



Intelligent Network Management Switch

User Manual

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Creative Lianjie Network Technology Co., Ltd.

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July 3, 2024	Richard Huo	V1.0	First Edition
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The series of products are AC/DC to DC industrial-rated 4-port PoE switch with management function.

They include 1 uplink data port, AC or DC input terminal block and 4 PoE ports, providing 90W each port power for remote PDs over 4 pairs output at 10/100/1000Mbps of data speed. Each PoE port is compliant with BT standard and backward compatible with 802.3af/at. Such as power for Pan Tilt Zoom cameras/IP cameras, VoIP video phones, building/access control equipment, WiFi access devices, POS terminals, thin clients, kiosks, and IP print servers.

Supports IEEE 802.1Q VLAN and port-based VLAN. We can access and manage the device via web browser, including IP configuration, port configuration, VLAN configuration, PoE configuration, device control, etc. We can also view device information such as switch status, port status, PoE status, etc. In addition, the PoE port enables remote control of the device' on/off and reset status.

Please see the 6 models below for their differences. In the manual, we take one model with SFP/Fiber uplink for example.

Model	Input	Output	Power Budget	Managed	Uplink
PT-PIS4PB1S-E-M	12-55Vdc	55Vdc/1.64A per port	90W(Max)*4, total 120W to 360W	Y	Fiber
PT-PIS4PB1T-E-M	12-55Vdc	55Vdc/1.64A per port	90W(Max)*4, total 120W to 360W	Y	LAN
PT-PIS4PB1S-AC-M	100-240Vac	55Vdc/1.64A per port	90W(Max)*4 total 160W	Y	Fiber
PT-PIS4PB1T-AC-M	100-240Vac	55Vdc/1.64A per port	90W(Max)*4 total 160W	Y	LAN
PT-PIS4PB1S-M	48-55Vdc/8.0A	48-55Vdc/1.64A per port	90W(Max)*4 total 360W	Y	Fiber
PT-PIS4PB1T-M	48-55Vdc/8.0A	48-55Vdc/1.64A per port	90W(Max)*4 total 360W	Y	LAN

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1. Introduction to the Switch

Intelligent managed switches, also known as PoE managed switches, are used between regular switches and network terminal devices. They can provide power and network connectivity to network terminal devices via Ethernet cables. Additionally, through the web interface of the intelligent managed switch, it is possible to manage the network terminal devices connected to the switch.

2. Basic Operations of the Switch

2.1.Login Page

2.1.1.Login

A. Local Login

Power the switch that needs to be logged into, connect any port of the switch to the login computer, and ensure the login computer's local IP is in the same subnet as the switch's IP. For instance, if the switch's default IP is 192.168.31.192, then the login computer's IP needs to be set to 192.168.31.*.

After the setup is complete, open the browser on the login computer and enter the IP address, such as 192.168.31.192, to access the login page. Enter the username: **admin** and password: **123123**, then click Login to enter the WEB interface.

B. Remote Login

Power the switch that needs to be logged into, and connect an Ethernet cable that has access to the internet to the switch. Open the browser on any computer in the same local network and enter the IP address, such as 192.168.31.192, to access the login page. Enter the username: **admin** and password: **123123**, then click Login to enter the WEB interface.



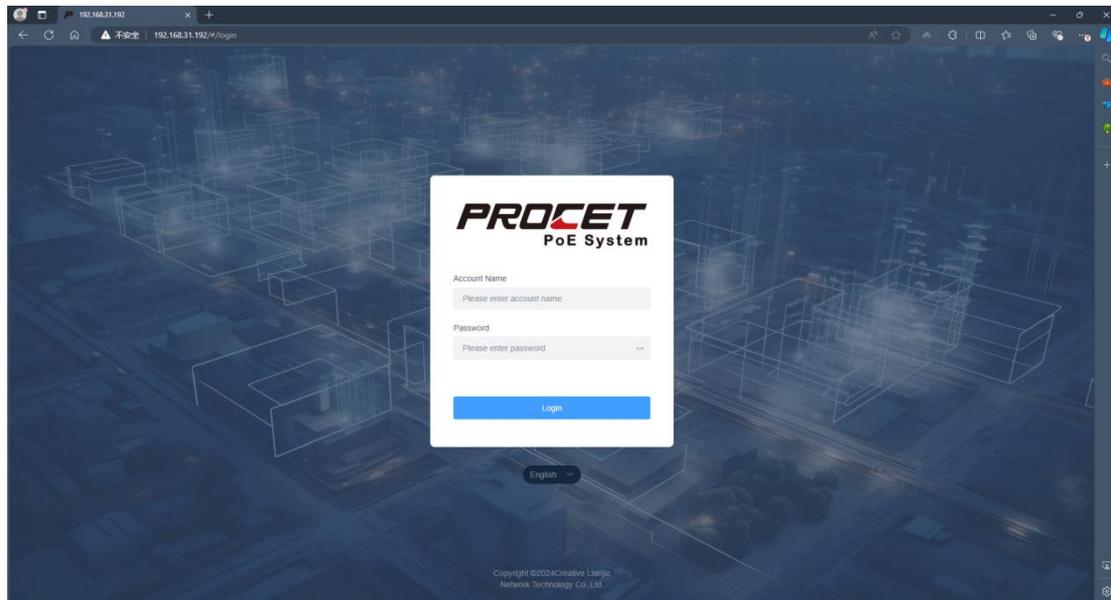
Note:

Ensure that the IP address used for the switch login and the IP address of the login

computer are different from other devices in the network to avoid IP conflicts that may result in login failure.

Initial login uses a fixed IP address. If you need to change the IP address, please follow the manual instructions in section 2.9.2.5.

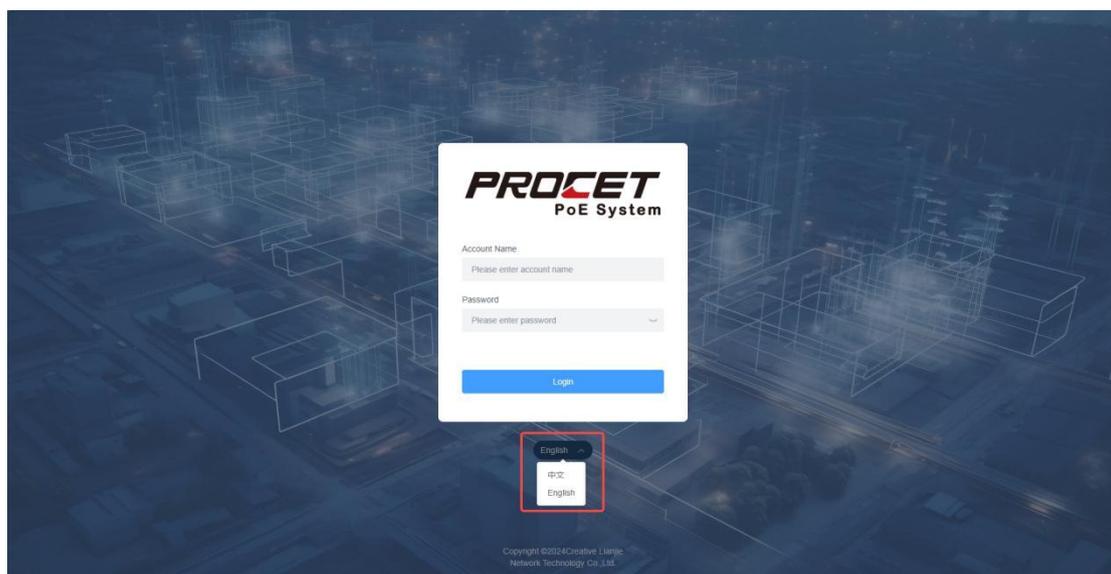
The Login Page see as below:



2.1.2.Switch Language

The login interface allows for direct language switching, supporting toggling between Chinese and English.

The language switching page looks as shown in the following image.



2.2. System Overview page

The System Overview page includes port overview, Basic Information, power overview, etc.

2.2.1 Port Overview

The port overview is initially expanded by default, and you can click the collapse button to hide the port overview. The page displays only the ports that the current device has.

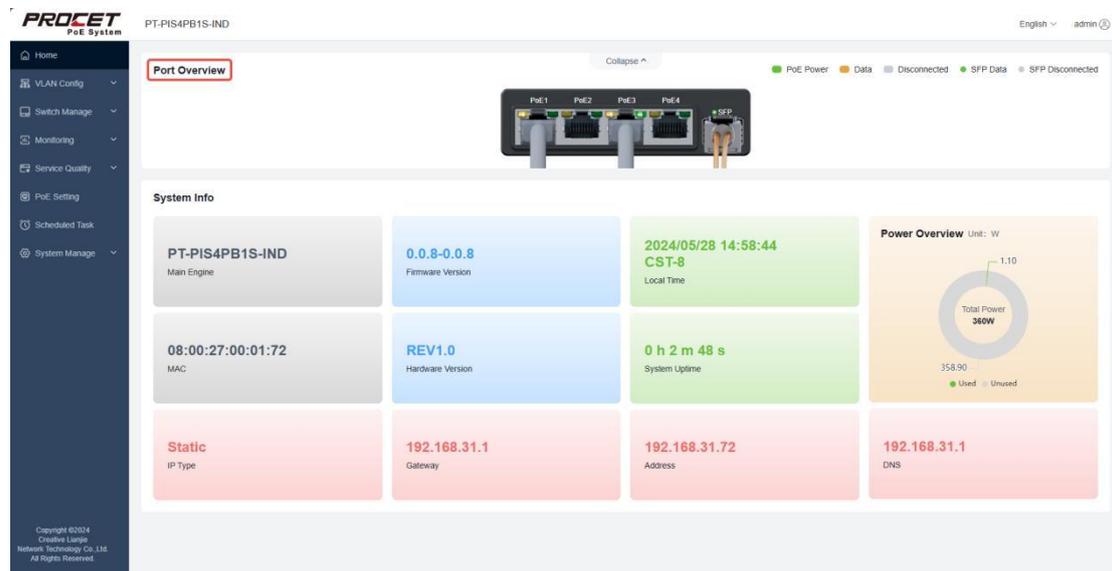
For PoE ports:

- "Connected" indicates that a device is connected.
- A green square indicates that PoE power is supplied.
- A yellow square indicates data transmission.
- A gray square indicates the port is not connected or PoE power is not supplied.

For SFP ports:

- "Connected" indicates that a device is connected.
- A green circle indicates data transmission.
- A gray circle indicates the SFP port is not connected.

The port overview page is shown in the diagram below:

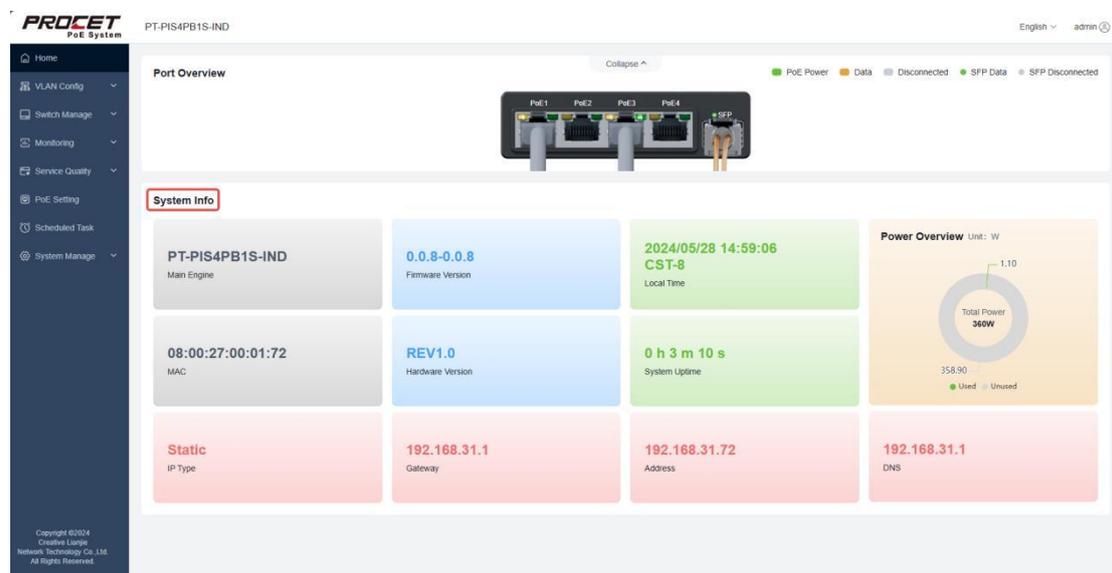


2.2.2 Basic Info

Basic Information includes details such as host model, firmware version, local time, MAC address, hardware version, system uptime, IP type, gateway, address, DNS, etc. Parameter description

Parameters	Description
Host Model	The device's host model information can be viewed in 'System Overview - Basic Info'.
Firmware Version	The device's firmware version information can be viewed in 'System Overview - Basic Info'.
Local Time	The device's local time information can be viewed in 'System Overview - Basic Info'.
MAC	The current MAC address information of the device can be modified by the user in 'System Settings - Configuration'.
Hardware Version	Device hardware version information
System Uptime	The device's system uptime information can be viewed in 'System Overview - Basic Info'.
IP Type	The device's ip type information can be viewed in 'System Overview - Network Info'.
Gateway	The current gateway information of the device can be modified by the user in 'System Settings - Network Settings - Gateway'.
IP Address	The current IP address information of the device can be modified by the user in 'System Settings - Network Settings - IP'.
DNS	The current DNS information of the device can be modified by the user in 'System Settings - Network Settings - DNS'.

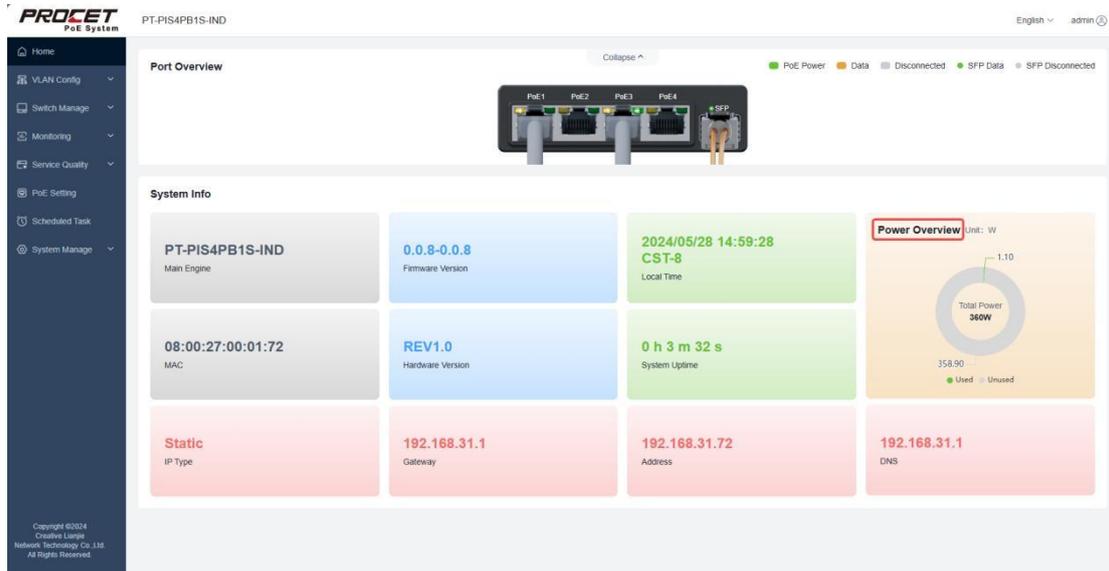
The Basic Info see as below:



2.2.3 Power Overview

Power Overview is displayed in watts (W), showing a pie chart that provides statistics on the current and unused power consumption of the device.

The Power Overview page is shown in the following diagram:



2.3.VLAN Config

VLAN configuration includes 802.1Q VLAN, port VLAN, and MTU VLAN, catering to various network environments. These VLAN types are initially disabled; only one type can be activated at a time for use.

2.3.1. 802.1Q VLAN

802.1Q VLAN enables isolation of Layer 2 networks within a LAN and facilitates VLAN intercommunication across switches. In medium to large networks, setting up 802.1Q VLANs effectively segregates broadcast domains, ensuring bandwidth for users while minimizing performance degradation caused by LAN broadcast processing.

The IEEE 802.1Q protocol standardizes VLAN implementation by specifying the addition of VLAN tags to data packets. Switches use the VLAN ID within the VLAN tag to identify the VLAN to which a packet belongs.

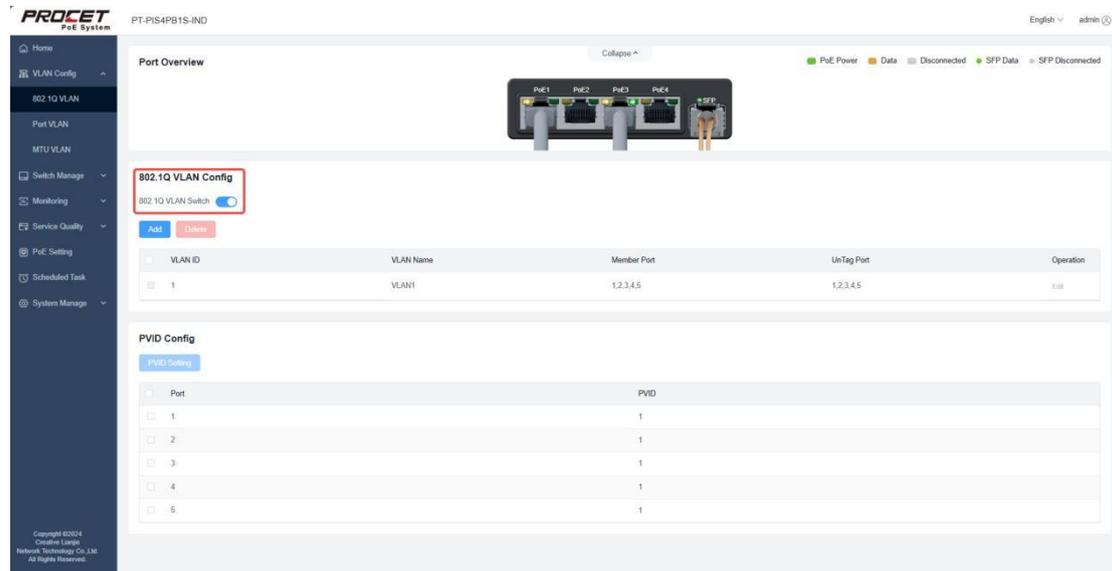
This switch allows configuration of port tagging:

- Untagged ports: The switch discards the tag header before transmitting data packets.
- Tagged ports: The switch adds a tag header before transmitting data packets, commonly used for connections between network devices.

PVID (Port VLAN ID) and VLAN packet handling:

PVID represents the default VLAN for each port in a LAN VLAN configuration. When a switch port receives a packet without a VLAN tag, the switch inserts a VLAN tag based on the port's PVID value and forwards the packet accordingly.

The 802.1Q VLAN page is depicted in the diagram below:



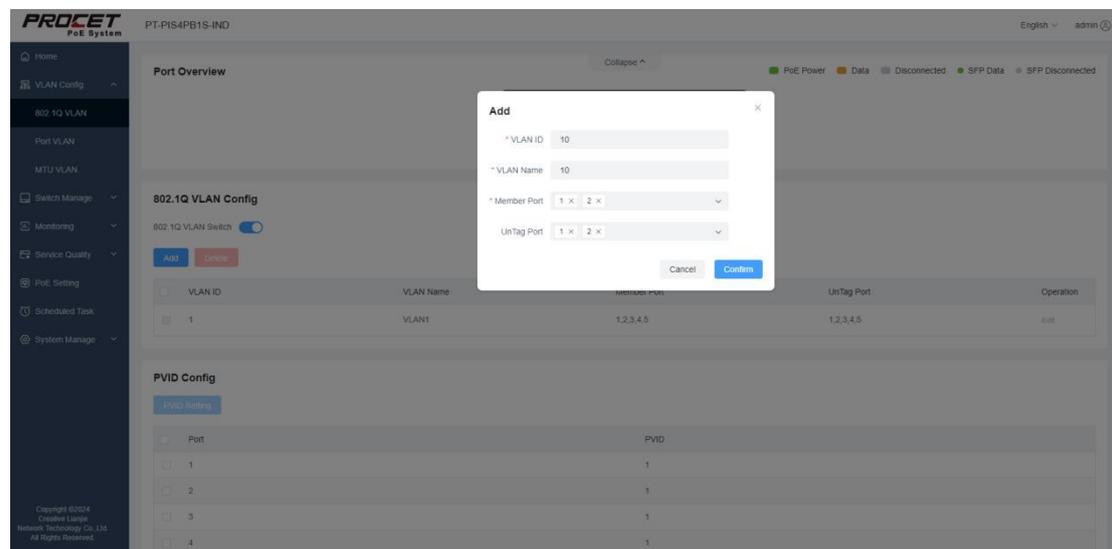
Example:

Create VLAN 10 with member ports and untagged ports as Port 1 and Port 2; set PVID of Port 1 and Port 2 to 10.

Create VLAN 20 with member ports and untagged ports as Port 3 and Port 4; set PVID of Port 3 and Port 4 to 20.

Ports 1 and 2 can communicate with each other, and ports 3 and 4 can communicate with each other.

The VLAN 10 configuration page is shown in the diagram below, with VLAN 20 following the same logic.



Set the PVID of ports 3 and 4 to 20, as shown in the figure below. The PVID of ports 1 and 2 should be set similarly.

The screenshot shows the PRO-CET PoE System web interface. The main content area is titled "802.1Q VLAN Config" and includes a "Port VLAN" toggle switch. Below this is a table of VLAN configurations:

VLAN ID	VLAN Name	Member Port	UnTag Port	Operation
1	VLAN1	1,2,3,4,5	1,2,3,4,5	Edit
10	10	1,2	1,2	Edit

Below the VLAN table is the "PVID Config" section, which includes a "PVID Setting" button and a table of port PVID assignments:

Port	PVID
1	1
2	1
3	1
4	1
5	1

A modal dialog titled "PVID设置" (PVID Setting) is open, showing a text input field for "PVID" with the value "20" and "Cancel" and "Confirm" buttons.

The Configuration completed see as below:

The screenshot shows the PRO-CET PoE System web interface after configuration. The main content area is titled "802.1Q VLAN Config" and includes a "Port VLAN" toggle switch. Below this is a table of VLAN configurations:

VLAN ID	VLAN Name	Member Port	UnTag Port	Operation
1	VLAN1	1,2,3,4,5	1,2,3,4,5	Edit
10	10	1,2	1,2	Edit
20	20	3,4	3,4	Edit

Below the VLAN table is the "PVID Config" section, which includes a "PVID Setting" button and a table of port PVID assignments:

Port	PVID
1	1
2	1
3	20
4	20
5	1

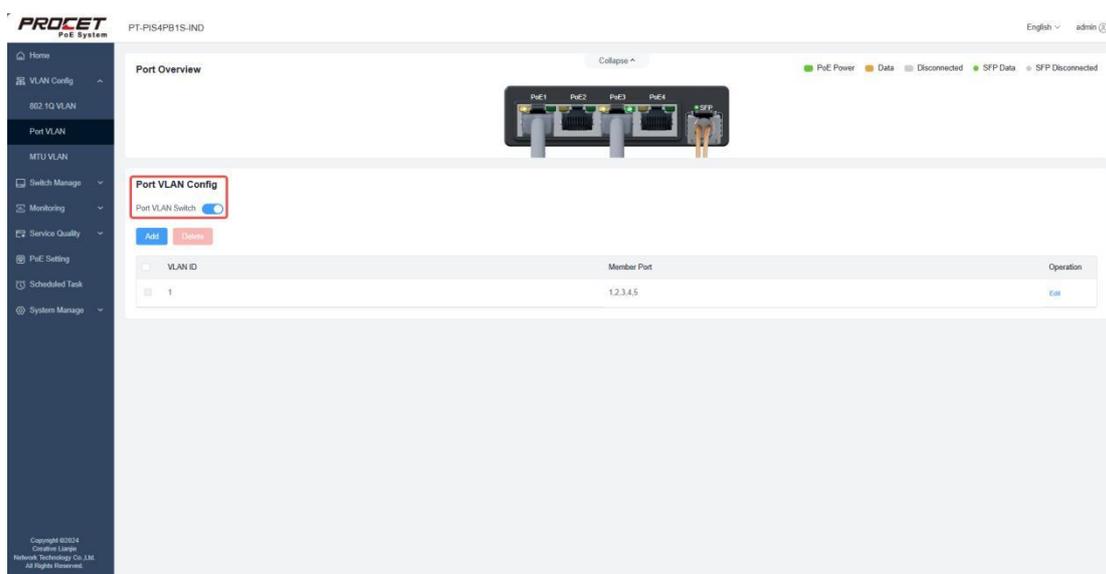


Note:

The PVID must be a subset of the VLAN ID.

2.3.2. Port VLAN

Port VLAN is a port-based VLAN, where communication is allowed only between ports within the same VLAN. This can effectively block broadcast storms and enhance network security. Port-based VLANs are simple to implement and easy to manage. Port VLANs are generally used for VLAN division within the same switch. For VLAN division across switches, 802.1Q VLAN is required. The Port VLAN page is shown below:



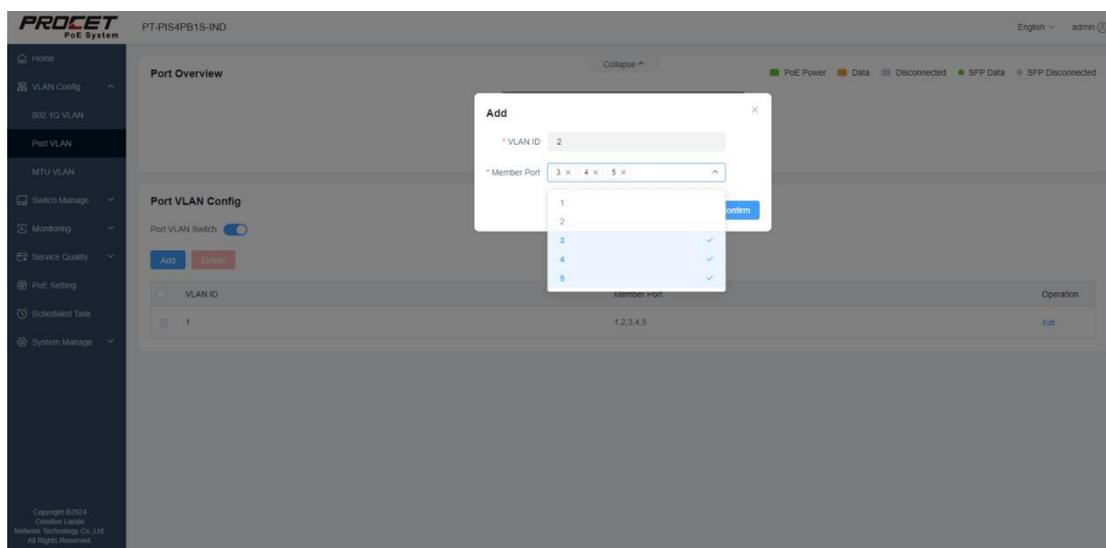
Example:

Create VLAN 2 with member ports 3, 4, and 5;

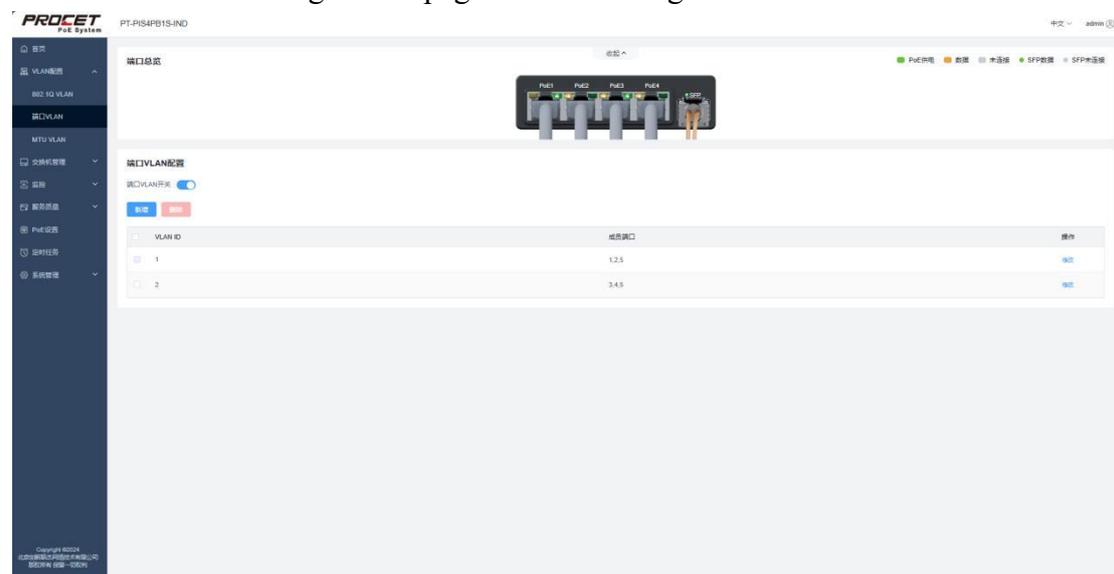
Modify VLAN 1 with member ports 1, 2, and 5;

Ports 1, 2, and 5 can communicate with each other, and ports 3, 4, and 5 can communicate with each other.

The configuration for the new VLAN 2 is shown below:



Click 'Modify' for VLAN 1, remove ports 3 and 4 from the member ports, and click 'OK' to save. The configuration page after the changes is shown below:



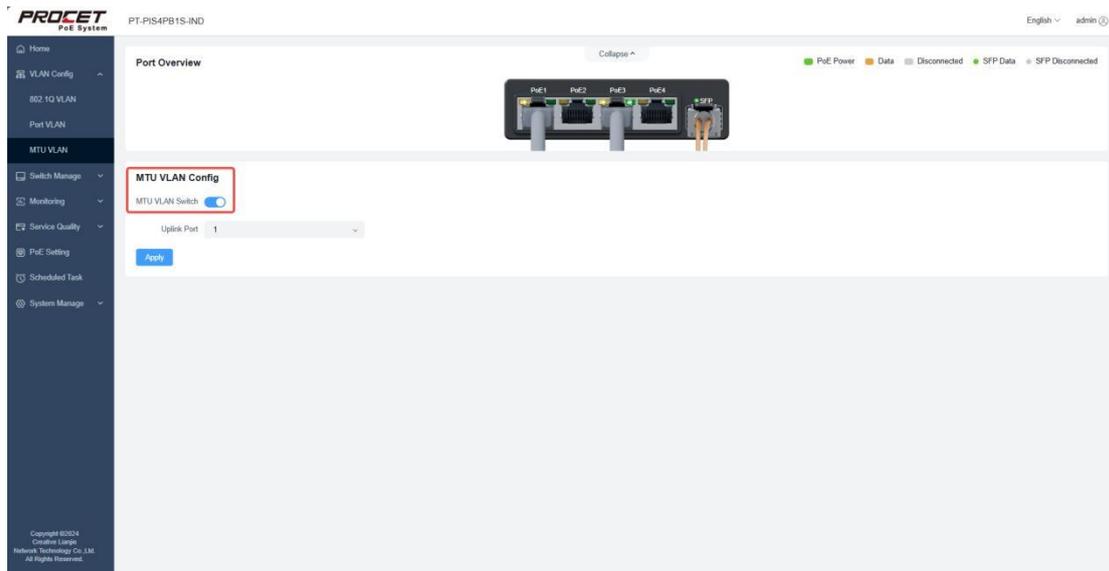
Note:

The Port VLAN defaults to include ports 1-5. If a port is not included in other VLANs, it cannot be deleted. If a newly created VLAN is deleted, the member ports of this VLAN automatically revert to VLAN 1.

2.3.3. MTU VLAN

MTU VLAN is a special case of port VLAN, where each user's occupied port and the upstream port are divided into separate VLANs. Normal ports can only communicate with pre-configured upstream ports and cannot communicate with each other, ensuring network security.

The MTU VLAN page is shown in the diagram below:



Example:

Setting the uplink port to port 1; hence, ports 2, 3, 4, and 5 can communicate individually with port 1, but cannot communicate with each other.

2.4 Switch Manage

2.4.1. Port Manage

A. Port Enable/Disable

The switch allows enabling or disabling ports. When the port status is set to 'Enable,' it can forward packets normally.

When the port status is set to 'Disable,' the switch will discard packets from this port. If a switch port is not used for a long period, it can be set to 'Disable' and then re-enabled when needed.

Select the port number and click 'Modify' to change the port status to 'Enable' or 'Disable.'

The port status is shown in the diagram below:

The screenshot shows the PRO CET POE System web interface. The 'Port Manage' section contains the following table:

Port	Type	State	Flow Control	Speed/Duplex	Operation
1	POE	Enable	Disable	Auto	Edit
2	POE	Enable	Disable	Auto	Edit
3	POE	Disable	Enable	Auto	Edit
4	POE	Enable	Disable	Auto	Edit
5	SFP	Enable	Disable	Full_1000	Edit

B.Port Speed/Duplex

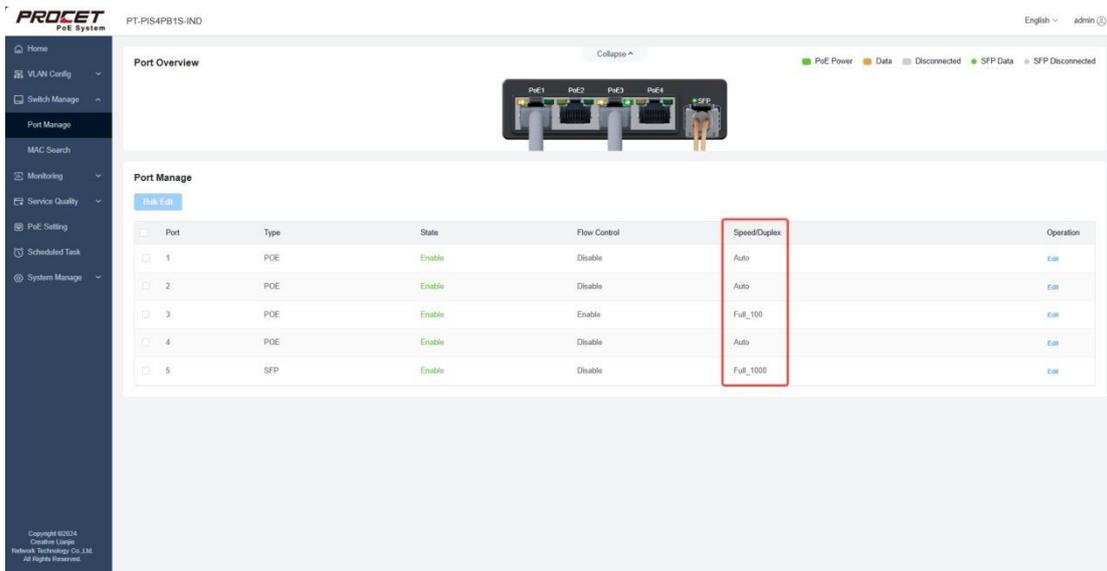
The Speed rates include three types: 10M, 100M, and 1000M. The modes include three types: Auto, Half, and Full. The device ports connected to the switch must match the transmission rate and duplex mode of the switch ports. When the 'Auto' option is selected, the port's rate and duplex mode are determined by auto-negotiation. The default port rate/duplex mode is Auto.

Select the port number and click 'Modify' to set the rate/duplex mode to Auto, Half_10, Full_10, Half_100, Full_100, or Full_1000.



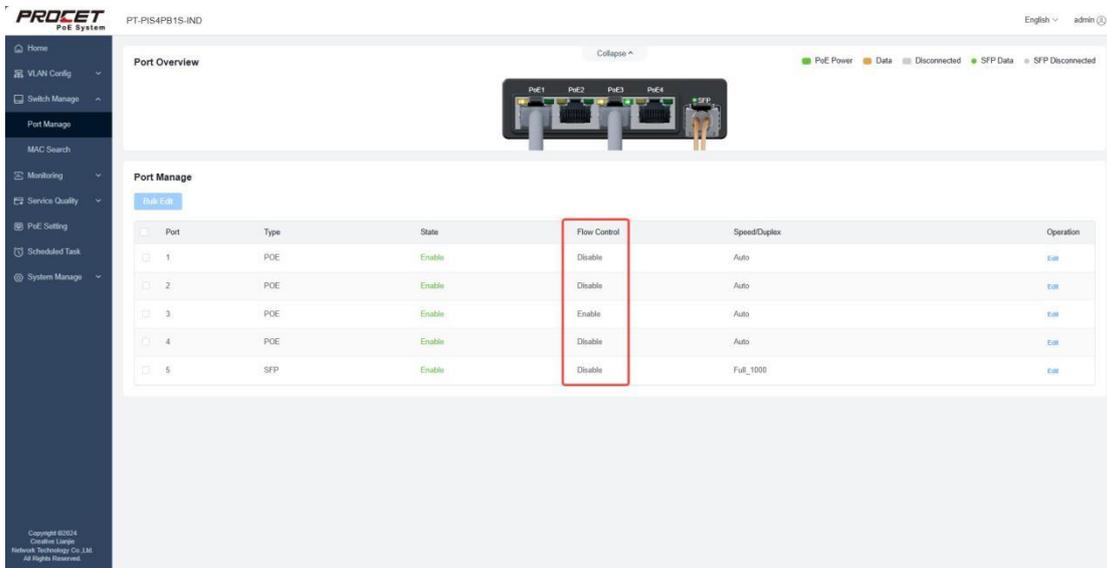
Note:

SFP Port doesn't support setting Speed/Duplex



C.Flow Control

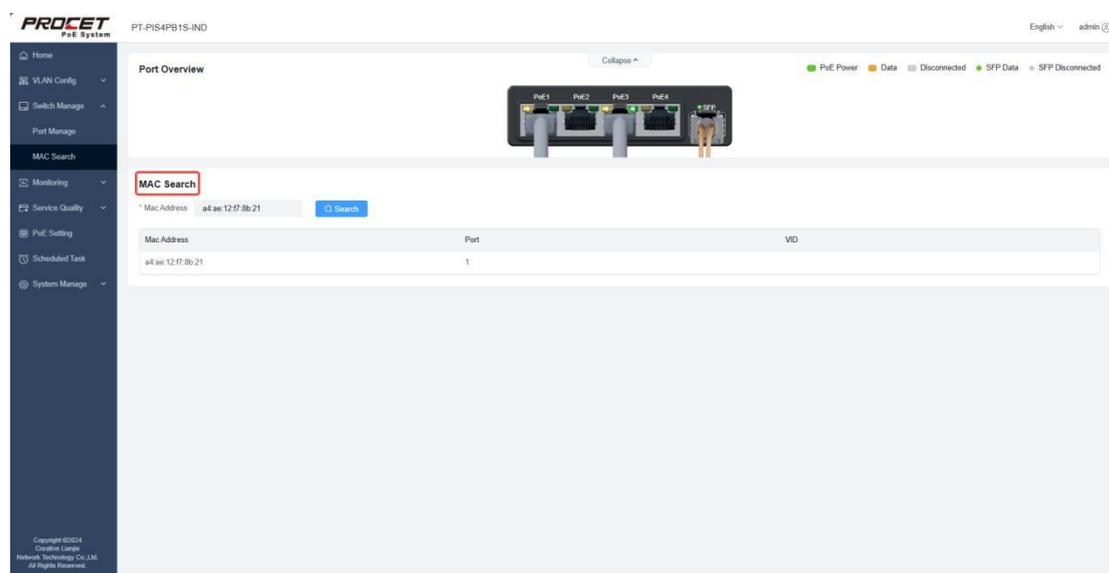
Enabling port flow control can prevent packet loss due to switch congestion. When a switch port receives a large number of packets in a short time and the switch is unable to process them, to prevent packet loss due to congestion, the switch notifies the sender on that port to temporarily stop sending packets.



2.4.2.MAC Search

The switch has a MAC address table that records the correspondence between terminal device MAC addresses and switch ports.

Enter the MAC address of the device you want to find and click the 'Search' button. If the device is connected to this switch, the port number and VID information of the connection will be displayed. If the device is not found, no data will be shown.



2.5. Monitoring

2.5.1. Port Statistics

Port Statistics can query the data of all the Ports.

Keys	Description
InGoodOctetsLo	The lower 32-bits of the 64-bit InGoodOctets counter.
InGoodOctetsHi	The upper 32-bits of the 64-bit InGoodOctets counter.
InBadOctets	The sum of lengths of all bad Ethernet frames received.
OutFCSErr	The number of frames transmitted with an invalid FCS.
InUnicasts	The number of good frames received that have a Unicast destination MAC address.
Deferred	The total number of successfully transmitted frames that experienced no collisions but are delayed.
InBroadcasts	The number of good frames received that have a Broadcast destination MAC address.
InMulticasts	The number of good frames received that have a Multicast destination MAC address.
Octets64	Total frames received with a length of exactly 64 octets, including those with errors.
Octets127	Total frames received with a length of exactly 65 and 127 octets, including those with errors.
Octets255	Total frames received with a length of exactly 128 and 255 octets,

	including those with errors.
Octets511	Total frames received with a length of exactly 256 and 511 octets, including those with errors.
Octets1023	Total frames received with a length of exactly 1024 and MaxSize octets, including those with errors.
OctetsMax	The number of good frames received that have a Unicast destination MAC address.
OutOctetsLo	The lower 32-bits of the 64-bit OutOctets counter.
OutOctetsHi	The upper 32-bits of the 64-bit OutOctets counter.
OutUnicasts	The number of frames sent that have a Unicast destination MAC address.
Excessive	The number frames dropped in the transmit MAC.
OutMulticasts	The number of good frames sent that have a Multicast destination MAC address.
OutBroadcasts	The number of good frames sent that have a Broadcast destination MAC address.
Single	The total number of successfully transmitted frames that experienced exactly one collision.
OutPause	The number of Flow Control frames sent.
InPause	The number of Good frames received that have a Pause destination MAC address.
Multiple	The total number of successfully transmitted frames that experienced more than one collision.
InUndersize	Total frames received with a length of less than 64 octets but with a valid FCS.
InFragments	Total frames received with a length of less than 64 octets and an invalid FCS.
InOversize	Total frames received with a length of less than MaxSize octets but with a valid FCS.
InJabber	Total frames received with a length of less than MaxSize octets but with an invalid FCS.
InRxErr	Total frames received with an RxErr signal from the PHY.
InFCSErr	Total frames received with a CRC error not counted in InFragments, InJabber or InRxErr.
Collisions	The number of collision events seen by the MAC not including those counted in Single, Multiple, Excessive, or Late.
Late	The number of times a collision is detected later than 52 bits-times into the transmission of a frame.
InDiscards	The number of good, non-filtered, frames that are received but can't be forwarded due to a lack of buffer memory.
InFiltered	The number of good frames that were not forwarded due to policy filtering rules such as but not limited to: 802.1Q Mode, Tagging mode, SA filtering e.t.c.

InAccepted	The number of good frames that are not policy filtered nor discarded due to an error and made it through the Ingress and is presented to the Queue Controller.
InBadAccepted	The number of frames with a CRC error that is not filtered nor discarded.
InGoodAvbClassA	The number of good AVB frames received that have a Priority Code Point for Class A that are not Undersize nor Oversize and are not discarded or filtered.
InGoodAvbClassB	The number of good AVB frames received that have a Priority Code Point for Class B that are not Undersize nor Oversize and are not discarded or filtered
InBadAvbClassA	The number of bad AVB frames received that have a Priority Code Point for Class A that are not Undersize nor Oversize.
InBadAvbClassB	The number of bad AVB frames received that have a Priority Code Point for Class B that are not Undersize nor Oversize.
TCAMCounter0	The number of good frames received that have a TCAM Hit on a TCAM Entry that has its IncTcamCtr bit set to a one and its Flow ID[7:6]=0 and are not discarded or filtered.
TCAMCounter1	The number of good frames received that have a TCAM Hit on a TCAM Entry that has its IncTcamCtr bit set to a one and its Flow ID[7:6]=1 and are not discarded or filtered.
TCAMCounter2	The number of good frames received that have a TCAM Hit on a TCAM Entry that has its IncTcamCtr bit set to a one and its Flow ID[7:6]=2 and are not discarded or filtered.
TCAMCounter3	The number of good frames received that have a TCAM Hit on a TCAM Entry that has its IncTcamCtr bit set to a one and its Flow ID[7:6]=3 and are not discarded or filtered.
InDroppedAvbA	The number of good AVB frames received that have a Priority Code Point for Class A that are not Undersize nor Oversize and are not discarded or filtered but were not kept by the switch due to a lack of AVB buffers.
InDroppedAvbB	The number of good AVB frames received that have a Priority Code Point for Class B that are not Undersize nor Oversize and are not discarded or filtered but were not kept by the switch due to a lack of AVB buffers.
InDaUnknown	The number of good frames received that did not have a Destination Address 'hit' from the ATU and are not discarded or filtered.
InMGMT	The number of good frames received that are considered to be Management frames and are not discarded size is legal and its CRC is good or it was forced good by register.
OutQueue0	The number of frames that egress this port from Queue0.
OutQueue1	The number of frames that egress this port from Queue1.
OutQueue2	The number of frames that egress this port from Queue2.
OutQueue3	The number of frames that egress this port from Queue3.

OutQueue4	The number of frames that egress this port from Queue4.
OutQueue5	The number of frames that egress this port from Queue5.
OutQueue6	The number of frames that egress this port from Queue6.
OutQueue7	The number of frames that egress this port from Queue7.
OutCutThrough	The number of frames that egress this port from the Cut Through path
InBadQbv	The number of good,non-filtered,frames that are received but can't be forwarded due to them arriving at the wrong time per the Qbv ingress policier.
OutOctetsA	The sum of lengths of all Ethernet frames sent from the AVB Class a Queue not including frames that are considered Management by ingress.
OutOctetsB	The sum of lengths of all Ethernet frames sent from the AVB Class B Queue not including frames that are considered Management by ingress.
OutYel	The number of Yellow frames that egressed this port.
OutDroppedYel	The number of Yellow frames not counted in InDiscards that are 'head Dropped' from an egress port's queues and the number of Yellow frames's 'tail dropped' from an egress port's queues due to Queue Controller's queue limits.
OutDiscards	The number of Green frames not counted in Indiscards that are 'head dropped' from an egress port's queues and the number of Green frames's 'tail dropped' from an egress port's queues due to Queue Controller's queue limits.
OutMGMT	The number of frames transmitted that were considered to be Management frames.

The Port Statistics Page see as below:

The screenshot shows the PRO-CET PoE System web interface. The main content area is titled "Port Overview" and "Port Statistics". A table displays the following data:

Port	Key	Value
1	InGoodOctetsLo	3988029
1	InGoodOctetsHi	0
1	InBadOctets	0
1	OutFCSErr	0
1	InUnicasts	18672
1	Deferred	0
1	InBroadcasts	626
1	InMulticasts	1287
1	Octets64	18708
1	Octets127	3089
1	Octets255	965
1	Octets511	2300
1	Octets1023	4154
1	OctetsMax	4430

2.5.2. Line Detection

When a cable is connected to a switch port, the cable test function can determine if the cable is normal or open, as well as measure the distance, helping to locate and diagnose network faults.



Note:

The cable test takes approximately 40 seconds. Please wait for the page to display the results.

The test information is for reference only and may differ from actual conditions. Please refer to the actual situation.

The screenshot displays the PROCEET PoE System web interface. The main content area is titled "Line Detection" and features a table with the following data:

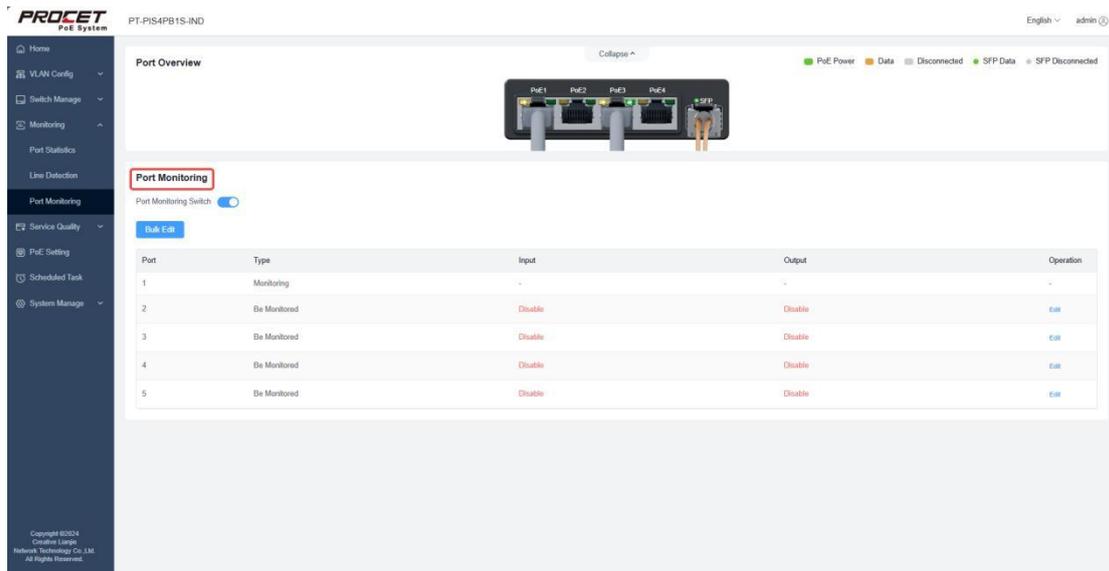
Port	Type	Detection Result	Distance(cm)
1	PoE	Normal	100
2	PoE	Open Circuit	0
3	PoE	Normal	50
4	PoE	Open Circuit	0

The interface also includes a "Port Overview" section with a diagram of a switch and a legend for PoE Power, Data, Disconnected, SFP Data, and SFP Disconnected. A sidebar on the left contains navigation options like Home, WAN Config, Switch Manage, Monitoring, Port Statistics, Line Detection, Port Monitoring, Service Quality, PoE Setting, Scheduled Task, and System Manage. The footer contains copyright information for PROCEET Technology Co., Ltd.

2.5.3. Port Monitoring

Port monitoring is a packet capturing technique. By configuring the switch, it can copy packets from one or several ports (monitored ports) to a specific port (monitoring port). A host with packet analysis software installed is connected to the monitoring port to analyze the collected packets. This achieves the purpose of network monitoring and troubleshooting network issues.

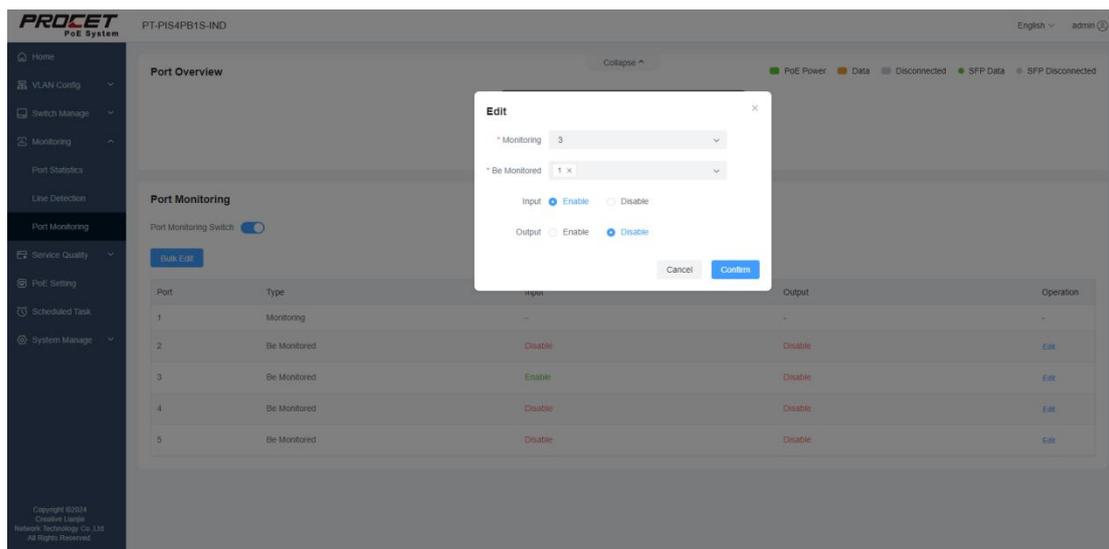
The port monitoring page is shown as follows:



Example:

1. Port 1 is connected to PC 1, Port 2 is connected to PC 2, and Port 3 is connected to PC 3 and set to monitor the ingress of Port 1; PC 1 continuously pings the IP of PC 2. Using Wireshark on PC 3, you can capture the request packets from PC 1 pinging PC 2.
2. Port 1 is connected to PC 1, Port 2 is connected to PC 2, and Port 3 is connected to PC 3 and set to monitor the egress of Port 1; PC 1 continuously pings the IP of PC 2. Using Wireshark on PC 3, you can capture the reply packets from PC 2 to PC 1. The configuration for monitoring the ingress of Port 1 with Port 3 is shown in the figure below.

The configuration for monitoring the egress is similar:

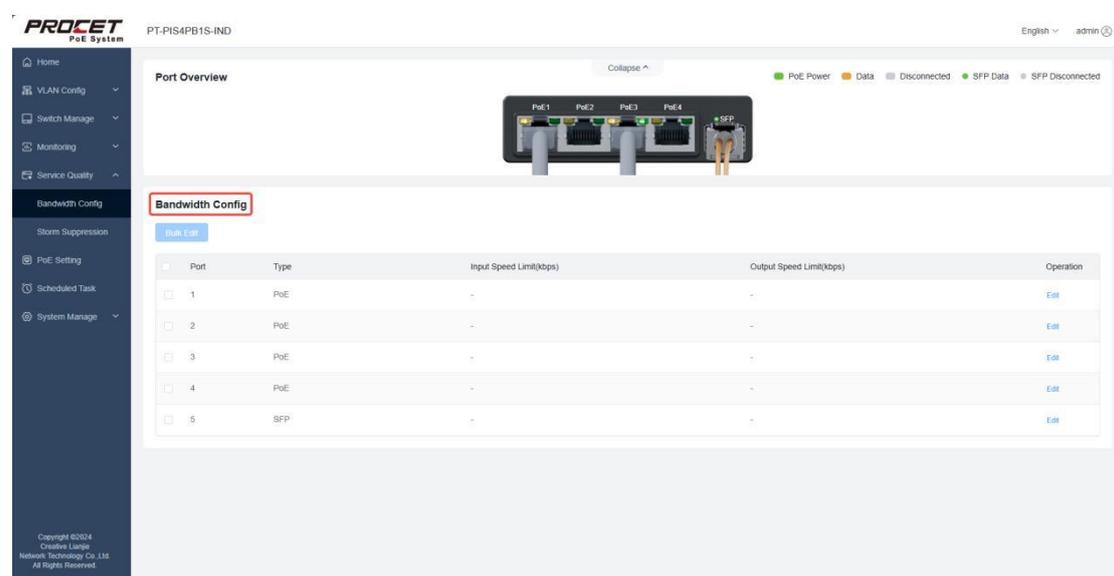


2.6. Service Quality

2.6.1. Bandwidth Config

Bandwidth configuration primarily involves setting rate limits on the ingress and egress of ports. By specifying the available bandwidth for a port, the data transmission rate for input/output can be controlled, enabling the reasonable allocation and utilization of network bandwidth.

Select the target port, click "Edit," and choose to enable or disable ingress/egress rate limiting. If enabled, set the rate limit size.



The screenshot shows the PROJET PoE System web interface. The main content area is titled "Bandwidth Config" and contains a table with the following data:

Port	Type	Input Speed Limit(kbps)	Output Speed Limit(kbps)	Operation
1	PoE	-	-	Edit
2	PoE	-	-	Edit
3	PoE	-	-	Edit
4	PoE	-	-	Edit
5	SFP	-	-	Edit

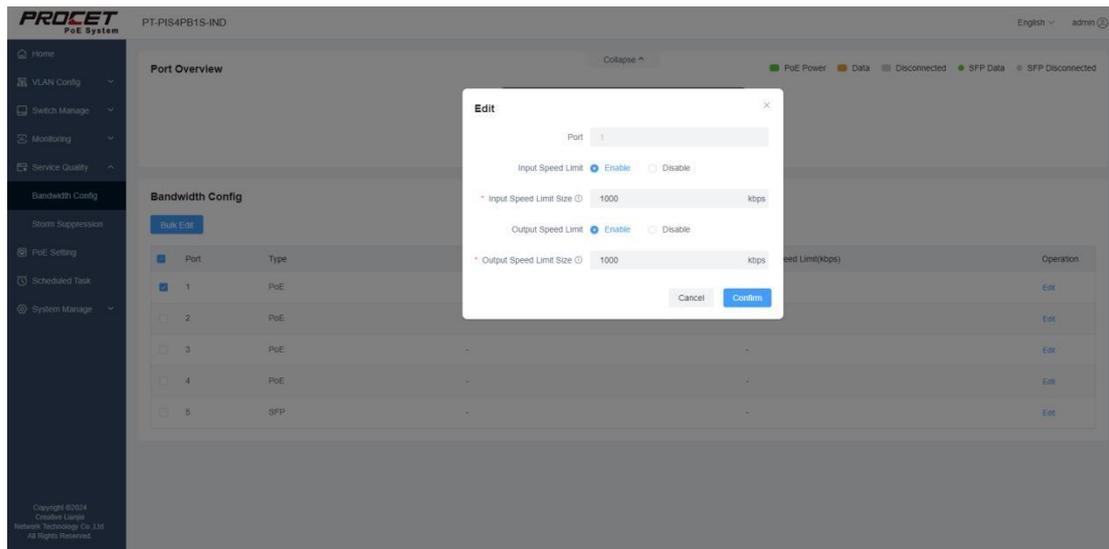


Note:

The port limit values are kbps. After entering a value, the device will automatically match it to an appropriate value.

The ingress bandwidth limit and storm control cannot be enabled simultaneously on the same port.

The bandwidth configuration page is shown as follows:

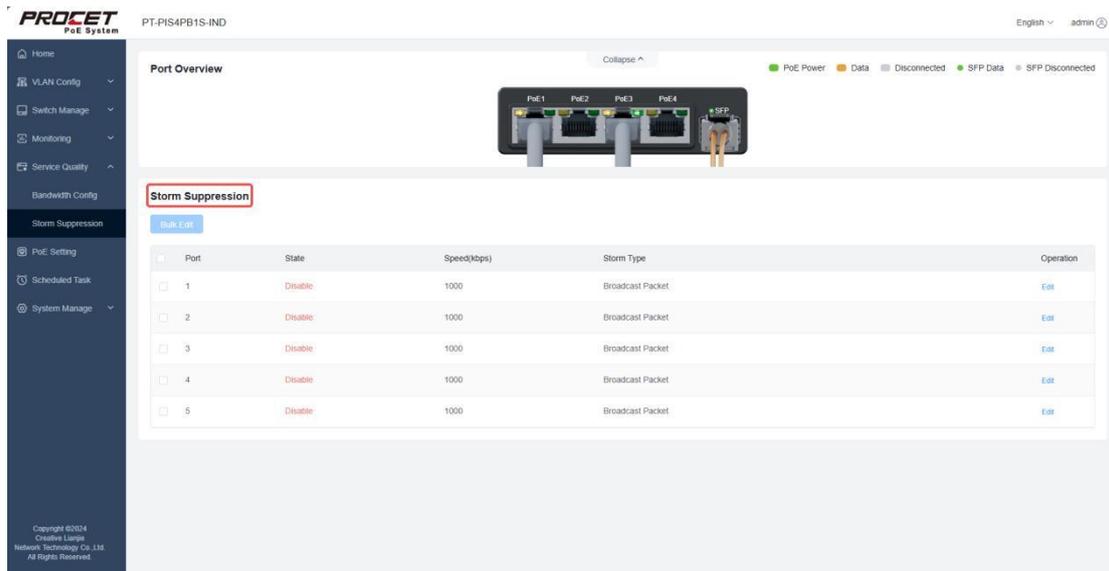


2.6.2. Storm Suppression

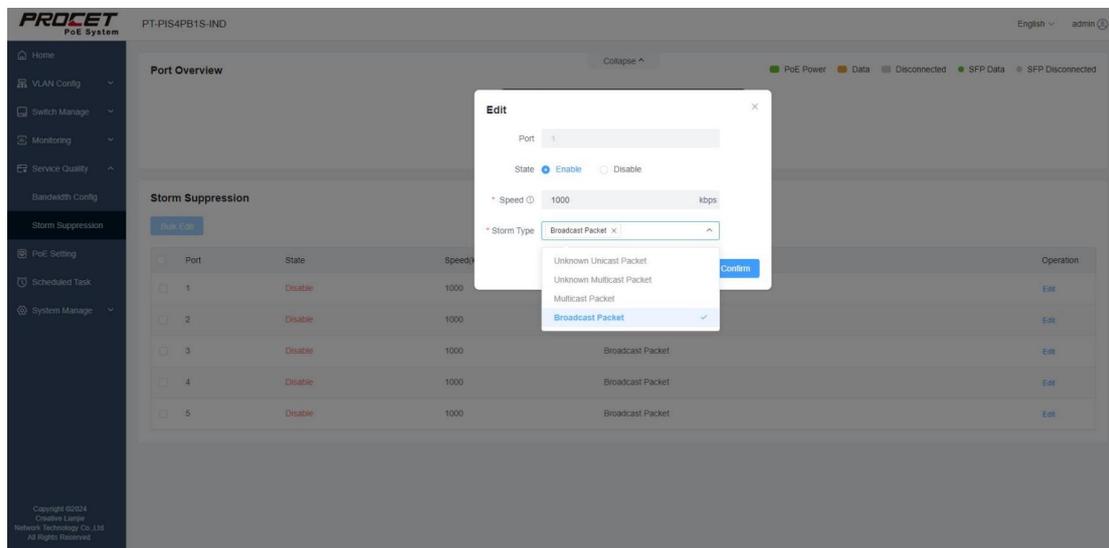
A broadcast storm refers to a situation where the number of broadcast frames on a network increases dramatically due to continuous forwarding, affecting normal network communication and severely degrading network performance. A broadcast storm is determined by whether a port receives many broadcast frames in a short period. Storm control allows users to limit the amount of broadcast traffic a port can receive. When this traffic exceeds the user-defined threshold, the system will discard the excess broadcast frames, preventing a broadcast storm and ensuring normal network operation.

This switch can limit three common types of broadcast frames (broadcast, multicast, and unicast packets).

Select the target port, click "Edit," and choose to enable or disable the feature. If enabled, set the rate and storm type.



The Storm Suppression Configuration page see as below:



2.7. PoE Setting

2.7.1. Global Setting

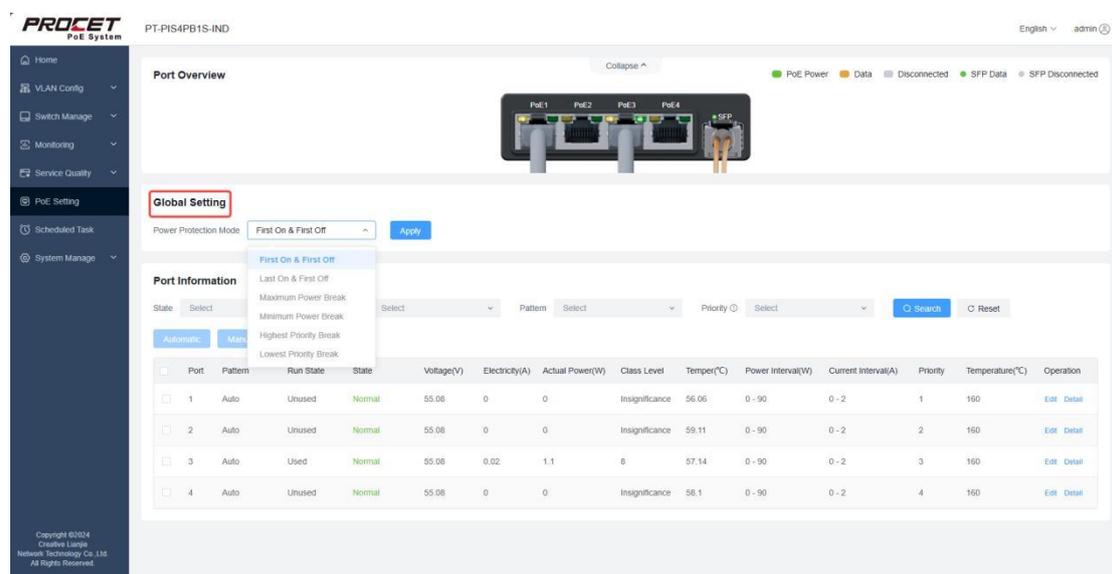
Global settings refer to the power protection mode configuration, which includes six modes: First In, First Out (FIFO), Last In, First Out (LIFO), Maximum Power Cut-off, Minimum Power Cut-off, Highest Priority Cut-off, and Lowest Priority Cut-off.

FIFO and LIFO modes determine power protection based on the order in which ports are connected to devices. When the total actual power usage across all ports exceeds the configured total power, ports are sequentially powered off based on their connection order until total power usage is below the configured limit.

Maximum and Minimum Power Cut-off modes determine power protection based on individual port power levels. When the total actual power usage across all ports exceeds the configured total power, ports are sequentially powered off based on their individual power usage until total power usage is below the configured limit.

Highest and Lowest Priority Cut-off modes determine power protection based on priority settings assigned to ports. When the total actual power usage across all ports exceeds the configured total power, ports are sequentially powered off based on their assigned priority until total power usage is below the configured limit.

 **Note:**
The total power of the device can be viewed in the Power Overview section on the homepage.

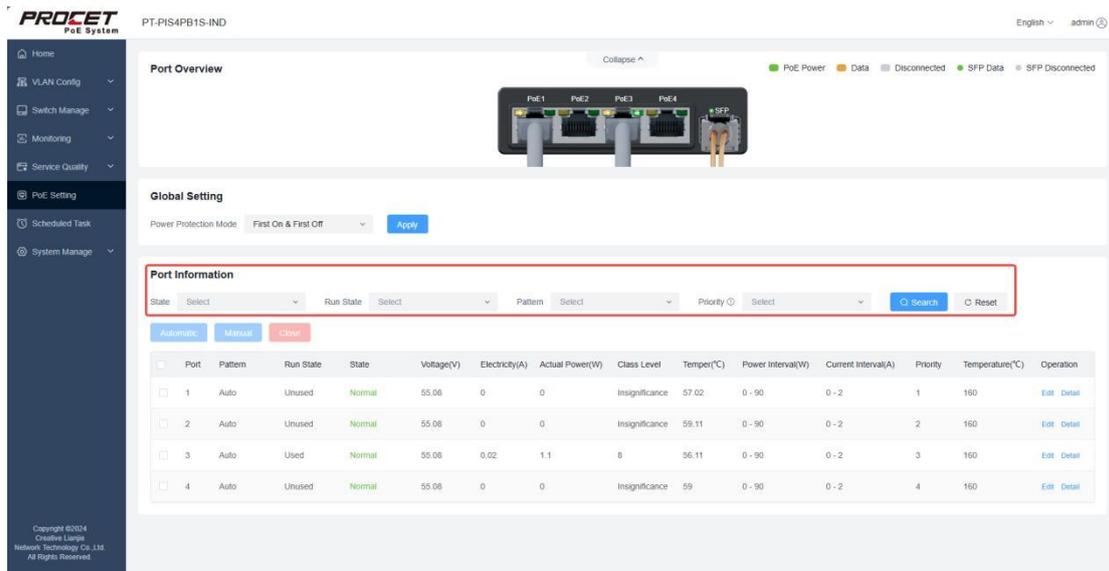


The screenshot shows the PROJET PoE System web interface for device PT-PIS4PB1S-IND. The 'Port Information' section is active, displaying a table of port details. A dropdown menu is open for the 'State' column, showing options: Last On & First Off, Maximum Power Break, Minimum Power Break, Highest Priority Break, and Lowest Priority Break. The table lists four ports with their respective configurations and current status.

Port	Pattern	Run State	State	Voltage(V)	Electricity(A)	Actual Power(W)	Class Level	Temper(°C)	Power Interval(W)	Current Interval(A)	Priority	Temperature(°C)	Operation
1	Auto	Unused	Normal	55.08	0	0	Insignificance	56.06	0-90	0-2	1	160	Edit Detail
2	Auto	Unused	Normal	55.08	0	0	Insignificance	59.11	0-90	0-2	2	160	Edit Detail
3	Auto	Used	Normal	55.08	0.02	1.1	8	57.14	0-90	0-2	3	160	Edit Detail
4	Auto	Unused	Normal	55.08	0	0	Insignificance	58.1	0-90	0-2	4	160	Edit Detail

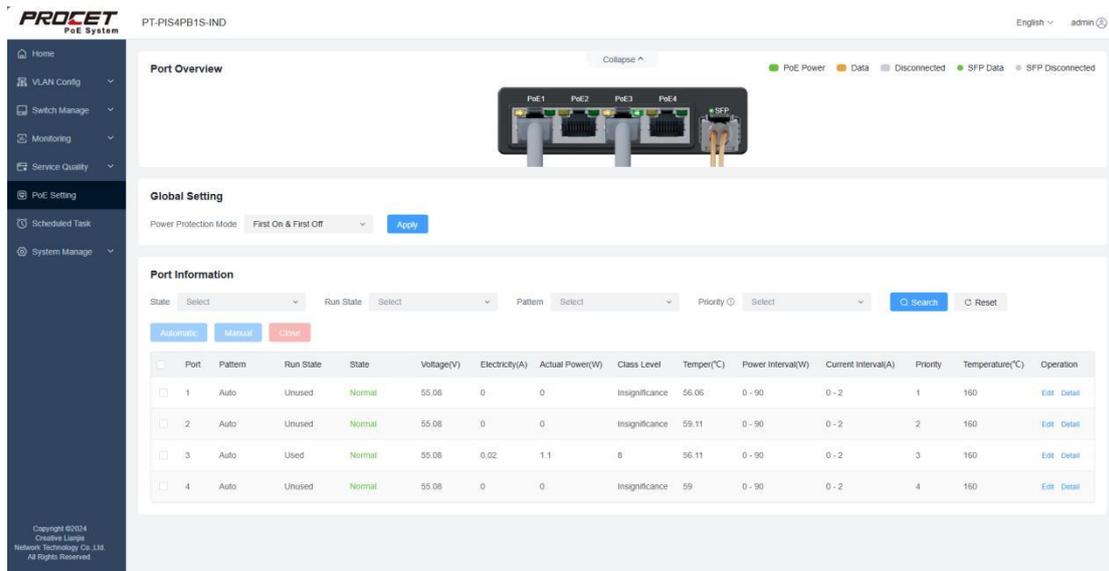
2.7.2. Port Information

Port information can be filtered based on individual or multiple criteria using dropdown options such as status (Normal, Previously Abnormal, Abnormal), operational status (In Use, Not In Use), mode (Auto Mode, Manual Open, Manual Close), and priority (1-5).



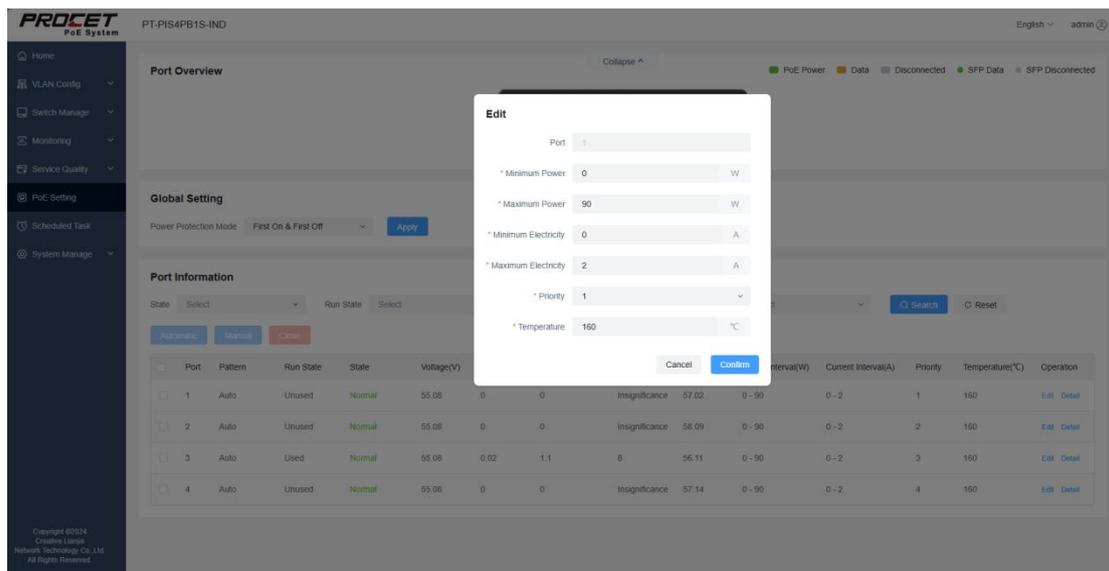
Port information primarily displays basic details about each port, including port number, mode, operational status, status, voltage, current, actual power, Class level, temperature, power range, current range, priority, temperature threshold, and operations.

- **Port Number:** Corresponds to each port of the device, fixed and uniquely identifiable.
- **Mode:** Includes Auto Mode, Manual Open, Manual Close. All ports default to Auto Mode, and individual or multiple ports can be set by checking checkboxes. Auto Mode automatically detects the connected device status, Manual Close forcibly shuts down the port, and Manual Open forcibly opens the port.
- **Operational Status:** Includes In Use, Not In Use, reflecting the current actual usage status of the port.
- **Status:** Includes Normal, Abnormal, Previously Abnormal. Ports in normal use show as Normal. Ports closed due to exceeding power, current, or temperature thresholds show as Abnormal. Ports that were previously abnormal but have since returned to normal show as Previously Abnormal. Ports set to Manual Open after being Previously Abnormal return to Normal.
- **Voltage, Current, Actual Power, Class Level:** Display the current usage status of each port, updating in real-time.
- **Power Range, Current Range, Temperature Threshold:** Display the configured threshold ranges.
- **Priority:** Displays the set port priority; smaller values indicate higher priority.

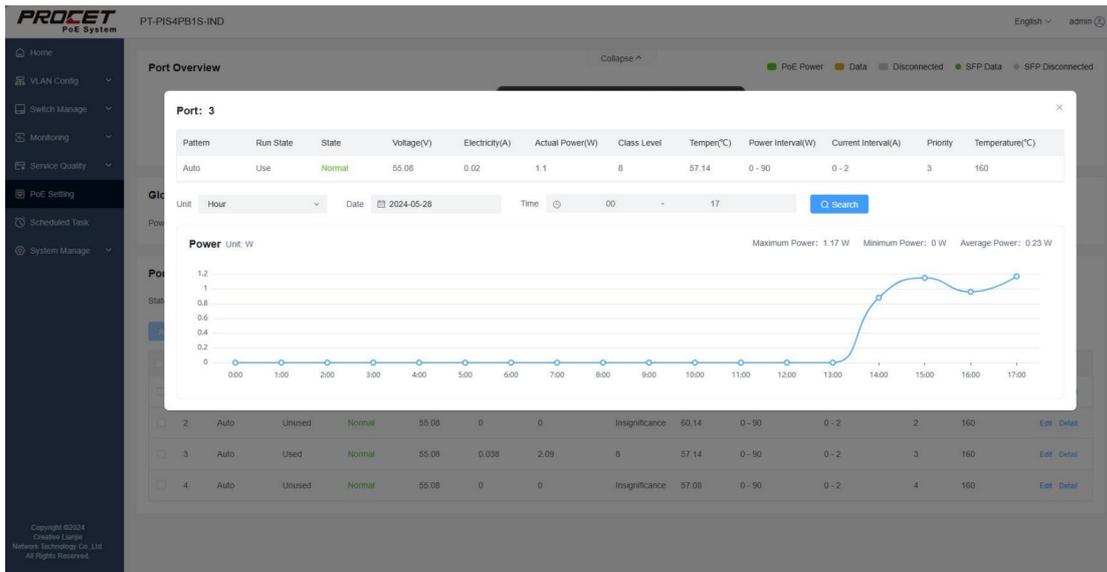


In operations, modifications can adjust power range, current range, temperature threshold, and priority.

- **Power Range:** Values range from 0 to 90W with a precision of 0.01W, where the minimum power is less than the maximum power.
- **Current Range:** Values range from 0 to 2A with a precision of 0.001A, where the minimum current is less than the maximum current.
- **Priority:** Can be selected from 1 to 5, with higher values indicating lower priority.
- **Temperature Threshold:** Values range from 0 to 160°C with a precision of 0.01°C. After modification, if any of the port's power, current, or temperature exceeds the set range, the port will automatically shut down.



In the details section of operations, port information is displayed along with power usage statistics filtered by hours, days, and months. Additionally, users can view the maximum, minimum, and average power usage during the selected time period.



2.8. Scheduled Task

In the Scheduled Task section, when there are no tasks, it displays as empty. When there are scheduled tasks, it shows a two-dimensional table containing columns for sequence number, nickname, ID, period, port, trigger condition, task, status, start, and operations.

When the Scheduled Task start button is off, the task status displays "-". When the start button is clicked but the trigger condition is not met, the task status displays "Not Started". Once the trigger condition is met, the status changes to "Running". For non-repetitive tasks, once the task is completed, the start button automatically turns off and the status changes to "-". For repetitive tasks, after completing one instance, the status remains "Running" until the end time, after which the start button turns off.

Serial	Nick Name	ID	Repeat	Relevancy Port	Trigger Condition	Task	State	Start	Operation
1	1	10000	Start Date: 2024-07-01 End Date: Never Ends Without Repetition	1	Time 14:55:52	Powered On Duration 0.1H	Running	<input checked="" type="checkbox"/>	Edit Delete
2	2	10001	Start Date: 2024-07-01 End Date: Never Ends Without Repetition	1	Time 18:00:24	Powered Off Duration 0.1H	-	<input type="checkbox"/>	Edit Delete
3	3	10002	Start Date: 2024-07-02 End Date: Never Ends Without Repetition	1	Time 13:56:53	Set Priority 3 Level	Not Started	<input checked="" type="checkbox"/>	Edit Delete
4	4	10003	Start Date: 2024-07-01 End Date: Never Ends Without Repetition	1	Device Connected	Set Upper Power Limit 30W	Running	<input checked="" type="checkbox"/>	Edit Delete
5	5	10004	Start Date: 2024-07-02 End Date: Never Ends Without Repetition	1	Device Connected	Set Lower Power Limit 8.5W	-	<input type="checkbox"/>	Edit Delete
6	6	10005	Start Date: 2024-07-02 End Date: Never Ends Without Repetition	1	Device Disconnect	Set Priority 5 Level	Not Started	<input checked="" type="checkbox"/>	Edit Delete

A. Adding a Scheduled Task:

Nickname: Required field, allows customization of the task nickname. Character limit is 32 characters, and it cannot be empty. The first character cannot be a space, consecutive spaces are not allowed, and illegal characters cannot be input.

Period: By default, "No End Date" is selected. The current date is displayed by default as the start date with no end date. You can modify the start date. If "End Date" is selected, the current date is displayed as both the start and end dates. You can modify both the start and end dates.

Add Scheduled Task

* Nick Name

Repeat: Deadline YES NO

Start Date: 2024-07-01 End Date: ~Never Ends

Without Repetition

* Relevancy Port: Please Select

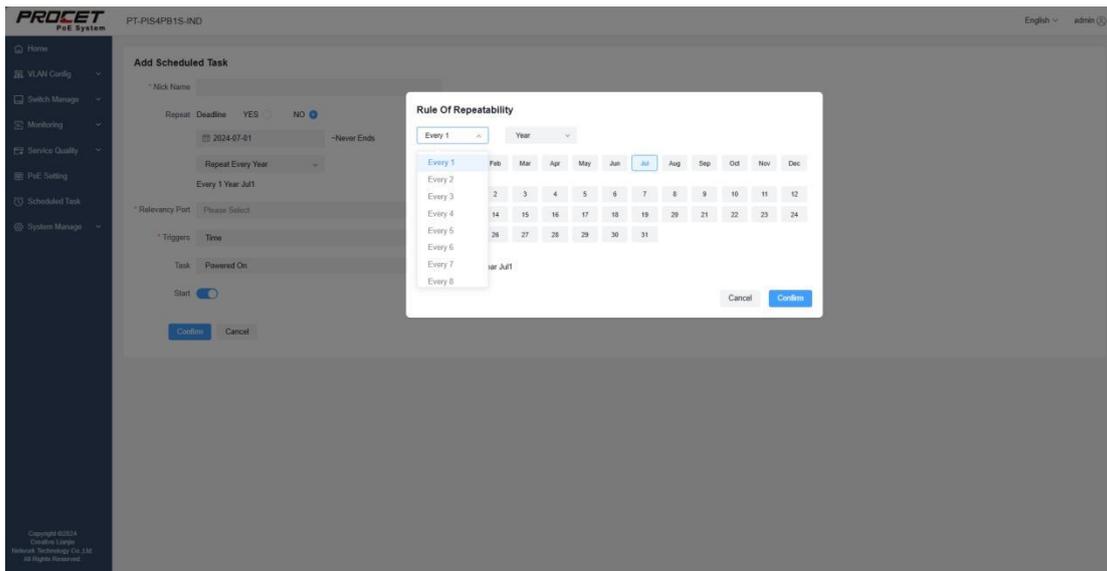
* Triggers: Time 14:03:24

Task: Powered On Please Enter Duration: H

Start:

[Confirm](#) [Cancel](#)

The default selection for repeat cycle is "No Repeat," but you can modify it to repeat daily, weekly, monthly, or yearly. You can also choose custom repeat, which allows flexible rules such as repeating every few days, specific days of the week, certain days of the month, or months of the year. After selecting the repeat rule, the chosen rules will be displayed under the repeat rule section.



Port: You can select one or multiple ports from 1 to 4 ports.

Triggers: You can select time, device connection, or device disconnection from the dropdown menu. When selecting time, a time selection box appears after the trigger condition with the default current time, which can be manually adjusted. When selecting device connection or disconnection, the time selection box does not appear.

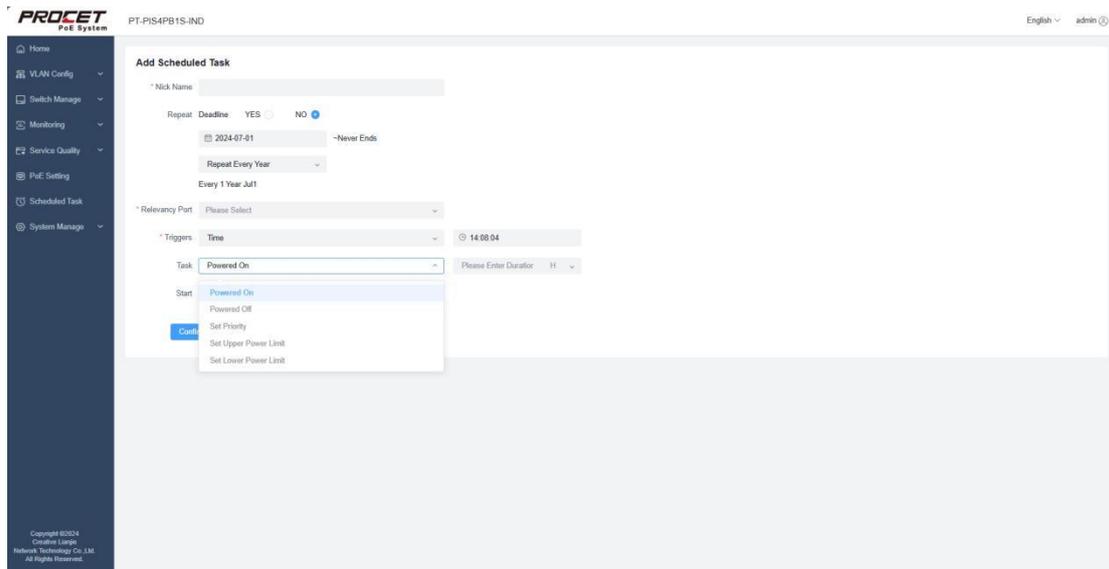
Task: If the trigger task is time or device connection, you can choose from the dropdown menu to power on, power off, set priority, set power upper limit, or set power lower limit. If the trigger task is device disconnection, you can choose to set priority, set power upper limit, or set power lower limit from the dropdown menu.

When selecting power on or power off, a duration input box appears after the task, with a precision of 0.1. It cannot be empty or 0 and can be selected in hours or days.

When selecting the task to set priority, a priority selection box appears after the task, with options from 1 to 5. When selecting the task to set power upper or lower limit, an input box for power value appears after the task, accepting numbers from 0 to 90 with a precision of 0.01, in units of W.

Start: The button is initially enabled. When enabled, the scheduled task is active; when disabled, the scheduled task is inactive.

After completing the new task details, click OK. If the trigger condition is time and multiple ports are selected, one task is generated. If the trigger condition is device connection or disconnection and multiple ports are selected, multiple scheduled tasks are generated.



B.Modify Scheduled Tasks

You can modify the nickname, period, ports, trigger condition, task, and start settings of scheduled tasks. However, when changing the trigger condition to device connection or disconnection, you cannot select multiple ports.

C.Execution of Scheduled Tasks

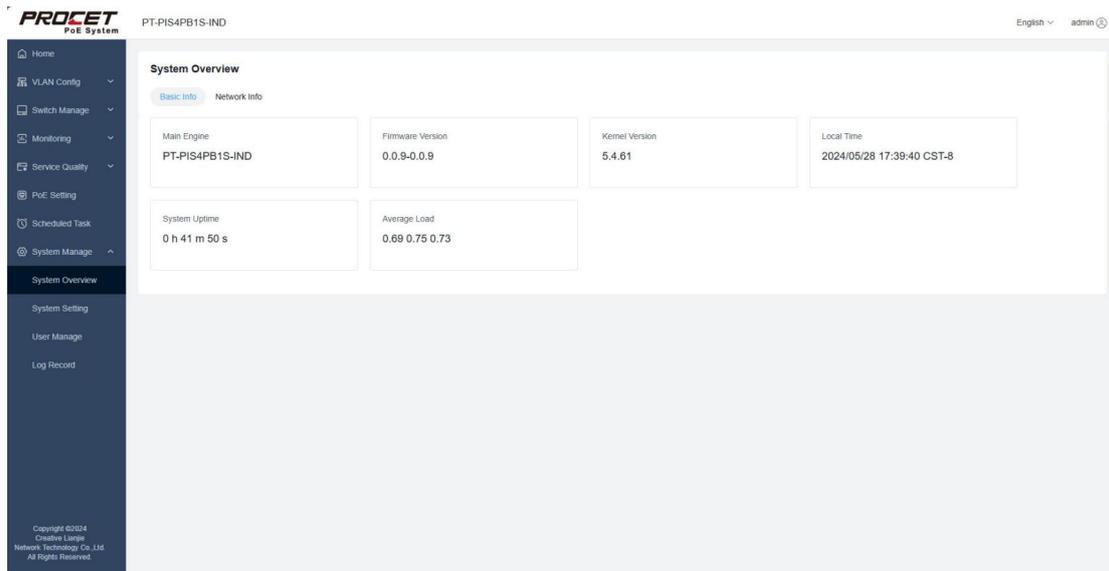
During the period from the start date to the end date, according to the set repeat frequency, tasks are triggered and executed on the corresponding ports. For example, if the task is to power on for 1 hour, after 1 hour of execution, the task is completed, and the port changes to manual power off. Conversely, if the task is to power off for 1 hour, after 1 hour of execution, the task is completed, and the port changes to auto mode. If the task involves adjusting priority or adjusting power thresholds, when the trigger condition is met, the priority and power thresholds of the corresponding ports are adjusted according to the set values. If the power does not fall within the adjusted threshold range, the port maintains the power threshold settings as they were before the task was triggered.

2.9.System Manage

2.9.1.System Overview

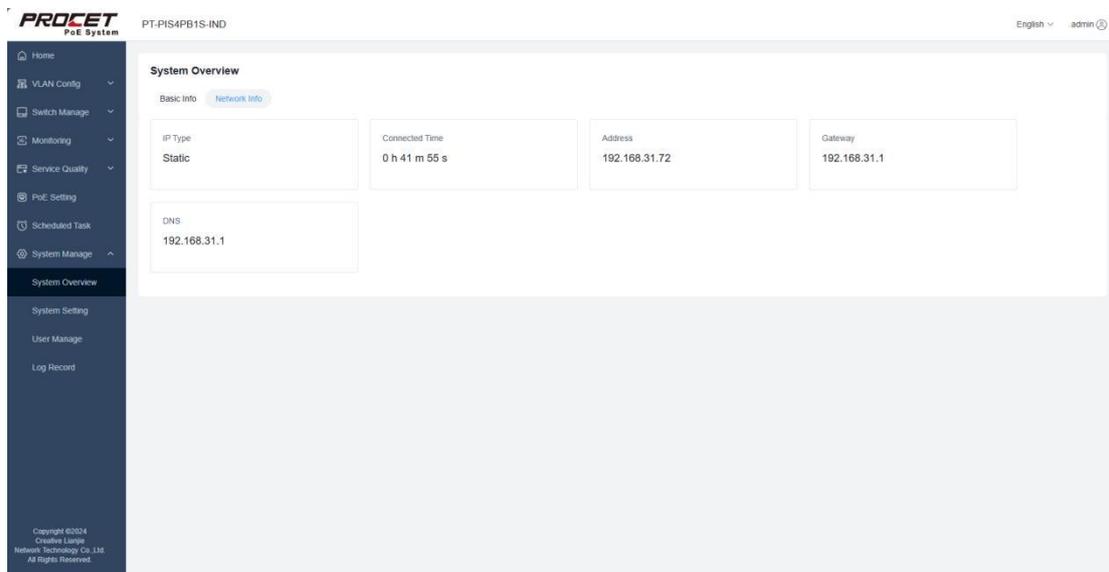
A.Basic Info

System basic information primarily displays the host model, firmware version, kernel version, local time, system uptime, and average load.



B. Network Info

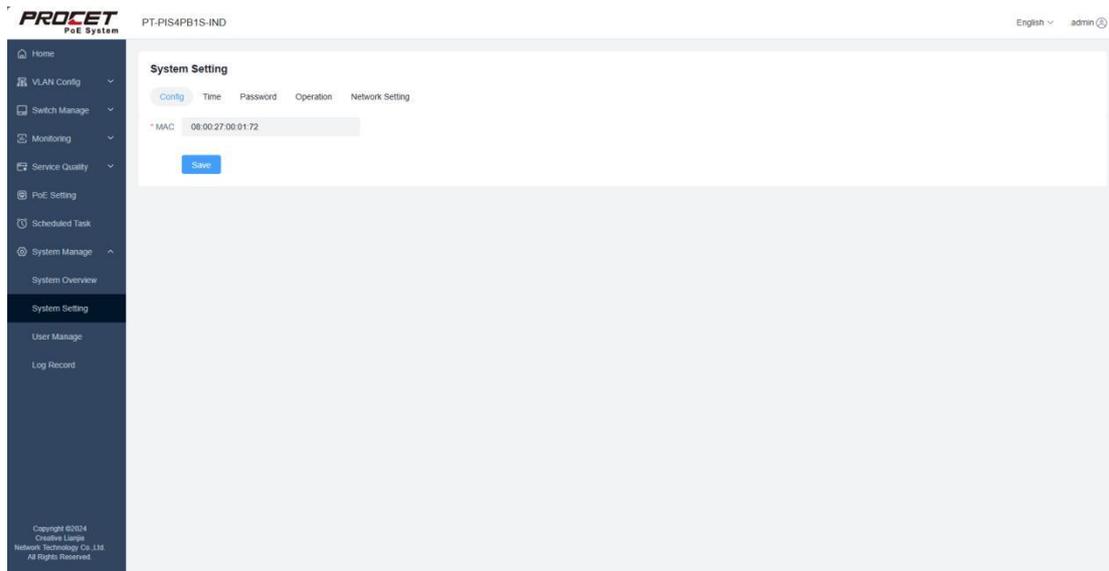
Network information mainly displays IP type, connection time, address, gateway, and DNS.



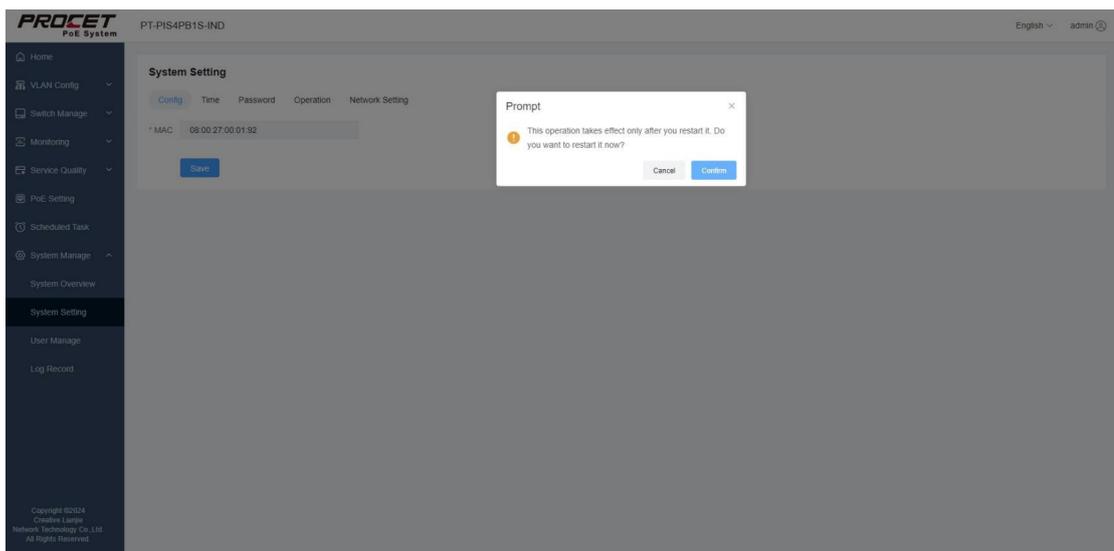
2.9.2. System Setting

2.9.2.1. Config

Config displays MAC address, which has a fixed and unique format.

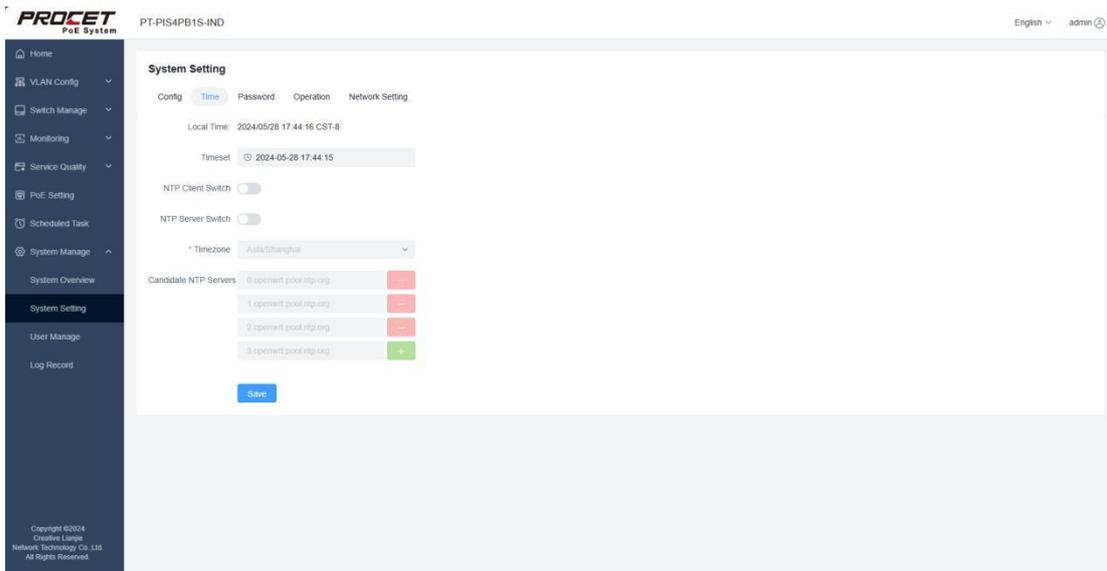


After modifying the MAC address, click "Save." You will receive a prompt to restart the device; click "OK." Wait for the device to restart. After it restarts, log back into the switch to see the updated MAC address. If the device does not restart, the MAC address modification will fail.

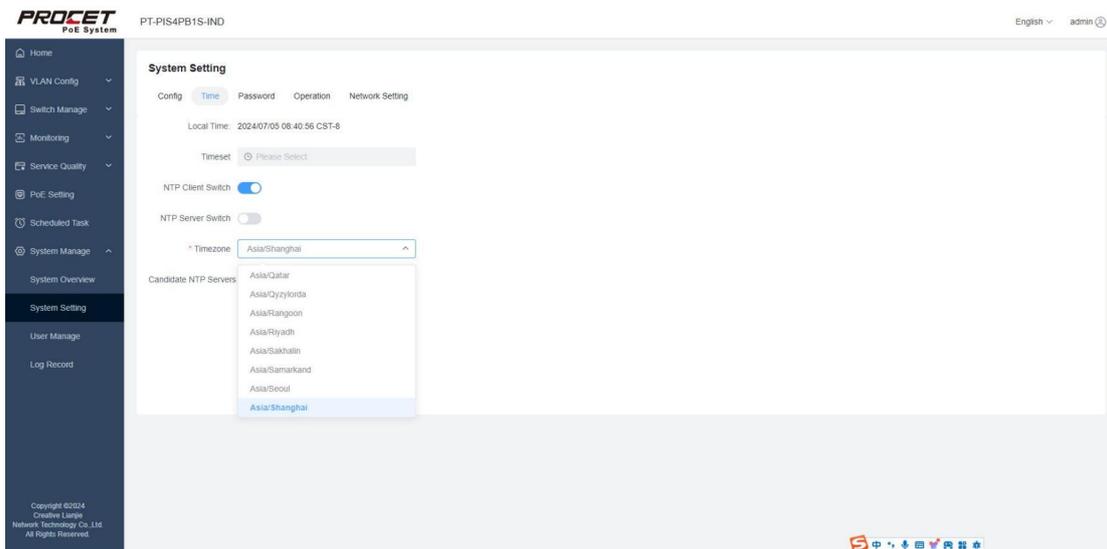


2.9.2.2 Time

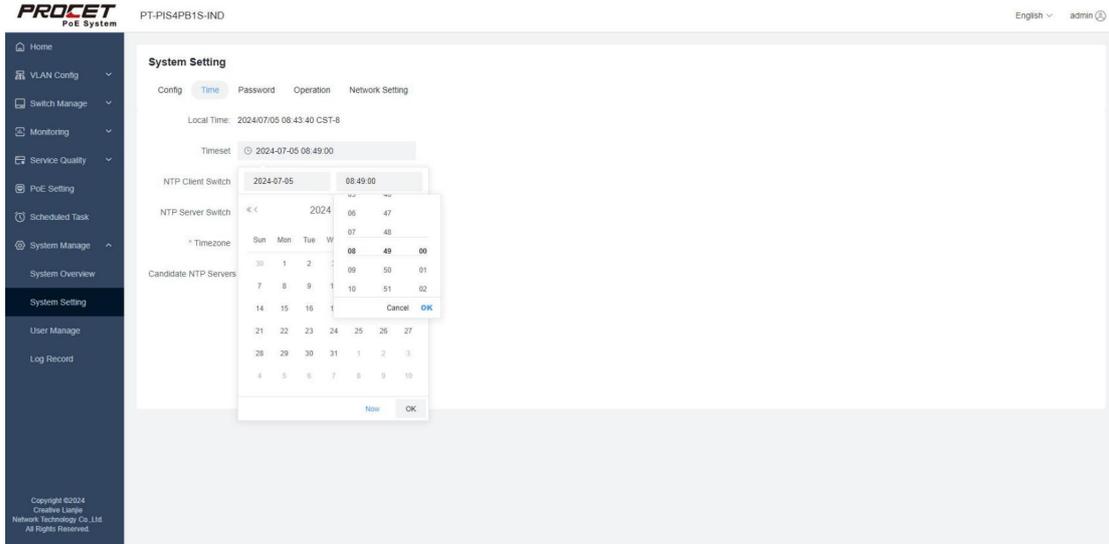
The **Time** display shows the local time, which can be manually set to the current time or synchronized with the time in the respective time zone via NTP (Network Time Protocol).



To synchronize time via NTP, network connection is required. Select the time zone and enable the NTP client switch, as shown in the figure below:



To manually set the time, you need to disable the NTP client switch, then set the time, click OK, and save. The configuration page is shown as follows:

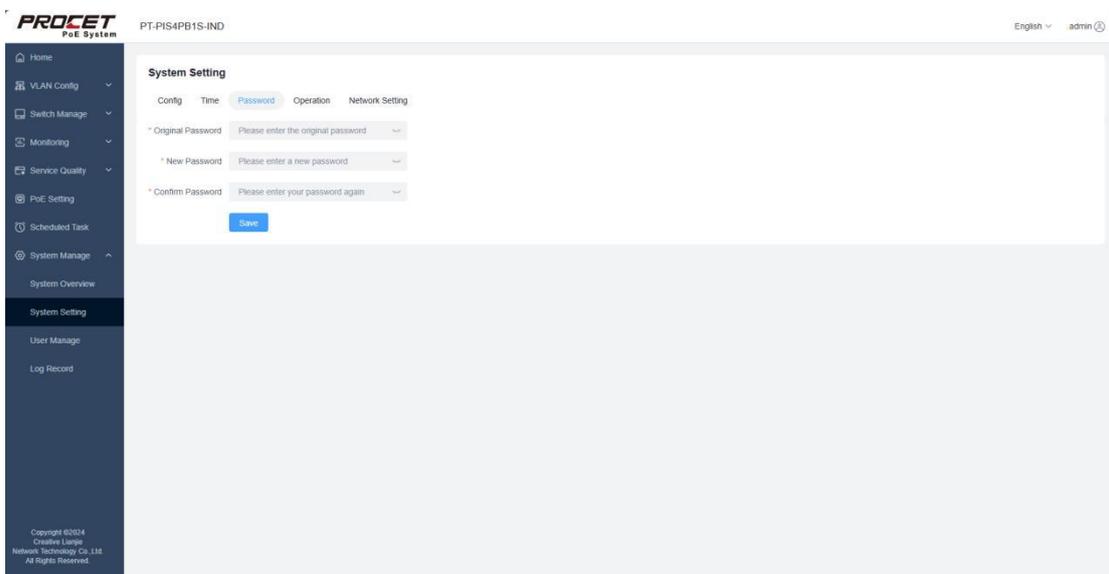


2.9.2.3. Password

By entering the current password and confirming the new password, you can change the login password for the current user. After changing the password, you will be logged out to the login page and will need to use the new password to log in again.

To change the password, the current password must be correct, the new password must match the confirmation password, and the new password cannot be the same as the old one.

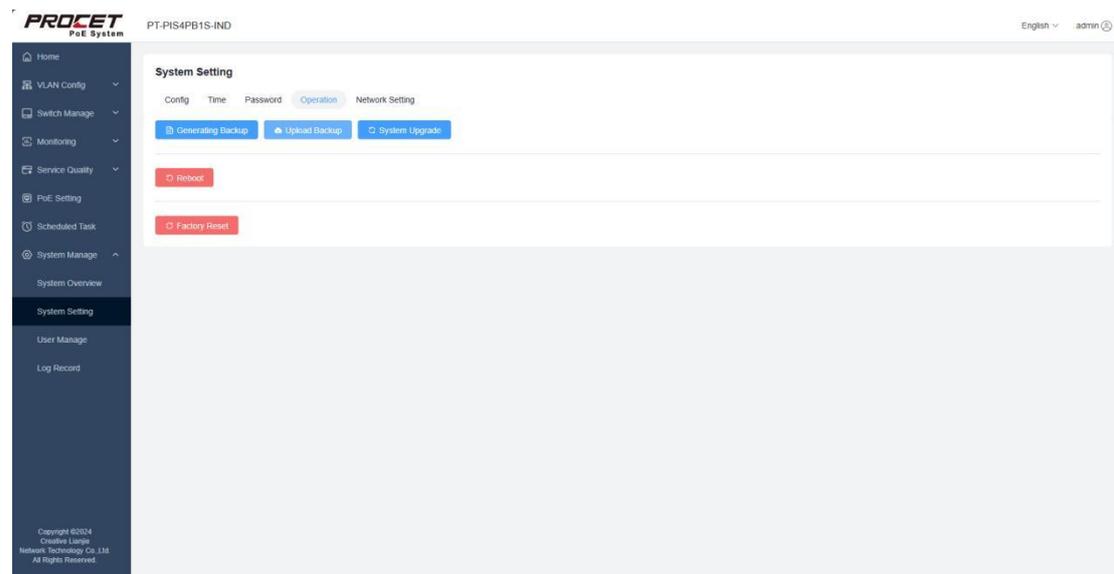
The password change page is shown as follows:



2.9.2.4. Operation

The operating interface includes functions such as generating backup files, uploading backup files, system upgrade, system reboot, and restoring factory settings. For details on logging in after restoring factory settings, please refer to section 1.1.

The operation page is shown as illustrated below:

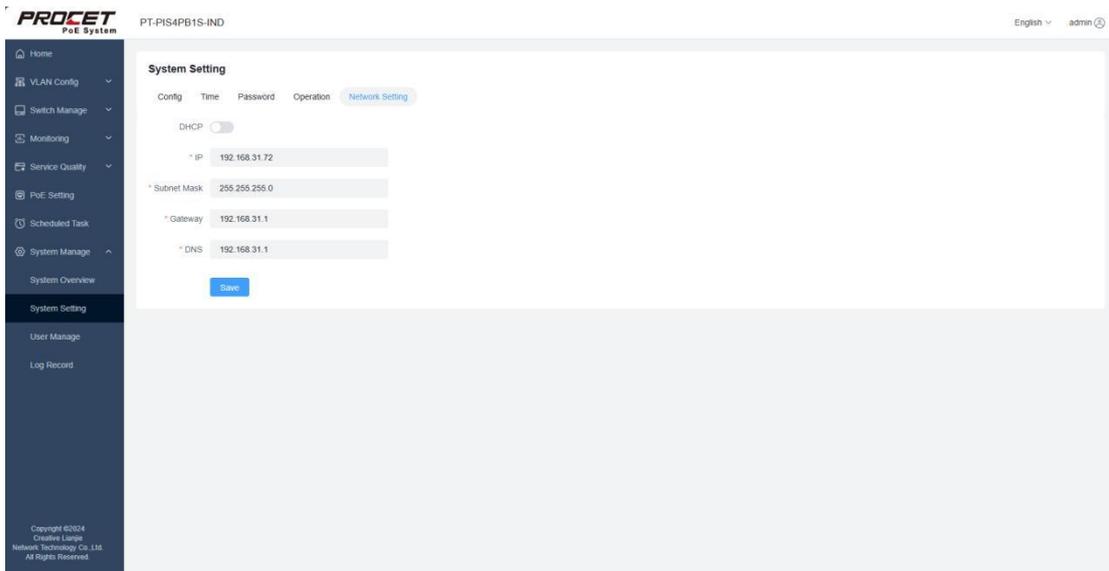


 **Note:**
To prevent damage to the device, please do not cut off power during system operations!

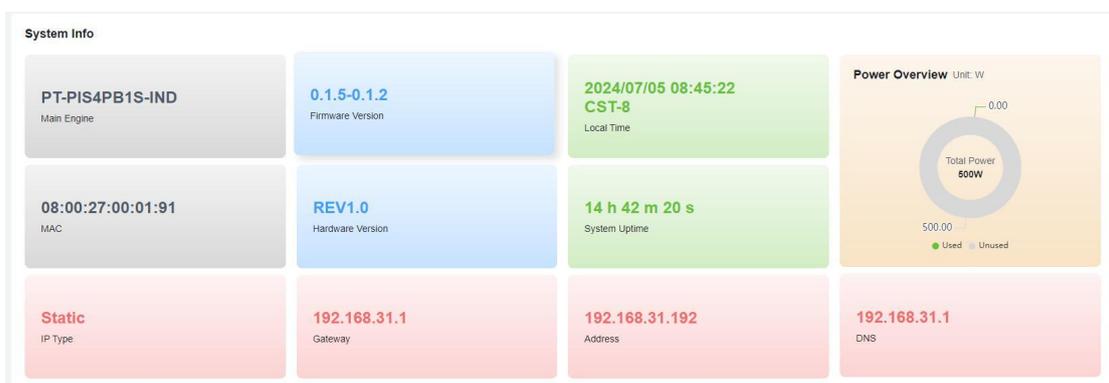
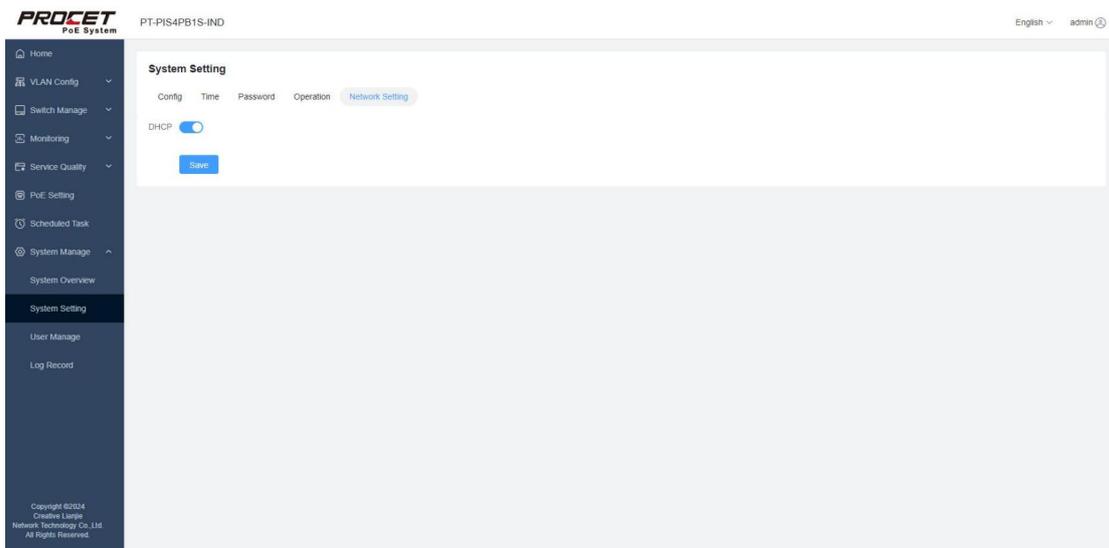
2.9.2.5 Network Setting

Network settings allow manual input of IP address, subnet mask, gateway, and DNS, or you can enable DHCP for automatic IP allocation.

To disable DHCP, configure the IP address, subnet mask, gateway, DNS, and click Save. After the device restarts, you can log in using the configured IP address. The static IP configuration page is shown as illustrated below:



Enable DHCP, click Save, and after the device restarts, enter the newly assigned IP address in the browser. Log in with your account credentials to see the updated IP information in the System Information section on the homepage, where the IP type will change to dynamic, or check it in the System Overview > Network Information section.



PROJET
PoE System

PT-PIS4PB1S-IND

English admin

System Overview

Basic Info Network Info

Main Engine PT-PIS4PB1S-IND	Firmware Version 0.1.5-0.1.2	Kernel Version 5.4.61	Local Time 2024/07/05 08:45:49 CST-8
System Uptime 14 h 42 m 48 s	Average Load 1.95 1.86 1.94		

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 **Note:**
Before enabling DHCP, please ensure that you can obtain the assigned IP to avoid login failures.

2.9.3. User Manage

Administrators can create and manage regular users by entering a username and password. The username must not be empty, the first character cannot be a space, consecutive spaces are not allowed, illegal characters are not permitted, and the username must be unique and not already exist. After successfully creating a user, administrators can modify or delete the user.

PROJET
PoE System

PT-PIS4PB1S-IND

English admin

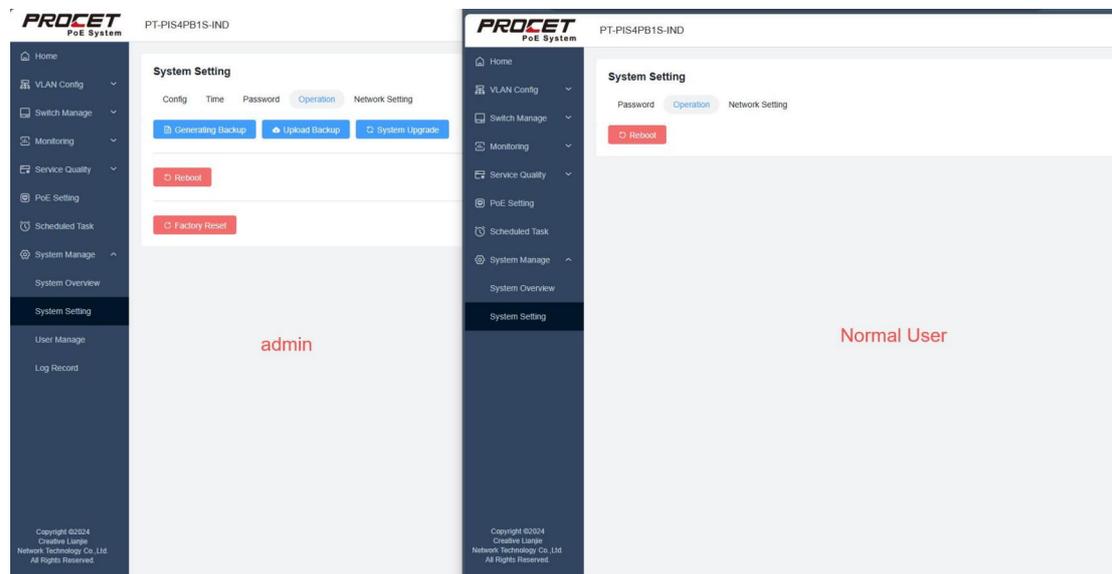
User Manage

+ Add New User

ID	Account Name	Created Time	Operation
1	123	2024-07-01 14:15:27	Edit Delete
2	12345678901234567890123456789012	2024-07-01 14:15:57	Edit Delete
3	qwerlyukopasdghklzxcvbnm,?[]	2024-07-01 14:16:37	Edit Delete

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Regular users do not have permissions for logs or user management. They do not have access to configuration, time settings, backup generation/upload, system upgrade, or factory reset in system settings. Permissions for other sections are consistent between both user types.



2.9.4. Log Record

Only administrators have permission to view logs; regular users do not have permission to view logs.

Logs display up to 17,000 entries, automatically clearing the oldest logs once the limit is exceeded.

A. Port Logs

Port logs primarily record operational activities related to ports. The log table includes fields such as ID, port number, type, port action, operator, and date.

The main contents recorded in port logs are as follows:

- Closed due to exceeding temperature threshold
- Closed due to exceeding power threshold
- Closed due to exceeding current threshold
- Closed due to exceeding voltage threshold
- Port closed due to device power exceeding threshold
- Device connected
- Device disconnected
- Power threshold set to x~x
- Temperature threshold set to x

- Current threshold set to x~x
- Port priority set to x
- Port mode set to automatic mode
- Port mode set to manual on
- Port mode set to manual off
- Global protection mode set to first connect first disconnect
- Global protection mode set to last connect first disconnect
- Global protection mode set to maximum power disconnect
- Global protection mode set to minimum power disconnect
- Global protection mode set to highest priority disconnect
- Global protection mode set to lowest priority disconnect
- Port bound to timed task x
- Timed task x completed
- Timed task x triggered for port
- Timed task x started execution for port
- Timed task x stopped due to exception for port
- Timed task x unbound from port
- Port exception handled

You can search log contents by filtering keywords such as ID/port action/operator. You can also search logs by date and time, or by port number and type (including normal, previously abnormal, and abnormal types). Multiple search conditions are combined with "AND" logic, except when searching by ID, which is treated with "OR" logic alongside other search conditions due to its uniqueness.

The screenshot displays the 'Log Record' page in the PROJET PoE System interface. The page title is 'PT-PIS4PB1S-IND'. The interface includes a sidebar with navigation options like Home, VLAN Config, Switch Manage, Monitoring, Service Quality, PoE Setting, Scheduled Task, and System Manage. The main content area shows a 'Log Record' section with a search bar and a table of log entries. The search bar has 'Please enter ID / Port Action / Operator' as a placeholder. The table has columns for ID, Port, Type, Port Action, Operator, and Date. A dropdown menu is open for the 'Type' column, showing 'Normal', 'Ever Abnormal', and 'Abnormal' options. The table contains 12 rows of log entries, all with 'Normal' type. The footer of the page shows 'Copyright ©2024 Creative Lanze Network Technology Co., Ltd All Rights Reserved.'

ID	Port	Type	Port Action	Operator	Date
217	4	Normal	Scheduled task 10012 completed execution	sys	2024-05-29 14:55:08
216	4	Normal	Set port priority to 1	sys	2024-05-29 14:55:08
215	4	Normal	Port scheduled task 10012 starts execution	sys	2024-05-29 14:55:08
214	4	Normal	Port scheduled task 10012 has been triggered	sys	2024-05-29 14:55:08
213	4	Normal	The device is connected	sys	2024-05-29 14:55:08
212	3	Normal	Scheduled task 10011 completed execution	sys	2024-05-29 14:55:07
211	3	Normal	Set port priority to 1	sys	2024-05-29 14:55:07
210	3	Normal	Port scheduled task 10011 starts execution	sys	2024-05-29 14:55:07
209	3	Normal	Port scheduled task 10011 has been triggered	sys	2024-05-29 14:55:07
208	3	Normal	The device is connected	sys	2024-05-29 14:55:07

B. System Logs

System logs primarily record system-related activities. The log table includes fields such as ID, type, content, operator, and date.

You can search log contents by filtering keywords such as ID/content/operator. You can also search logs by date and time, or by type (including error messages, warning messages, notification messages, and informational messages). Multiple search

conditions are combined with "AND" logic, except when searching by ID, which is treated with "OR" logic alongside other search conditions due to its uniqueness.

PROJET PoE System PT-PIS4PB1S-IND English admin

Log Record

Port Log System Log

Key Word Please enter ID / Content / Operator Date Start Date End Date Type Please Select Search Reset

ID	Type	Content	Operator	Date
202	Hint Info	user admin login success	admin	2024-05-29 14:56:32
201	Hint Info	user id 11 passwd change success	admin	2024-05-29 14:56:28
200	Hint Info	user admin login success	admin	2024-05-29 14:55:28
199	Hint Info	user id 11 passwd change success	admin	2024-05-29 14:55:22
198	Hint Info	user 11 set timer groupid 10009	admin	2024-05-29 14:23:09
197	Hint Info	dnsmasq[3515]: read /tmp/hosts/dhcp.ctg01411c - 0 addresses	sys	2024-05-29 13:39:02
196	Hint Info	dnsmasq[3515]: read /etc/hosts - 4 addresses	sys	2024-05-29 13:39:02
195	Hint Info	dnsmasq[3515]: using nameserver 192.168.31.1#53	sys	2024-05-29 13:39:02
194	Hint Info	dnsmasq[3515]: using only locally-known addresses for domain bind	sys	2024-05-29 13:39:02
193	Hint Info	dnsmasq[3515]: using only locally-known addresses for domain invalid	sys	2024-05-29 13:39:02

Total 202 < 1 2 3 4 5 6 ... 21 >

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