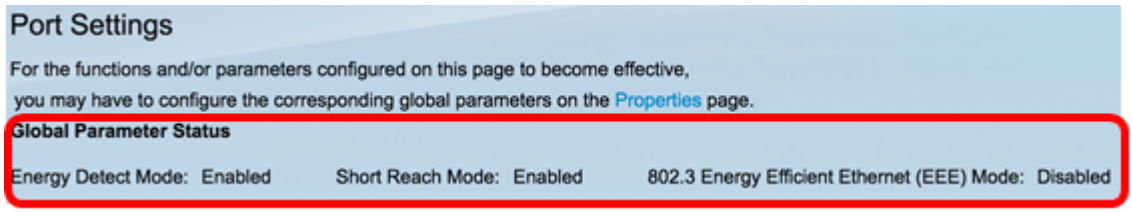
Note: The available options may vary depending on the exact model of your device. In this example, SG350X-48MP switch is used.



Step 2. (Optional) To configure the global Green Ethernet settings on the switch, click the **Properties** link. For instructions, click here.



The Global Parameter Status area displays the following:



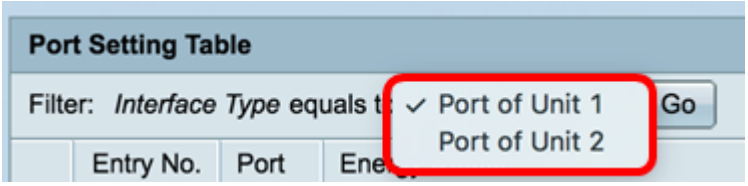
- Energy Detect Mode — Whether this mode is enabled or not. In this example, this feature is enabled.
- Short Reach Mode — Whether this mode is enabled. In this example, Short Reach Mode is enabled.
- 802.3 Energy Efficient Ethernet (EEE) Mode — Whether this mode is enabled. In this example,

this feature is disabled.

Step 3. Choose an interface from the Interface Type drop-down list.

- Port — From the Interface Type drop-down list, choose Port if only a single port needs to be chosen.
- LAG — From the Interface Type drop down list, choose the LAG to configure. This affects the group of ports defined in the LAG configuration.

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



Note: If you have a non-stackable switch such as Sx200, Sx250, or Sx300 Series switch, skip to Step 5.

Step 4. Click **Go** to bring up a list of ports or LAGs on the interface.



The Port Setting Table displays the following:



- Port — The port number.
- Energy Detect — State of energy detect mode on the port.

  - Administrative — Shows whether energy detect mode is enabled or not.

  - Operational — Shows whether energy detect mode is currently operational or not.

- Reason — The reason why energy detect mode is not operational.

- Short Reach — State of short reach mode on the port.

  - Administrative — Shows whether short reach mode is enabled or not.

  - Operational — Shows whether short reach mode is currently operational or not.

  - Reason — The reason why short reach mode is not operational.

  - Cable Length — The Virtual Cable Tester (VCT) cable length in meters.

- 802.3 Energy Efficient Ethernet (EEE) — State of 802.3 Energy Efficient Ethernet mode on the port.

  - Administrative — Shows whether 802.3 EEE mode is enabled or not.

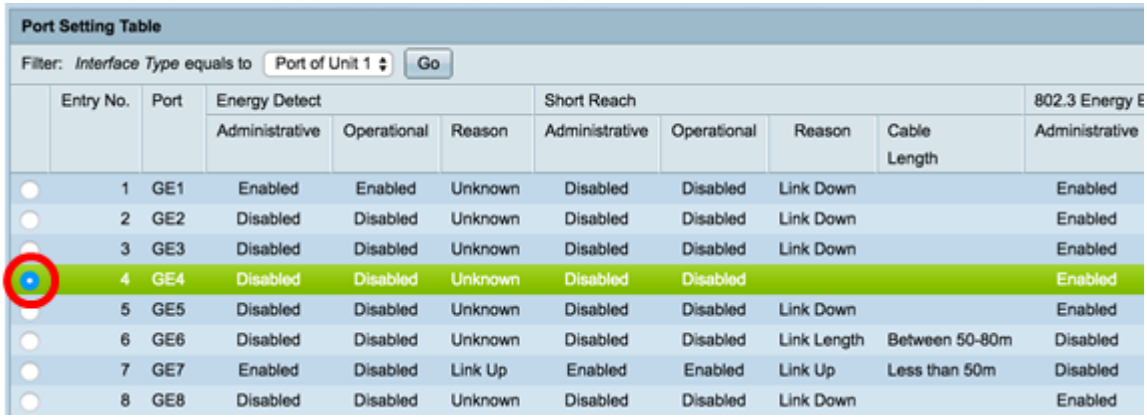
  - Operational — Shows whether 802.3 EEE mode is operational or not.

  - LLDP Administrative — Shows whether advertising EEE counters through Link Layer Discovery Protocol (LLDP) are enabled or not.

  - LLDP Operational — Shows whether advertising EEE counters through LLDP are currently operational or not.

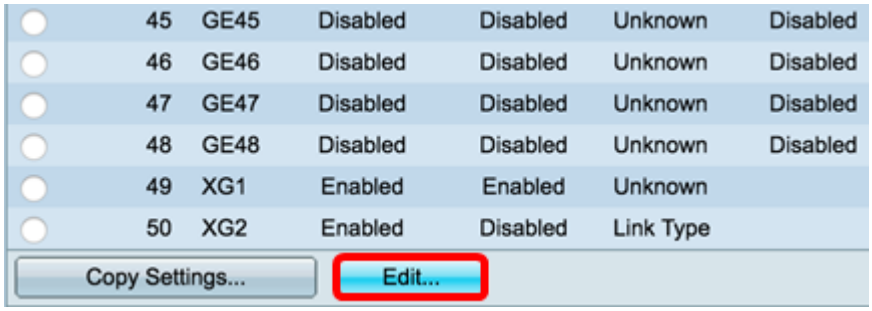
  - EEE Support on Remote — Shows whether EEE is supported on the link partner. EEE must be supported on the local device and link partner for EEE to work.

Step 5. Click the radio button next to the Entry No. that corresponds to the interface that you want to configure.



Note: In this example, Entry No. 4 is chosen.

Step 6. Scroll down then click **Edit**.



Step 7. (Optional) Choose the desired interface to configure from the Interface drop-down lists. In this example, Port GE4 of Unit 1 is chosen.



Note: If you have an Sx500 switch, the Unit option will show as Unit/Slot.If you have a non-stackable switch such as Sx200, Sx250, or Sx300 Series switch, choose a port only.



Step 8. To enable the Energy Detect Mode feature on the interface, check the **Enable** Energy Detect Mode check box. Otherwise, leave it unchecked. This is used to conserve power when the port is not connected to an active link partner.



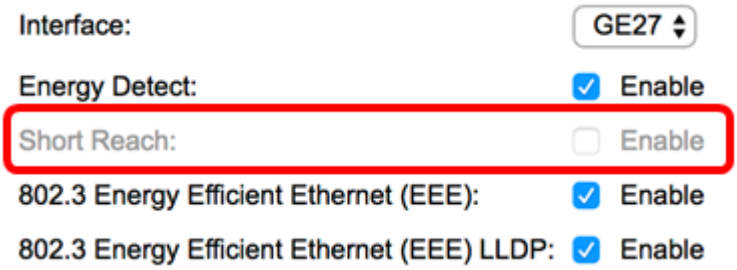
Note: If you have an XG switch, skip to Step 10.

Step 9. Check the **Enable** Short Reach check box to enable the Short Reach on the chosen interface. Otherwise, leave it unchecked. This allows you to run the links with less power than the link can normally handle.

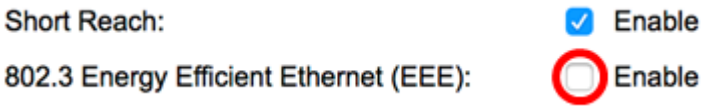
Important: If Short Reach Mode is enabled, the EEE mode must be disabled.



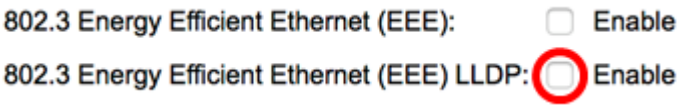
Note: If you have an Sx200, Sx250, Sx300, or Sx500 Series switch, the **Enable** Short Reach check box is grayed-out by default. To enable the check box, disable the 802.3 Energy Efficient Ethernet (EEE) in Step 10 and 802.3 Energy Efficient Ethernet (EEE) LLDP in Step 11 first.



Step 10. If you are configuring a Gigabit port, check the **Enable** 802.3 Energy Efficient Ethernet (EEE) check box enable 802.3 EEE mode. Otherwise, uncheck this option. By default, this is enabled. EEE was developed to reduce the power consumption during times that there is a low amount of data activity on the switch.



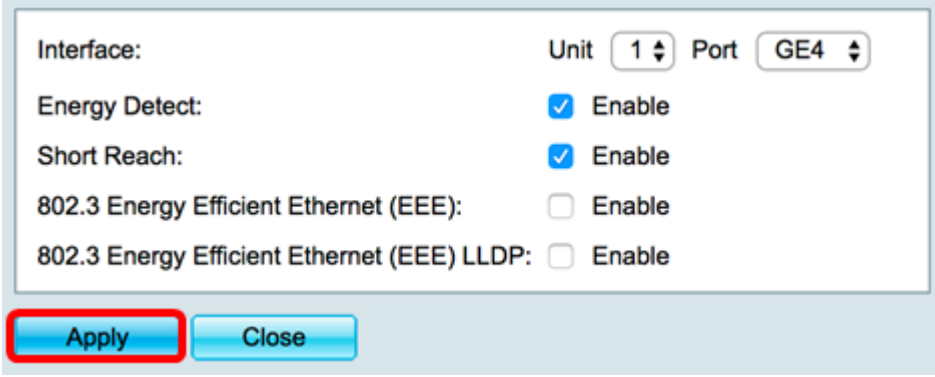
Step 11. Check the **Enable** 802.3 Energy Efficient Ethernet (EEE) LLDP check box to enable the advertisement of EEE capabilities through LLDP on the port. Otherwise, uncheck this option. 802.3 EEE LLDP is used to select the optimal parameters for the link partners in 802.3 EEE mode.



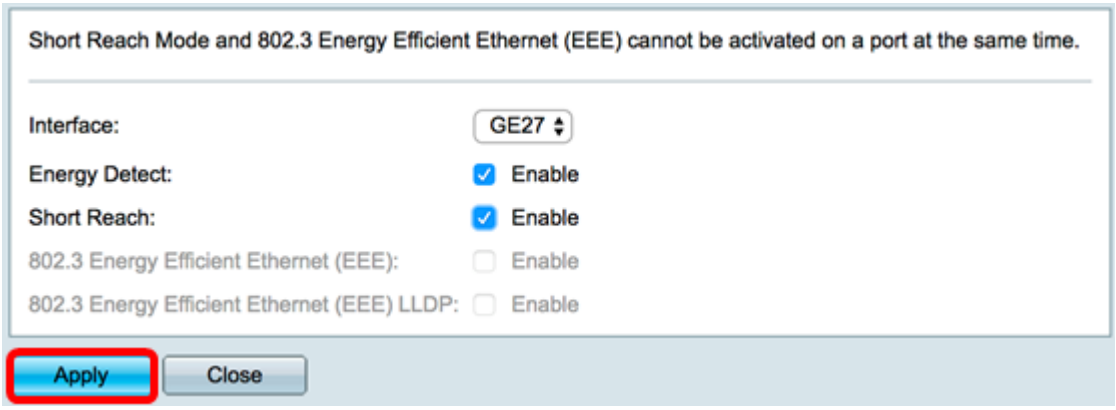
Note: 802.3 EEE mode is still operational if LLDP is disabled, but it will not have the optimal parameters.

Step 12. Click **Apply** then click **Close**.

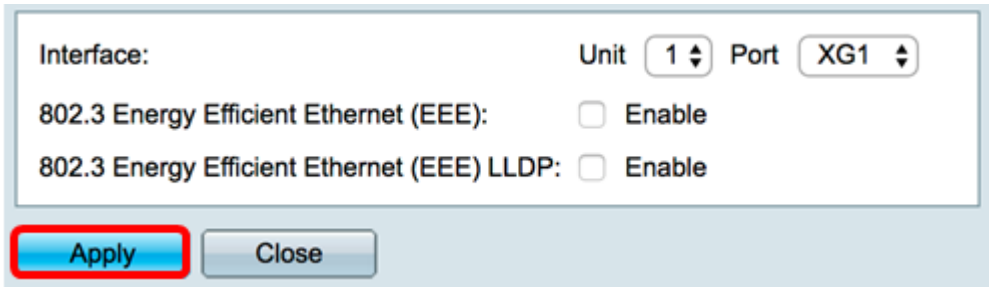
SG350X and Sx550X Series Switches:



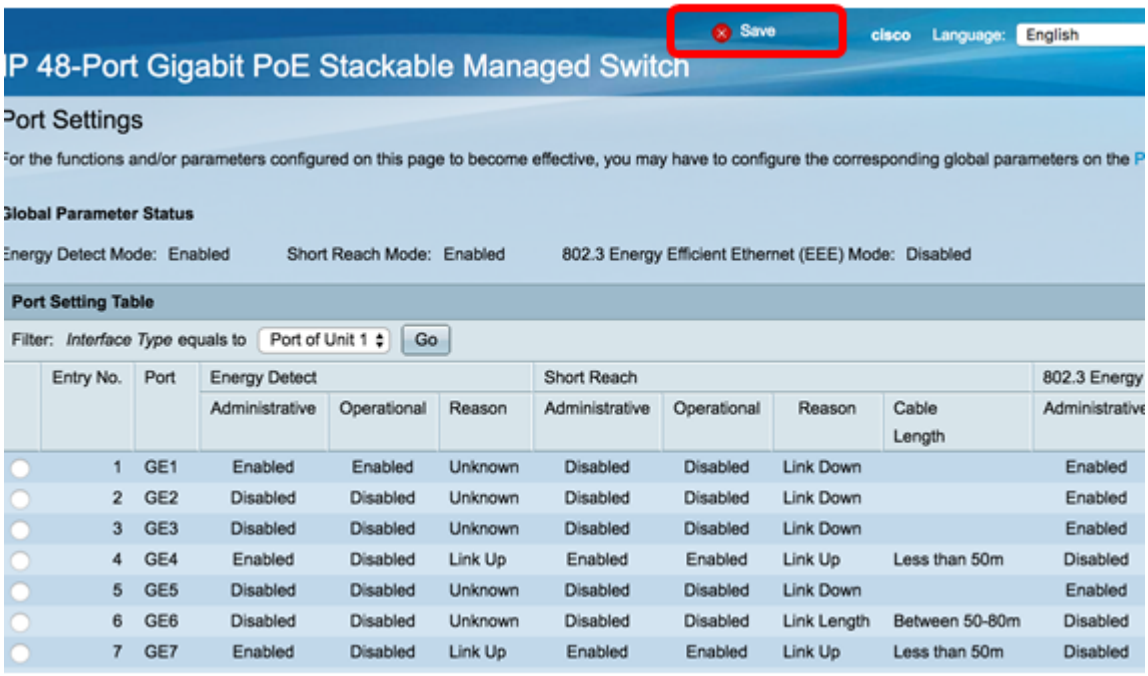
Sx200, Sx250, Sx300, and Sx500 Series Switches:



XG Switches:



Step 13. (Optional) Click **Save** to save the settings to the startup configuration file.

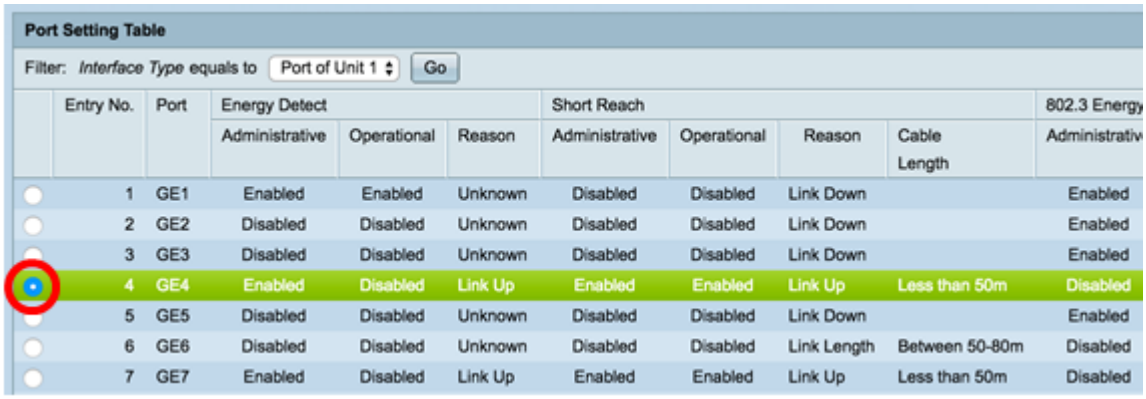


	Entry No.	Port	Energy Detect			Short Reach				802.3 Energy
			Administrative	Operational	Reason	Administrative	Operational	Reason	Cable Length	Administrative
○	1	GE1	Enabled	Enabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	2	GE2	Disabled	Disabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	3	GE3	Disabled	Disabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	4	GE4	Enabled	Disabled	Link Up	Enabled	Enabled	Link Up	Less than 50m	Disabled
○	5	GE5	Disabled	Disabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	6	GE6	Disabled	Disabled	Unknown	Disabled	Disabled	Link Length	Between 50-80m	Disabled
○	7	GE7	Enabled	Disabled	Link Up	Enabled	Enabled	Link Up	Less than 50m	Disabled

You should now have successfully configured the Green Ethernet settings on a port of your switch.

Copy Green Ethernet Port Settings

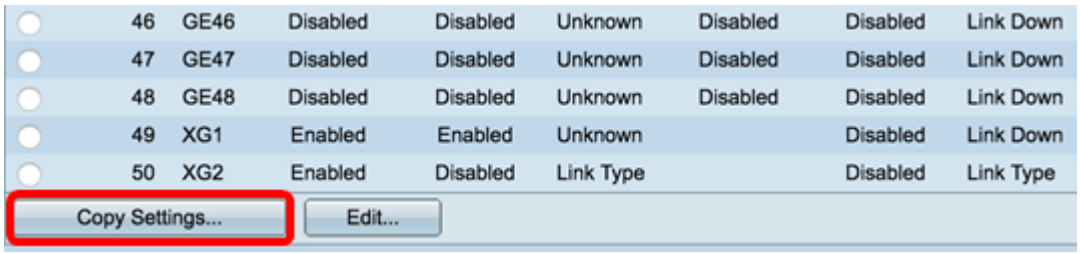
Step 1. Click the radio button next to the Entry No. that corresponds to the port that you want to copy settings from.



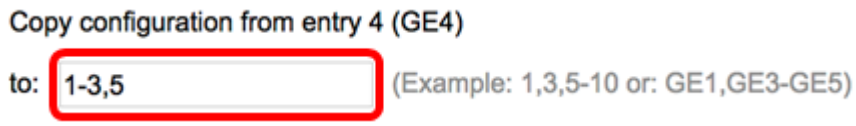
	Entry No.	Port	Energy Detect			Short Reach				802.3 Energy
			Administrative	Operational	Reason	Administrative	Operational	Reason	Cable Length	Administrativ
○	1	GE1	Enabled	Enabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	2	GE2	Disabled	Disabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	3	GE3	Disabled	Disabled	Unknown	Disabled	Disabled	Link Down		Enabled
◉	4	GE4	Enabled	Disabled	Link Up	Enabled	Enabled	Link Up	Less than 50m	Disabled
○	5	GE5	Disabled	Disabled	Unknown	Disabled	Disabled	Link Down		Enabled
○	6	GE6	Disabled	Disabled	Unknown	Disabled	Disabled	Link Length	Between 50-80m	Disabled
○	7	GE7	Enabled	Disabled	Link Up	Enabled	Enabled	Link Up	Less than 50m	Disabled

Note: In this example, Entry No. 4 is chosen.

Step 2. Scroll down then click **Copy Settings**.

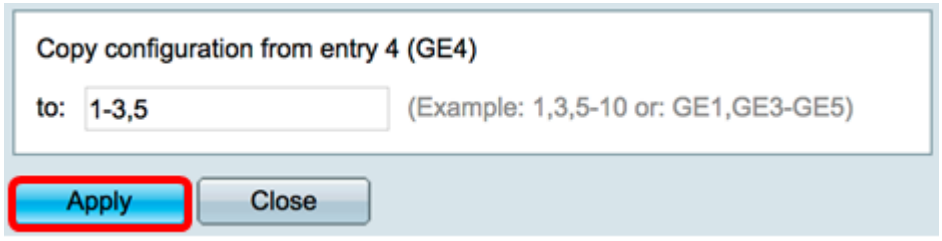


Step 3. Enter the Entry or port numbers in the *to* field.

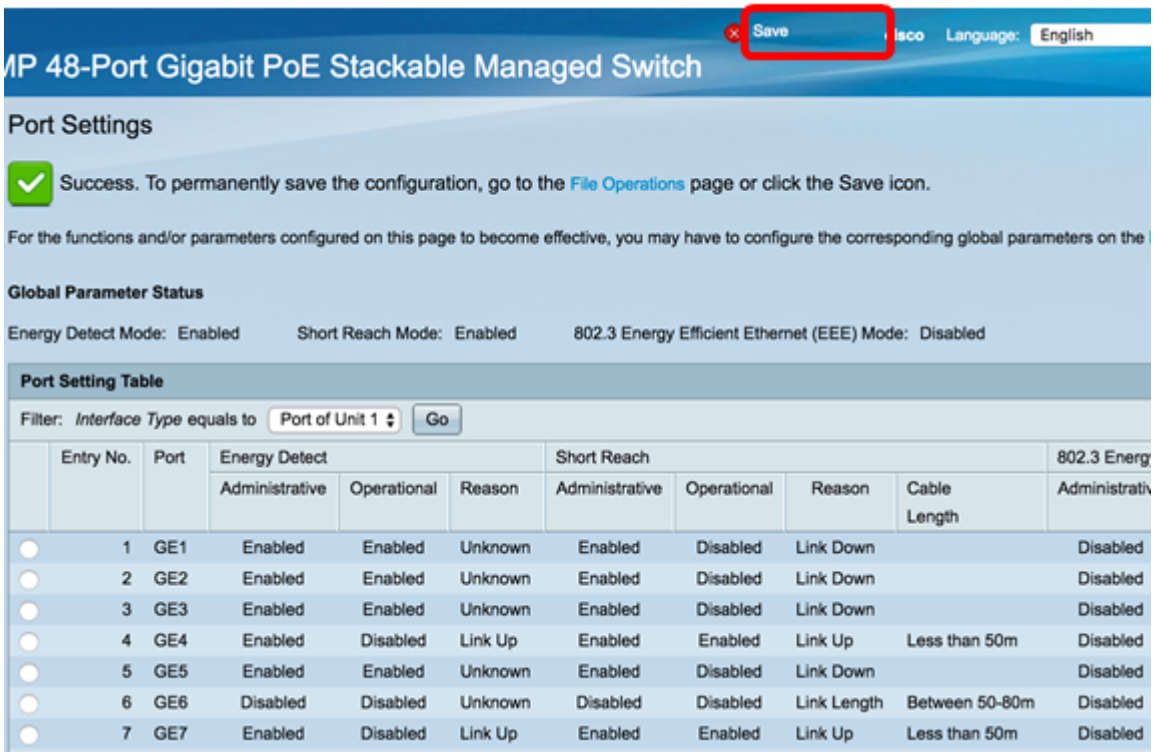


Note: In this example, ports 1 to 3 and 5 are used.

Step 4. Click **Apply** then click **Close**.



Step 5. (Optional) Click **Save** to save the settings to the startup configuration file.



You should now have successfully copied the Green Ethernet port settings to a port or ports on your switch.