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PoE commands

Only the PoE switch models support the PoE feature.

apply poe-profile

Use **apply poe-profile** to apply a PoE profile to a power interface (PI).

Use **undo apply poe-profile** to restore the default.

Syntax

```
apply poe-profile { index index | name profile-name }  
undo apply poe-profile { index index | name profile-name }
```

Default

No PoE profile is applied to PIs.

Views

PI view

Predefined user roles

network-admin

Parameters

index *index*: Specifies a PoE profile by its index number in the range of 1 to 100.

name *profile-name*: Specifies a PoE profile by its name, a case-sensitive string of 1 to 15 characters.

Examples

```
# Apply the PoE profile named forIPphone to Smartrate-Ethernet 1/0/1.  
<Sysname> system-view  
[Sysname] interface smartrate-ethernet1/0/1  
[Sysname-Smartrate-Ethernet1/0/1] apply poe-profile name forIPphone
```

Related commands

```
apply poe-profile interface  
display poe-profile
```

apply poe-profile interface

Use **apply poe-profile interface** to apply a PoE profile to PIs.

Use **undo apply poe-profile interface** to remove the PoE profile application from PIs.

Syntax

```
apply poe-profile { index index | name profile-name } interface  
interface-range  
undo apply poe-profile { index index | name profile-name } interface  
interface-range
```

Default

No PoE profile is applied to a PI.

Views

System view

Predefined user roles

network-admin

Parameters

index *index*: Specifies a PoE profile by its index number in the range of 1 to 100.

name *profile-name*: Specifies a PoE profile by its name, a case-sensitive string of 1 to 15 characters.

interface-range: Specifies a range of Ethernet interfaces in the form of *interface-type interface-number [to interface-type interface-number]*, where *interface-type interface-number* represents the interface type and interface number. The start interface number must be smaller than the end interface number. If an interface in the specified range does not support PoE, it is ignored when the PoE profile is applied.

Examples

Apply the PoE profile named **forIPphone** to Smartrate-Ethernet 1/0/1.

```
<Sysname> system-view
```

```
[Sysname] apply poe-profile name forIPphone interface smartrate-ethernet1/0/1
```

Apply the PoE profile with index number 1 to PIs Smartrate-Ethernet 1/0/2 through Smartrate-Ethernet 1/0/6.

```
<Sysname> system-view
```

```
[Sysname] apply poe-profile index 1 interface smartrate-ethernet 1/0/2 to smartrate-ethernet 1/0/6
```

Related commands

apply poe-profile

display poe-profile interface

display poe device

Use **display poe device** to display general PSE information.

Syntax

```
display poe device [ slot slot-number ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, the command displays general PSE information about all PSEs in the IRF fabric.

Examples

Display general PSE information.

```
<Sysname> display poe device
```

PSE ID	Slot No.	SSlot No.	PortNum	MaxPower(W)	State	Model
4	1	0	24	900	Off	LSP8POEJ

Table 1 Command output

Field	Description
PSE ID	ID of the PSE.
Slot No.	Slot number of the PSE.
SSlot No.	Sub-slot number of the PSE.
PortNum	Number of PIs on the PSE.
MaxPower(W)	Maximum power of the PSE.
State	PSE status: <ul style="list-style-type: none">• On—The PSE is supplying power.• Off—The PSE is not supplying power.• Faulty—The PSE has failed.
Model	PSE model.

display poe interface

Use `display poe interface` to display power supplying information for PIs.

Syntax

```
display poe interface [ interface-type interface-number ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface-type interface-number: Specifies an interface by its type and number. If you do not specify an interface, this command displays power supplying information for all PIs.

Examples

Display power supplying information for Smartrate-Ethernet 1/0/1.

```
<Sysname> display poe interface smartrate-ethernet1/0/1
```

```
PoE Status           : Enabled
Power Priority        : Low
Oper                 : Off
IEEE Class           : 0
Detection Status     : Searching
Power Mode           : Signal
Current Power        : 0      mW
```

```

Average Power      : 0      mW
Peak Power        : 0      mW
Max Power         : 100000 mW
Electric Current  : 0      mA
Voltage           : 0.0    V
PD Description    :
Legacy PD Detection : Disabled
PoE force power Status : Disabled

```

Table 2 Command output

Field	Description
PoE Status	PoE status: <ul style="list-style-type: none"> • Enabled. • Disabled.
Power Priority	Power supply priority: <ul style="list-style-type: none"> • Critical (highest). • High. • Low.
Oper	Operating status: <ul style="list-style-type: none"> • Off—PoE is disabled. • On—Power is being supplied to the PI correctly. • Power-lack—Remaining guaranteed power is insufficient for a critical PI. • Power-deny—The PSE refuses to supply power. The power required by the PD is higher than the configured power. • Power-itself—The PD is using another power supply. • Power-limit—The PSE is supplying power to the PD based on the configured power though the PD requires more power than the configured power.
IEEE Class	PD power class: 0, 1, 2, 3, or 4. If the PSE does not support PD classification, this field displays a hyphen (-).
Detection Status	Power detection status: <ul style="list-style-type: none"> • Disabled—The PoE function is disabled. • Searching—The PI is searching for the PD. • Delivering power—The PI is supplying power to the PD. • Fault—A fault occurred during the test. • Test—The PI is undergoing a test. • Other fault—A fault has caused the PSE to enter the idle status. • PD disconnected—The PD is disconnected.
Power Mode	Power transmission mode. Signal means that power is transmitted over the signal pairs of a twisted pair cable.
Current Power	Current power, including PD consumption power and transmission loss.
Average Power	Average power.
Peak Power	Peak power.
Max Power	Maximum power.
Electric Current	Current.

Field	Description
Voltage	Voltage.
PD Description	Type and location description for the PD connected to the PI.
Legacy PD Detection	Whether non-standard PD detection is enabled: <ul style="list-style-type: none"> • Enabled. • Disabled.
PoE force power Status	This field is supported only in Release 6320 and later. Whether forced PoE power supply is enabled: <ul style="list-style-type: none"> • Enabled. • Disabled.

Display power supplying information for all PIs.

```
<Sysname> display poe interface
```

```
Interface   PoE        Priority  CurPower  Oper    IEEE  Detection
              (W)          Class  Status

SGE1/0/1    Enabled    Low       0.0       Off     0     Searching
SGE1/0/2    Enabled    Low       0.0       Off     0     Searching
SGE1/0/3    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/4    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/5    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/6    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/7    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/8    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/9    Disabled   Low       0.0       Off     0     Disabled
SGE1/0/10   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/11   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/12   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/13   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/14   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/15   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/16   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/17   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/18   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/19   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/20   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/21   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/22   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/23   Disabled   Low       0.0       Off     0     Disabled
SGE1/0/24   Disabled   Low       0.0       Off     0     Disabled

--- On State Ports: 0; Used: 0.0(W); Remaining: 900.0(W) ---
```

Table 3 Command output

Field	Description
Interface	Interface name.
PoE	PoE status: <ul style="list-style-type: none"> • Enabled. • Disabled.

Field	Description
Priority	Power priority: <ul style="list-style-type: none"> • Critical (highest). • High. • Low.
CurPower	Current power of a PI.
Oper	Operating status: <ul style="list-style-type: none"> • Off—PoE is disabled. • On—Power is being supplied to the PI correctly. • Power-lack—Remaining guaranteed power is insufficient for a critical PI. • Power-deny—The PSE refuses to supply power. The power required by the PD is higher than the configured power. • Power-itself—The PD is using another power supply. • Power-limit—The PSE is supplying power to the PD based on the configured power though the PD requires more power than the configured power.
IEEE Class	PD power class: 0, 1, 2, 3, or 4. If the PSE does not support PD classification, this field displays a hyphen (-).
Detection Status	Power detection status: <ul style="list-style-type: none"> • Disabled—PoE function is disabled. • Searching—The PI is searching for the PD. • Delivering Power—The PI is supplying power for the PD. • Fault—A fault occurred during the test. • Test—The PI is undergoing a test. • Other fault—A fault has caused the PSE to enter the idle status. • PD disconnected—The PD is disconnected.
On State Ports	Number of PIs that are supplying power.
Used	Power consumed by the current PI.
Remaining	Total remaining power of the PSE.

display poe interface power

Use `display poe interface power` to display power information for PIs.

Syntax

```
display poe interface power [ interface-type interface-number ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface-type interface-number: Specifies an interface by its type and number. If you do not specify an interface, this command displays power information for all PIs.

Examples

Display power information for Smartrate-Ethernet 1/0/1.

```
<Sysname> display poe interface power smartrate-ethernet1/0/1
Interface      Current    Peak      Max      PD Description
              (W)       (W)       (W)
SGE1/0/1      0.0       0.0       100.0
```

Display power information for all PIs.

```
<Sysname> display poe interface power
Interface      Current    Peak      Max      PD Description
              (W)       (W)       (W)
SGE1/0/1      0.0       0.0       100.0
SGE1/0/2      0.0       0.0       100.0
SGE1/0/3      0.0       0.0       100.0
SGE1/0/4      0.0       0.0       100.0
SGE1/0/5      0.0       0.0       100.0
SGE1/0/6      0.0       0.0       100.0
SGE1/0/7      0.0       0.0       100.0
SGE1/0/8      0.0       0.0       100.0
SGE1/0/9      0.0       0.0       100.0
SGE1/0/10     0.0       0.0       100.0
SGE1/0/11     0.0       0.0       100.0
SGE1/0/12     0.0       0.0       100.0
SGE1/0/13     0.0       0.0       100.0
SGE1/0/14     0.0       0.0       100.0
SGE1/0/15     0.0       0.0       100.0
SGE1/0/16     0.0       0.0       100.0
SGE1/0/17     0.0       0.0       100.0
SGE1/0/18     0.0       0.0       100.0
SGE1/0/19     0.0       0.0       100.0
SGE1/0/20     0.0       0.0       100.0
SGE1/0/21     0.0       0.0       100.0
SGE1/0/22     0.0       0.0       100.0
SGE1/0/23     0.0       0.0       100.0
SGE1/0/24     0.0       0.0       100.0

--- On State Ports: 0; Used: 0.0(W); Remaining: 900.0(W) ---
```

Table 4 Command output

Field	Description
Interface	Interface name.
CurPower	Current power.
PeakPower	Peak power.
MaxPower	Maximum power.
PD Description	Type and location description for the PD connected to a PI.
Ports On	Number of PIs that are supplying power.
Used	Power consumed by all PIs.
Remaining	Total remaining power of all PSEs configured with a maximum power.

Field	Description
	This field displays 0 if no PSE is configured with a maximum power (all PSEs participate in dynamic power allocation).

display poe pse

Use `display poe pse` to display detailed PSE information.

Syntax

```
display poe pse [ pse-id ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

pse-id: Specifies a PSE by its ID. The device is a single-PSE device. This command displays same information whether you specify this argument or not.

Examples

Display detailed PSE information.

```
<Sysname> display poe pse
```

```
PSE ID                : 4
Slot No.              : 1
SSlot No.            : 0
PSE Model             : LSP8POEJ
PSE Status            : Enabled
Power Priority         : Low
Current Power         : 0.0    W
Average Power         : 0.0    W
Peak Power            : 0.0    W
Max Power             : 900.0  W
Remaining Guaranteed Power : 900.0  W
PSE CPLD Version     : -
PSE Software Version  : 1654
PSE Hardware Version  : 57633
PSE Legacy PD Detection : Disabled
Power Utilization Threshold : 80
PD Power Policy       : Disabled
PD Disconnect-Detection Mode : DC
PD High Inrush       : Enabled
```

Table 5 Command output

Field	Description
PSE ID	ID of the PSE.
SSlot No.	Subslot number of the PSE.

Field	Description
PSE Status	PoE status of the PSE: <ul style="list-style-type: none"> • Enabled. • Disabled.
PSE Fast Power Supply	This field is not supported in the current software version. PSE fast power supply enabling status: <ul style="list-style-type: none"> • Enabled. • Disabled.
Power Priority	Power priority of the PSE.
Current Power	Current power of the PSE.
Average Power	Average power of the PSE.
Peak Power	Peak power of the PSE.
Max Power	Maximum power of the PSE.
Remaining Guaranteed Power	Remaining guaranteed power of the PSE = Maximum guaranteed power of the PSE – Total maximum power of all critical PIs of the PSE.
PSE CPLD Version	PSE CPLD version number.
PSE Software Version	PSE software version number.
PSE Hardware Version	PSE hardware version number.
Legacy PD Detection	Nonstandard PD detection status: <ul style="list-style-type: none"> • Enabled. • Disabled.
Power Utilization Threshold	PSE power alarm threshold.
PD Power Policy	PD power management policy mode.
PD Disconnect-Detection Mode	PD disconnection detection mode.
PD High Inrush	Whether PD high inrush is enabled. <ul style="list-style-type: none"> • Enabled. • Disabled.

display poe pse interface

Use `display poe pse interface` to display the PoE status of all PIs on a PSE.

Syntax

```
display poe pse pse-id interface
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

`pse pse-id`: Specifies a PSE ID. To display PSE ID and slot mappings, use the `display poe device` command.

Examples

Display the status of all PIs on PSE 4.

```
<Sysname> display poe pse 4 interface
```

```
Interface      PoE          Priority  CurPower  Oper      IEEE  Detection
              (W)          (W)      (W)      Class    Status
SGE1/0/1      Enabled     Low       0.0       Off       0      Searching
SGE1/0/2      Enabled     Low       0.0       Off       0      Searching
SGE1/0/3      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/4      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/5      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/6      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/7      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/8      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/9      Disabled    Low       0.0       Off       0      Disabled
SGE1/0/10     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/11     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/12     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/13     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/14     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/15     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/16     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/17     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/18     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/19     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/20     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/21     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/22     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/23     Disabled    Low       0.0       Off       0      Disabled
SGE1/0/24     Disabled    Low       0.0       Off       0      Disabled

--- On State Ports: 0; Used: 0.0(W); Remaining: 900.0(W) ---
```

Table 6 Command output

Field	Description
Interface	Interface name of a PI.
PoE	PoE status of a PI: <ul style="list-style-type: none"> • Enabled. • Disabled.
Priority	Priority of a PI: <ul style="list-style-type: none"> • Critical (highest). • High. • Low.
CurPower	Current power of a PI.
Oper	Operating status of a PI: <ul style="list-style-type: none"> • Off—PoE is disabled. • On—Power is being supplied to the PI correctly. • Power-lack—Remaining guaranteed power is insufficient for a critical PI. • Power-deny—The PSE refuses to supply power. The power

Field	Description
	<p>required by the PD is higher than the configured power.</p> <ul style="list-style-type: none"> • Power-itself—The PD is using another power supply. • Power-limit—The PSE is supplying power to the PD based on the configured power though the PD requires more power than the configured power.
IEEE Class	<p>PD power class: 0, 1, 2, 3, or 4.</p> <p>If the PSE does not support PD classification, this field displays a hyphen (-).</p>
Detection Status	<p>Power detection status of a PI:</p> <ul style="list-style-type: none"> • Disabled—PoE function is disabled. • Searching—The PI is searching for the PD. • Delivering Power—The PI is supplying power to the PD. • Fault—A fault occurred during the test. • Test—The PI is undergoing a test. • Other Fault—A fault has caused the PSE to enter the idle status. • PD Disconnected—The PD is disconnected.
On State Ports	Number of PIs that are supplying power.
Used	Power consumed by PIs on the PSE.
Remaining	Remaining power of the PSE.

display poe pse interface power

Use `display poe pse interface power` to display power information for PIs on a PSE.

Syntax

```
display poe pse pse-id interface power
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

`pse pse-id`: Specifies a PSE by its ID. To display PSE ID and slot mappings, use the `display poe device` command.

Examples

```
# Display power information for PIs on PSE 4.
```

```
<Sysname> display poe pse 4 interface power
```

Interface	Current (W)	Peak (W)	Max (W)	PD Description
SGE1/0/1	0.0	0.0	100.0	
SGE1/0/2	0.0	0.0	100.0	
SGE1/0/3	0.0	0.0	100.0	
SGE1/0/4	0.0	0.0	100.0	
SGE1/0/5	0.0	0.0	100.0	
SGE1/0/6	0.0	0.0	100.0	

```

SGE1/0/7      0.0      0.0      100.0
SGE1/0/8      0.0      0.0      100.0
SGE1/0/9      0.0      0.0      100.0
SGE1/0/10     0.0      0.0      100.0
SGE1/0/11     0.0      0.0      100.0
SGE1/0/12     0.0      0.0      100.0
SGE1/0/13     0.0      0.0      100.0
SGE1/0/14     0.0      0.0      100.0
SGE1/0/15     0.0      0.0      100.0
SGE1/0/16     0.0      0.0      100.0
SGE1/0/17     0.0      0.0      100.0
SGE1/0/18     0.0      0.0      100.0
SGE1/0/19     0.0      0.0      100.0
SGE1/0/20     0.0      0.0      100.0
SGE1/0/21     0.0      0.0      100.0
SGE1/0/22     0.0      0.0      100.0
SGE1/0/23     0.0      0.0      100.0
SGE1/0/24     0.0      0.0      100.0
--- On State Ports: 0; Used: 0.0(W); Remaining: 900.0(W) ---

```

Table 7 Command output

Field	Description
Interface	Interface name of a PI.
Current	Current power of a PI.
Peak	Peak power of a PI.
Max	Maximum power of a PI.
PD Description	Type and location description for the PD connected with a PI.
Ports On	Number of PIs that are supplying power.
Used	Power consumed by all PIs.
Remaining	Remaining power of the PSE.

display poe-profile

Use `display poe-profile` to display information about the PoE profile.

Syntax

```
display poe-profile [ index index | name profile-name ]
```

Views

Any view

Predefined user roles

network-admin
network-operator

Parameters

index *index*: Specifies a PoE profile by its index number in the range of 1 to 100.

name *profile-name*: Specifies a PoE profile by its name, a case-sensitive string of 1 to 15 characters.

Usage guidelines

If you do not specify a profile, the command displays information about all PoE profiles.

Examples

Display information about all PoE profiles.

```
<Sysname> display poe-profile
PoE Profile      Index  ApplyNum  Interfaces      Configuration
forIPphone      1      4         SGE1/0/1       poe enable
                 1      4         SGE1/0/2       poe priority critical
                 1      4         SGE1/0/3
                 1      4         SGE1/0/4
forAP            2      2         SGE1/0/5       poe enable
                 2      2         SGE1/0/6       poe max-power 14000
--- Total PoE profiles: 2, total ports: 6 ---
```

Display information about the PoE profile with index number 1.

```
<Sysname> display poe-profile index 1
PoE Profile      Index  ApplyNum  Interfaces      Configuration
forIPphone      1      6         SGE1/0/1       poe enable
                 1      6         SGE1/0/2       poe priority critical
                 1      6         SGE1/0/3
                 1      6         SGE1/0/4
                 1      6         SGE1/0/5
                 1      6         SGE1/0/6
--- Total ports: 6 ---
```

Table 8 Command output

Field	Description
PoE Profile	Name of the PoE profile.
Index	Index number of the PoE profile.
ApplyNum	Number of PIs to which the PoE profile is applied.
Interfaces	Interface name of the PI to which the PoE configuration is applied.
Configuration	Configurations of the PoE profile.
Total PoE profiles	Number of PoE profiles.
Total ports	Number of PIs to which all PoE profiles are applied.

display poe-profile interface

Use **display poe-profile interface** to display information about the PoE profile on a PI.

Syntax

```
display poe-profile interface interface-type interface-number
```

Views

Any view

Predefined user roles

network-admin
network-operator

Parameters

interface-type interface-number: Specifies an interface by its type and number.

Examples

Display information about the PoE profile on Smartrate-Ethernet 1/0/1.

```
<Sysname> display poe-profile interface smartrate-ethernet1/0/1
PoEProfile      Index  ApplyNum  Interface  Effective configuration
forIPphone      1      6         SGE1/0/1   poe enable
                                     poe priority critical
```

The **Effective configuration** field displays the configurations that have taken effect. For the descriptions of other fields, see [Table 8](#).

poe ai enable

Use `poe ai enable` to enable AI-driven PoE.

Use `undo ai poe enable` to disable AI-driven PoE.

NOTE:

This command is supported only in Release 6320 and later.

Syntax

```
poe ai enable
undo poe ai enable
```

Default

AI-driven PoE is disabled.

Views

System view

Predefined user roles

network-admin

Usage guidelines

With AI-driven PoE enabled, the device automatically recovers a PI when it fails. If more than one PI fails simultaneously, the device recovers the PIs one by one in ascending order of PI number.

AI-driven PoE automatically adjusts the power supply parameters to fit the power needs. If you disable AI-driven PoE, the system reverts the parameters to the settings before the adjustment.

AI-driven PoE takes effect only on PSEs that run firmware V147 or later.

- **Firmware earlier than V147**—You must use the `poe update` command to upgrade the PSE firmware and then enable AI-driven PoE on the PSE.
- **Firmware V147 or later**—You do not need to re-enable AI-driven PoE after upgrading the firmware if you have enabled the feature before the upgrade.

Examples

Enable AI-driven PoE.

```
<Sysname> system-view
[Sysname] poe ai enable
```

Related commands

```
poe update
```

poE enable

Use **poe enable** to enable PoE on a PI.

Use **undo poe enable** to disable PoE on a PI.

Syntax

```
poe enable
undo poe enable
```

Default

PoE is disabled on a PI.

Views

```
PI view
PoE profile view
```

Predefined user roles

```
network-admin
```

Usage guidelines

If a PoE profile has been applied to a PI, remove the application before configuring the PI in PoE profile view.

If a PI has been configured, remove the configuration before configuring the PI in PI view.

Examples

```
# Enable PoE on a PI in PI view.
<Sysname> system-view
[Sysname] interface smartrate-ethernet1/0/1
[Sysname-Smartrate-Ethernet1/0/1] poe enable

# Enable PoE on a PI in PoE profile view.
<Sysname> system-view
[Sysname] poe-profile abc
[Sysname-poe-profile-abc-1] poe enable
```

Related commands

```
display poe interface
poe-profile
```

poE force-power

Use **poe force-power** to enable forced PoE power supply.

Use **undo poe force-power** to disable forced PoE power supply.

NOTE:

This command is supported only in Release 6320 and later.

Syntax

```
poe force-power
undo poe force-power
```

Default

Forced PoE power supply is disabled.

Views

PI view

Predefined user roles

network-admin

Usage guidelines**△ CAUTION:**

This command enables the device to supply power to a PD directly without performing a detection of the PD. To avoid damaging the PD, make sure the power provided by the device meets the PD specifications before executing this command.

Before supplying power to a PD, the device performs a detection of the PD. It supplies power to the PD only after the PD passes the detection. If the PD fails the detection but the power provided by the device meets the PD specifications, you can execute this command to enable forced power supply to the PD.

Examples

```
# Enable forced PoE power supply.
```

```
<Sysname> system-view
[Sysname] interface gigabitethernet 1/0/1
[Sysname-GigabitEthernet1/0/1] poe force-power
```

```
The PD might be damaged if the provided by the device does not meet the PD power specifications.
Make sure you are fully aware of the impacts of this command when you use it in a live
network. Continue?[Y/N]: y
```

poe high-inrush enable

Use **poe high-inrush enable** to allow inrush currents drawn by PDs.

Use **undo poe high-inrush enable** to restore the default.

Syntax

```
poe high-inrush enable pse pse-id
undo poe high-inrush enable pse pse-id
```

Default

Inrush currents drawn by PDs are not allowed.

Views

System view

Predefined user roles

network-admin

Parameters

pse *pse-id*: Specifies a PSE by its ID.

Usage guidelines

CAUTION:

Inrush currents might damage the components on the device. Use this command with caution.

Inrush current might occur at PD startup and trigger PSE self-protection, As a result, the PSE stops supplying power to the PDs. To continue power supply to the PDs, configure this feature to allow inrush currents drawn by PDs.

IEEE 802.3af and IEEE 802.3at define specifications for inrush current. The device supports the IEEE 802.3af and IEEE 802.3at specifications for inrush current.

Examples

```
# All high inrush currents drawn by PDs.  
<Sysname> system-view  
[Sysname] poe high-inrush enable pse 4
```

Related commands

```
display poe interface  
display poe pse
```

poel legacy enable (interface view)

Use **poel legacy enable** to enable nonstandard PD detection for a PI.

Use **undo poel legacy enable** to disable nonstandard PD detection for a PI.

Syntax

```
poel legacy enable  
undo poel legacy enable
```

Default

Nonstandard PD detection is disabled for a PI.

Views

Interface view

Predefined user roles

network-admin

Usage guidelines

The device supports PSE-based and PI-based nonstandard PD detection. If you enable nonstandard PD detection both in system view and interface view, the configuration in system view takes effect.

As a best practice for disabling nonstandard PD detection for all PIs successfully in one operation, disable this feature in both system view and interface view.

Examples

```
# Enable nonstandard PD detection for a PI.
```

```
<Sysname> system-view
[Sysname] interface smartrate-ethernet1/0/1
[Sysname-Smartrate-Ethernet1/0/1] poe legacy enable
```

Related commands

```
display poe interface
poe legacy enable (system view)
```

poe legacy enable (system view)

Use **poe legacy enable** to enable the PSE to detect nonstandard PDs.

Use **undo poe legacy enable** to disable the PSE from detecting nonstandard PDs.

Syntax

```
poe legacy enable pse pse-id
undo poe legacy enable pse pse-id
```

Default

Nonstandard PD detection is disabled.

Views

System view

Predefined user roles

network-admin

Parameters

pse *pse-id*: Specifies a PSE by its ID.

Usage guidelines

The device supports PSE-based and PI-based nonstandard PD detection. If you enable nonstandard PD detection both in system view and interface view, the configuration in system view takes effect.

As a best practice for disabling nonstandard PD detection for all PIs successfully in one operation, disable this feature in both system view and interface view.

Examples

```
# Enable PSE 4 to detect nonstandard PDs.
<Sysname> system-view
[Sysname] poe legacy enable pse 4
```

Related commands

```
display poe pse
poe legacy enable (interface view)
```

poe max-power (interface view)

Use **poe max-power** to set the maximum PI power.

Use **undo poe max-power** to restore the default.

Syntax

```
poe max-power max-power  
undo poe max-power
```

Default

The maximum PI power is 100000 milliwatts.

Views

PI view
PoE profile view

Predefined user roles

network-admin

Parameters

max-power: Sets the maximum PI power in milliwatts. The value is in the range of 1000 to 100000, in increments of 100.

Examples

```
# Set the maximum PI power to 12000 milliwatts in PI view.  
<Sysname> system-view  
[Sysname] interface smartrate-ethernet1/0/1  
[Sysname-Smartrate-Ethernet1/0/1] poe max-power 12000  
  
# Set the maximum PI power to 12000 milliwatts in PoE profile view.  
<Sysname> system-view  
[Sysname] poe-profile abc  
[Sysname-poe-profile-abc-1] poe max-power 12000
```

Related commands

```
poe max-power (system view)
```

poe max-power (system view)

Use **poe max-power** to set the maximum PSE power.

Use **undo poe max-power** to restore the default.

Syntax

```
poe pse pse-id max-power max-power  
undo poe pse pse-id max-power
```

Default

The maximum PSE power depends on the PoE power supply installed on the device.

Views

System view

Predefined user roles

network-admin

Parameters

max-power: Sets the maximum PSE power in watts. The value increases in increments.

pse *pse-id*: Specifies a PSE by its ID.

Usage guidelines

To avoid the PSE power overload situation, make sure the total power of all PSEs is less than the maximum PoE power.

The maximum power of the PSE must be greater than or equal to the total maximum power of all its critical PIs on the PSE to guarantee these PIs power.

Examples

```
# Set the maximum PSE power to 150 watts. (Single-PSE device)
```

```
<Sysname> system-view
```

```
[Sysname] poe max-power 150
```

```
# Set the maximum power of PSE 4 to 150 watts. (Multi-PSE device)
```

```
<Sysname> system-view
```

```
[Sysname] poe pse 4 max-power 150
```

Related commands

poe max-power (interface view)

poe priority pse

po e pd-description

Use **po e pd-description** to configure a description for the PD that connects to a PI.

Use **undo po e pd-description** to restore the default.

Syntax

```
po e pd-description text
```

```
undo po e pd-description
```

Default

No description is configured for the PD that connects to a PI.

Views

PI view

Predefined user roles

network-admin

Parameters

text: Configures a description for the PD connected to the PI, a case-sensitive string of 1 to 80 characters.

Examples

```
# Configure the description for the PD as IP Phone for Room 101.
```

```
<Sysname> system-view
```

```
[Sysname] interface smartrate-ethernet1/0/1
```

```
[Sysname-Smartrate-Ethernet1/0/1] po e pd-description IP Phone For Room 101
```

po e pd-policy priority

Use **po e pd-policy priority** to enable PI power management.

Use `undo poe pd-policy priority` to restore the default.

Syntax

```
poe pd-policy priority
undo poe pd-policy priority
```

Default

PI power management is disabled.

Views

System view

Predefined user roles

network-admin

Usage guidelines

If PI power management is disabled, the PSE does not supply power to new PDs when PSE power overload occurs.

If PI power management is enabled, when a PSE is overloaded, the PSE allocates power to PDs based on the priority of their PIs.

Examples

```
# Enable PI power management.
<Sysname> system-view
[Sysname] poe pd-policy priority
```

Related commands

```
poe priority
```

poe priority (interface view)

Use `poe priority` to set the power supply priority for a PI.

Use `undo poe priority` to restore the default.

Syntax

```
poe priority { critical | high | low }
undo poe priority
```

Default

The power supply priority of a PI is **low**.

Views

PI view

PoE profile view

Predefined user roles

network-admin

Parameters

critical: Sets the power supply priority to **critical**. The PI with critical power priority operates in guaranteed mode. Power is first supplied to the PD connected to the critical PI.

high: Sets the power supply priority to **high**.

low: Sets the power supply priority to **low**.

Usage guidelines

When the PoE power is insufficient, power is first supplied to PIs with higher priority.

For PIs with same power supply priority, the PI with the smallest ID is allocated with power first.

If a PoE profile has been applied to a PI, remove the application before configuring the PI in PoE profile view.

If a PI has been configured, remove the configuration before configuring the PI in PI view.

Examples

Set the power supply priority of the PI to **critical** in PI view.

```
<Sysname> system-view
[Sysname] interface smartrate-ethernet1/0/1
[Sysname-Smartrate-Ethernet1/0/1] poe priority critical
```

Set the power supply priority of the PI to **critical** in PoE profile view.

```
<Sysname> system-view
[Sysname] poe-profile abc
[Sysname-poe-profile-abc-1] poe priority critical
[Sysname-poe-profile-abc-1] quit
[Sysname] interface smartrate-ethernet1/0/1
[Sysname-Smartrate-Ethernet1/0/1] apply poe-profile name abc
```

Related commands

poe pd-policy priority

poe reset enable

Use **poe reset enable** to enable PI power cycling upon a system warm reboot.

Use **undo poe pse-policy priority** to disable PI power cycling upon a system warm reboot.

Syntax

```
poe reset enable
undo poe reset enable
```

Default

PI power cycling upon a system warm reboot is disabled.

Views

System view

Predefined user roles

network-admin

Usage guidelines

During the system warm reboot process (upon execution of the **reboot** command), the PIs continue supplying power to the PDs but data connections between the PDs and the device are interrupted. After the system reboots, PDs might not re-initiate data connections with the device. Power cycling PIs upon a system warm reboot allows the PDs to re-establish data connections with the device.

Examples

Enable PI power cycling upon a system warm reboot.

```
<Sysname> system-view
[Sysname] poe reset enable
```

poe standard

Use **poe standard** { **at** | **bt** } to specify a PoE standard for a PI.

Use **undo poe standard** to restore the default.

Syntax

```
poe standard { at | bt }
undo poe standard
```

Default

No PoE standard is specified for a PI.

Views

PI view

Predefined user roles

network-admin

Parameters

at: Specifies the IEEE 802.3at standard.

bt: Specifies the IEEE 802.3bt standard.

Usage guidelines

For your configuration to take effect, restore the PI maximum power to the default before you configure this command.

IEEE PoE standards are not forward compatible. For a PI to supply power to PDs, make sure the PoE standard version of the PDs is the same as or earlier than the PoE standard version of the PI.

If a PI operates in IEEE 802.3bt mode and supplies more than 30 W power, changing the PoE standard for the PI will cause the connected PDs to be power cycled. Be cautious when you modify the configuration of this command.

Examples

```
# Specify the PoE standard as IEEE 802.3at for PI Smartrate-Ethernet 1/0/1.
```

```
<Sysname> system-view
[Sysname] interface smartrate-ethernet1/0/1
[Sysname-Smartrate-Ethernet1/0/1] poe standard at
```

Related commands

```
poe class-detect
poe max-power (interface view)
```

poe update

Use **poe update** to upgrade the PSE firmware when the device is operating.

Syntax

```
poe update { full | refresh } filename [ pse pse-id ]
```


Views

System view

Predefined user roles

network-admin

Parameters

full: Upgrades the PSE firmware in full mode.

refresh: Upgrades the PSE firmware in refresh mode.

filename: Specifies the name of the upgrade file, a case-insensitive string of 1 to 64 characters. The specified file must be in the root directory of the file system of the device.

pse *pse-id*: Specifies a PSE by its ID. If you do not specify a PSE, all PSEs are upgraded.

Usage guidelines

You can upgrade the PSE firmware in service in either of the following modes:

- **Refresh mode**—Updates the PSE firmware without deleting it. You can use the refresh mode in most cases.
- **Full mode**—Deletes the current PSE firmware and reloads a new one. Use the full mode if the PSE firmware is damaged and you cannot execute any PoE commands.

Examples

```
# Upgrade the firmware of PSE 4 in service.
<Sysname> system-view
[Sysname] poe update refresh POE-168.bin pse 4
```

poe utilization-threshold

Use **poe utilization-threshold** to configure a power alarm threshold for the PSE.

Use **undo poe utilization-threshold** to restore the default power alarm threshold of the PSE.

Syntax

```
poe utilization-threshold value pse pse-id
```

```
undo poe utilization-threshold pse pse-id
```

Default

The power alarm threshold for the PSE is 80%.

Views

System view

Predefined user roles

network-admin

Parameters

value: Specifies alarm threshold as a percentage of 1 to 99.

pse *pse-id*: Specifies a PSE by its ID.

Usage guidelines

If PSE power usage crosses the threshold multiple times in succession, the system sends notification messages only for the first crossing. For more information, see "Configuring SNMP."

Examples

```
# Set the power alarm threshold of PSE 4 to 90%.
<Sysname> system-view
[Sysname] poe utilization-threshold 90 pse 4
```

poef-profile

Use **poef-profile** to create a PoE profile and enter its view, or enter the view of an existing PoE profile.

Use **undo poef-profile** to delete a PoE profile.

Syntax

```
poef-profile profile-name [ index ]
undo poef-profile { index index | name profile-name }
```

Default

No PoE profiles exist.

Views

System view

Predefined user roles

network-admin

Parameters

profile-name: Specifies a PoE profile name, a case-sensitive string of 1 to 15 characters. A PoE configuration file name begins with a letter and must not contain reserved keywords including **undo**, **all**, **name**, **interface**, **user**, **poe**, **disable**, **max-power**, **mode**, **priority**, or **enable**.

index: Specifies the index number of a PoE profile, in the range of 1 to 100.

Usage guidelines

To configure PIs in batches, use the PoE profile.

If you do not specify a profile index, the system automatically assigns an index (starting from 1) to the PoE profile.

If a PoE profile is applied, use the **undo apply poef-profile** command to remove the application before deleting the PoE profile.

Examples

```
# Create a PoE profile, name it abc, and specify the index number as 3.
<Sysname> system-view
[Sysname] poef-profile abc 3
[Sysname-poef-profile-abc-3]

# Create a PoE profile and name it def. Do not specify the index number.
<Sysname> system-view
[Sysname] poef-profile def
[Sysname-poef-profile-def-1]
```

Related commands

```
apply poef-profile
poe enable
```

`poe max-power (interface view)`

`poe mode`

`poe priority`