Power Over Ethernet Configuration Commands

Table of Contents

Chapter 1 Power Over Ethernet Configuration Commands

1.1 POE Configuration Commands

1.1.1 show poe system

Parameters

To display the information about POE-related systems, run the following command.

show poe system

Parameters

None

Default Value

None

Command Mode

Monitoring Mode

Usage Guidelines

POE DRIVER: means the drive of the chip.

POE CHIP: means the detailed chip type.

POE Port Num: means the maximum POE ports.

PSE Power Management: means the power supply management mode (automatic, preempt, non-preempt).

PSE Total Power: Total power of the power supply equipment

PSE Usage Threshold: power alarm (it is set according to the percentage)

PSE Alarm Power: means the power alarm threshold.

PSE Lower-Port-Disable Power: The threshold of the power supply for the relatively high priority preempt, which is effective only in non-automatic mode

PSE Lower-Port-NoConnect Power: The threshold of the power supply to forbid the lower or same-level priority preempt, which is effective only in non-automatic mode

PSE Consumed Power: the used power consumption

PSE Peak Power: peak power of the power supply equipment, which is effective when the power statistics is enabled

PSE Mib Notification: MIB notification occurs when the power supply for a port changes or the power changes.

PSE Temperature PSE: temperature of the chip

Example

> Switch_config# show poe system
>
> POE DRIVER:PETH PD69000 DRV
>
> POE CHIP:PD69100
>
> POE Port Num:16
>
> PSE PowerManagement:Non-Preemptive
>
> PSE Total Power:6300000 mW
>
> PSE Usage Threshold:90%
>
> PSE Alarm Power:5670000 mW
>
> PSE Lower-Port-Disable Power:6299900 mW
>
> PSE Lower-Port-NoConnect Power:6299800 mW
>
> PSE Consumed Power:0 mW
>
> PSE Peak Power:0 mW
>
> PSE Mib Notification:Disable
>
> PSE Temperature:41 degree

Related Command

None

1.1.2　show poe all

To display the information description table of the POE port, run the following command.

show poe all

Parameters

None

Default Value

None

Command Mode

Monitoring Mode

Usage Guidelines

Port enabled/disabled: To enable or disable power supply for a port

Port detection: the power supply state of a port, which may be disabled, searching, delivering-power or fault.

　delivering-power: means the power supply is normal.

Port pairs: the ordering of the power line of a port, of which signal means the power supply by way of the signal line and spare that by way of the spare line

Port priority: means the priority for port's power supply and it from high to low is critical, high and low.

Example

Switch#show poe all

Port	Enable	Status	Pair	Priority
g0/1	enabled	disabled	signal	low
g0/2	enabled	disabled	signal	low
g0/3	enabled	disabled	signal	low
g0/4	enabled	disabled	signal	low
g0/5	enabled	disabled	signal	low
g0/6	enabled	disabled	signal	low
g0/7	enabled	disabled	signal	low
g0/8	enabled	disabled	signal	low
g0/9	enabled	searching	signal	high
g0/10	enabled	searching	signal	high
g0/11	enabled	searching	signal	high
g0/12	enabled	searching	signal	high
g0/13	enabled	delivering-power	signal	high
g0/14	enabled	searching	signal	high
g0/15	enabled	delivering-power	signal	high
g0/16	enabled	searching	signal	high

Related Command

None

1.1.3 show poe power

To display the information about the power supply of all ports, run the following command.

show poe power

Parameters

None

Default Value

None

Command Mode

Monitoring Mode

Usage Guidelines

Max: means the maximum power limitation of a port.

Current: means the current power of a port.

Average: means the average power of a port, which is effective only when the power statistics table is enabled.

Peak: means the peak power of a port, which is effective when the power statistics is enabled.

Bottom: means the bottom power of a port, which is effective only when the power statistics table is enabled.

Example

Switch#show poe power

Port	Current	Max	Average	Peak	Bottom
g0/1	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/2	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/3	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/4	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/5	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/6	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/7	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/8	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/9	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/10	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/11	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/12	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/13	7600 mW	30000 mW	7620 mW	7800 mW	7600 mW
g0/14	0 mW	30000 mW	0 mW	0 mW	0 mW
g0/15	7600 mW	30000 mW	7600 mW	7800 mW	7600 mW
g0/16	0 mW	30000 mW	0 mW	0 mW	0 mW

Related Command

None

1.1.4   show poe interface

To display the detailed POE information of a designated port, run the following command.

show poe interface *type slot/port*

Parameters

Parameters	Description
type	Interface type
slot	Slot ID
Port	Port ID

Default Value

None

Command Mode

Monitoring Mode

Usage Guidelines

PSE Port Number: means the ID of an internal port.

Port Power Enabled: means to enable the power supply for a port.

Port Force Power: means to enable the forced power supply or the power supply for a low-priority port.

Port detection: the power supply state of a port, which may be disabled, searching, delivering-power or fault.

Port Fault Status: means the error information about a port.

Port Last Disconnection Reason: means the reason of the latest power cutoff on a port.

Port pairs: the ordering of the power line of a port, of which signal means the power supply by way of the signal line and spare that by way of the spare line

Port IEEE Class: means the class of a port.

Port priority: means the priority for port's power supply and it from high to low is critical, high and low.

Port Current : stands for the present current on a interface.

Port Voltage: means the current voltage of a port, which cannot be shown by some chips.

Port Current Power: stands for the current power on an interface.

Port Average Power: means the average power of a port, which is effective only when the power statistics table is enabled.

Port Peak Power : means the peak power of a port, which is effective when the power statistics is enabled.

Port Bottom Power: means the bottom power of a port, which is effective only when the power statistics table is enabled.

Port Max Powe: means the maximum power limitation of a port.

Port PD Description: stands for the description of a port.

Example

Switch_config#show   poe interface g0/1

PSE Port Number : 0

Port Power Enabled : disable

Port Force Power : enable

Port Detection Status : disabled

Port Fault Status :

Port Pairs : signal

Port IEEE Class : 0

Port Priority : low

Port Current : 0 mA

Port Voltage : 0 mV

Port Current Power : 0 mW

Port Average Power : 0 mW

Port Peak Power : 0 mW

Port Bottom Power : 0 mW

Port Max Power : 100 mW

Port PD Description : link_ssss

Switch_config#

Related Command

None

1.1.5 poe power-management

To set the power supply management mode for a switch, run the following command.

poe power-management {auto | preemptive | non-preemptive | lowDisable | lowNoConnect } *value*

Parameters

Parameters	Description
auto	Sets the power-supply management mode of a switch to automatic.

preemptive	Sets the power-supply management mode of a switch to preemptive.
non-preemptive	Sets the power-supply management mode of a switch to non-preemptive.
lowDisable	When the total power exceeds lowDisable, the port cannot be powered; when the total power is less than lowDisable, the power supply can go again. lowDisable = total power - value
lowNoConnect	When the total power exceeds lowNoConnect, those ports whose priorities are lower than or equal to the priority of the currently powered port, which is lowest priority among the powered ports, will be cut off from the power supply. lowNoConnect = lowDisable – value

Default Value

The power supply management mode is auto by default.

Command Mode

Global configuration mode

Usage Guidelines

The maximum power limitation of a port cannot be set and the port's power supported by the chip is considered by default as the maximum power.

The power-supply priority of a port cannot be set and the default priority of this port is low.

Preemptive: it is to enable the function of limiting the maximum power of a port.

It is also to enable the power supply priority of a port.

Non-preemptive: it is to enable the function of limiting the maximum power of a port.

It is also to enable the power supply priority of a port.

Preempt means that a new PD device will be normally powered by a high-priority power supply port if the new PD device is connected to this high-priority port in full load and at the same time the port with the lowest power-supply priority will be cut off from power supply.

Non-preempt means that the power supply port with high priority will be notified that a PD device has accessed when this port is connected to a PD device in full load.

Example

The following example shows how to set the power supply management mode to preemptive.

Switch_config#poe power-management preemptive

Switch_config#poe power-management lowDisable 18000

Switch_config#poe power-management lowNoConnect 18000

Related Command

poe max-power

poe priority

1.1.6 poe led-time

To set the lasting time of the LED in PoE mode, run the following command.

poe led-time *time*

no poe led-time

Parameters

Parameters	Description
time	Unit: second

Default Value

The lasting time of LED in POE mode is 30 seconds.

Command Mode

Global configuration mode

Usage Guidelines

The no poe led-time command can set the lasting time back to the default value.

Example

The following example shows how to set the lasting time to 10 seconds.

Switch_config#poe led-time 10

Related Command

None

1.1.7 poe mib notification-stop

To stop sending the trap notification to users when power supply changes or power alarm occurs, run the following command:

poe mib notification-stop

no poe mib notification-stop

Parameters

None

Default Value

In the default settings, the change of power supply or the occurrence of power alarm will lead the system to send the trap notification to users.

Command Mode

Global configuration mode

Usage Guidelines

The "no" form of this command can be used to resume the default settings.

Example

The following example shows how to stop sending the trap notification to users when power supply changes or power alarm occurs:

Switch_config#poe mib notification-stop

Related Command

None

1.1.8 poe pse-unprotect

To set power supply protection for a port, run the following command:

poe pse-unprotect

no poe pse-unprotect

Parameters

None

Default Value

The power supply protection for ports is enabled by default.

Command Mode

Global configuration mode

Usage Guidelines

The "no" form of this command can be used to resume the default settings.

Example

The following example shows how to disable the power supply protection:

Switch_config# poe pse-unprotect

Related Command

None

1.1.9 poe counter value

To enable the power statistics globally, run the following command:

poe counter *value*

no poe counter

Parameters

Parameters	Description
value	Stands for the sampling interval, whose unit is second.

Default Value

The power statistics is disabled by default.

Command Mode

Global configuration mode

Usage Guidelines

The "no" form of this command can be used to resume the default settings.

Example

The following example shows how to set the sampling interval of the power statistics to 5 seconds.

Switch_config# poe counter 5

Related Command

None

1.1.10   poe threshold

To set the percentage between alarm power and the total power, run the following command.

poe threshold *value*

no poe threshold

Parameters

Parameters	Description
value	Sets the percentage between alarm power and the total power.

Default Value

The default percentage between alarm power and the total power is 100%.

Command Mode

Global configuration mode

Usage Guidelines

The "no" form of this command can be used to resume the default settings.

Example

The following example shows how to set the percentage between the alarm power and the total power to 50%:

Switch_config#poe threshold 50

Related Command

poe power-management

1.1.11   poe standard

To set the standard of PSE power supply, run the following command:

poe standard {AF| AT| MAX}

Parameters

Parameters	Description
AF	If you select the AF standard, the power supply for a port can reach up to 15.4W.

AT	If you select the AT standard, the power supply for a port can reach up to 30W.
MAX	If you select MAX, it means that as to the switch with support of both AF and AT, the AT standard will be selected, and as to the switch only support AF, the AF standard will be selected.

Default Value

The switch support MAX by default.

Command Mode

Global configuration mode

Usage Guidelines

If you select the AF standard, the power supply for a port can reach up to 15.4W.

If you select the AT standard, the power supply for a port can reach up to 30W.

If you select MAX, it means that as to the switch with support of both AF and AT, the AT standard will be selected, and as to the switch only support AF, the AF standard will be selected.

Example

The following example shows how to set the PSE power supply standard to AF.

Switch_config#poe standard AF

Related Command

None

1.1.12 poe disable

To enable the power supply of a port, run the following command.

poe disable { time-range *name* | <cr>}

no poe disable {time-range | <cr>}

Parameters

Parameters	Description
time-range *name*	The parameter name stands for

	the name of the power-off time range.
<cr>	Means to enter poe disable alone and disable the port.

Default Value

Power supply on a port is enabled and there is no time limit to power supply.

Command Mode

Interface configuration mode

Usage Guidelines

poe disable: means to shut down power supply.

no poe disable: means to open power supply.

poe disable time-range *name* to shut down the control of time range in the period of adding name.

no poe disable time-range   to remove the control of time range in the period of adding name.

Example

The following example shows how to disable the power supply of port g/1.

Switch_config_g0/1#poe disable

The following example shows how to disable power supply in the period of Sunday_free.

Switch_config_g0/1poe disable time-range Sunday_free

Related Command

time-range

1.1.13 poe max-power

Setting the Maximum Power of a Port

poe max-power *value*

no poe max-power

Parameters

Parameters	Description
value	Means the maximum power of a

	port, whose unit is mW.

Default Value

The default maximum power of a port is 30000mW.

Command Mode

Interface configuration mode

Usage Guidelines

The "no" form of this command can be used to resume the default maximum power. The command runs in non-auto mode.

Example

The following example shows how to set the maximum power of port g0/1 to 15000mW.

Switch_config_g0/1#poe max-power 15000

Related Command

poe power-management

1.1.14   poe priority

Setting the Power Supply Priority for a Port

poe priority {critical | high | low }

Parameters

Parameters	Description
critical	Stands for the highest priority.
high	Stands for the high priority.
low	Stands for the lowest priority.

Default Value

The power supply priority of a port is low by default.

Command Mode

Interface configuration mode

Usage Guidelines

The command runs in non-auto mode.

Example

The following example shows how to set the power supply priority of port g0/1 to critical.

Switch_config_g0/1#poe priority critical

Related Command

poe power-management

1.1.15 poe PD-description

To set the port description (usually for PD), run the following command.

poe PD-discription *string*

no poe PD-discription

Parameters

Parameters	Description
string	Stands for the character string of port's description.

Default Value

The default value is null.

Command Mode

Interface configuration mode

Usage Guidelines

The "no" form of this command is used to delete the description character string.

Example

The following example shows how to set POE port description of g0/1 to AP-1.

Switch_config_g0/1#poe PD-discription AP-1

Related Command

None

1.1.16   poe force-power

To set the forced power supply, run the following command.

poe force-power

no poe force-power

Parameters

None

Default Value

The forced power supply is disabled by default.

Command Mode

Interface configuration mode

Usage Guidelines

The "no" form of this command is used to disable the forced power supply.

Example

The following example shows how to set the forced power supply for the POE port of g0/1.

Switch_config_g0/1#poe force-power

Related Command

poe power-management

1.1.17   poe extern-power

Setting the power value of the external power supply

poe extern-power *value*

no poe extern-power

Parameters

Parameters	Description
value	The actual power value of the external power supply. Unit: W

Default Value

The exteral power is 0W by default.

Command Mode

Global configuration mode

Usage Guidelines

Use the no form of this command to set the default value of the external power to 0W. The total power of the POE power supply = the power of the interal power supply + the power of the external power supply The power of the external power supply is the actual power of the external power supply.

Example

The following example shows how to set the external power to 400W when the external power supply is 400W.

Switch_config#poe extern-power 400

Related Command

None