Configuring EEE

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information About EEE

EEE Overview

Energy Efficient Ethernet (EEE) is an IEEE 802.3az standard that is designed to reduce power consumption in Ethernet networks during idle periods.

EEE can be enabled on devices that support low power idle (LPI) mode. Such devices can save power by entering LPI mode during periods of low utilization. In LPI mode, systems on both ends of the link can save power by shutting down certain services. EEE provides the protocol needed to transition into and out of LPI mode in a way that is transparent to upper layer protocols and applications.

Default EEE Configuration

EEE is disabled by default.

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Restrictions for EEE

EEE has the following restrictions:

- Changing the EEE configuration resets the interface because the device has to restart Layer 1 autonegotiation.

- You might want to enable the Link Layer Discovery Protocol (LLDP) for devices that require longer wakeup times before they are able to accept data on their receive paths. Doing so enables the device to negotiate for extended system wakeup times from the transmitting link partner.

How to Configure EEE

You can enable or disable EEE on an interface that is connected to an EEE-capable link partner.

Enabling or Disabling EEE

SUMMARY STEPS

1. **configure terminal**
2. **interface** *interface-id*
3. **power efficient-ethernet auto**
4. **no power efficient-ethernet auto**
5. **end**
6. **copy running-config startup-config**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** SwitchDevice# **configure terminal**	Enters global configuration mode.
Step 2	**interface** *interface-id* **Example:** SwitchDevice(config)# **interface gigabitethernet1/0/1**	Specifies the interface to be configured, and enter interface configuration mode.

	Command or Action	Purpose
Step 3	**power efficient-ethernet auto** **Example:** SwitchDevice(config-if)# **power efficient-ethernet auto**	Enables EEE on the specified interface. When EEE is enabled, the device advertises and autonegotiates EEE to its link partner.
Step 4	**no power efficient-ethernet auto** **Example:** SwitchDevice(config-if)# **no power efficient-ethernet auto**	Disables EEE on the specified interface.
Step 5	**end** **Example:** SwitchDevice(config-if)# **end**	Returns to privileged EXEC mode.
Step 6	**copy running-config startup-config** **Example:** SwitchDevice# **copy running-config startup-config**	(Optional) Saves your entries in the configuration file.

Monitoring EEE

Table 1: Commands for Displaying EEE Settings

Command	Purpose
show eee capabilities interface *interface-id*	Displays EEE capabilities for the specified interface.
show eee status interface *interface-id*	Displays EEE status information for the specified interface.

Configuration Examples for Configuring EEE

This example shows how to enable EEE for an interface:

```
SwitchDevice# configure terminal
SwitchDevice(config)# interface gigabitethernet1/0/1
SwitchDevice(config-if)# power efficient-ethernet auto
```

This example shows how to disable EEE for an interface:

```
SwitchDevice# configure terminal
SwitchDevice(config)# interface gigabitethernet1/0/1
SwitchDevice(config-if)# no power efficient-ethernet auto
```