Persistent PoE with 2-event enabled and Fast PoE

Feature History for Persistent PoE with 2-event enabled and Fast PoE

This table provides release and platform support information for the features explained in this module.

These features are available in all the releases subsequent to the one they were introduced in, unless noted otherwise.

Release	Feature Name and Description	Supported Platform
Cisco IOS XE 17.18.1	Persistent PoE with 2-event enabled and Fast PoE: 2-event classification is a method that allows the switch's PSE to signal its ability to provide higher power (up to 30W) to a powered device.	Cisco C9350 Series Smart Switches

Support of persistent PoE with 2-event enabled and fast PoE on switch

Persistent PoE with 2-event enabled and Fast PoE is supported only on the following modules of the Cisco C9350 Series Smart Switches:

- C9350-24P
- C9350-48P
- C9350-24U
- C9350-48U
- C9350-48HX

Persistent PoE with 2-event enabled and fast PoE

2-event classification is a method that allows the switch's power sourcing equipment (PSE) to signal its ability to provide higher power (up to 30W) to a powered device. With 2-event classification, when a class 4 powered device is detected, Cisco IOS allocates 30W of power without requiring CDP (Cisco Discovery Protocol) or LLDP (Link Layer Discovery Protocol) negotiation. This means that even before the network link becomes operational, the Class 4 powered device can receive 30W of power.

How persistent PoE with 2-event enabled and fast PoE works

Workflow

The following process details how persistent PoE with 2-event enabled and Fast PoE works:

1. The PSE detects the presence of a powered device by applying a small voltage (usually between 2.7V and 10.1V) on the Ethernet cable and measuring the resistance to determine that a powered device is connected.
2. The PSE sends a low voltage (usually between 15.5V and 20.5V) on the Ethernet cable, and the powered device responds with a specific current signature that indicates its power class, for example class 0, 1, 2, 3, or 4 and so on. This is known as the first event.
3. The PSE repeats the classification voltage a second time. This is known as the second event.
4. Based on the power class identification, the PSE applies full operating voltage (44V to 57V, typically around 48V) and begins delivering power to the powered device.

Guidelines to configure persistent PoE with 2-event enabled and fast PoE

- Configuration of 2-event classification has to be done before physically connecting any endpoint.
- Power to the ports is interrupted in case of microcontroller unit firmware upgrade and ports will be restored immediately after the upgrade.
- Once 2-event is enabled on a port, manually shut and no-shut the port or reconnect the powered device to start the detection.

Configure persistent PoE with 2-event enabled and fast PoE

Perform this task to configure Persistent PoE with 2-event enabled and Fast PoE to enable a PSE to higher power to a powered device.

Procedure

Step 1 **enable**

Example:

```
Device> enable
```

Enables privileged EXEC mode.

Enter your password, if prompted.

Step 2 **configure terminal**

Example:

```
Device# configure terminal
```

Enters global configuration mode.

Step 3 **interface** *interface-id*

Example:

```
Device(config)# interface gigabitethernet1/0/4
```

Specifies the physical port to be configured, and enters interface configuration mode.

Step 4 **power inline port 2-event**

Example:

```
Device(config-if)# power inline port 2-event
```

Enables 2-event classification on the port of the switch.

Step 5 **end**

Example:

```
Device(config-if)# end
```

Returns to privileged EXEC mode.

Example: Configure 2-Event classification

This example shows how you can configure 2-event classification:

```
Device> enable
Device# configure terminal
Device(config)# interface gigabitethernet2/0/1
```

```
Device(config-if)# power inline port 2-event
Device(config-if)# end
```