

# Web Smart Managed Switches

## User Manual

Models 508834, 560559, 561167, 561198, 561341, 561426, 562003



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## **Chapter 1 - Product Introduction**

Thank you for purchasing this Intellinet Web Smart Managed Switch. Before you install and use this product, please read this manual carefully to benefit from the full set of features that are available.

### **1.1 Product Overview**

These Layer 2 switches are designed to create a high-security and high-performance network with Self-Healing Network features. They provide from eight to 24 10/100/1000 Mbps auto-sensing RJ45 ports and 100/1000 Mbps SFP optical ports. All ports support wire-speed forwarding and can provide you with larger network flexibility.

Some of our newer features have been labeled as Self-Healing Network (SHN) features. These features are designed to assist in the automated preservation of health on the network. To assist even further, we have partnered with Domotz™ to provide the additional option of Cloud Management, which gives the ability to administer our managed switches from any internet-connected device through an app on your smartphone or web application hosted by Domotz (Cloud Management is subscription-based, and information can be found at the following link: <https://www.domotz.com/residential-plan.php>.)

### **1.2 Features**

- Compliance with IEEE 802.3i, IEEE 802.3u, IEEE802.3x, IEEE802.3ab, IEEE802.1q, IEEE802.1p standards
- In PoE versions, supports IEEE802.3af, IEEE802.3at standards, management of the PoE ports, PoE port power on/off, and port output power restriction
- Web interface management
- Up to 24 x 10/100/1000 Mbps Auto MDI/MDI-X Ethernet ports, ports Auto MDI/MDIX
- 8K-entry MAC address table of the Switch with auto-learning and auto-aging
- Supports IEEE802.3x flow control for Full-duplex Mode and backpressure for Half-duplex Mode
- Supports QoS (quality of service), port mirroring, link aggregation protocol
- Supports packet length 9,216 bytes jumbo frame packet forwarding at wire speed
- LED indicators for monitoring Link / Activity / Speed and, in PoE versions, PSE monitoring

### 1.3 External Component Description

#### 1.3.1 Front Panel (Example shown from 560559)

Depending on your model number, the front panel of the Switch consists of up to 24 x 10/100/1000 Mbps RJ45 ports, 4 x 1000 Mbps SFP ports (and 4 x Uplink RJ45 ports), 1 x Console port, 1 x Reset button and a series of LED indicators as shown as below.



**A — 10/100/1000 Mbps RJ45 ports (1 – 24):**

Designed to connect to a device with a bandwidth of 10 Mbps, 100 Mbps or 1000 Mbps. Each has a corresponding 10/100/1000 Mbps LED (see E — LED indicators below).

**B — SFP ports (SFP1, SFP2, 25S, etc.):**

Designed to install an SFP module and connect to the device with a bandwidth of 1000 Mbps. Each has a corresponding 1000 Mbps LED.

**Combo ports (25-28T) on model 561426:**

The four SFP receiver slots are shared with four related RJ45 ports (25-28T). An SFP port and a related RJ45 port are called "composite" ports, which means that they can't be used at the same time. Either the SFP port works or the RJ45 port works.

**C — Console port (Console):**

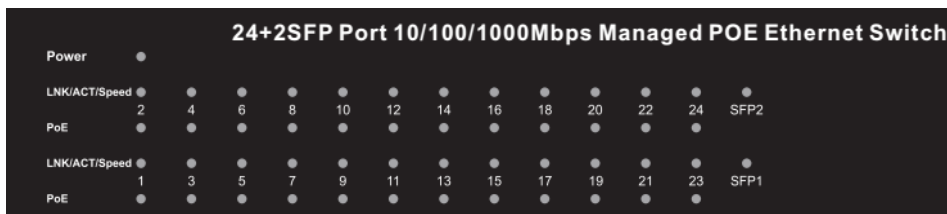
Designed to connect with the serial port of a computer or terminal for monitoring and configuring the Switch.

**D — Reset button (Reset):**

With the device powered on, press down the button for about 5 seconds. The system restores the factory default settings.

**E — LED indicators:**

The LED indicators will allow you to monitor, diagnose and troubleshoot any potential problem with the Switch, connection or attached devices.



The following chart shows the LED indicators of the Switch along with explanation of each indicator.

| LED  | COLOR                      | STATUS   | STATUS DESCRIPTION   |
|--|----------------------------|----------|--|
| Power  | Green                      | On       | Power On   |
|  |                            | Off      | Power Off  |
| LINK/ACT/<br>Speed<br>(1 – 24;<br>25T – 28T) | Orange<br>(10/100<br>Mbps) | On       | A device is connected to the port  |
|  |                            | Off      | No device is connected to the port   |
|  | Green<br>(1000<br>Mbps)    | Flashing | Sending or receiving data  |
| LINK/ACT/<br>Speed<br>(SFP1, 2)              | Green                      | On       | A device is connected to the port  |
|  |                            | Off      | No device is connected to the port   |
|  |                            | Flashing | Sending or receiving data  |
| PoE<br>(1 – 24)<br>(excluding<br>508834)     | Yellow                     | On       | A Powered Device is connected to the port and is receiving power.  |
|  |                            | Off      | No Powered Device is connected to the port, or no power is supplied according to the power limits of the port. |
|  |                            | Flashing | The PoE power circuit may be in short or the power current may be overloaded.                                  |

### 1.3.2 Rear Panel (19 Rackmount/Desktop example shown)

The rear panel of the Switch contains AC power connector and one marker shown as below.



**F — AC Power Connector:**

Power is supplied through an external AC power adapter. See specifications for your model.

**G — Grounding Terminal:**

The Switch already comes with a Lightning Protection Mechanism. You can also ground the Switch through the PE (Protecting Earth) cable of an AC cord or with a Ground Cable.

## **1.4 Environment**

- Operating Temperature: 0°C – 45°C
- Storage Temperature: -40°C – 70°C
- Operating Humidity: 10% – 90% non-condensing
- Storage humidity: 5% – 90% non-condensing

## **1.5 Package Contents**

Before installing the Switch, make sure that the following the packing list matches the items in the packaging. If any part is lost and damaged, please contact your local agent immediately. In addition, make sure that you have the tools to install switches and cables on hand.

- One Managed Ethernet Switch
- Four rubber feet, two mounting ears and eights screws (except for Industrial version 508834, which is for DIN Rail mounting)
- One AC power cord (except for Industrial version 508834, which is designed to receive power from an Industrial power source)
- Quick Install Guide



## **Chapter 2 - Installing and Connecting the Switch**

This part describes how to install this Switch and make connections to it. Please read the following topics and perform the procedures in the order being presented.

### **2.1 Installation (19 Rackmount & Desktop version)**

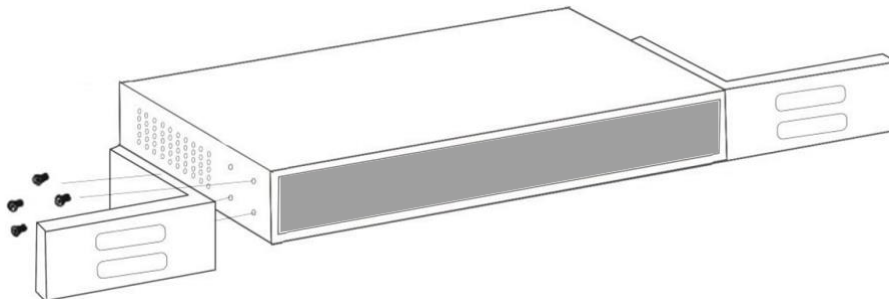
Please follow these instructions to avoid incorrect installation, cause device damage or security threats.

- Put the Switch on stable place or desktop to prevent damage from falling.
- Make sure the Switch works in the proper AC input range and matches the voltage labeled on the Switch.
- To prevent electrical shocks, do not open the Switch's housing, even in power failure or if disconnected from a power source.
- Make sure that there is proper heat dissipation from and adequate ventilation around the Switch.
- Make sure the cabinet can hold the weight of the Switch and its accessories.

#### **2.1.1 Installation in a 19-inch Rack / Cabinet**

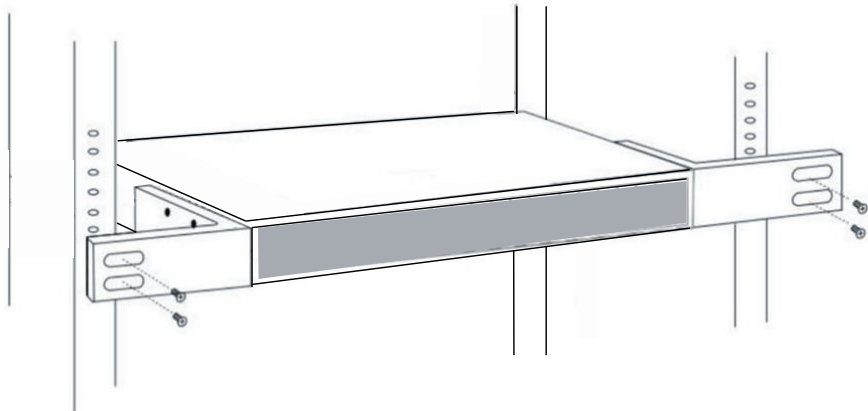
The Switch can be mounted in an EIA standard-sized, 19-inch rack, which can be placed in a wiring closet with other equipment. To install the Switch, follow these steps:

- a. Attach the mounting brackets on the Switch's side panels (one on each side) and secure them with the screws provided.



Bracket Installation

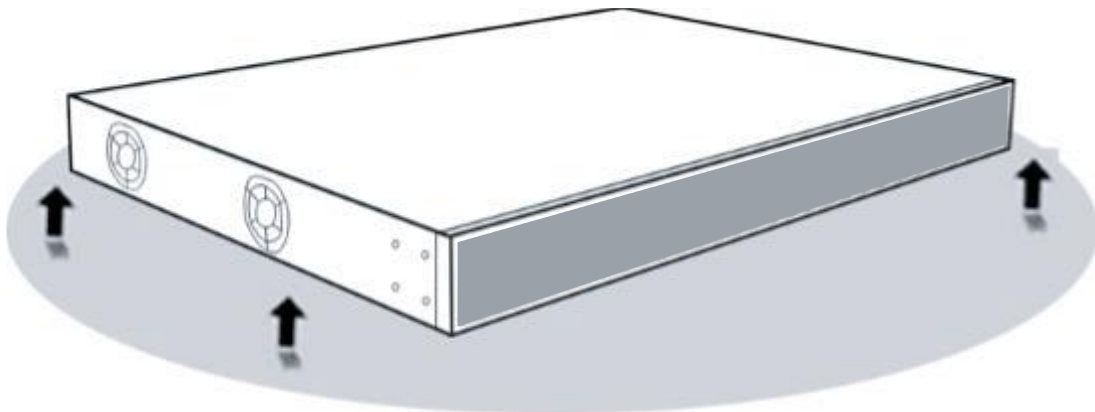
- b. Use the screws provided with the equipment rack to mount the Switch on the rack and tighten it.



Rack Installation

### **2.1.2 Desktop Installation**

If users are not equipped with a 19-inch standard cabinet, install the Switch on a desktop. Attach the included rubber feet on the bottom of the Switch at each corner to minimize external vibration. Allow adequate space for ventilation between the device and the objects around it.



Desktop Installation

### 2.1.3 DIN Rail Installation

For Industrial Models, the Switch can be installed onto a DIN rail. Follow these instructions:

1. With the DIN-rail bracket attached to the device with screws, angle the bracket onto the DIN rail.
2. Push in the device until it clicks into place.



### 2.1.4 Power on the Switch

The Switch is powered on by the AC 100 – 240 V 50/60 Hz internal high-performance power supply. Please follow the next tips to connect:

#### AC Electrical Outlet:

It is recommended to use single-phase three-wire receptacle with neutral outlet or multifunctional computer professional receptacle. Please make sure to connect the metal ground connector to the grounding source on the outlet.

#### AC Power Cord Connection:

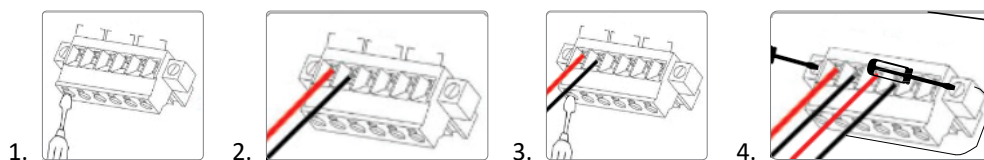
Connect the AC power connector in the back panel of the Switch to external receptacle with the included power cord, and check the power indicator is ON. When it is ON, it indicates the power connection is OK.

#### DC Terminal Block Installation (for Industrial models)

NOTE: Ensure all power is off/disconnected before beginning!

1. Loosen appropriate screws.
2. Insert bare power-supply wires into appropriate terminal slots (positive wire into positive slot; negative wire into negative slot).
3. Tighten appropriate screws to secure wires. (If desired, repeat steps 1 – 3 on second input pair.)
4. Install block into the device and tighten screws.

Example — Your model may be different.



## **2.2 Connect Computer (NIC) to the Switch**

After installing the network card driver, insert the NIC into the computer. Connect one end of the twisted pair to the RJ45 jack on your computer, and connect the other end to any RJ45 port of the Switch, with a maximum distance of 100 meters between the Switch and the computer. Once the connection is OK and the devices power on normally, the LINK/ACT/Speed status indicator lights, corresponding to ports on the Switch.

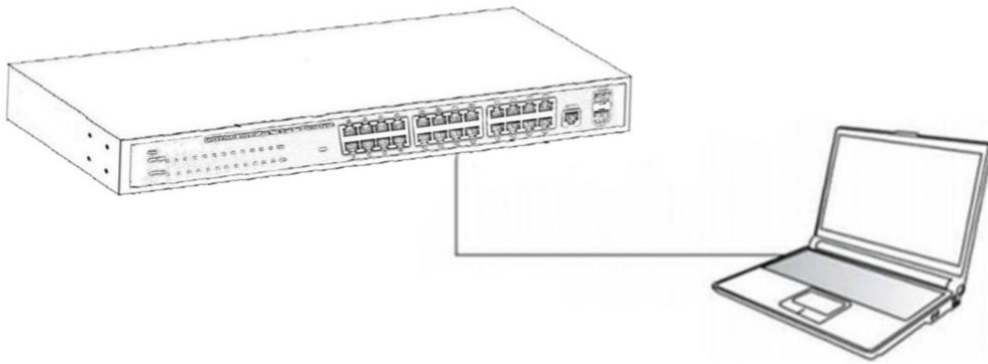
## **2.3 Switch connection to the PD (excluding 508834)**

On PoE models, any ports that have a PoE indicator also have the PoE power supply function, which makes it possible to provide power to PD devices such as VoIP phones, network cameras, wireless access points and more. You only need to connect the Switch PoE port directly to the PD with a network cable.

## **Chapter 3 - How to Log into the Switch**

### **3.1 Switch to End Node**

Use standard Cat5 and higher Ethernet cable (UTP/STP) to connect the Switch to end nodes as described below. Switch ports will automatically adjust to the characteristics (MDI/MDI-X, speed, duplex) of the device to which is connected.



Please refer to the [LED Indicator](#) table shown above. The LNK/ACT/Speed LEDs for each port lights when the link is available.

### **3.2 Login Information**

As the Switch provides Web-based management login, configure your computer's IP address manually to log onto the Switch. The default settings of the Switch are shown below.

| <b>Parameter</b>   | <b>Default Value</b>                                   |
|--------------------|--|
| Default IP address | 192.168.2.1  |
| Default Username   | admin  |
| Default Password   | SERIAL NUMBER (S/N; found on the bottom of the switch) |

You can log into the configuration window of the Switch through following steps:

1. Connect the Switch with the computer NIC interface.
2. Power on the Switch.

3. Check whether the IP address of the computer is within this network segment: 192.168.2.xxx (xxx ranges 2 – 254), for example, 192.168.2.100.
4. Open the browser and enter <http://192.168.2.1> and then press Enter. The Switch login window appears with the following picture:

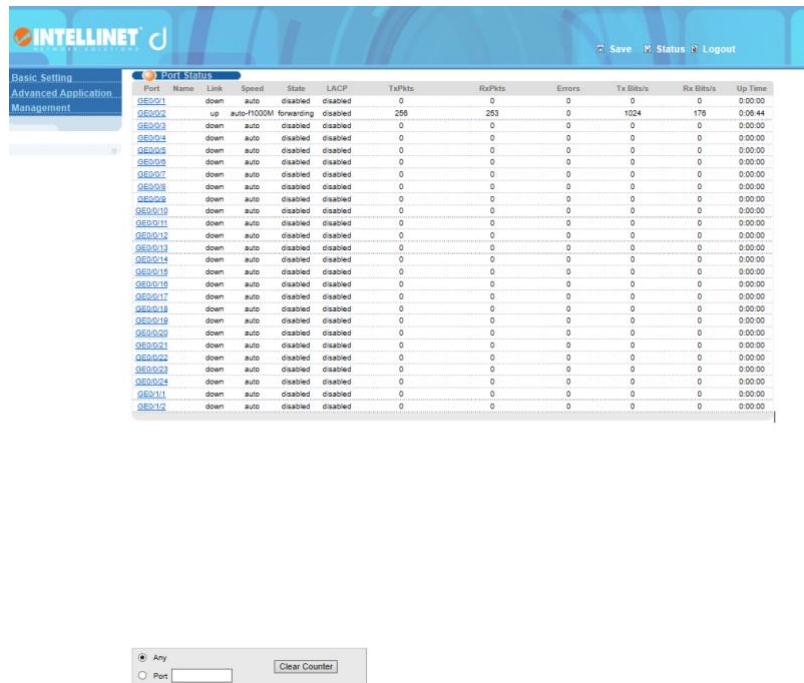


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Enter the Username and Password. The factory default Username is **admin** and the initial Password is the same as the serial number found on the bottom of the switch. Then click **Login** to log into the Switch configuration window.

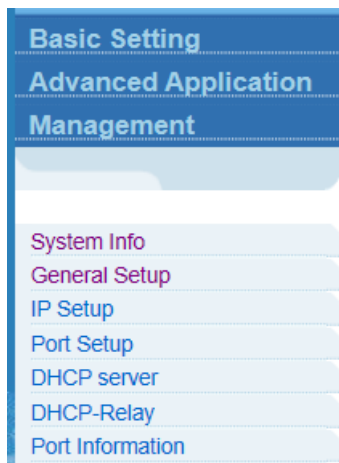
## Chapter 4 - Web Configuration Guide

The Switch configuration interface consists of three main areas: the status bar at the top, the left function menu bar, and the main configuration window. Select the different functions in the function menu bar to modify all settings in the main configuration window.



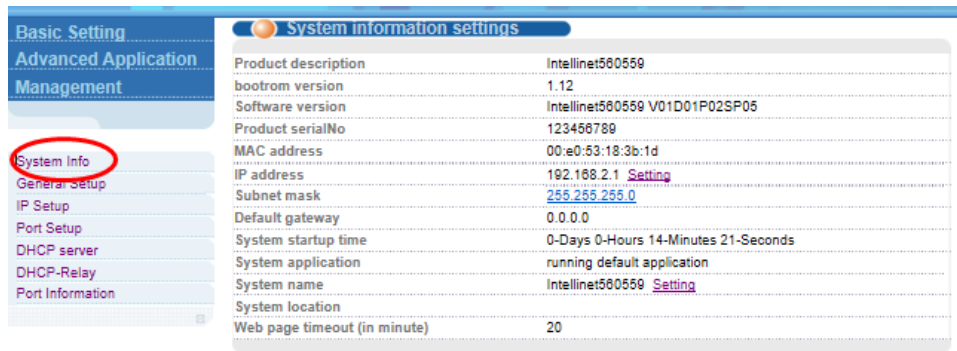
### 4.1 Basic Setting

Choose Basic Setting, and the following page appears. There are configuration web pages for **System Info**, **General Setup**, **IP Setup**, **Port Setup**, **DHCP server**, **DHCP-Relay**, and **Port Information**.



### 4.1.1 System Info

To view the basic information of System and configure the IP address and System name, select **Basic Setting>System Information settings** in the function menu bar.



#### **【Parameter Description】**

| Parameter           | Description  |
|---------------------|--|
| Product description | Brief description of device type   |
| Software version    | Show switch’s current software version.  |
| MAC address         | Show switch’s physical address.  |
| IP Address          | The management IP of Switch  |
| Subnet Mask         | Configure the corresponding subnet mask of the IP address specified above. The default is 255.255.255.0. |
| Default Gateway     | Specify a gateway address for the switch.  |
| System name         | System name.   |
| System Location     | Specify the system location.   |

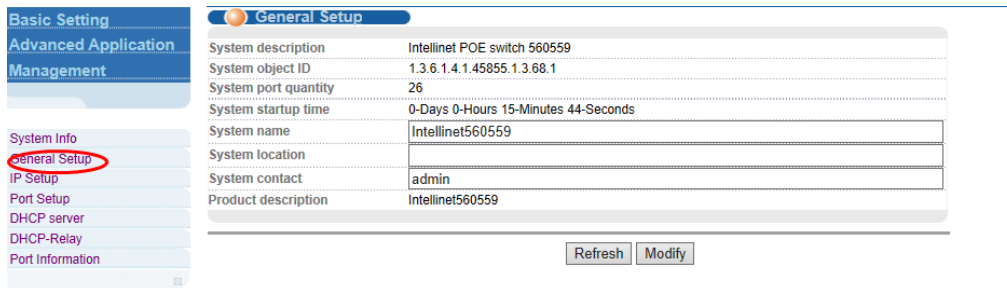
#### **【Information】**

You can view and configure Running System status.



## 4.1.2 General Setup

To view the basic information of Switch, such as System Description and so on, select **Basic Setting>General Setup** in the function menu bar. You can also modify the System name, System contact and System location.



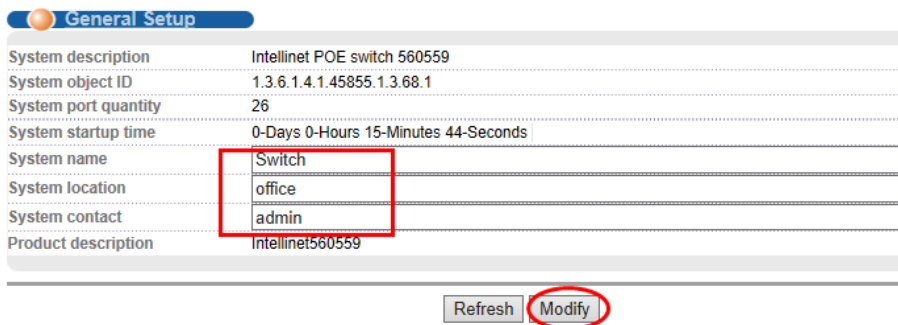
### 【Parameter Description】

| Parameter           | Description                       |
|---------------------|-----------------------------------|
| System name         | System name                       |
| System Location     | Specify the system location       |
| System contact      | Including company or related URL  |
| Product description | Brief description of device type. |

### 【Configuration example】

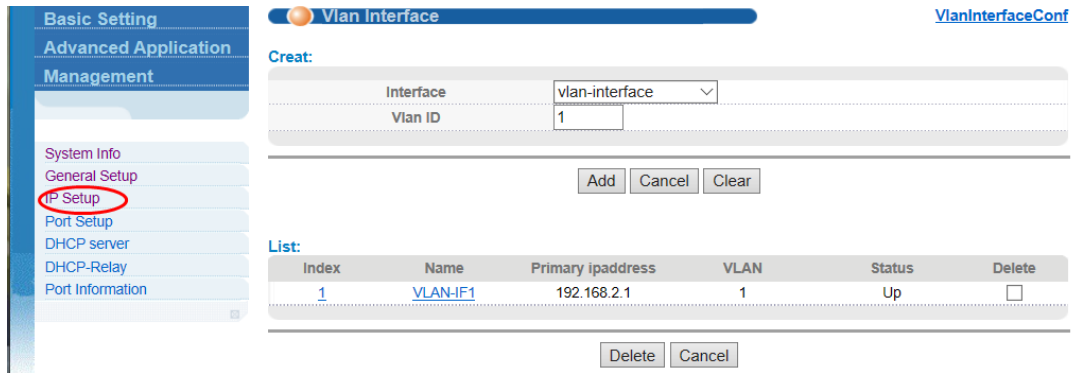
To configure general system information:

1. Click Basic Setting > General Setup.
2. Specify the system name as Switch, location as office, and contact information as admin for the system administrator.
3. Click Apply.



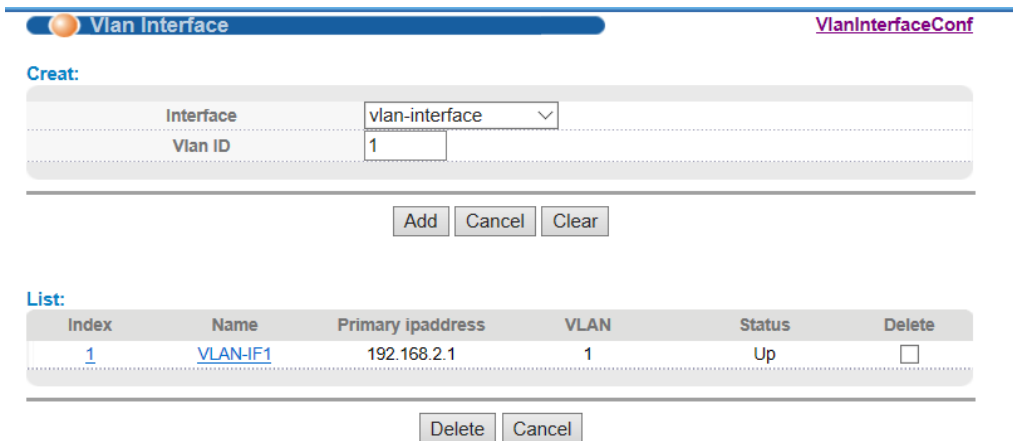
### 4.1.3 IP Setup

To configure the IP, select **Basic Setting>IP Setup** in the function menu bar.



#### 4.1.3.1 VLAN interface

To configure the VLAN Interface, select **Basic Setting>IP Setup>Vlan interface** in the function menu bar.



#### 【Parameter Description】

| Parameter | Description  |
|-----------|--|
| Interface | Select the interface:<br>vlan-interface<br>Supervlan-interface |
| Vlan ID   | Specify the vlan ID  |
| Name      | The name of interface  |

### 4.1.3.2 VLAN Interface Config

To adjust settings to the VLAN Interface Configuration, select **Basic Setting>IP Setup>Vlan Interface Config** in the function menu bar.

#### 【Parameter Description】

| Parameter      | Description  |
|----------------|--|
| Interface name | Name of interface                                  |
| Vlan ID        | Specify the VLAN ID                                |
| IP Address     | The IP address to log into the Switch              |
| Override       | You can override former original primary IP or not |

#### 【Configuration example】

To configure general system information:

1. Click Basic Setting > IP Setup >Vlan interface Config.
2. Specify the IP Address as 192.168.2.1.
3. Click Add.

**Vlan Interface Config** [VlanInterface](#)

**VLAN Interface Name List:**

|                |          |
|----------------|----------|
| Interface Name | VLAN-IF1 |
| Vlan ID        | 1        |

**VLAN Interface Configuration:**

|                 |                                     |
|-----------------|-------------------------------------|
| Mode            | Ip Address                          |
| IP Address      | 192.168.2.2                         |
| NetMask Address | 255.255.255.0                       |
| Override        | <input checked="" type="checkbox"/> |

**VLAN Interface List:**

| Index | Ip          | Mask                          | Primary                          | Delete                   |
|-------|-------------|-------------------------------|----------------------------------|--------------------------|
| 1     | 192.168.2.1 | <a href="#">255.255.255.0</a> | <input checked="" type="radio"/> | <input type="checkbox"/> |

### 4.1.4 Port Setup

To configure the related parameters of a port, select **Basic Setting>Port Setup** in the function menu bar.

Port basic settings Ethernet 1000M Port[1]

| Port     | Status | Link | Priority | Set speed | Mode | Actual speed | Port description (0-128 chars) |
|----------|--------|------|----------|-----------|------|--------------|--------------------------------|
| GE0/0/1  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/1  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/2  | enable | up   | 0        | auto      | auto | full-1000M   |                                |
| GE0/0/3  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/4  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/5  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/6  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/7  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/8  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/9  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/10 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/11 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/12 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/13 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/14 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/15 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/16 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/17 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/18 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/19 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/20 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/21 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/22 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/23 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/0/24 | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/1/1  | enable | down | 0        | auto      | auto | unknown      |                                |
| GE0/1/2  | enable | down | 0        | auto      | auto | unknown      |                                |

#### 【Parameter Description】

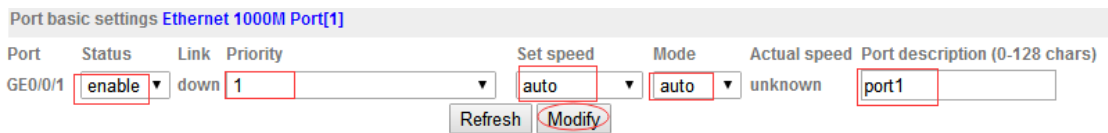
| Parameter | Description  |
|-----------|--|
| Port      | Port number  |
| Status    | Choose whether to enable or disable the link port  |
| Link      | Status:<br>down<br>up  |
| Priority  | Set port priority in the range of 0 – 7  |
| Set speed | Choose the following modes:<br>10/100 Mbps ports:<br>full-10<br>half-10<br>auto-10<br>full-100<br>half-100 |

| Parameter        | Description   |
|------------------|---|
|                  | auto-100<br><br>10/100/1000 Mbps ports:<br>full-10<br>half-10<br>auto-10<br>full-100<br>half-100<br>auto-100<br>full-1000<br>half-1000<br>auto-1000<br>auto |
| Mode             | Choose the following kinds:<br>auto<br>slave<br>master  |
| Actual speed     | Displays the actual speed of the port   |
| Port description | Describe the port.  |

**【Configuration example】**

To configure static routes:

1. Click Basic Setting > Port Setup.
2. Configure the related parameters for port 1: Status is enable, Priority is 1, Set speed is auto, Mode is auto, Port description is port 1.
3. Click Modify.



### 4.1.5 DHCP Server

To configure the DHCP server pool and DHCP server group, select **Basic Setting>DHCP Server** in the function menu bar.

The screenshot shows the configuration page for a DHCP server pool. On the left, a navigation menu lists various system settings, with 'DHCP server' highlighted. The main content area is titled 'DHCP server pool set' and includes several input fields for configuring the pool's parameters. Below the configuration fields is a table for managing assignable addresses, and at the bottom, there are buttons for 'Add', 'Delete', and 'Save'.

| number | start address | end address |        |
|--------|---------------|-------------|--------|
| 0      |               |             | delete |
| 1      |               |             | delete |
| 2      |               |             | delete |
| 3      |               |             | delete |
| 4      |               |             | delete |
| 5      |               |             | delete |
| 6      |               |             | delete |
| 7      |               |             | delete |

### 4.1.5.1 DHCP server pool set

To configure DHCP Server pool set, select **Basic Setting>DHCP server>DHCP server pool set** in the function menu bar.

**DHCP server pool set**
[DHCP server group set](#)

ip pool ▼

name

lease time  day  hour  minute

Gate Address

Ip Mask

First DNS

Secondary DNS

**list of assignable address:**

| number | start address                            | end address                              |                                       |
|--------|--|--|---------------------------------------|
| 0      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 1      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 2      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 3      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 4      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 5      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 6      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |
| 7      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input type="button" value="delete"/> |

#### 【Parameter Description】

| Parameter     | Description             |
|---------------|-------------------------|
| ip pool       | IP pool ID              |
| name          | Set the name of IP pool |
| lease time    | Set lease time          |
| Gate Address  | Set gate address        |
| Ip Mask       | Set IP mask             |
| First DNS     | Set first DNS           |
| Secondary DNS | Set secondary DNS       |
| Start address | Set start address range |
| End address   | Set end address range   |



### 4.1.5.2 DHCP server group set

To configure the DHCP Server group, select **Basic Setting>DHCP server>DHCP server group set** link to the right of the header.

#### 【Parameter Description】

| Parameter  | Description                        |
|------------|------------------------------------|
| group id   | Provide the DHCP server group ID   |
| IP address | Provide the DHCP server IP address |

### 4.1.6 DHCP-Relay

To turn on the DHCP relay function, hide DHCP Server, and set the source IP used, select **Basic Setting>DHCP-Relay** in the function menu bar.

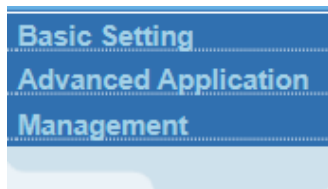
## 4.1.7 Port Information

To view port information, select **Basic Setting>Port Information** in the function menu bar.

| Port     | link Status | Receive bit/sec | Transmit bit/sec |
|----------|-------------|-----------------|------------------|
| GE0/0/1  | down        | 0               | 0                |
| GE0/0/2  | up          | 6.37Kbps        | 24.11Kbps        |
| GE0/0/3  | down        | 0               | 0                |
| GE0/0/4  | down        | 0               | 0                |
| GE0/0/5  | down        | 0               | 0                |
| GE0/0/6  | down        | 0               | 0                |
| GE0/0/7  | down        | 0               | 0                |
| GE0/0/8  | down        | 0               | 0                |
| GE0/0/9  | down        | 0               | 0                |
| GE0/0/10 | down        | 0               | 0                |
| GE0/0/11 | down        | 0               | 0                |
| GE0/0/12 | down        | 0               | 0                |
| GE0/0/13 | down        | 0               | 0                |
| GE0/0/14 | down        | 0               | 0                |
| GE0/0/15 | down        | 0               | 0                |
| GE0/0/16 | down        | 0               | 0                |
| GE0/0/17 | down        | 0               | 0                |
| GE0/0/18 | down        | 0               | 0                |
| GE0/0/19 | down        | 0               | 0                |
| GE0/0/20 | down        | 0               | 0                |
| GE0/0/21 | down        | 0               | 0                |
| GE0/0/22 | down        | 0               | 0                |
| GE0/0/23 | down        | 0               | 0                |
| GE0/0/24 | down        | 0               | 0                |
| GE0/1/1  | down        | 0               | 0                |
| GE0/1/2  | down        | 0               | 0                |
| Total    |             | 6.37Kbps        | 24.11Kbps        |

## 4.2 Advanced Application

Choose Advanced Application, and the function menu bar shows configuration web pages for **VLAN, MAC Address Forwarding, Loopback Detection, Spanning Tree Protocol, Bandwidth Control, Broadcast Storm Control, Mirroring, Link Aggregation, PoE Settings, PoE Scheduling, PDM, Classifier, Policy Rule, Queuing Method, Multicast, IPv6 Multicast, Dos attack protect, DHCP Snooping Setting, SNTP Setting, LLDP Protocol, AAA, EEE, ARP Safeguarding, Port Isolation, MTU, and Watch Dog.**



|                         |
|-------------------------|
| VLAN                    |
| MAC Address Forwarding  |
| Loopback Detection      |
| Spanning Tree Protocol  |
| Bandwidth Control       |
| Broadcast Storm Control |
| Mirroring               |
| Link Aggregation        |
| PoE Settings            |
| POE Scheduling          |
| PDM                     |
| Classifier              |
| Policy Rule             |
| Queuing Method          |
| Multicast               |
| IPv6 Multicast          |
| Dos attack protect      |
| DHCP Snooping Setting   |
| SNTP Setting            |
| LLDP Protocol           |
| AAA                     |
| EEE                     |
| ARP Safeguarding        |
| Port Isolation          |
| MTU                     |
| Watch Dog               |

## 4.2.1 VLAN

To configure VLAN, select **Advanced Application>VLAN** in the function menu bar.

The screenshot displays the 'VLAN Status' configuration page. On the left, a navigation menu lists various network settings, with 'VLAN' highlighted and circled in red. The main content area includes a search bar for VLANs by VID, a status summary, and a detailed table of VLAN configurations.

| Index | VID | Elapsed Time | Status |
|-------|-----|--------------|--------|
| 1     | 1   | 0:27:46      | Static |

| VID | Port Number |   |   |   |    |    |    |    |    |    |    |    |    |
|-----|-------------|---|---|---|----|----|----|----|----|----|----|----|----|
|     | 2           | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 |
| 1   | U           | U | U | U | U  | U  | U  | U  | U  | U  | U  | U  | U  |
|     | U           | U | U | U | U  | U  | U  | U  | U  | U  | U  | U  | U  |
| VID | Port Number |   |   |   |    |    |    |    |    |    |    |    |    |
|     | 1           | 3 | 5 | 7 | 9  | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 |

### 【Information】

Traditional Ethernet uses a common communication medium and is based on Carrier Sense Multiple Access/Collision Detect (CSMA/CD) data network communication protocol. Overloaded hosts in a LAN will cause major collisions, flooding broadcasts, subpar performance, or even the collapse of the Internet using standard Ethernet. While substantial collisions can be avoided by connecting LANs through switches, flooding broadcasts cannot be avoided because they consume a lot of bandwidth resources and could result in significant security issues.

A network topology called a Virtual Local Area Network (VLAN) is set up using a logical plan rather than a physical one. Switches use VLAN technology to manage broadcast in LANs. You can divide a physical LAN into several logical LANs, each with its own broadcast domain, by implementing VLANs. The communication between hosts on the same VLAN is similar to that of a LAN. However, hosts in separate VLANs are unable to directly connect with one another.

VLANs therefore restrict broadcast packets. Standard Ethernet is how hosts in the same VLAN communicate, while Layer 3 switches, routers, and other Internet-connected devices are the method of communication for hosts in separate VLANs.

### 4.2.1.1 VLAN Status

To view VLAN status, select **Advanced Application>VLAN>VLAN Status** in the function menu bar.

The screenshot shows the 'VLAN Status' page with a search bar and two tables. The search bar is labeled 'VLAN Search by VID' and contains the number '1'. The first table shows the number of VLANs and the current page. The second table shows the status of VLAN 1 across various ports.

| Index | VID | Elapsed Time | Status |
|-------|-----|--------------|--------|
| 1     | 1   | 0:27:46      | Static |

| VID | Port Number |   |   |   |    |    |    |    |    |    |    |    |    |
|-----|-------------|---|---|---|----|----|----|----|----|----|----|----|----|
|     | 2           | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 |
| 1   | U           | U | U | U | U  | U  | U  | U  | U  | U  | U  | U  | U  |
|     | U           | U | U | U | U  | U  | U  | U  | U  | U  | U  | U  | U  |

#### 【Parameter Description】

| Parameter          | Description                             |
|--------------------|---|
| VLAN Status        | View all VLANs configured in the device |
| VLAN Search by VID | Enter VID to view the specified VLAN    |

#### 【Configuration example】

View the VLAN of VID as 1.

The screenshot shows the 'VLAN Status' page with the search bar highlighted in red. The search bar is labeled 'VLAN Search by VID' and contains the number '1'. The rest of the page content is identical to the previous screenshot.

| Index | VID | Elapsed Time | Status |
|-------|-----|--------------|--------|
| 1     | 1   | 0:27:46      | Static |

| VID | Port Number |   |   |   |    |    |    |    |    |    |    |    |    |
|-----|-------------|---|---|---|----|----|----|----|----|----|----|----|----|
|     | 2           | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 |
| 1   | U           | U | U | U | U  | U  | U  | U  | U  | U  | U  | U  | U  |
|     | U           | U | U | U | U  | U  | U  | U  | U  | U  | U  | U  | U  |

### 4.2.1.2 VLAN Port Settings

To configure or adjust settings related to a VLAN port, select **Advanced Application>VLAN>VLAN Port Settings** in the function menu bar.

| Port                | PVID | Acceptable Frame | Port Mode | Port GVRP                | Ingress Check                       |
|---------------------|------|------------------|-----------|--------------------------|-------------------------------------|
| *                   |      | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Ethernet 1000M Port |      |                  |           |                          |                                     |
| GE0/0/1             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/2             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/3             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/4             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/5             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/6             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/7             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/8             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/9             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/10            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/11            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/12            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/13            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/14            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/15            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/16            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/17            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/18            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/19            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/20            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/21            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/22            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/23            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/0/24            | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/1/1             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE0/1/2             | 1    | All              | Hybrid    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

#### 【Parameter Description】

| Parameter           | Description  |
|---------------------|--|
| PVID (Port VLAN ID) | The PVID of the port can be modified, the default port PVID is 1   |
| Acceptable Frame    | Choose the following kinds:<br>All<br>Tagged only<br>Untagged only |
| Port Mode           | Choose the following modes:  |

| Parameter     | Description   |
|---------------|---|
|               | <p><b>Hybrid:</b> The port can be either a tagged member or untagged member in the VLAN and can be a member port for multiple VLANs. Used to connect switches to each other and to computers.</p> <p><b>Trunk:</b> The port can only be a tagged member in the VLAN and can be a member port for multiple VLANs. Typically used to connect switches to each other.</p> <p><b>Access:</b> port belongs to one VLAN. Common use is to connect computer ports. The port can only be an untagged member in the VLAN and the port can only be in one VLAN, not multiple.</p> |
| Port GVRP     | Select enable or disable GVRP (a dynamic VLAN learning function); port mode must be Trunk mode.   |
| Ingress Check | Enable port filtering function. If enabled, the port checks for a tagged message. If the message is untagged, it is disregarded. If disabled, all messages are allowed through.   |

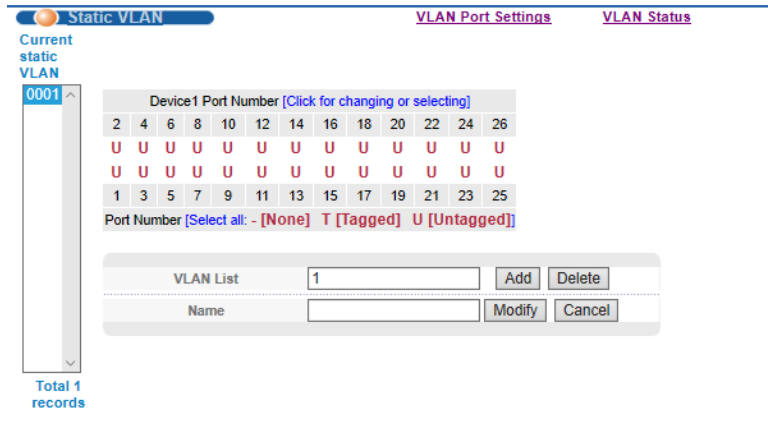
#### 【 Configuration example 】

1. Click Advanced Application > VLAN> VLAN Port Settings.
2. The PVID of port 1 is set to 1, the frame type is set to All, the port mode is set to Hybrid, and the port GVRP is not turned on and the entry inspection function is opened.
3. Click Apply.

GE0/0/1    1    All    Hybrid

### 4.2.1.3 Static VLAN

To configure a Static VLAN, select **Advanced Application>VLAN>Static VLAN** in the function menu bar.



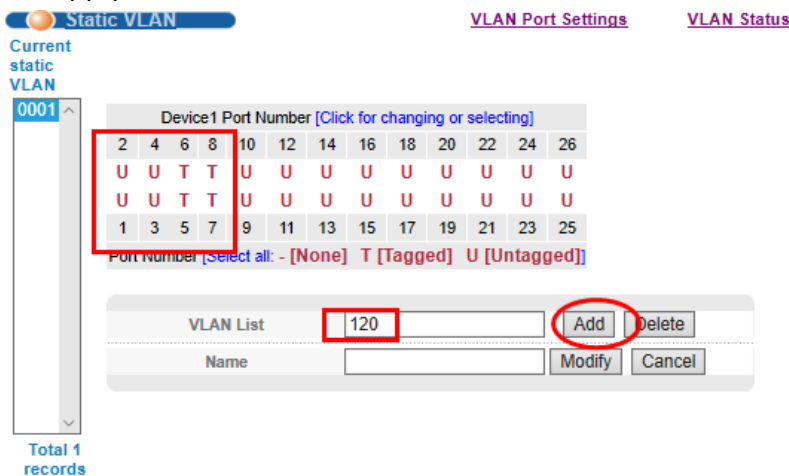
#### 【Parameter Description】

| Parameter | Description     |
|-----------|-----------------|
| VLAN List | VLAN group ID   |
| Name      | VLAN group name |

#### 【Configuration example】

To add and delete VLAN members:

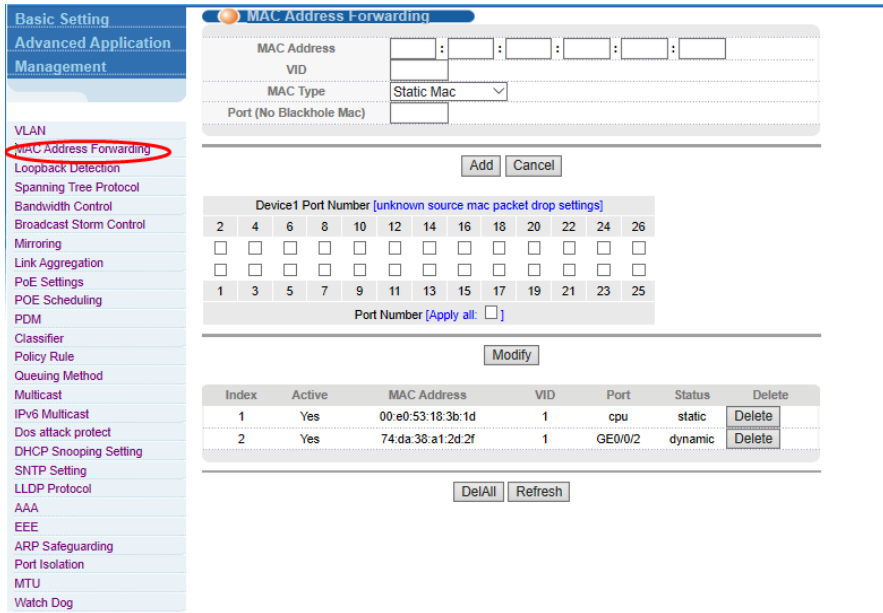
1. Click Advanced Application > VLAN> Static VLAN.
2. Add a new VLAN with VLAN Group ID (VLAN List) 120, which contains untagged member ports 1 – 4 and Tagged member ports 5 - 8. The user can modify the port member by clicking on the white area below the port number.
3. Click Apply.





## 4.2.2 MAC Address Forwarding

To configure MAC Address Forwarding, select **Advanced Application > MAC Address Forwarding** in the function menu bar.



### 【Parameter Description】

| Parameter | Description  |
|-----------|--|
| MAC Type  | MAC Type:<br>Static MAC<br>Dynamic MAC<br>Blackhole MAC<br>Permanent MAC |

### 【Information】

Example to Create a Blackhole MAC: If a PC's MAC address is configured on a switch to be a blackhole MAC, then the PC's packets will be discarded by the switch and not forwarded to the network.

### 【Configuration example】

1. Click Advanced Application > MAC Address Forwarding.
2. Provide the MAC address, VID, choose the MAC Type and enter port number for the blackhole MAC:

**MAC Address Forwarding**

|                         |                             |
|-------------------------|-----------------------------|
| MAC Address             | 00 : 01 : 33 : jt : dc : aq |
| VID                     | q                           |
| MAC Type                | Static Mac                  |
| Port (No Blackhole Mac) | 8                           |

3. Unknown source MAC packet drop settings.

Device1 Port Number [unknown source mac packet drop settings]

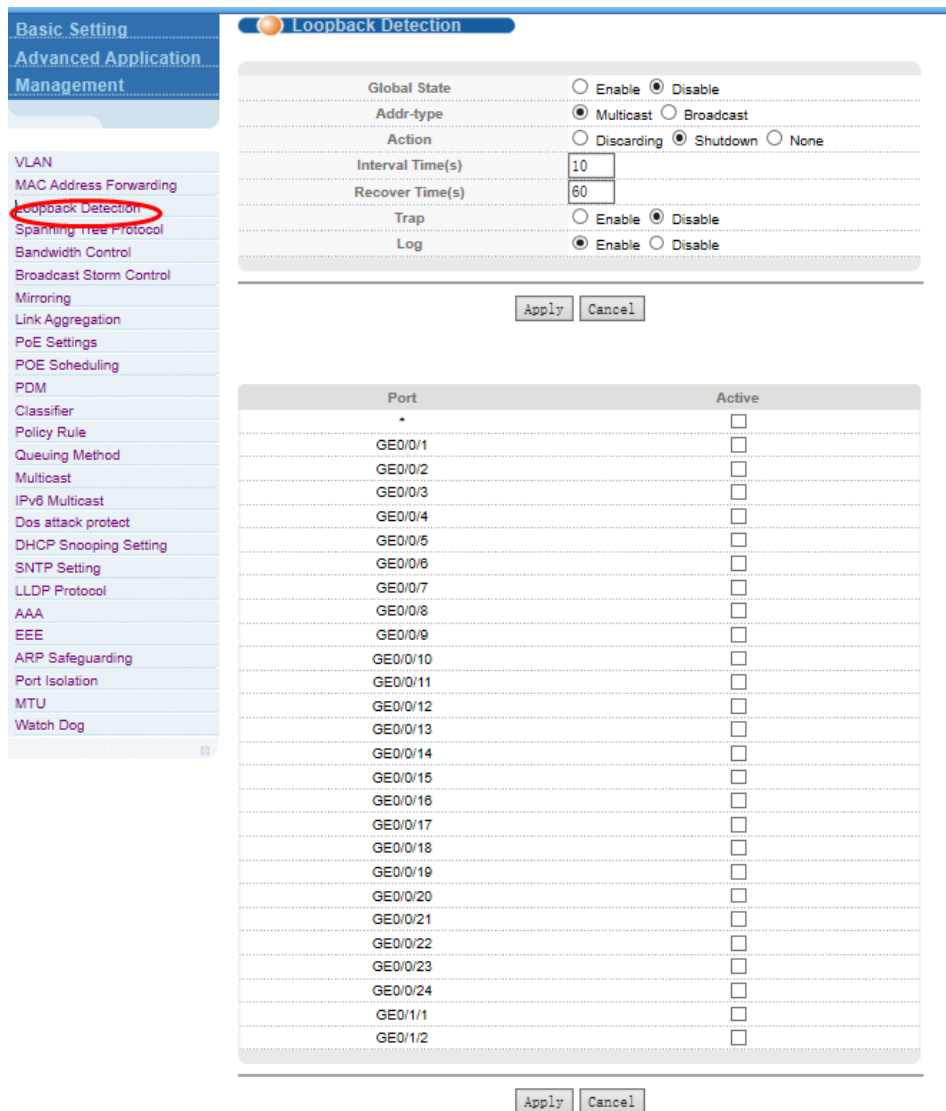
|                          |                                     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2                        | 4                                   | 6                        | 8                        | 10                       | 12                       | 14                       | 16                       | 18                       | 20                       | 22                       | 24                       | 26                       |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1                        | 3                                   | 5                        | 7                        | 9                        | 11                       | 13                       | 15                       | 17                       | 19                       | 21                       | 23                       | 25                       |

Port Number [Apply all:

4. Click Modify.

### 4.2.3 Loopback Detection (Part of our Self-Healing Network Suite of Features)

To configure Loopback Detection, select **Advanced Application>Loopback Detection** in the function menu bar. Loopback Detection allows the switch to detect loops in the network. When a loop is detected on a port, the switch will display an alert on the management interface and further block the corresponding port according to your configurations.



**【Parameter Description】**

| Parameter      | Description   |
|----------------|---|
| Interval Times | Set the interval of sending loopback detection packets. |
| Recover Times  | Set the recovery time globally                          |

## 4.2.4 Spanning Tree Protocol (Part of our Self-Healing Network Suite of Features)

To configure Spanning Tree Protocol (STP), select **Advanced Application>Spanning Tree Protocol** in the function menu bar. According to the IEEE 802.1D standard, STP is used to create ring-free networks on the Data Link layer in a local network. A ring network can be separated from the network by using STP-enabled devices that identify loops and block ports from endlessly repeating and forwarding packets.

**Spanning Tree Protocol Status** [Configuration](#) [STP/RSTP](#) [MSTP](#)

**Spanning Tree Protocol: RSTP**

| Global Spanning Tree      |  | Enable               |
|---------------------------|--|----------------------|
| Our Bridge ID             |  | 32768-00e0.5318.3b1d |
| Root Bridge ID            |  | 32768-00e0.5318.3b1d |
| Root Path Cost            |  | 0                    |
| Hello Time (second)       |  | 2                    |
| Max Age (second)          |  | 20                   |
| Forwarding Delay (second) |  | 15                   |
| Topology Changed Times    |  | 0                    |

| Port     | Active | Pathcost | Priority | Role           | State      |
|----------|--------|----------|----------|----------------|------------|
| GE0/0/1  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/2  | enable | 20000    | 128      | designatedPort | forwarding |
| GE0/0/3  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/4  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/5  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/6  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/7  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/8  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/9  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/10 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/11 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/12 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/13 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/14 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/15 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/16 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/17 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/18 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/19 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/20 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/21 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/22 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/23 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/24 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/1/1  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/1/2  | enable | 200000   | 128      | designatedPort | disabled   |

#### 4.2.4.1 Spanning Tree Protocol Status

To view Spanning Tree Protocol status, select **Advanced Application>Spanning Tree Protocol>Spanning Tree Protocol Status** in the function menu bar.

Spanning Tree Protocol Status

[Configuration](#)
[STP/RSTP](#)
[MSTP](#)

Spanning Tree Protocol: RSTP

|                           |                      |        |  |
|---------------------------|----------------------|--------|--|
| Global Spanning Tree      |                      | Enable |  |
| Our Bridge ID             | 32768-00e0.5318.3b1d |        |  |
| Root Bridge ID            | 32768-00e0.5318.3b1d |        |  |
| Root Path Cost            | 0                    |        |  |
| Hello Time (second)       | 2                    |        |  |
| Max Age (second)          | 20                   |        |  |
| Forwarding Delay (second) | 15                   |        |  |
| Topology Changed Times    | 0                    |        |  |

| Port     | Active | Pathcost | Priority | Role           | State      |
|----------|--------|----------|----------|----------------|------------|
| GE0/0/1  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/2  | enable | 20000    | 128      | designatedPort | forwarding |
| GE0/0/3  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/4  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/5  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/6  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/7  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/8  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/9  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/10 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/11 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/12 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/13 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/14 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/15 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/16 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/17 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/18 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/19 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/20 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/21 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/22 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/23 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/0/24 | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/1/1  | enable | 200000   | 128      | designatedPort | disabled   |
| GE0/1/2  | enable | 200000   | 128      | designatedPort | disabled   |

#### 【Parameter Description】

| Parameter                 | Description   |
|---------------------------|---|
| Root Path Cost            | Configure Root Path Cost  |
| Hello time (second)       | Send Bridge Protocol Data Unit (BPDU) in packet interval  |
| Max age (second)          | Topology changes are initiated for ports that have not received a message in the time specified |
| Forwarding delay (second) | The state of the port switch time   |
| Topology changed times    | The number of topology changes  |

#### 4.2.4.2 Spanning Tree Configuration

To configure Spanning Tree, select **Advanced Application>Spanning Tree Protocol>Spanning Tree configuration** in the function menu bar.

#### **【Parameter Description】**

| Parameter                   | Description   |
|-----------------------------|---|
| Spanning Tree Mode          | Spanning tree mode:<br>IEEE Compatible Spanning Tree<br>Rapid Spanning Tree<br>Multiple Spanning Tree |
| Global Spanning Tree Status | Select Enable or Disable  |

### 4.2.4.3 Compatible/Rapid Spanning Tree Protocol

To configure Compatible/Rapid Spanning Tree Protocol, select **Advanced Application>Spanning Tree Protocol>Compatible/Rapid Spanning Tree Protocol** in the function menu bar.

**Compatible/Rapid Spanning Tree Protocol** Status

|                  |       |         |
|------------------|-------|---------|
| Bridge Priority  | 32768 |         |
| Hello Time       | 2     | Seconds |
| MAX Age          | 20    | Seconds |
| Forwarding Delay | 15    | Seconds |

(Notice:When the port is a member of an aggregation group, the configuration is based on the maximum port configuration of the member.)

| Port     | Active                              | Priority | Path Cost | Path Cost Default Value             |
|----------|-------------------------------------|----------|-----------|-------------------------------------|
| *        | <input type="checkbox"/>            |          |           | <input type="checkbox"/>            |
| GE0/0/1  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/2  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/3  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/4  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/5  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/6  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/7  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/8  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/9  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/10 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/11 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/12 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/13 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/14 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/15 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/16 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/17 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/18 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/19 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/20 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/21 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/22 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/23 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/0/24 | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/1/1  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |
| GE0/1/2  | <input checked="" type="checkbox"/> | 128      | 200000    | <input checked="" type="checkbox"/> |

Apply Cancel

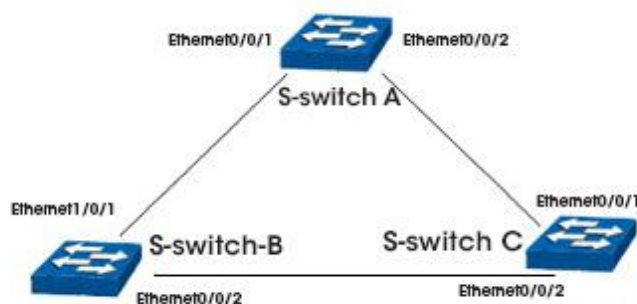
#### 【Parameter Description】

| Parameter        | Description   |
|------------------|---|
| Bridge Priority  | Set bridge priority, the default instance bridge priority for 32768   |
| Hello Time       | Send Bridge Protocol Data Unit (BPDU) in packet interval  |
| Max Age          | The time the switch will wait before initiating topology changes for ports that have not received a message |
| Forwarding Delay | The state of the port switch time   |
| Priority         | Set port instance priority, defaults to 128   |
| Path Cost        | Configure port costs  |

**【Configuration example】**

As shown in the figure, configure Switch-A as the root bridge and S-switch-B as the designated Bridge.

The links connected by S-switch-B and S-switch-C are backup links. When the links connected by S-switch-B, S-switch-A and S-switch-C fail, the backup link will come into effect.

**S-switch-A Configuration :**

1. Configure Ethernet0/0/1 and Ethernet0/0/2 as a trunk port.
2. Configure spanning-tree priority as 0.
3. Enable RSTP globally.

**S-switch-B Configuration :**

1. Configure Ethernet0/0/1 and Ethernet0/0/2 as a trunk port.
2. Configure spanning-tree priority as 4096, and configure the Ethernet0/0/1 port path cost and the Ethernet0/0/2 port path cost as 10.
3. Enable RSTP globally.

**S-switch-C Configuration :**

1. Configure Ethernet0/0/1 and Ethernet0/0/2 as a trunk port.
2. Configure the Ethernet0/0/1 port path cost and Ethernet0/0/2 port path cost as 10 to ensure that the link between Switch-B and Switch-C is the main link.
3. Enable RSTP globally.



#### 4.2.4.4 Multiple Spanning Tree Protocol

To configure Multiple Spanning Tree Protocol, select **Advanced Application>Spanning Tree Protocol>Multiple Spanning Tree Protocol** in the function menu bar.

Multiple Spanning Tree Protocol
[Status](#)

**Bridge:**

|                    |    |         |
|--------------------|----|---------|
| Hello Time         | 2  | seconds |
| MAX Age            | 20 | seconds |
| Forwarding Delay   | 15 | seconds |
| Maximum hops       | 20 |         |
| Configuration Name |    |         |
| Revision Number    | 0  |         |

Apply Cancel

---

**Instance:**

|                 |       |
|-----------------|-------|
| Instance        | 0     |
| Bridge Priority | 32768 |
| VLAN Range      |       |

Apply Remove Cancel

---

**Show Mstp Instance Information:**

| Port     | Active                              | External Path Cost | External Cost Default               | Priority | Inner Path Cost | Inner Cost Default                  |
|----------|-------------------------------------|--------------------|-------------------------------------|----------|-----------------|-------------------------------------|
| *        | <input type="checkbox"/>            |                    | <input type="checkbox"/>            |          |                 | <input type="checkbox"/>            |
| GE0/0/1  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/2  | <input checked="" type="checkbox"/> | 20000              | <input checked="" type="checkbox"/> | 128      | 20000           | <input checked="" type="checkbox"/> |
| GE0/0/3  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/4  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/5  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/6  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/7  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/8  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/9  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/10 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/11 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/12 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/13 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/14 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/15 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/16 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/17 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/18 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/19 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/20 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/21 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/22 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/23 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/0/24 | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/1/1  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |
| GE0/1/2  | <input checked="" type="checkbox"/> | 200000             | <input checked="" type="checkbox"/> | 128      | 200000          | <input checked="" type="checkbox"/> |

Apply Cancel

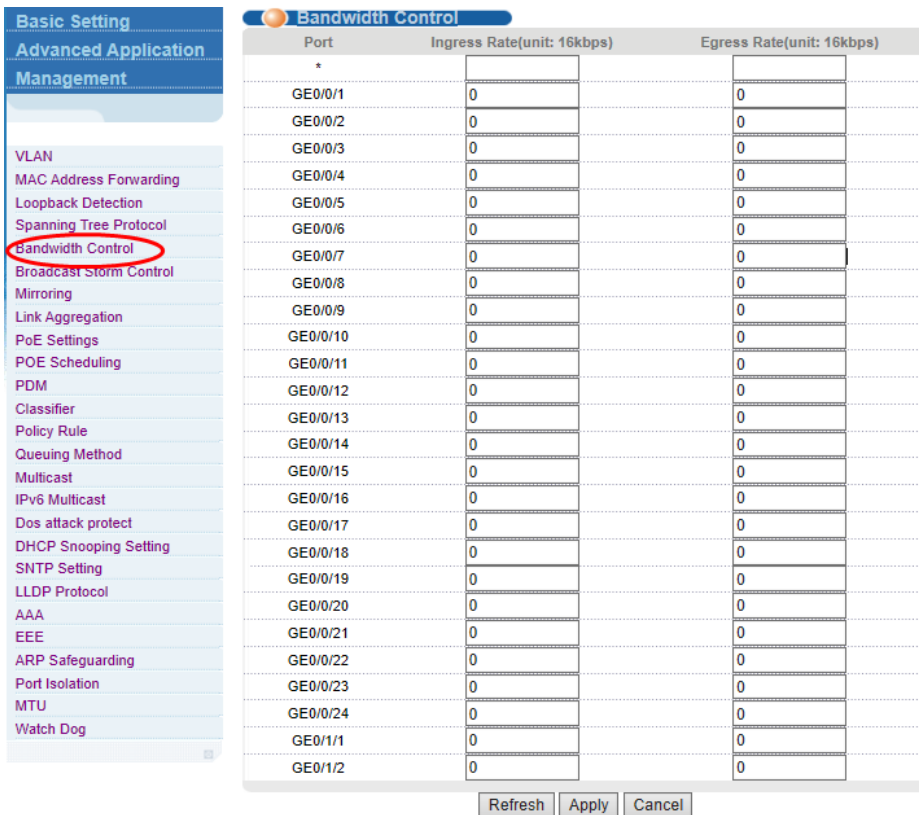
#### 【Parameter Description】

| Parameter        | Description   |
|------------------|---|
| Hello Time       | Send BPDU in packet interval  |
| Max age          | The time the switch will wait before initiating topology changes for ports that have not received a message |
| Forwarding Delay | The state of the port switch time   |

| Parameter          | Description   |
|--------------------|---|
| Maximum Hops       | Set the maximum number of hops that BPDUs can support in the spanning tree      |
| Configuration Name | Fill in configuration name  |
| Revision Number    | Set revision number   |
| Instance           | Instance number   |
| Bridge Priority    | Priority setting bridge example, the default instance bridge priority for 32768 |
| VLAN Range         | Set VLAN range  |
| Priority           | Set port instance priority, defaults to 128                                     |
| Path Cost          | Configure port costs  |

### 4.2.5 Bandwidth Control

To configure Bandwidth Control, select **Advanced Application>Bandwidth Control** in the function menu bar.



**[Information]**

1 Mbit/s = 1000 Kbit/s = 1000 / 8 KB/s = 125 KB/s. That is, the theoretical rate of 1M bandwidth is 125 KB/s.

**【Configuration example】**

Configure bandwidth control for port 8.

1. Click Basic Setting > Bandwidth Control.
2. Configure port-8 Ingress Rate as 64 kbps and the Egress Rate as 128 kbps.

|          |    |     |
|----------|----|-----|
| GE0/0/8  | 64 | 128 |
| GE0/0/9  | 0  | 0   |
| GE0/0/10 | 0  | 0   |

3. Click Apply.

**4.2.6 Broadcast Storm Control**

To configure Broadcast Storm Control, select **Advanced Application>Broadcast Storm Control** in the function menu bar.

| Port     | Broadcast(unit:pps) | Multicast(unit:pps) | Unicast(unit:pps) |
|----------|---------------------|---------------------|-------------------|
| *        |                     |                     |                   |
| GE0/0/1  | 0                   | 0                   | 0                 |
| GE0/0/2  | 0                   | 0                   | 0                 |
| GE0/0/3  | 0                   | 0                   | 0                 |
| GE0/0/4  | 0                   | 0                   | 0                 |
| GE0/0/5  | 0                   | 0                   | 0                 |
| GE0/0/6  | 0                   | 0                   | 0                 |
| GE0/0/7  | 0                   | 0                   | 0                 |
| GE0/0/8  | 0                   | 0                   | 0                 |
| GE0/0/9  | 0                   | 0                   | 0                 |
| GE0/0/10 | 0                   | 0                   | 0                 |
| GE0/0/11 | 0                   | 0                   | 0                 |
| GE0/0/12 | 0                   | 0                   | 0                 |
| GE0/0/13 | 0                   | 0                   | 0                 |
| GE0/0/14 | 0                   | 0                   | 0                 |
| GE0/0/15 | 0                   | 0                   | 0                 |
| GE0/0/16 | 0                   | 0                   | 0                 |
| GE0/0/17 | 0                   | 0                   | 0                 |
| GE0/0/18 | 0                   | 0                   | 0                 |
| GE0/0/19 | 0                   | 0                   | 0                 |
| GE0/0/20 | 0                   | 0                   | 0                 |
| GE0/0/21 | 0                   | 0                   | 0                 |
| GE0/0/22 | 0                   | 0                   | 0                 |
| GE0/0/23 | 0                   | 0                   | 0                 |
| GE0/0/24 | 0                   | 0                   | 0                 |
| GE0/1/1  | 0                   | 0                   | 0                 |
| GE0/1/2  | 0                   | 0                   | 0                 |

**【Parameter Description】**

| Parameter | Description  |
|-----------|--|
| Broadcast | Broadcast rate limitation (the range of 64 - 32000000, unit: pps; you must enter a multiple of 64, default is 49984) |

| Parameter | Description  |
|-----------|--|
| Multicast | Multicast rate limitation (the range of 64 - 32000000, unit: pps; you must enter a multiple of 64, default is 49984) |
| Unicast   | Unicast rate limitation (the range of 64 - 32000000, unit: pps; you must enter a multiple of 64, default is 49984)   |

### 【Information】

1 Mbit/s = 1000 Kbit/s = 1000 / 8 KB/s = 125 KB/s. That is, the theoretical rate of 1M bandwidth is 125 KB/s.

### 【Configuration example】

To configure broadcast storm control for port 1.

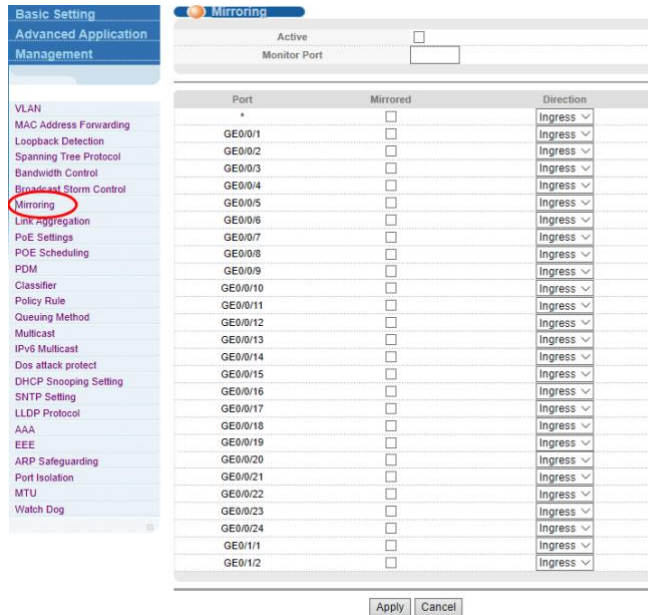
1. Click Basic Setting > Broadcast Storm Control.
2. Set port 1 broadcast as 6400 pps, multicast as 3200 pps, and unicast as 3200 pps.

| Port    | Broadcast(unit:64pps) | Multicast(unit:64pps) | Unicast(unit:64pps) |
|---------|-----------------------|-----------------------|---------------------|
| *       |                       |                       |                     |
| GE0/0/1 | 6400                  | 3200                  | 3200                |
| GE0/0/2 | 0                     | 0                     | 0                   |

3. Click Apply.

## 4.2.7 Mirroring

To configure mirroring, select **Advanced Application>Mirroring** in the function menu bar.



### 【Parameter Description】

| Parameter    | Description  |
|--------------|--|
| Active       | Select to enable or disable Mirroring  |
| Monitor Port | Set up the monitoring port and forward the flow data of the source port to the message analyzer to analyze the message and then forward to the monitoring port |
| Mirrored     | Check the box to configure the mirror source port  |
| Direction    | Configure the direction of the mirror message, choose: Ingress, Egress, Both   |

### 【Configuration example】

1. Click Advanced Application > Mirroring.
2. Enable mirroring; the monitoring port is port 8, the source port is port 7, and the mirror message is in both directions.
3. Click Apply.

## Web Smart Managed PoE Switches User Manual

**Mirroring**

Active

Monitor Port

| Port    | Mirrored                            | Direction |
|---------|-------------------------------------|-----------|
| *       | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/1 | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/2 | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/3 | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/4 | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/5 | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/6 | <input type="checkbox"/>            | Ingress ▼ |
| GE0/0/7 | <input checked="" type="checkbox"/> | Both ▼    |

## 4.2.8 Link Aggregation

To configure link aggregation, select **Advanced Application>Link Aggregation** in the function menu bar. With the LAG (Link Aggregation Group) function enabled, you can aggregate multiple physical ports into a logical interface to increase link bandwidth and configure the backup ports to enhance the connection reliability. You can configure LAG in two ways:

- Static LAG: The member ports are manually added to the LAG.
- LACP (Link Aggregation Control Protocol): The switch uses LACP to implement dynamic link aggregation and disaggregation by exchanging LACP packets with its partner. LACP extends the flexibility of the LAG configuration.

| Basic Setting                   |  | Link Aggregation Status |               | Link Aggregation Setting |               |          |        |
|---------------------------------|--|-------------------------|---------------|--------------------------|---------------|----------|--------|
| Advanced Application Management |  | Group ID                | Enabled Ports | Synchronized Ports       | Aggregator ID | Criteria | Status |
| VLAN                            |  | T1                      | -             | -                        | -             | -        | -      |
| MAC Address Forwarding          |  | T2                      | -             | -                        | -             | -        | -      |
| Loopback Detection              |  | T3                      | -             | -                        | -             | -        | -      |
| Spanning Tree Protocol          |  | T4                      | -             | -                        | -             | -        | -      |
| Bandwidth Control               |  | T5                      | -             | -                        | -             | -        | -      |
| Broadcast Storm Control         |  | T6                      | -             | -                        | -             | -        | -      |
| Mirroring                       |  | T7                      | -             | -                        | -             | -        | -      |
| Link Aggregation                |  | T8                      | -             | -                        | -             | -        | -      |
| PoE Settings                    |  |                         |               |                          |               |          |        |
| POE Scheduling                  |  |                         |               |                          |               |          |        |
| PDM                             |  |                         |               |                          |               |          |        |
| Classifier                      |  |                         |               |                          |               |          |        |
| Policy Rule                     |  |                         |               |                          |               |          |        |
| Queueing Method                 |  |                         |               |                          |               |          |        |
| Multicast                       |  |                         |               |                          |               |          |        |
| IPv6 Multicast                  |  |                         |               |                          |               |          |        |
| Dos attack protect              |  |                         |               |                          |               |          |        |
| DHCP Snooping Setting           |  |                         |               |                          |               |          |        |
| SNTP Setting                    |  |                         |               |                          |               |          |        |
| LLDP Protocol                   |  |                         |               |                          |               |          |        |
| AAA                             |  |                         |               |                          |               |          |        |
| EEE                             |  |                         |               |                          |               |          |        |
| ARP Safeguarding                |  |                         |               |                          |               |          |        |
| Port Isolation                  |  |                         |               |                          |               |          |        |
| MTU                             |  |                         |               |                          |               |          |        |
| Watch Dog                       |  |                         |               |                          |               |          |        |

### 4.2.8.1 Link Aggregation status

To view link aggregation status, Group ID, Enabled Ports, Synchronized Ports, Aggregator ID, Criteria, and overall Status, select **Advanced Application>Link Aggregation>Link Aggregation Status** in the function menu bar.

| Link Aggregation Status |               | Link Aggregation Setting |               |          |        |
|-------------------------|---------------|--------------------------|---------------|----------|--------|
| Group ID                | Enabled Ports | Synchronized Ports       | Aggregator ID | Criteria | Status |
| T1                      | -             | -                        | -             | -        | -      |
| T2                      | -             | -                        | -             | -        | -      |
| T3                      | -             | -                        | -             | -        | -      |
| T4                      | -             | -                        | -             | -        | -      |
| T5                      | -             | -                        | -             | -        | -      |
| T6                      | -             | -                        | -             | -        | -      |
| T7                      | -             | -                        | -             | -        | -      |
| T8                      | -             | -                        | -             | -        | -      |

### 4.2.8.2 Link Aggregation Setting

To set Link Aggregation, select **Advanced Application>Link Aggregation>Link Aggregation Setting** in the function menu bar.

Link Aggregation Setting
Status LAC

| Port     | Group ID | Port LACP Mode |
|----------|----------|----------------|
| GE0/0/1  | none ▼   | active ▼       |
| GE0/0/2  | none ▼   | active ▼       |
| GE0/0/3  | none ▼   | active ▼       |
| GE0/0/4  | none ▼   | active ▼       |
| GE0/0/5  | none ▼   | active ▼       |
| GE0/0/6  | none ▼   | active ▼       |
| GE0/0/7  | none ▼   | active ▼       |
| GE0/0/8  | none ▼   | active ▼       |
| GE0/0/9  | none ▼   | active ▼       |
| GE0/0/10 | none ▼   | active ▼       |
| GE0/0/11 | none ▼   | active ▼       |
| GE0/0/12 | none ▼   | active ▼       |
| GE0/0/13 | none ▼   | active ▼       |
| GE0/0/14 | none ▼   | active ▼       |
| GE0/0/15 | none ▼   | active ▼       |
| GE0/0/16 | none ▼   | active ▼       |
| GE0/0/17 | none ▼   | active ▼       |
| GE0/0/18 | none ▼   | active ▼       |
| GE0/0/19 | none ▼   | active ▼       |
| GE0/0/20 | none ▼   | active ▼       |
| GE0/0/21 | none ▼   | active ▼       |
| GE0/0/22 | none ▼   | active ▼       |
| GE0/0/23 | none ▼   | active ▼       |
| GE0/0/24 | none ▼   | active ▼       |
| GE0/1/1  | none ▼   | active ▼       |
| GE0/1/2  | none ▼   | active ▼       |

#### 【Parameter Description】

| Parameter      | Description  |
|----------------|--|
| Group ID       | Add the port to the specified Aggregation Group ID |
| Port LACP mode | Configure port aggregation (active/passive)        |



### 4.2.8.3 Link Aggregation Control Protocol

To configure Link Aggregation Control Protocol, select **Advanced Application>Link Aggregation>Link Aggregation Control Protocol** in the function menu bar.

Link Aggregation Control Protocol
Link Aggregation Setti

System Priority

32768

Load-balance Mode

src-mac ▾

---

| Group ID | Active                   | Eth-trunk Mode |
|----------|--------------------------|----------------|
| T1       | <input type="checkbox"/> | static ▾       |
| T2       | <input type="checkbox"/> | static ▾       |
| T3       | <input type="checkbox"/> | static ▾       |
| T4       | <input type="checkbox"/> | static ▾       |
| T5       | <input type="checkbox"/> | static ▾       |
| T6       | <input type="checkbox"/> | static ▾       |
| T7       | <input type="checkbox"/> | static ▾       |
| T8       | <input type="checkbox"/> | static ▾       |

---

| Port     | Port Priority |
|----------|---------------|
| *        |               |
| GE0/0/1  | 128           |
| GE0/0/2  | 128           |
| GE0/0/3  | 128           |
| GE0/0/4  | 128           |
| GE0/0/5  | 128           |
| GE0/0/6  | 128           |
| GE0/0/7  | 128           |
| GE0/0/8  | 128           |
| GE0/0/9  | 128           |
| GE0/0/10 | 128           |
| GE0/0/11 | 128           |
| GE0/0/12 | 128           |
| GE0/0/13 | 128           |
| GE0/0/14 | 128           |
| GE0/0/15 | 128           |
| GE0/0/16 | 128           |
| GE0/0/17 | 128           |
| GE0/0/18 | 128           |
| GE0/0/19 | 128           |
| GE0/0/20 | 128           |
| GE0/0/21 | 128           |
| GE0/0/22 | 128           |
| GE0/0/23 | 128           |
| GE0/0/24 | 128           |
| GE0/1/1  | 128           |
| GE0/1/2  | 128           |

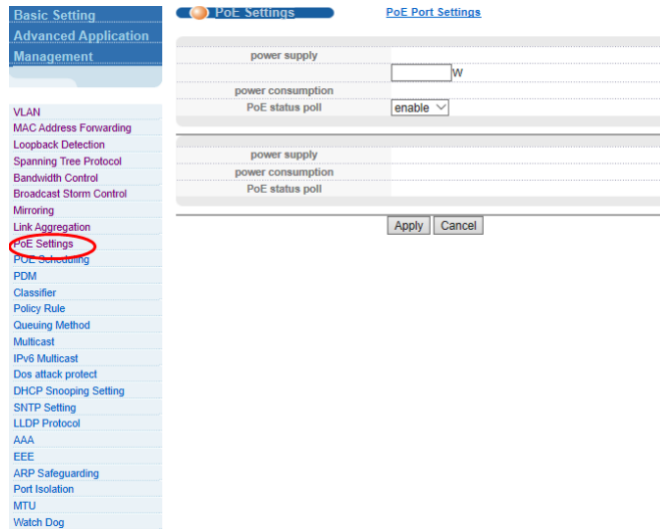
Apply Cancel

#### **【Parameter Description】**

| Parameter         | Description   |
|-------------------|---|
| System priority   | Aggregation group system priority, the default is 32768 (the range is 1 - 65535)                      |
| Load-balance Mode | Configure the Aggregation Group load balancing (src-mac/dst-mac/src-dst-mac/src-ip/dst-ip/src-dst-ip) |

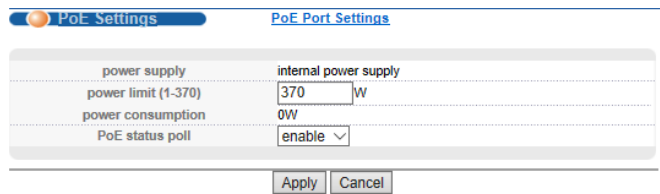
## 4.2.9 PoE Settings (excludes 508834, where PoE is not supported)

To adjust settings for PoE, select **Advanced Application>PoE Settings**.



### 4.2.9.1 PoE Settings

To configure PoE, select **Advanced Application>PoE Settings**.

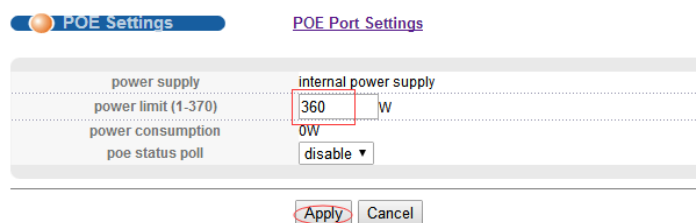


#### 【Parameter Description】

| Parameter   | Description                                       |
|-------------|---|
| power limit | Set the limit for the overall power of PoE switch |

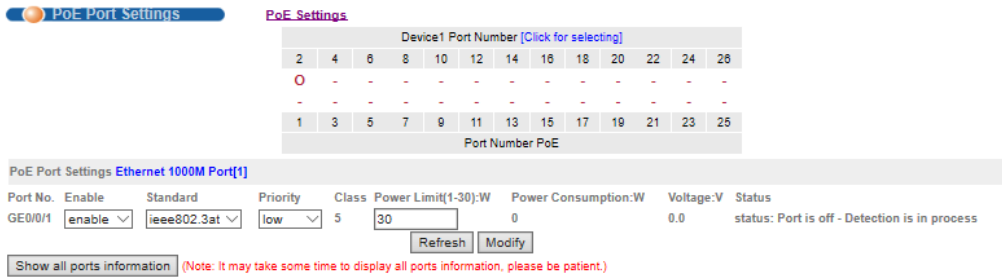
#### 【Configuration example】

Set the power limit to 360 W.



### 4.2.9.2 PoE Port Settings

To configure settings for a PoE Port, select **Advanced Application>PoE Settings>PoE Port Settings** in the function menu bar.

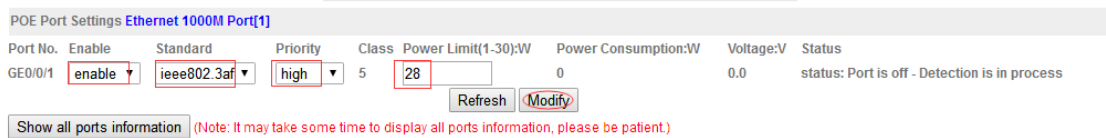


### 【Parameter Description】

| Parameter   | Description   |
|-------------|---|
| Enable      | Turn the port PoE power on and off; the default is enabled                  |
| Standard    | Configure IEEE 802.3af or IEEE 802.3at mode; the default is IEEE 802.3at    |
| Priority    | Configure port priority as low, critical, high; the default priority is low |
| Power limit | Set the power limit of PoE port   |

### 【Configuration example】

Configure the PoE for port 1.



## 4.2.10 PoE Scheduling (Part of our Self-Healing Network Suite of Features)

To configure PoE Scheduling, select **Advanced Application>PoE Scheduling**.

The screenshot shows the 'PoE Scheduling Configuration' page. On the left, a navigation menu lists various settings, with 'PoE Scheduling' highlighted and circled in red. The main configuration area includes a 'Range Name' input field, a 'Daily' checkbox, and dropdown menus for 'From: Week' and 'To: Week', both set to 'Sun'. Below these are time selection fields for 'From: Time (HH:MM)' and 'To: Time (HH:MM)', both set to '00'. An 'Apply' button is located below the time fields. At the bottom, there is a table header for 'Total Entries: 0' with columns for 'Range Name', 'Start Weekday', 'Start Time', 'End Weekday', and 'End Time'.

### 4.2.10.1 PoE Scheduling

To configure PoE Scheduling, select **Advanced Application>PoE Scheduling**.

This is a close-up view of the configuration form. It shows the 'Range Name' input field, a 'Daily' checkbox, and two dropdown menus for 'From: Week' and 'To: Week', both currently set to 'Sun'. Below these are two time selection fields: 'From: Time (HH:MM)' and 'To: Time (HH:MM)', both set to '00'. An 'Apply' button is positioned below the time fields.

#### 【Parameter Description】

| Parameter          | Description                   |
|--------------------|-------------------------------|
| Range Name         | Set the name for the schedule |
| From: Week         | Set the start day             |
| To: Week           | Set the end day               |
| From: Time (HH:MM) | Set the start time            |
| To: Time (HH:MM)   | Set the end time              |

**【Configuration example】**

Set Range Name 1 with the values shown.

POE Scheduling Configuration

Range Name: 1  Daily

From: Week: MON To: Week: Thurs

From: Time (HH:MM): 08:30 To: Time (HH:MM): 18:00

Apply

**4.2.10.2 Configure Port PoE Scheduling**

To configure Port PoE Scheduling, select **Advanced Application>PoE Scheduling>Configure Port PoE Scheduling** in the function menu bar.

Configure Port PoE Scheduling

From Port: eth1 To Port: eth1

POE Scheduling: None

Apply

| Port  | POE Scheduling        |
|-------|-----------------------|
| eth1  | Delete POE Scheduling |
| eth2  | Delete POE Scheduling |
| eth3  | Delete POE Scheduling |
| eth4  | Delete POE Scheduling |
| eth5  | Delete POE Scheduling |
| eth6  | Delete POE Scheduling |
| eth7  | Delete POE Scheduling |
| eth8  | Delete POE Scheduling |
| eth9  | Delete POE Scheduling |
| eth10 | Delete POE Scheduling |
| eth11 | Delete POE Scheduling |
| eth12 | Delete POE Scheduling |
| eth13 | Delete POE Scheduling |
| eth14 | Delete POE Scheduling |
| eth15 | Delete POE Scheduling |
| eth16 | Delete POE Scheduling |
| eth17 | Delete POE Scheduling |
| eth18 | Delete POE Scheduling |
| eth19 | Delete POE Scheduling |
| eth20 | Delete POE Scheduling |
| eth21 | Delete POE Scheduling |
| eth22 | Delete POE Scheduling |
| eth23 | Delete POE Scheduling |
| eth24 | Delete POE Scheduling |

**【Parameter Description】**

| Parameter | Description        |
|-----------|--------------------|
| From Port | Set the start port |
| To Port   | Set the end port   |

**【Configuration example】**

Configure PoE from Port 1 to Port 16.

Configure Port PoE Scheduling

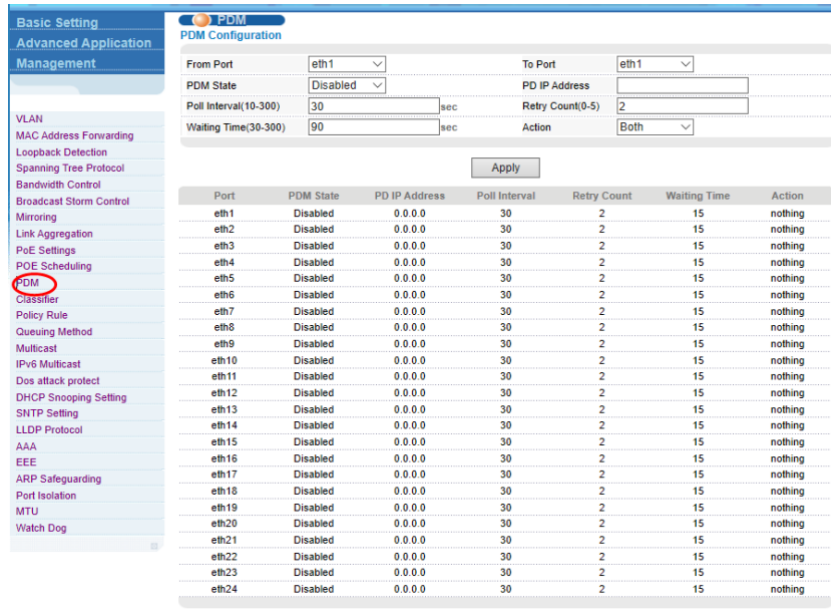
From Port: eth1 To Port: eth16

POE Scheduling: None

Apply

### 4.2.11 PDM (Part of our Self-Healing Network Suite of Features)

To configure the Powered Device Monitor (PDM) which restarts “down” devices, select **Advanced Application>PDM**.

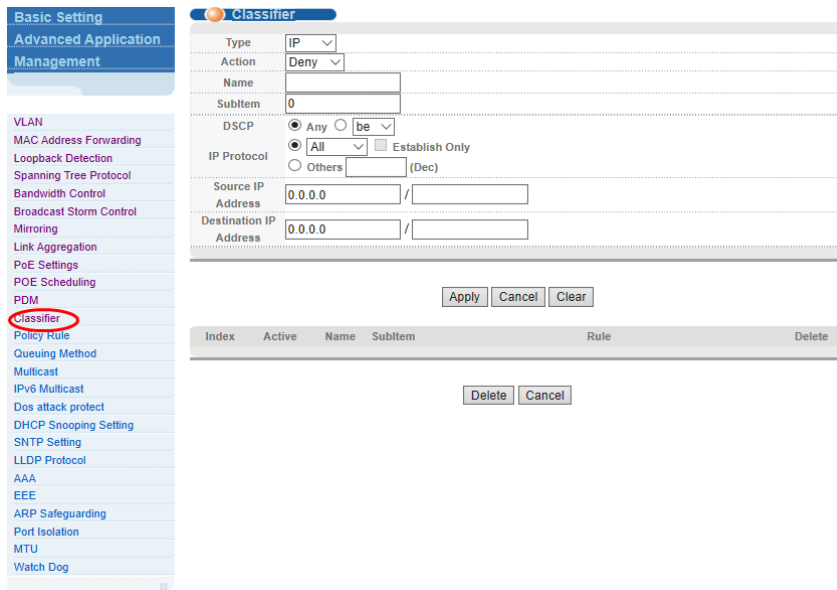


#### **[Parameter Description]**

| Parameter     | Description                              |
|---------------|--|
| From Port     | Set the start port                       |
| To Port       | Set the end port                         |
| PDM State     | Set the PDM State (disabled and enabled) |
| Poll Interval | Set the poll interval, range 10 - 300 s  |
| Retry Count   | Set the retry count, range 0 - 5         |
| Waiting Time  | Set the waiting time, range 30 - 300 s   |
| Action        | Set the Action (Reset/Notify/Both)       |

## 4.2.12 Classifier

To configure Classifier, select **Advanced Application>Classifier** in the function menu bar.

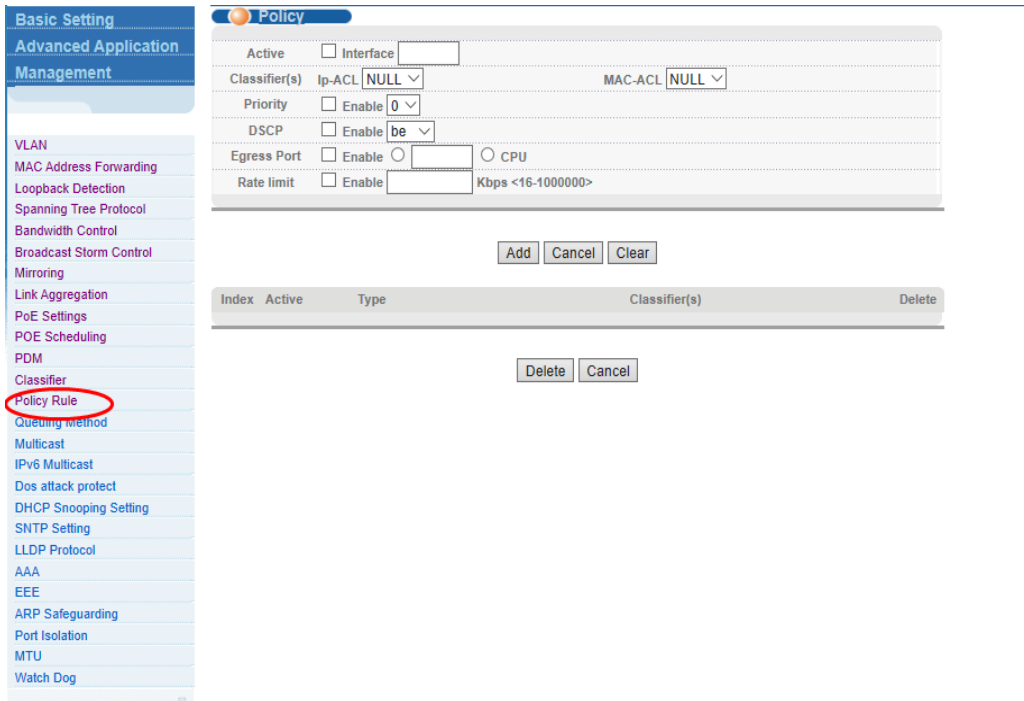


### 【Parameter Description】

| Parameter | Description    |
|-----------|----------------|
| Action    | Deny or Permit |
| Type      | IP or MAC      |
| Action    | Permit or Deny |

### 4.2.13 Policy Rule

To configure Policy Rule, select **Advanced Application>Policy Rule** in the function menu bar.



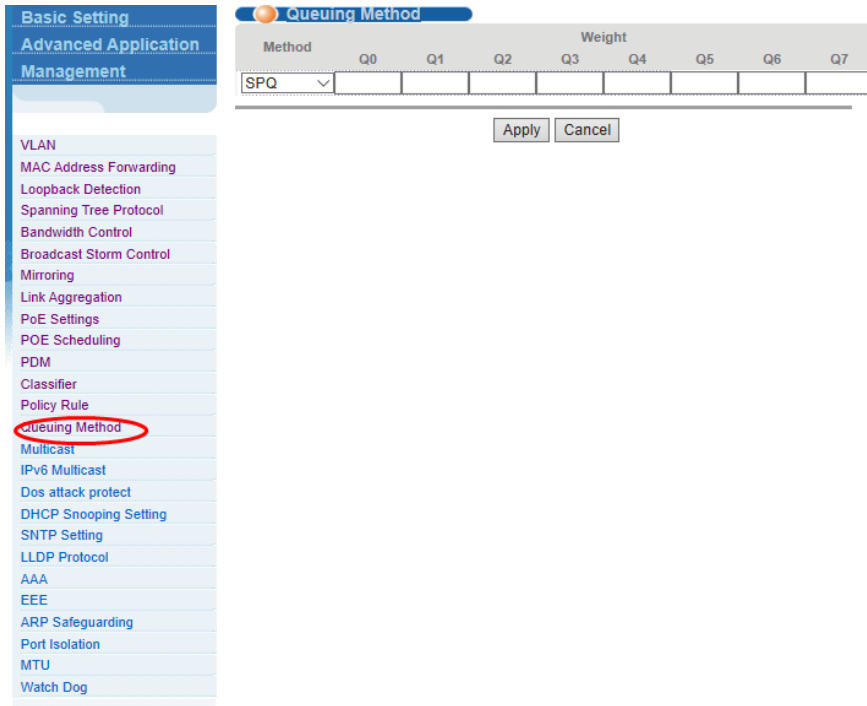
#### **【Parameter Description】**

| Parameter     | Description  |
|---------------|--|
| Active        | Activate Classifier                                |
| Classifier(s) | Note: Classification rules must match              |
| Priority      | Choose whether to enable priority and set priority |
| DSCP          | Choose whether to enable DSCP                      |
| Egress Port   | Choose whether to enable an egress port and set    |
| Rate limit    | Choose whether to enable a rate limit and set      |



### 4.2.14 Queuing Method

To configure queuing method, select **Advanced Application>Queuing Method** in the function menu bar.



#### 【Parameter Description】

| Parameter | Description                                    |
|-----------|--|
| Method    | Five methods:<br>SPQ, WRR, SP+WRR, WFQ, SP+WFQ |

#### 【Information】

- Strict-Priority (SP) and Weighted Round Robin (WRR).

##### 1. Strict Priority Queueing

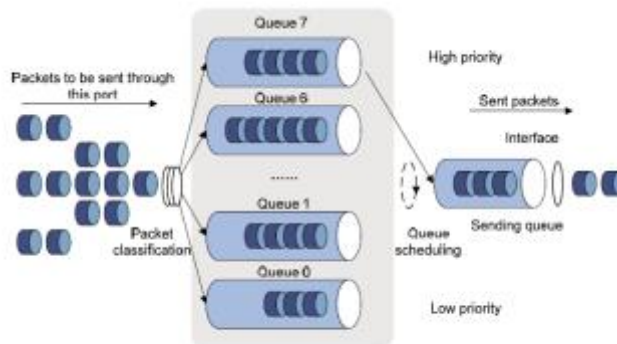
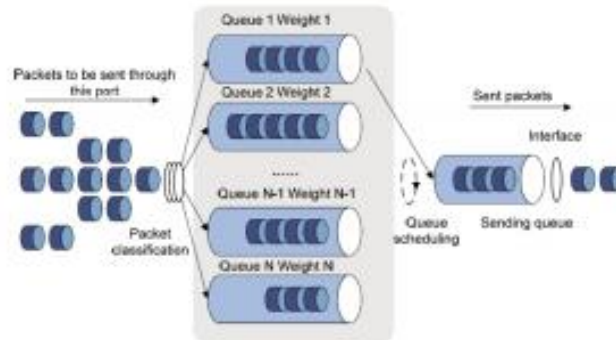


Diagram for SP queuing

Strict Priority Queueing is specially designed to meet the demands of critical services or applications. Critical services or applications such as voice are delay-sensitive and thus require to be dequeued and sent first before packets in other queues are dequeued on a congested network. For example, four egress queues 3, 2, 1 and 0 with descending priority are configured on a port. Under the SP algorithm, the port strictly prioritizes packets from a higher-priority queue over those from a lower-priority queue. Namely, only after packets in the highest-priority queue are emptied can packets in a lower-priority queue be forwarded. Therefore, high-priority packets are always processed before those of less priority. Medium-priority packets are always processed before low-priority packets. The lowest-priority queue is serviced only when highest-priority queues had no packets buffered. Disadvantages of SP: The SP queueing method gives absolute priority to high-priority packets over low-priority traffic, so it should be used with care. The moment a higher-priority packet arrives in its queue, servicing of the lower-priority packets is interrupted in favor of the higher-priority queue; packets can also be dropped if the amount of high-priority traffic is too great to be emptied within a short time.

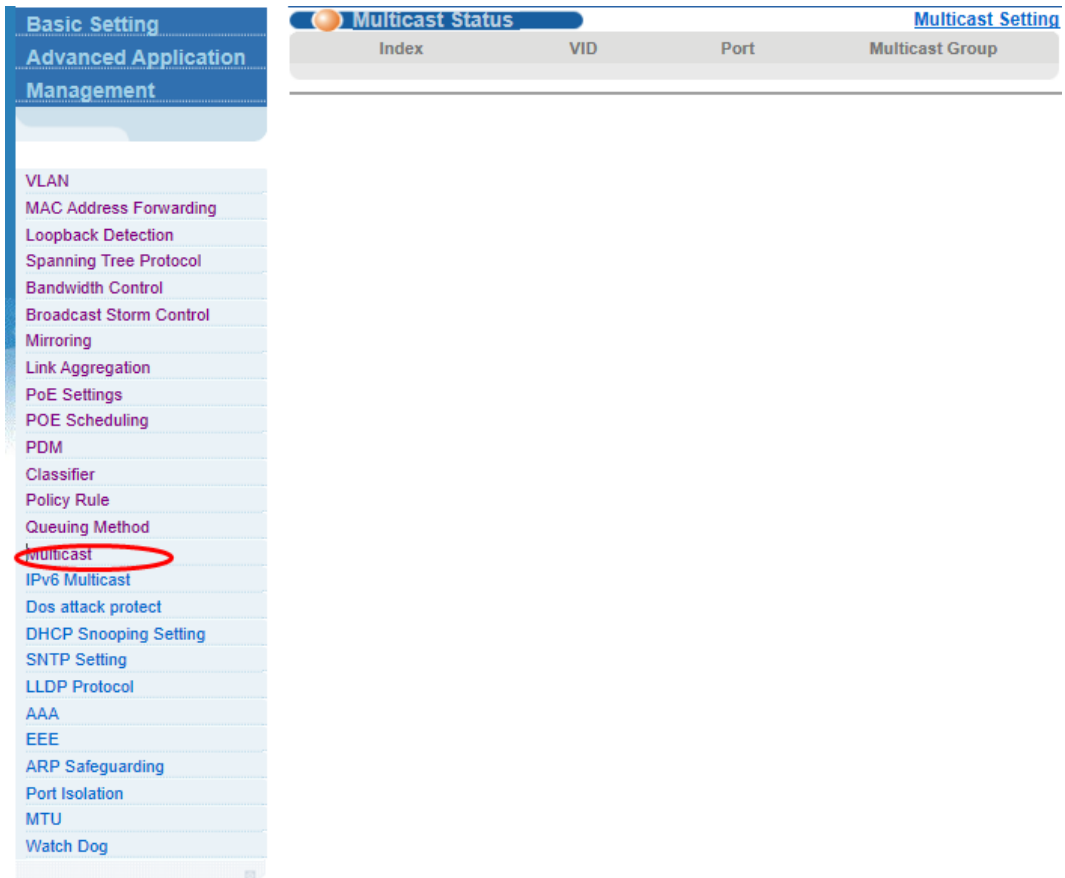
## 2. Weighted Round Robin



The WRR queue-scheduling algorithm ensures every queue receives guaranteed service time by taking turns according to a schedule determined by weighted values. Assume a 100-M port has four egress queues with four weight values  $w_3$ ,  $w_2$ ,  $w_1$  and  $w_0$  and the corresponding values 25, 15, 5 and 5 that reflect the proportion of resources assigned to those four queues. The queue with the lowest priority can be assured of receiving at least 10 Mbps bandwidth, which avoids the disadvantage of the SP algorithm where packets in low-priority queues may not be served for long periods of time. Another advantage of the WRR algorithm is that, though the queues are scheduled in turn, the service time for each queue is not fixed. That is, when a queue is emptied, the next queue is scheduled for service. Therefore, bandwidth resources are more fully utilized.

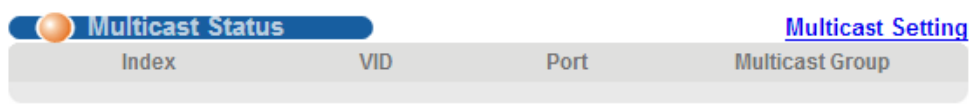
## 4.2.15 Multicast

To configure Multicast, select **Advanced Application>Multicast** in the function menu bar.



### 4.2.15.1 Multicast Status

To view all multicast, including the static configuration and the multicast that is learned through the IGMP-Snooping protocol, select **Advanced Application>Multicast>Multicast Status** in the function menu bar.



### 4.2.15.2 Multicast Settings

To set multicast, select **Advanced Application>Multicast>Multicast Settings** in the function menu bar.

Multicast Setting

Multicast Status

Deny VLAN

IGMP Filtering Profile

IGMP Snooping:

Active

Querier

Host Timeout  seconds

IGMP Route Port Forward

Port Information:

| Port     | Max Group Limit | Fast Leave               | Multicast Vlan | IGMP Filtering Profile |
|----------|-----------------|--------------------------|----------------|------------------------|
| *        |                 | <input type="checkbox"/> |                |                        |
| GE0/0/1  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/2  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/3  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/4  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/5  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/6  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/7  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/8  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/9  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/10 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/11 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/12 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/13 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/14 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/15 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/16 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/17 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/18 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/19 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/20 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/21 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/22 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/23 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/0/24 | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/1/1  | 506             | <input type="checkbox"/> | 0              |                        |
| GE0/1/2  | 506             | <input type="checkbox"/> | 0              |                        |

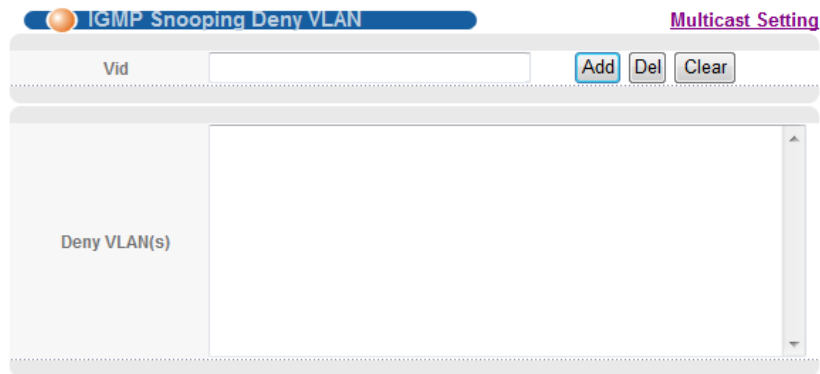
#### 【Parameter Description】

| Parameter               | Description   |
|-------------------------|---|
| Active                  | Enable IGMP snooping                                    |
| Querier                 | Enable IGMP snooping timed query function               |
| Host Timeout            | Configure the dynamic group sowing time (default 300 s) |
| IGMP Route Port Forward | Enable IGMP Route Port Forward                          |

| Parameter              | Description   |
|------------------------|---|
| Max Group Limit        | Max learning group of configuration port (default 1020)   |
| Fast Leave             | Enable port quick-exit function (i.e., when the port receives the IGMP and leaves the message, immediately remove the port from the reshuffle group)  |
| Multicast VLAN         | The configuration group multicast the default VLAN  |
| IGMP Filtering Profile | The configuration port refers to the multicast preview, which can only be learned by the broadcast group that is allowed in the group broadcast preview and cannot be learned by the multicast group, which is forbidden by the group broadcast preview |

#### 4.2.15.3 IGMP Snooping Deny VLAN

To preview the banned group broadcast group that is unable to learn the multicast group which is prohibited by the group preview, select **Advanced Application>Multicast>IGMP Snooping Deny VLAN** in the function menu bar.



**【Parameter Description】**

| Parameter | Description |
|-----------|-------------|
| Vid       | VLAN ID     |

#### 4.2.15.4 IGMP Filtering Profile

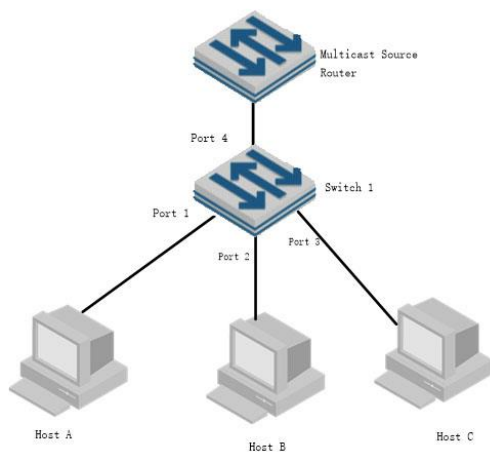
To add and remove the preview feature of the modified group, select **Advanced Application>Multicast>IGMP Filtering Profile** in the function menu bar.

#### 【Parameter Description】

| Parameter     | Description  |
|---------------|--|
| Profile ID    | The range of 1 - 128   |
| Profile Limit | Profile rules can be permit or deny                          |
| Input Format  | The preview address can be configured to be either IP or MAC |

#### 【Configuration example】

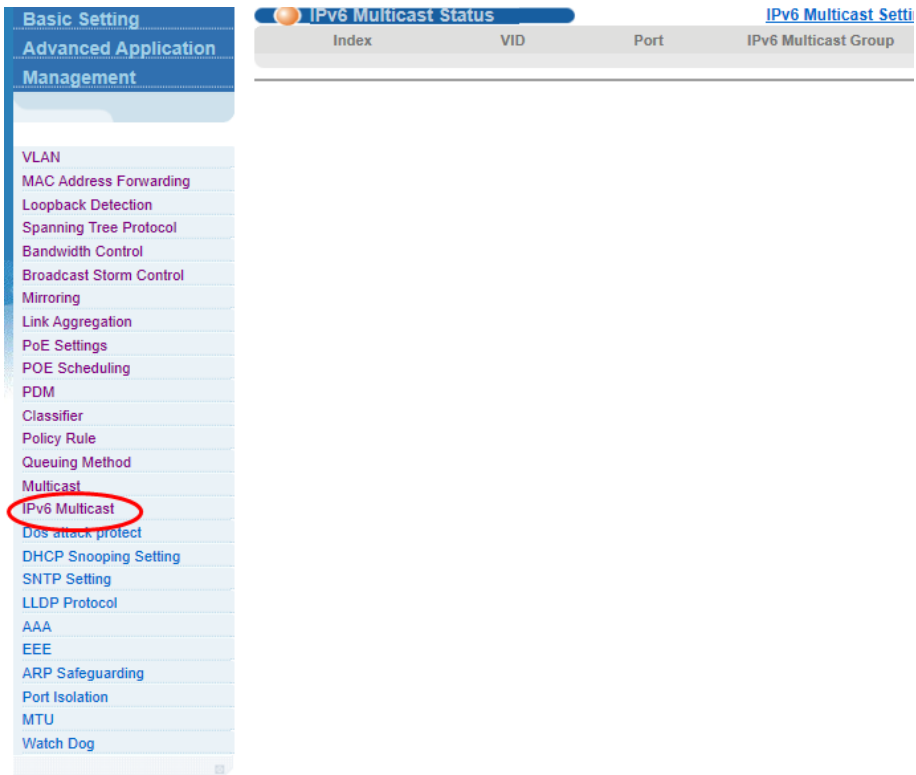
As shown in the figure, host-A, host-B and host-C belong to VLAN2, VLAN3 and VLAN4, respectively. The configuration enables the three hosts to receive the data of the multicast group with the group address of 224.0.1.1 – 224.0.1.3.



1. Enable IGMP Snooping.
2. Add different ports to different VLANs.
3. The host sends the report message to the switch, and the switch learns the multicast group.
4. The multicast source router sends a query message to the switch, which will learn the routing port table entry.
5. The multicast source router sends a multicast traffic stream to the switch and the switch distributes it to the hosts.

## 4.2.16 IPv6 Multicast

To configure IPv6 Multicast, select **Advanced Application>IPv6 Multicast** in the function menu bar.



### 4.2.16.1 IPv6 Multicast Status

To view all IPv6 multicast groups, select **Advanced Application>IPv6 Multicast>IPv6 Multicast Status** in the function menu bar.



### 4.2.16.2 IPv6 Multicast Setting

To configure IPv6 Multicast, select **Advanced Application>IPv6 Multicast>IPv6 Multicast Setting** in the function menu bar.

IPv6 Multicast Setting
IPv6 Multicast Status
Deny VLAN

MLD Snooping:

|                        |  |
|------------------------|--|
| Active                 | <input type="checkbox"/>                 |
| Querier                | <input type="checkbox"/>                 |
| Host Timeout           | <input type="text" value="300"/> seconds |
| MLD Route Port Forward | <input type="checkbox"/>                 |

Port Information:

| Port     | Max Group Limit | Fast Leave               | IPv6 Multicast Vlan |
|----------|-----------------|--------------------------|---------------------|
| *        |                 | <input type="checkbox"/> |                     |
| GE0/0/1  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/2  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/3  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/4  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/5  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/6  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/7  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/8  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/9  | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/10 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/11 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/12 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/13 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/14 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/15 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/16 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/17 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/18 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/19 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/20 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/21 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/22 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/23 | 506             | <input type="checkbox"/> | 0                   |
| GE0/0/24 | 506             | <input type="checkbox"/> | 0                   |
| GE0/1/1  | 506             | <input type="checkbox"/> | 0                   |
| GE0/1/2  | 506             | <input type="checkbox"/> | 0                   |

**【Parameter Description】**

| Parameter    | Description  |
|--------------|--|
| Active       | Enable or disable MLD snooping                             |
| Querier      | Enable or disable MLD snooping timed Querier               |
| Host Timeout | Configure Dynamic IPv6 multicast aging time (default 300s) |



| Parameter              | Description  |
|------------------------|--|
| MLD Route Port Forward | Enable or disable MLD Route Port Forward   |
| Max Group Limit        | Configure maximum learning IPv6 Multicast message of port (default 1020)   |
| Fast Leave             | Enable or disable Fast Leave (That is, when the port receives IGMP leave message, the port is deleted immediately from the IPv6 multicast group) |
| IPv6 Multicast VLAN    | Configure IPv6 multicast default VLAN  |

**【Configuration Example】**

**IPv6 Multicast Setting** [IPv6 Multicast Status](#) [Deny VLAN](#)  
 MLD Snooping:

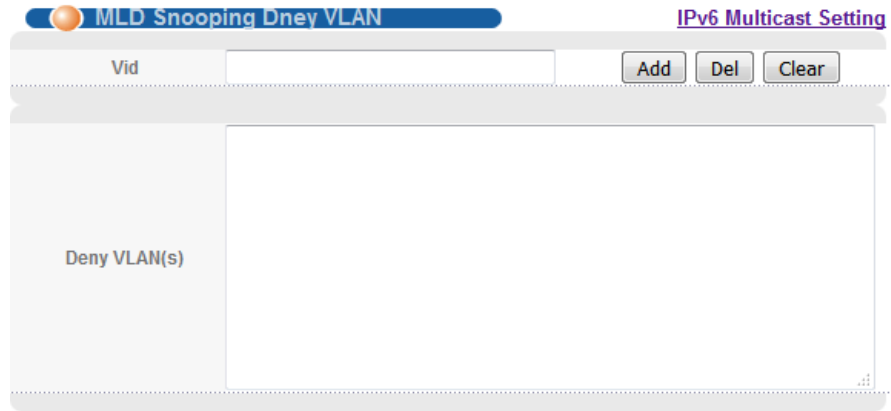
|                        |                          |
|------------------------|--------------------------|
| Active                 | <input type="checkbox"/> |
| Querier                | <input type="checkbox"/> |
| Host Timeout           | 300 seconds              |
| MLD Route Port Forward | <input type="checkbox"/> |

Port Information:

| Port    | Max Group Limit | Fast Leave                          | IPv6 Multicast Vlan |
|---------|-----------------|-------------------------------------|---------------------|
| *       |                 | <input type="checkbox"/>            |                     |
| GE0/0/1 | 507             | <input checked="" type="checkbox"/> | 1                   |

### 4.2.16.3 MLD Snooping Deny VLAN

To configure MLD Snooping Deny VLAN, select **Advanced Application>IPv6 Multicast>MLD Snooping Deny VLAN** in the function menu bar.



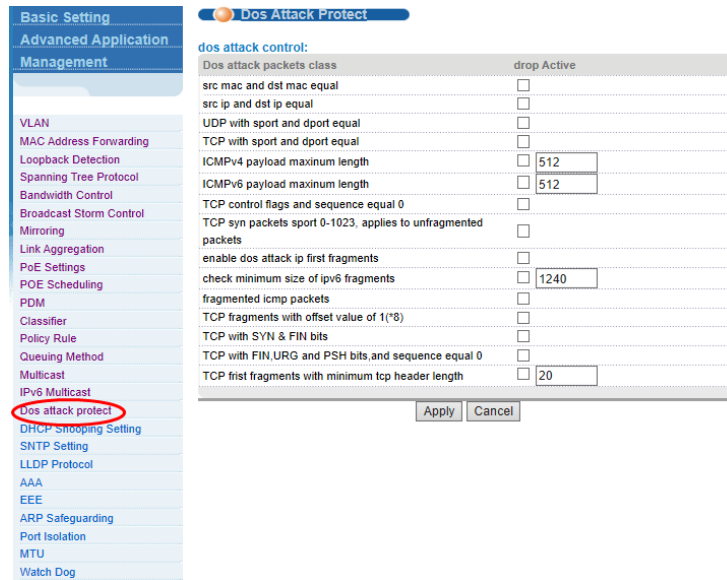
#### 【Parameter Description】

| Parameter | Description |
|-----------|-------------|
| Vid       | VLAN ID     |

|  |  |
|--|--|
|  |  |
|  |  |

### 4.2.17 DoS Attack Protect

To configure DoS Attack Protect, select **Advanced Application>Dos Attack Protect** in the function menu bar.

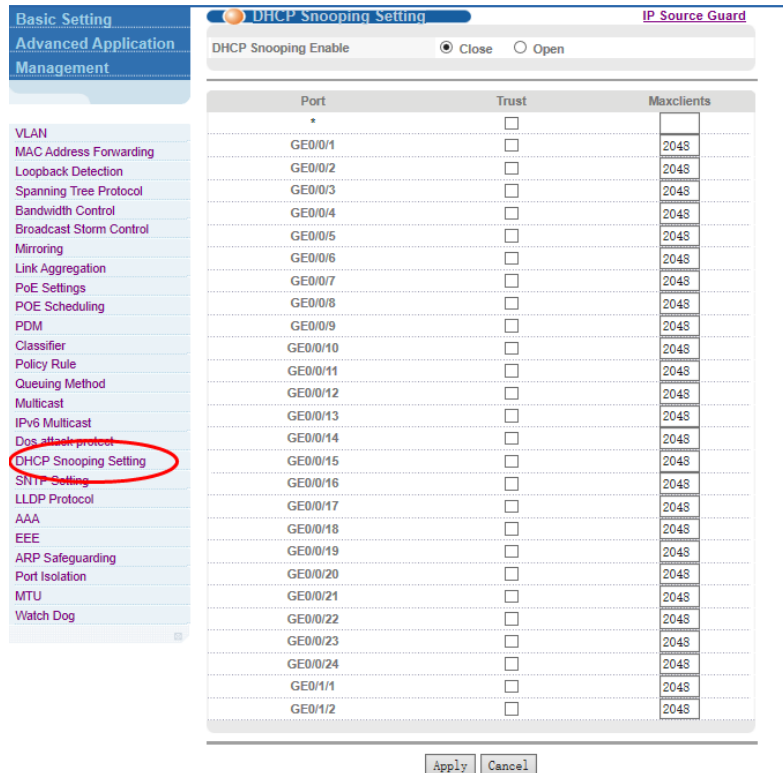


#### 【Parameter Description】

| Parameter          | Description  |
|--------------------|--|
| dos attack control | DoS attack is controlled by the discarding behavior of the corresponding message |

## 4.2.18 DHCP Snooping Setting

To configure DHCP Snooping, select **Advanced Application>DHCP Snooping Setting** in the function menu bar.



### 4.2.18.1 DHCP Snooping Setting

To configure DHCP Snooping, select **Advanced Application>DHCP Snooping Setting>DHCP Snooping Setting** in the function menu bar. Today’s networks can be large and complicated. If the number of wireless network devices exceeds the number of assigned or available IP addresses or if a wireless device’s location changes, it becomes necessary to update the corresponding IP address. One way to do this is through Dynamic Host Configuration Protocol (DHCP), the network configuration protocol optimized and developed based on BOOTP.

**DHCP Snooping Setting** IP Source Guard

DHCP Snooping Enable  Close  Open

| Port     | Trust                    | Maxclients |
|----------|--------------------------|------------|
| *        | <input type="checkbox"/> |            |
| GE0/0/1  | <input type="checkbox"/> | 2048       |
| GE0/0/2  | <input type="checkbox"/> | 2048       |
| GE0/0/3  | <input type="checkbox"/> | 2048       |
| GE0/0/4  | <input type="checkbox"/> | 2048       |
| GE0/0/5  | <input type="checkbox"/> | 2048       |
| GE0/0/6  | <input type="checkbox"/> | 2048       |
| GE0/0/7  | <input type="checkbox"/> | 2048       |
| GE0/0/8  | <input type="checkbox"/> | 2048       |
| GE0/0/9  | <input type="checkbox"/> | 2048       |
| GE0/0/10 | <input type="checkbox"/> | 2048       |
| GE0/0/11 | <input type="checkbox"/> | 2048       |
| GE0/0/12 | <input type="checkbox"/> | 2048       |
| GE0/0/13 | <input type="checkbox"/> | 2048       |
| GE0/0/14 | <input type="checkbox"/> | 2048       |
| GE0/0/15 | <input type="checkbox"/> | 2048       |
| GE0/0/16 | <input type="checkbox"/> | 2048       |
| GE0/0/17 | <input type="checkbox"/> | 2048       |
| GE0/0/18 | <input type="checkbox"/> | 2048       |
| GE0/0/19 | <input type="checkbox"/> | 2048       |
| GE0/0/20 | <input type="checkbox"/> | 2048       |
| GE0/0/21 | <input type="checkbox"/> | 2048       |
| GE0/0/22 | <input type="checkbox"/> | 2048       |
| GE0/0/23 | <input type="checkbox"/> | 2048       |
| GE0/0/24 | <input type="checkbox"/> | 2048       |
| GE0/1/1  | <input type="checkbox"/> | 2048       |
| GE0/1/2  | <input type="checkbox"/> | 2048       |

Apply Cancel

**【Parameter Description】**

| Parameter            | Description   |
|----------------------|---|
| DHCP Snooping Enable | Enable or disable DHCP Snooping                               |
| Trust                | Enable or disable the DHCP Snooping port trust property state |
| Maxclients           | Set Maxclients  |

**【Configuration Example】**

**DHCP Snooping Setting** IP Source Guard

DHCP Snooping Enable  Close  Open

| Port    | Trust                               | Maxclients |
|---------|-------------------------------------|------------|
| *       | <input type="checkbox"/>            |            |
| GE0/0/1 | <input checked="" type="checkbox"/> | 2048       |

### 4.2.18.2 IP Source Guard

To configure IP Source Guard, select **Advanced Application>DHCP Snooping Setting>IP Source Guard** in the function menu bar.

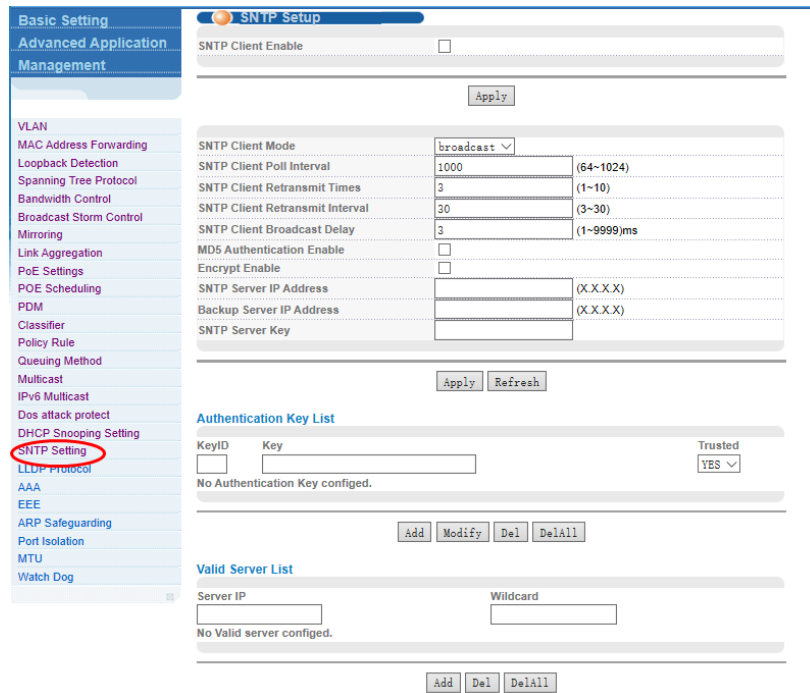
The screenshot displays the IP Source Guard configuration page. At the top, there are tabs for 'IP-Source-Guard' and 'DHCP Snooping Setting'. The main area contains a table with two columns: 'Port' and 'Mode'. The 'Port' column lists various GE ports from GE0/0/1 to GE0/1/2. The 'Mode' column shows a dropdown menu for each port, all currently set to 'Disable'. Below the table are 'modify' and 'cancel' buttons. A section titled 'Add IP-MAC-PORT-VLAN binding entry' includes input fields for IP Address, MAC Address (in H:H:H:H:H:H format), Port, and VLAN ID, along with a 'bindadmin' button. Below this is a 'Binding table' with columns: IP Address, MAC Address, Port, VLAN ID, Binding status, and Delete. A 'Refresh' button is positioned below the table.

#### 【Parameter Description】

| Parameter | Description   |
|-----------|---|
| Mode      | Setting the Mode (Disable, IP, IP+MAC, IP+MAC+VLAN) |

## 4.2.19 SNMP Setting

To configure SNMP, select **Advanced Application>SNMP Setting** in the function menu bar.



### 【Parameter Description】

| Parameter                       | Description  |
|---------------------------------|--|
| SNMP Client Enable              | Enable or disable SNMP Client  |
| SNMP Client Mode                | SNMP Client Mode:<br>broadcast, anycast, multicast, unicast  |
| SNMP Client Poll Interval       | The interval that SNMP Client sends requests to the SNMP Server  |
| SNMP Client Retransmit Times    | If SNMP Client does not receive a response within a certain period after sending a request, it will resend the request until the number of retransmissions exceeds the set value |
| SNMP Client Retransmit Interval | The interval that SNMP Client resends requests to the SNMP Server  |
| SNMP Client Broadcast Delay     | Set SNMP Client Broadcast Delay times  |
| MD5 Authentication Enable       | Enable or disable MD5 Authentication   |
| Encrypt Enable                  | Enable or disable Encrypt  |
| SNMP Server IP Address          | Set SNMP Server IP Address   |
| Backup Server IP Address        | Set Backup Server IP Address   |

| <b>Parameter</b> | <b>Description</b>  |
|------------------|---------------------|
| SNTP Server Key  | Set SNTP Server Key |

**【Information】**

SNTP Client receives and transmits messages from any SNTP Server when the work mode of the SNTP Client is broadcast or multicast. Local time cannot be synchronized to standard time if there is a malicious attack server (which provides incorrect time).



## 4.2.20 LLDP Protocol

To configure LLDP, select **Advanced Application>LLDP Protocol** in the function menu bar.

| Port     | Mode     | TxPkts | RxPkts | Neighbours |
|----------|----------|--------|--------|------------|
| GE0/0/1  | Disabled | -      | -      | -          |
| GE0/0/2  | Disabled | -      | -      | -          |
| GE0/0/3  | Disabled | -      | -      | -          |
| GE0/0/4  | Disabled | -      | -      | -          |
| GE0/0/5  | Disabled | -      | -      | -          |
| GE0/0/6  | Disabled | -      | -      | -          |
| GE0/0/7  | Disabled | -      | -      | -          |
| GE0/0/8  | Disabled | -      | -      | -          |
| GE0/0/9  | Disabled | -      | -      | -          |
| GE0/0/10 | Disabled | -      | -      | -          |
| GE0/0/11 | Disabled | -      | -      | -          |
| GE0/0/12 | Disabled | -      | -      | -          |
| GE0/0/13 | Disabled | -      | -      | -          |
| GE0/0/14 | Disabled | -      | -      | -          |
| GE0/0/15 | Disabled | -      | -      | -          |
| GE0/0/16 | Disabled | -      | -      | -          |
| GE0/0/17 | Disabled | -      | -      | -          |
| GE0/0/18 | Disabled | -      | -      | -          |
| GE0/0/19 | Disabled | -      | -      | -          |
| GE0/0/20 | Disabled | -      | -      | -          |
| GE0/0/21 | Disabled | -      | -      | -          |
| GE0/0/22 | Disabled | -      | -      | -          |
| GE0/0/23 | Disabled | -      | -      | -          |
| GE0/0/24 | Disabled | -      | -      | -          |
| GE0/1/1  | Disabled | -      | -      | -          |
| GE0/1/2  | Disabled | -      | -      | -          |

### 4.2.20.1 LLDP Status

To view LLDP status, select **Advanced Application>LLDP Protocol>LLDP Status** in the function menu bar.

| Port     | Mode     | TxPkts | RxPkts | Neighbours |
|----------|----------|--------|--------|------------|
| GE0/0/1  | Disabled | -      | -      | -          |
| GE0/0/2  | Disabled | -      | -      | -          |
| GE0/0/3  | Disabled | -      | -      | -          |
| GE0/0/4  | Disabled | -      | -      | -          |
| GE0/0/5  | Disabled | -      | -      | -          |
| GE0/0/6  | Disabled | -      | -      | -          |
| GE0/0/7  | Disabled | -      | -      | -          |
| GE0/0/8  | Disabled | -      | -      | -          |
| GE0/0/9  | Disabled | -      | -      | -          |
| GE0/0/10 | Disabled | -      | -      | -          |
| GE0/0/11 | Disabled | -      | -      | -          |
| GE0/0/12 | Disabled | -      | -      | -          |
| GE0/0/13 | Disabled | -      | -      | -          |
| GE0/0/14 | Disabled | -      | -      | -          |
| GE0/0/15 | Disabled | -      | -      | -          |
| GE0/0/16 | Disabled | -      | -      | -          |
| GE0/0/17 | Disabled | -      | -      | -          |
| GE0/0/18 | Disabled | -      | -      | -          |
| GE0/0/19 | Disabled | -      | -      | -          |
| GE0/0/20 | Disabled | -      | -      | -          |
| GE0/0/21 | Disabled | -      | -      | -          |
| GE0/0/22 | Disabled | -      | -      | -          |
| GE0/0/23 | Disabled | -      | -      | -          |
| GE0/0/24 | Disabled | -      | -      | -          |
| GE0/1/1  | Disabled | -      | -      | -          |
| GE0/1/2  | Disabled | -      | -      | -          |

### 4.2.20.2 LLDP Setting

To configure LLDP, select **Advanced Application>LLDP Protocol>LLDP Setting** in the function menu bar.

| Port     | Mode    |
|----------|---------|
| *        | Disable |
| GE0/0/1  | Disable |
| GE0/0/2  | Disable |
| GE0/0/3  | Disable |
| GE0/0/4  | Disable |
| GE0/0/5  | Disable |
| GE0/0/6  | Disable |
| GE0/0/7  | Disable |
| GE0/0/8  | Disable |
| GE0/0/9  | Disable |
| GE0/0/10 | Disable |
| GE0/0/11 | Disable |
| GE0/0/12 | Disable |
| GE0/0/13 | Disable |
| GE0/0/14 | Disable |
| GE0/0/15 | Disable |
| GE0/0/16 | Disable |
| GE0/0/17 | Disable |
| GE0/0/18 | Disable |
| GE0/0/19 | Disable |
| GE0/0/20 | Disable |
| GE0/0/21 | Disable |
| GE0/0/22 | Disable |
| GE0/0/23 | Disable |
| GE0/0/24 | Disable |
| GE0/1/1  | Disable |
| GE0/1/2  | Disable |

### 4.2.21 AAA

To configure AAA, select **Advanced Application>AAA** in the function menu bar.

| Port     | Active  | Port Control | Reauthentication | Reauthentication Timer | Max User(s) |
|----------|---------|--------------|------------------|------------------------|-------------|
| *        | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/1  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/2  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/3  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/4  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/5  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/6  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/7  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/8  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/9  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/10 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/11 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/12 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/13 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/14 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/15 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/16 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/17 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/18 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/19 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/20 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/21 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/22 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/23 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/24 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/1/1  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/1/2  | disable | auto         | Off              | 3600 seconds           | 64          |

### 4.2.21.1 802.1x

To configure 802.1x, select **Advanced Application>AAA>802.1x** in the function menu bar.

| Port     | Active  | Port Control | Reauthentication | Reauthentication Timer | Max User(s) |
|----------|---------|--------------|------------------|------------------------|-------------|
| *        | disable | auto         | Off              | seconds                |             |
| GE0/0/1  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/2  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/3  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/4  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/5  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/6  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/7  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/8  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/9  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/10 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/11 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/12 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/13 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/14 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/15 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/16 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/17 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/18 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/19 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/20 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/21 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/22 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/23 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/0/24 | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/1/1  | disable | auto         | Off              | 3600 seconds           | 64          |
| GE0/1/2  | disable | auto         | Off              | 3600 seconds           | 64          |

Apply Cancel

#### 【Parameter Description】

| Parameter           | Description   |
|---------------------|---|
| EAP Forwarding Mode | EAP Forwarding Mode:<br>EAP-finish,<br>EAP-tansfer  |
| Quiet Period        | If the same user fails to log in more than the allowed value, he or she will not be allowed to try to log in until a certain time |
| Active              | Active:<br>disable<br>portbased (multi)<br>portbased (single)<br>macbased   |
| Port Control        | Port Control:<br>auto<br>forceauthorized<br>forceunauthorized   |

| Parameter              | Description  |
|------------------------|--|
| Reauthentication       | After user authentication is passed, the port can be configured to require reauthentication or to periodically re-authenticate |
| Reauthentication Timer | Time range: 10 - 3600 seconds  |
| Max user(s)            | The maximum number of users: 1 - 100   |

**【Configuration Example】**

|         |           |        |       |      |         |     |
|---------|-----------|--------|-------|------|---------|-----|
| GE0/0/1 | disable ▼ | auto ▼ | Off ▼ | 3600 | seconds | 100 |
|---------|-----------|--------|-------|------|---------|-----|

### 4.2.21.2 Domain

To configure RADIUS Domain, select **Advanced Application>AAA> Domain** in the function menu bar.

#### **【Parameter Description】**

| Parameter          | Description                                       |
|--------------------|---|
| Active             | Enable or disable RADIUS domain                   |
| Domain Name        | Set domain name                                   |
| Default Domain     | Enable or disable Default Domain                  |
| Radius Server Name | Set RADIUS Server name                            |
| Force Max Number   | Maximum number of user connections range: 1 - 640 |

#### **【Information】**

This function requires a username and password to authenticate a client. The username information generally includes the user’s ISP information, the domain and one-to-one correspondence with the ISP. The main information domain is the domain of the user that is authenticated and accounted for by the RADIUS server.

### 4.2.21.3 Set Authentication

To configure Remote Authentication, select **Advanced Application>AAA>Set Authentication** in the function menu bar.

#### 【Parameter Description】

| Parameter           | Description  |
|---------------------|--|
| Authentication Mode | Authentication Mode:<br>Local,<br>Radius,<br>Tacacs+ |

### 4.2.21.4 TACACS+ Server Setup

To configure TACACS+ Server Setup, select **Advanced Application>AAA>TACACS+ Server Setup** in the function menu bar.

#### 【Parameter Description】

| Parameter           | Description                                    |
|---------------------|--|
| Authentication Type | Authentication Mode:<br>ascii,<br>chap,<br>pap |
| Preemption Time     | The time range: 0 - 1440 minutes               |

#### 4.2.21.5 Radius Server Setup

To configure RADIUS Server Setup, select **Advanced Application>AAA>Radius Server Setup** in the function menu bar.

**RADIUS Server Setup**
[AAA](#)
[MUSER](#)

---

8021P Priority

H3C Cams

Bandwidth Limit

---

**Radius Host:**

Host Name

Preemption Time  min (0-1440)

| Server                | Index | IP Address  | UDP Port   | Shared Secret  |
|-----------------------|-------|---|--|--|
| Authentication Server | 1     | <input style="width: 100%;" type="text" value="0.0.0.0"/> | <input style="width: 100%;" type="text" value="1812"/> | <input style="width: 100%;" type="text" value="Switch"/> |
|                       | 2     | <input style="width: 100%;" type="text" value="0.0.0.0"/> | <input style="width: 100%;" type="text" value="1812"/> | <input style="width: 100%;" type="text" value=""/>       |
| Accounting Server     | 1     | <input style="width: 100%;" type="text" value="0.0.0.0"/> | <input style="width: 100%;" type="text" value="1813"/> | <input style="width: 100%;" type="text" value="Switch"/> |
|                       | 2     | <input style="width: 100%;" type="text" value="0.0.0.0"/> | <input style="width: 100%;" type="text" value="1813"/> | <input style="width: 100%;" type="text" value=""/>       |

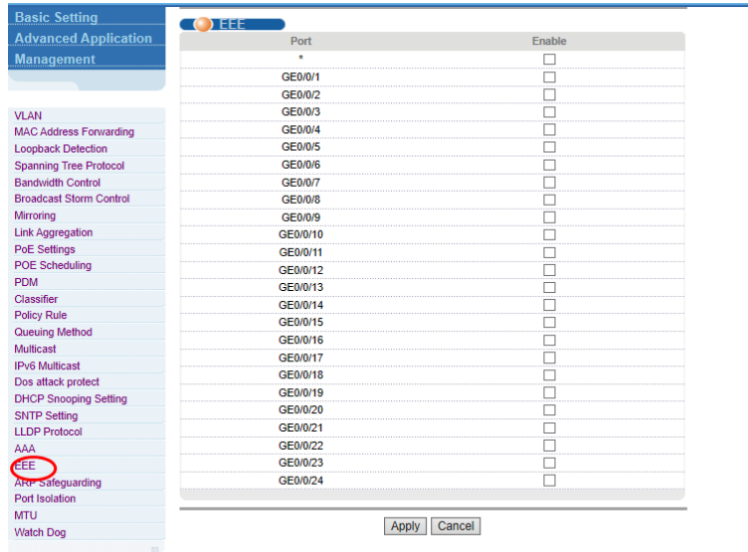
| Host | Authentication IP Address | Accounting IP Address | Delete  |
|------|---------------------------|-----------------------|---|
|      |                           |                       | <input type="button" value="Delete"/> <input type="button" value="Cancel"/> |

#### 【Parameter Description】

| Parameter       | Description  |
|-----------------|--|
| 8021P Priority  | If activated and user authentication is successful, this function will modify the PVID of the user's port.   |
| H3C Cams        | If activated, this function configures the version information of transmitting clients to the RADIUS server through the RADIUS attribute client-version. |
| Bandwidth limit | If activated and user authentication is successful, this function will modify the bandwidth of the user's port.  |

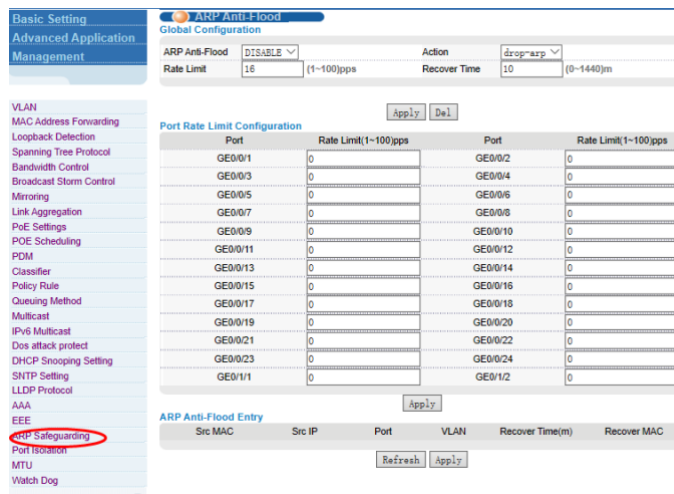
### 4.2.22 EEE (Part of our Self-Healing Network Suite of Features)

To enable or disable the function for Energy Efficient Ethernet, select **Advanced Application>EEE** in the function menu bar.



### 4.2.23 ARP Safeguarding

To prevent ARP flooding, select **Advanced Application>ARP Safeguarding**.



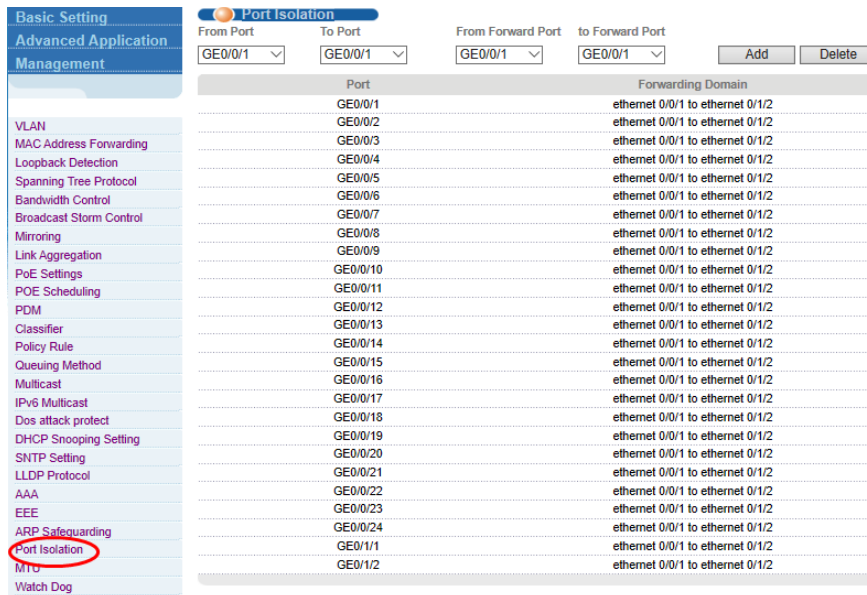
#### 【Parameter Description】

| Parameter            | Description   |
|----------------------|---|
| Global Configuration | Enable or disable ARP Anti-flood  |
| Port Rate Limit      | Set ARP message speed limit for specific interface. If it exceeds the speed limit, it is considered to be under attack. |



## 4.2.24 Port Isolation

To configure Port Isolation, select **Advanced Application>Port Isolation**.



## 4.2.25 MTU

To configure to MTU, select **Advanced Application>MTU**.



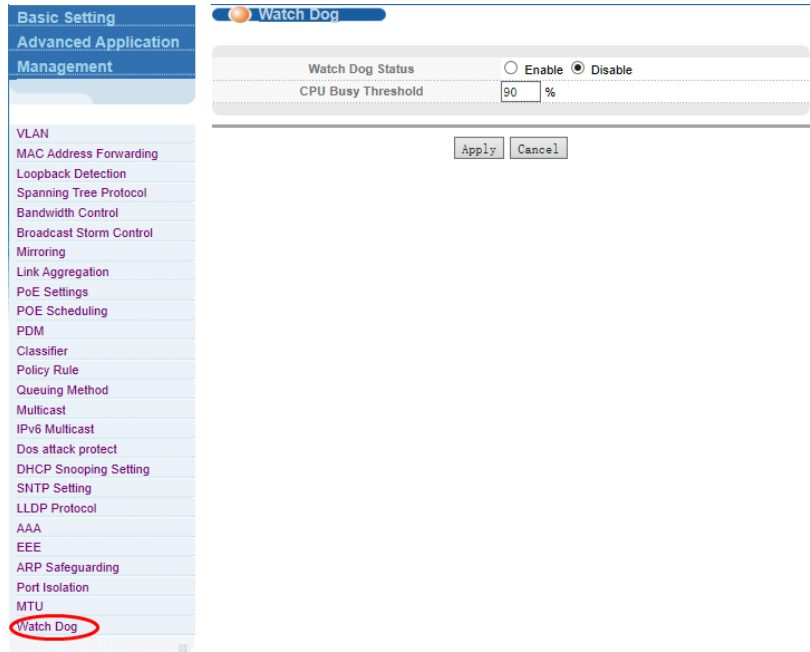
### 【Parameter Description】

| Parameter | Description                 |
|-----------|-----------------------------|
| MTU       | Set MTU, range 1522 - 10240 |

4.2.26

4.2.26 Watch Dog (Part of our Self-Healing Network Suite of Features)

To configure Watch Dog, select **Advanced Application>Watch Dog**.

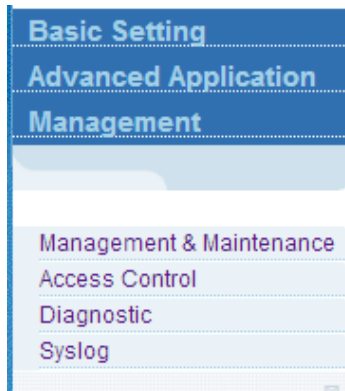


**【Parameter Description】**

| Parameter          | Description                        |
|--------------------|------------------------------------|
| Watch Dog Status   | Enable or disable Watch Dog Status |
| CPU Busy Threshold | Set the CPU Busy Threshold         |

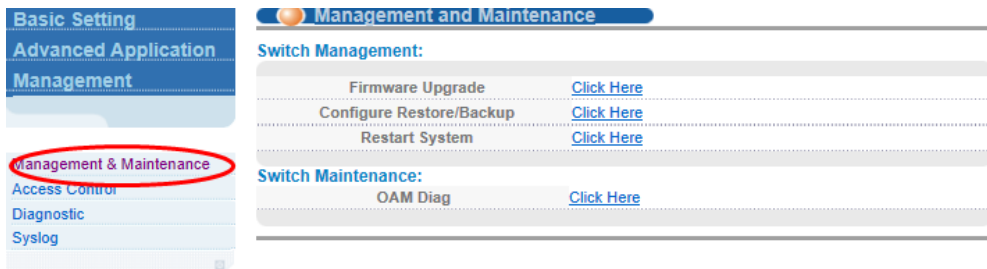
## 4.3 Management

Choose Management, and the following page appears. There are configuration web pages for **Management & Maintenance**, **Access Control**, **Diagnostic** and **Syslog**.



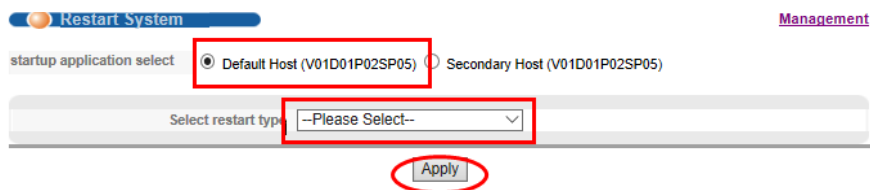
### 4.3.1 Management and Maintenance

To upgrade firmware, restart the system and perform switch maintenance, select **Management > Management & Maintenance** in the function menu bar.

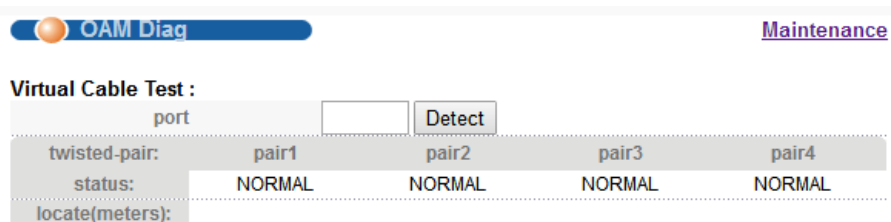


#### 【Configuration Example】

1. Firmware Upgrade.
2. Restart system. Restart type: Restart, Restart with Factory Defaults.

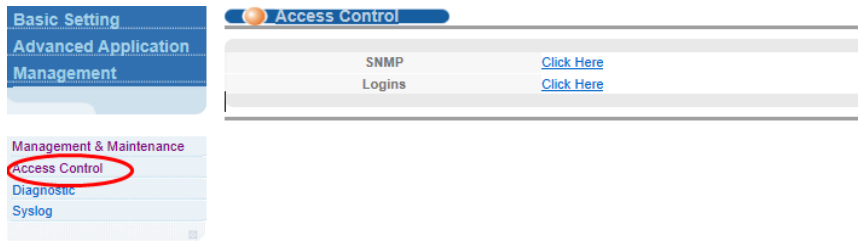


3. OAM Diag, Virtual cable can be tested.



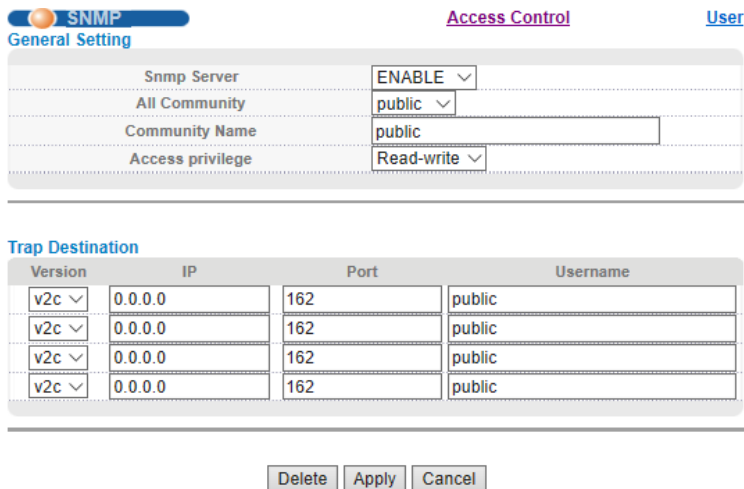
### 4.3.2 Access Control

To set SNMP and Logins, select **Management>Access Control** in the function menu bar.



#### 4.3.2.1 SNMP

To configure SNMP, select **Management> Access Control>SNMP** in the function menu bar.



#### 【Parameter Description】

| Parameter        | Description   |
|------------------|---|
| All Community    | Set All Community   |
| Community Name   | Community string, is equal to the NMS and SNMP agent communication between the password   |
| Access privilege | Read-only: specify the NMS (SNMP host) of MIB variables; can only be read, cannot be modified.<br>Read-write: specify the NMS (SNMP host) of MIB variables; can read and also be modified |
| Version          | Set version: v1, v2c, v3  |
| IP               | Set the IP address of the trap host   |

**【Configuration Example】**

Add a group name public community, set access to Read-Write. Set host 192.168.2.3 to receive trap messages. The specified version is v2c.

**SNMP** Access Control [User](#)

**General Setting**

|                  |            |
|------------------|------------|
| Snmp Server      | ENABLE     |
| All Community    | public     |
| Community Name   | public     |
| Access privilege | Read-write |

---

**Trap Destination**

| Version | IP          | Port | Username |
|---------|-------------|------|----------|
| v2c     | 192.168.2.3 | 162  | public   |
| v2c     | 0.0.0.0     | 162  | public   |
| v2c     | 0.0.0.0     | 162  | public   |
| v2c     | 0.0.0.0     | 162  | public   |

Delete **Apply** Cancel

**4.3.2.2 User Information**

To add a user, set a Security Level, Authentication, Privacy, Group and Password, select **Management> Access Control>User Information** in the function menu bar.

**User Information** SNMP Setting

Username:

Security Level: noauth

Authentication: MD5

Privacy: DES

Group: initial

Password:

Password:

Add Cancel Clear

| Index | Username    | SecurityLevel | Authentication | Privacy | Group   | Delete                   |
|-------|-------------|---------------|----------------|---------|---------|--------------------------|
| 1     | initialmd5  | pri           | MD5            | DES     | initial | <input type="checkbox"/> |
| 2     | initialsha  | pri           | SHA            | DES     | initial | <input type="checkbox"/> |
| 3     | initialnone | noauth        | noauth         | nopri   | initial | <input type="checkbox"/> |

Delete Cancel

**【Parameter Description】**

| Parameter      | Description        |
|----------------|--------------------|
| Username       | SNMP username      |
| Security Level | Noauth, auth, pri  |
| Authentication | MD5, SHA           |
| Privacy        | DES Privacy        |
| Group          | User group name    |
| Password       | Encrypted password |

**【Configuration Example】**

Add group initial, add username user1.

**4.3.2.3 Logins**

To modify the admin password and configure ordinary users, select **Management>Access Control>Logins** in the function menu bar.

| Login | User Name | New Password | Retype to confirm | Encrypt password | User privilege |
|-------|-----------|--------------|-------------------|------------------|----------------|
| 1     |           |              |                   | 0 Clear word     | 0 Guest        |
| 2     |           |              |                   | 0 Clear word     | 0 Guest        |
| 3     |           |              |                   | 0 Clear word     | 0 Guest        |
| 4     |           |              |                   | 0 Clear word     | 0 Guest        |
| 5     |           |              |                   | 0 Clear word     | 0 Guest        |
| 6     |           |              |                   | 0 Clear word     | 0 Guest        |
| 7     |           |              |                   | 0 Clear word     | 0 Guest        |
| 8     |           |              |                   | 0 Clear word     | 0 Guest        |
| 9     |           |              |                   | 0 Clear word     | 0 Guest        |
| 10    |           |              |                   | 0 Clear word     | 0 Guest        |
| 11    |           |              |                   | 0 Clear word     | 0 Guest        |
| 12    |           |              |                   | 0 Clear word     | 0 Guest        |
| 13    |           |              |                   | 0 Clear word     | 0 Guest        |
| 14    |           |              |                   | 0 Clear word     | 0 Guest        |
| 15    |           |              |                   | 0 Clear word     | 0 Guest        |

**【Parameter Description】**

| Parameter      | Description                          |
|----------------|--------------------------------------|
| User privilege | 0 - 1: normal; 2 - 15: administrator |

### 【Configuration Example】

**Logins** [Access Control](#) [Super Password](#)

**Edit admin**

|  |                    |
|--|--------------------|
| Old Password (1-32 characters)                           | ••••••••           |
| New Password (1-32 characters)                           | ••••••             |
| Retype to confirm  | •••••              |
| Encrypt password   | 0 Clear password ▾ |
| User privilege (0:Guest 1:User 2-14:Operator 15:Manager) | 15 Administrator   |

**Edit Other Logins**

| Login | User Name | New Password | Retype to confirm | Encrypt password | User privilege |
|-------|-----------|--------------|-------------------|------------------|----------------|
| 1     | Anne      | •••••        | •••••             | 0 Clear word ▾   | 0 Guest ▾      |
| 2     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 3     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 4     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 5     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 6     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 7     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 8     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 9     |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 10    |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 11    |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 12    |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 13    |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 14    |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |
| 15    |           |              |                   | 0 Clear word ▾   | 0 Guest ▾      |

### 4.3.2.4 Super Password

To set a Super Password, select **Management>Access Control>Super Password** in the function menu bar.

| Privilege | Password |
|-----------|----------|
| 1         |          |
| 2         |          |
| 3         |          |
| 4         |          |
| 5         |          |
| 6         |          |
| 7         |          |
| 8         |          |
| 9         |          |
| 10        |          |
| 11        |          |
| 12        |          |
| 13        |          |
| 14        |          |
| 15        |          |

**Edit User Privilege**

| User Name | User Privilege | Input Password |
|-----------|----------------|----------------|
|           |                |                |

### 4.3.3 Diagnostic

To display or clear the System Log, select **Management> Diagnostic** in the function menu bar.

**Diagnostic**

- Info -

### 【Configuration Example】

Display System Log.

```

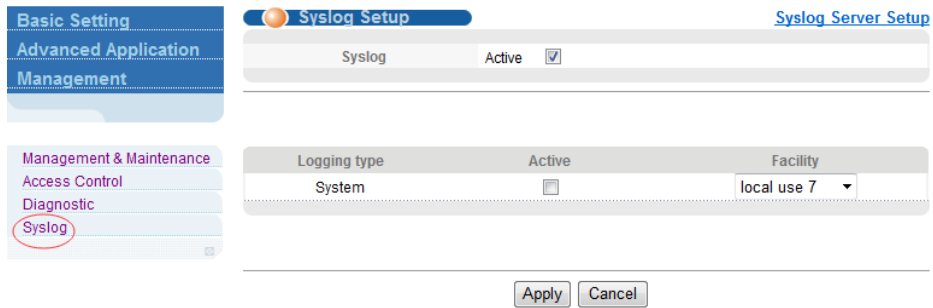
2000/01/01 02:18:20: %OAM-5-EVENT: User has logged in on web
1[username: admin, privilege: 15, ip: 192.168.2.2].
2000/01/01 02:18:17: %OAM-5-EVENT: User has logged out on web
1[username: admin, privilege: 15, ip: 192.168.2.2].
2000/01/01 01:48:31: %OAM-5-EVENT: User has logged in on web
1[username: admin, privilege: 15, ip: 192.168.2.2].
2000/01/01 01:48:28: %OAM-5-EVENT: User has logged out on web
1[username: admin, privilege: 15, ip: 192.168.2.2].
2000/01/01 00:07:42: %OAM-5-EVENT: User has logged in on web
1[username: admin, privilege: 15, ip: 192.168.2.2].
2000/01/01 00:01:39: %POE-5-EVENT: GE0/0/24 poe power switch
to off.
2000/01/01 00:01:38: %POE-5-EVENT: GE0/0/23 poe power switch
to off.
2000/01/01 00:01:37: %POE-5-EVENT: GE0/0/22 poe power switch
    
```

**System Log**



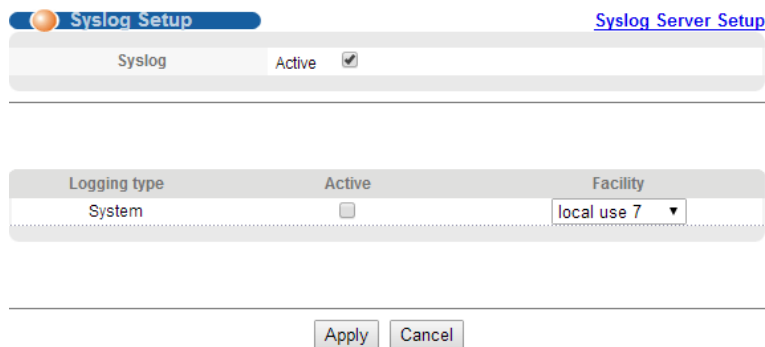
### 4.3.4 Syslog

To configure the Syslog, select **Management> Syslog** in the function menu bar.



#### 4.3.4.1 Syslog Setup

To start the logging function globally and the logging function of the corresponding module, select **Management>Syslog>Syslog Setup** in the function menu bar.



#### **【Parameter Description】**

| Parameter | Description  |
|-----------|--|
| Facility  | local use 0 - 7<br>kernel<br>userlevel<br>mail<br>system<br>security_1-2<br>sysogd<br>lineprinter<br>Networknews<br>uucp<br>clock_1-2<br>ftp<br>logaudit<br>logalert |

**【Configuration Example】**

**Syslog Setup** [Syslog Server Setup](#)

Syslog  Active

---

| Logging type | Active                              | Facility    |
|--------------|-------------------------------------|-------------|
| System       | <input checked="" type="checkbox"/> | local use 7 |

**4.3.4.2 Syslog Server Setup**

To set the syslog server, select **Management>Syslog>Syslog Server Setup** in the function menu bar.

**Syslog Server Setup** [Syslog Setup](#)

Active

Server Address

Log Level

---

| Index | Active | IP Address | Log Level | Delete |
|-------|--------|------------|-----------|--------|
|-------|--------|------------|-----------|--------|

**【Parameter Description】**

| Parameter      | Description  |
|----------------|--|
| Server Address | Syslog Server Address  |
| Log Level      | Level 0<br>Level 0-1<br>Level 0-2<br>Level 0-3<br>Level 0-4<br>Level 0-5<br>Level 0-6<br>Level 0-7 |
| Server Address | Syslog Server Address  |

**【Information】**

Open the log switch, set up the syslog server, and the system log will be automatically pushed to the server.

**【Configuration Example】**

Set server address to 192.168.2.100.

**Syslog Server Setup** [Syslog Setup](#)

|                |                                     |
|----------------|-------------------------------------|
| Active         | <input checked="" type="checkbox"/> |
| Server Address | 192.168.2.100                       |
| Log Level      | Level 0 ▾                           |

| Index | Active | IP Address    | Log Level | Delete                   |
|-------|--------|---------------|-----------|--------------------------|
| 1     | Yes    | 192.168.2.100 | 0         | <input type="checkbox"/> |

## **Chapter 5 - Appendix**

### **5.1 Technical Specifications**

| <b>5.1.1 Hardware Specifications</b> |  |
|--------------------------------------|--|
| Standards                            | IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x, IEEE 802.3z, IEEE 802.3at (excluding 508834), IEEE 802.3af (excluding 508834), IEEE 802.1q, IEEE 802.1p   |
| Network Media (Cable)                | 10Base-T: UTP category 3, 4, 5 cable (maximum 100 m)<br>100Base-Tx: UTP category 5, 5e cable (maximum 100 m)<br>1000Base-T: UTP category 5e, 6 cable (maximum 100 m)<br>1000Base-SX:62.5µm/50µm MMF (2 m – 550 m)<br>1000Base-LX:62.5µm/50µm MMF (2 m – 550 m) or 10µm SMF (2 m – 5000 m)  |
| Number of Ports (Total)              | <ul style="list-style-type: none"> <li>• 560559: 26 (24 RJ45, 2 SFP)</li> <li>• 561167: 10 (8 RJ45, 2 SFP)</li> <li>• 561198: 18 (16 RJ45, 2 SFP)</li> <li>• 561341: 18 (16 RJ45, 2 SFP)</li> <li>• 561426: 28 (24 RJ45, 4 Combo [4 SFP, 4 RJ45 Uplinks])</li> <li>• 508834: 10 (8 RJ45, 2 SFP)</li> <li>• 562003: 10 (8 RJ45, 2 SFP)</li> </ul> |
| Transfer Method                      | Store-and-Forward  |
| Switching Capacity                   | <ul style="list-style-type: none"> <li>• 560559: 52 Gbps</li> <li>• 561167: 20 Gbps</li> <li>• 561198: 36 Gbps</li> <li>• 561341: 36 Gbps</li> <li>• 561426: 56 Gbps</li> <li>• 508834: 20 Gbps</li> <li>• 562003: 20 Gbps</li> </ul>  |
| MAC Address Learning                 | 8,192  |
| Packet Forwarding Rate               | <ul style="list-style-type: none"> <li>• 1,488,000 pps (1000 Mbps), 148,800 pps (100 Mbps), 14,880 pps (10 Mbps)</li> </ul>  |
| Packet Buffer                        | <ul style="list-style-type: none"> <li>• 560559, 561167, 561198, 561341: 512 kBytes</li> <li>• 561426, 508834, 562003: 4.1 Mbit</li> </ul>   |
| Jumbo Frame                          | Up to 9,216  |
| PoE Ports (RJ45)                     | <ul style="list-style-type: none"> <li>• 560559: 24</li> </ul>   |

|                                  |            |  |
|----------------------------------|------------|--|
|                                  |            | <ul style="list-style-type: none"> <li>• 561167: 8</li> <li>• 561198: 16</li> <li>• 561341: 16</li> <li>• 561426: 24</li> <li>• 508834: not applicable</li> <li>• 562003: 8</li> </ul>   |
| PoE Budget                       |            | <ul style="list-style-type: none"> <li>• 560559: 240 W</li> <li>• 561167: 140 W</li> <li>• 561198: 374 W</li> <li>• 561341: 220 W</li> <li>• 561426: 370 W</li> <li>• 508834: not applicable</li> <li>• 562003: 242 W</li> </ul>   |
| Power Pin Assignment             |            | 1/2(+),3/6(-) (excluding 508834)   |
| Indicators                       | Per Device | <b>Standard Switches</b><br>System Power<br><b>Industrial Switch 508834</b><br>PWR1, PWR2, System Power  |
|                                  | Per Port   | Link/Activity/Speed, PoE (excluding 508834)  |
| Frame Filtering and Forward Rate |            | 10 Mbps: 14880pps<br>100 Mbps: 148800pps<br>1000 Mbps: 1488000pps  |
| Dimensions (W x L x H)           |            | <ul style="list-style-type: none"> <li>• 560559: 440 (W) x 208 (L) x 44 (H) mm (17.3 x 8.19 x 1.7 in.)</li> <li>• 561167: 280 (W) x 180 (L) x 44 (H) mm (11.02 x 7.09 x 1.73 in.)</li> <li>• 561198: 440 (W) x 208 (L) x 44 (H) mm (17.32 x 8.19 x 1.73 in.)</li> <li>• 561341: 440 (W) x 208 (L) x 44 (H) mm (17.32 x 8.19 x 1.73 in.)</li> <li>• 561426: 440 (W) x 208 (L) x 44 (H) mm (17.32 x 8.19 x 1.73 in.)</li> <li>• 508834: 140 (W) x 175 (L) x 55 (H) mm (5.51 x 6.89 x 2.17 in.)</li> <li>• 562003: 230 (W) x 280 (L) x 44 (H) mm (9.06 x 11.02 x 1.73 in.)</li> </ul> |
| Power Supply                     |            | <ul style="list-style-type: none"> <li>• 560559: 90 – 260 V AC, 50 – 60 Hz</li> <li>• 561167, 561198, 561341, 562003: 100.0 – 240.0 VAC, 50 – 60 Hz</li> <li>• 561426: 90 – 240 V AC, 50 – 60 Hz</li> <li>• 508834: 44.0 - 57.0 VDC</li> </ul>   |
| Power consumption                |            | <ul style="list-style-type: none"> <li>• 560559: 260 watts (max.)</li> <li>• 561167: 163.2 watts (max.)</li> <li>• 561198: 410 watts (max.)</li> <li>• 561341: 260 watts (max.)</li> <li>• 561426: 431.7 watts (max.)</li> <li>• 508834: 8.76 watts (max.)</li> <li>• 562003 : 252 watts (max.)</li> </ul>   |

|             |   |
|-------------|---|
| Environment | <p><b>Standard Switches</b></p> <p>Operating Temperature: 0°C – 45°C</p> <p>Storage Temperature: -40°C – 70°C</p> <p>Operating Humidity: 10% – 90% non-condensing</p> <p>Storage humidity: 5% – 90% non-condensing</p> <p><b>Industrial Version 508834</b></p> <p>Operating Temperature: -40 °C – 85°C</p> <p>Storage Temperature: -40°C – 85°C</p> <p>Operating Humidity: 5% – 95% RH non-condensing</p> <p>Storage humidity: 5% – 95% RH non-condensing</p> |
|-------------|---|

### 5.1.2 Software Specification

|                            |  |
|----------------------------|--|
| Basic function             | <p>Ethernet Setup</p> <p>STP/RSTP/MSTP</p> <p>Storm-control</p> <p>Port Monitor</p> <p>Port rate-limit</p> <p>MAC filtering</p>  |
| Three layers of functional | <p>ARP deception, network cheating</p> <p>Filtering the IP port</p> <p>Static binding IP and MAC</p> <p>ARP trust port</p> <p>Static routing capacity</p> <p>Ping and Traceroute</p> |
| The security policy        | <p>ACE capacity</p> <p>ACL</p> <p>QoS</p> <p>DAI</p>   |
| VLAN                       | <p>Port based VLAN</p> <p>802.1Q VLAN</p>  |
| Safety features            | <p>RADIUS</p> <p>TACACS+</p> <p>Preventing DoS attacks</p> <p>dot1x</p> <p>Gateway ARP deception</p>   |
| Application protocol       | <p>DHCP Relay</p> <p>DHCP Snooping</p> <p>DHCP Client</p> <p>FTP/TFTP</p>  |

|                |   |
|----------------|---|
| Management     | HTTP WEB<br>Telnet<br>SSH<br>Console  |
| Other function | LLDP<br>IGMP Snooping<br>SNMPV1, V2c, V3<br>RMON (1, 2, 3, 9)                       |
| PoE Management | PoE Status<br>Power supply management mode(auto/energy/static)<br>The port priority |

## 5.2 Features and Terms Explained

### **VLAN**

A Virtual Local Area Network, this allows network admins to maintain a virtual network to optimize devices attached to the switch for better overall performance.

### **MAC Address Forwarding**

The ability in Layer 2 networking to control network traffic based on MAC address within VLANs.

### **Loopback Detection**

Loopback Detection allows the switch to detect loops in the network (multiple connections from one device to another). When a loop is detected on a port, the switch will display an alert on the management interface and block the traffic on the corresponding port.

### **Spanning Tree Protocol (STP)**

Another form of loopback discovery and protection based upon the IEEE802.1D standard.

### **Bandwidth Control**

The ability to limit network traffic on a specific port of the switch on an inbound and/or outbound basis.

### **Broadcast Storm Control**

Storm control and equivalent protocols allow you to rate-limit broadcast packets.

Broadcast storm control is a feature of many managed switches in which the switch intentionally ceases to forward all broadcast traffic if the bandwidth consumed by incoming broadcast frames exceeds a designated configurable threshold.

**Mirroring**

The ability to duplicate network traffic from one port to another, on an inbound and/or outbound basis.

**Link Aggregation**

The ability to link multiple ports into one logical interface to increase bandwidth.

**PoE**

Power over Ethernet, a technique for delivering DC power to devices over copper Ethernet cabling, eliminating the need for separate power supplies and outlets. Current standards are IEEE802.3af/at and bt.

**PoE Scheduling**

The ability to schedule the availability of PoE on each port of the switch on a day/time basis.

**PDM**

Powered Device Monitoring, a function that restarts any connected PoE device that fails to respond or send out network traffic. (Configurable on Intellinet Network Solutions Managed Switches).



## **Chapter 6 - Additional Information**

### **6.1 WASTE ELECTRICAL & ELECTRONIC EQUIPMENT**

#### DISPOSAL OF ELECTRIC AND ELECTRONIC EQUIPMENT

(Applicable In the E.U. and Other European Countries With Separate Collection Systems)

**ENGLISH:** This symbol on the product or its



packaging means that this product must not be treated as unsorted

household waste. In accordance with EU Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE), this electrical product must be disposed of in accordance with the user's local regulations for electrical or electronic waste. Please dispose of this product by returning it to your local point of sale or recycling pickup point in your municipality.

**DEUTSCH:** Dieses auf dem Produkt oder der Verpackung angebrachte Symbol zeigt an, dass dieses Produkt nicht mit dem Hausmüll entsorgt werden darf. In Übereinstimmung mit der Richtlinie 2012/19/EU des Europäischen Parlaments und des Rates über Elektro- und Elektronik-Altgeräte (WEEE) darf dieses Elektrogerät nicht im normalen Hausmüll oder dem Gelben Sack entsorgt werden. Wenn Sie dieses Produkt entsorgen möchten, bringen Sie es bitte zur Verkaufsstelle zurück oder zum Recycling-Sammelpunkt Ihrer Gemeinde.

**ESPAÑOL:** Este símbolo en el producto o su embalaje indica que el producto no debe tratarse como residuo doméstico. De conformidad con la Directiva 2012/19/EU de la UE sobre residuos de aparatos eléctricos y electrónicos (RAEE), este producto eléctrico no puede desecharse se con el resto de residuos no clasificados. Deshágase de este producto devolviéndolo a su punto de venta o a un punto de recolección municipal para su reciclaje.

**FRANÇAIS:** Ce symbole sur le produit ou son emballage signifie que ce produit ne doit pas

être traité comme un déchet ménager.

Conformément à la Directive 2012/19/EU sur les déchets d'équipements électriques et électroniques (DEEE), ce produit électrique ne doit en aucun cas être mis au rebut sous forme de déchet municipal non trié. Veuillez vous débarrasser de ce produit en le renvoyant à son point de vente ou au point de ramassage local dans votre municipalité, à des fins de recyclage.

**POLSKI:** Jeśli na produkcie lub jego opakowaniu umieszczono ten symbol, wówczas w czasie utylizacji nie wolno wyrzucać tego produktu wraz z odpadami komunalnymi. Zgodnie z Dyrektywą Nr 2012/19/EU w sprawie zużytego sprzętu elektrycznego i elektronicznego (WEEE), niniejszego produktu elektrycznego nie wolno usuwać jako nie posortowanego odpadu komunalnego. Prosimy o usunięcie niniejszego produktu poprzez jego zwrot do punktu zakupu lub oddanie do miejscowego komunalnego punktu zbiórki odpadów przeznaczonych do recyklingu.

**ITALIANO:** Questo simbolo sui prodotto o sulla relativa confezione indica che il prodotto non va trattato come un rifiuto domestico. In ottemperanza alla Direttiva UE 2012/19/EU sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE), questa prodotto elettrico non deve essere smaltito come rifiuto municipale misto. Si prega di smaltire il prodotto riportandolo al punto vendita o al punto di raccolta municipale locale per un opportuno riciclaggio.

## 6.2 WARRANTY

### Go to [Intellinet-network.com](http://Intellinet-network.com)

**EN MÉXICO:** Póliza de Garantía Intellinet Network Solutions — Datos del importador y responsable ante el consumidor • IC Intracom México, S.A.P.I. de C.V. • Av. Interceptor Poniente # 73, Col. Parque Industrial La Joya, Cuautitlán Izcalli, Estado de México, C.P. 54730, México. • Tel. (55)1500-4500 • La presente garantía cubre los siguientes productos contra cualquier defecto de fabricación en sus materiales y mano de obra. A. Garantizamos los productos de limpieza, aire comprimido y consumibles, por 60 días a partir de la fecha de entrega, o por el tiempo en que se agote totalmente su contenido por su propia función de uso, lo que suceda primero. B. Garantizamos los productos con partes móviles por 3 años. C. Garantizamos los demás productos por 5 años (productos sin partes móviles), bajo las siguientes condiciones: 1. Todos los productos a que se refiere esta garantía, ampara su cambio físico, sin ningún cargo para el consumidor. 2. El comercializador no tiene talleres de servicio, debido a que los productos que se garantizan no cuentan con reparaciones, ni refacciones, ya que su garantía es de cambio físico. 3. La garantía cubre exclusivamente aquellas partes, equipos o sub-ensambles que hayan sido instaladas de fábrica y no incluye en ningún caso el equipo adicional o cualesquiera que hayan sido adicionados al mismo por el usuario o distribuidor. • Para hacer efectiva esta garantía bastará con presentar el producto al distribuidor en el domicilio donde fue adquirido o en el domicilio de IC Intracom México, S.A.P.I. de C.V., junto con los accesorios contenidos en su empaque, acompañado de su póliza debidamente llenada y sellada por la casa vendedora (indispensable el sello y fecha de compra) donde lo adquirió, o bien, la factura o ticket de compra original donde se mencione claramente el modelo, número de serie (cuando aplique) y fecha de adquisición. Esta garantía no es válida en los siguientes casos: Si el producto se hubiese utilizado en condiciones distintas a las normales; si el producto no ha sido operado conforme a los instructivos de uso; o si el producto ha sido alterado o tratado de ser reparado por el consumidor o terceras personas.

## 6.3 REGULATORY STATEMENTS

### FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense. Any changes or modifications made to this equipment without the approval of the manufacturer could result in the product not meeting the Class A limits, in which case the FCC could void the user's authority to operate the equipment.

CE

**ENGLISH** : This device complies with the requirements of CE 2014/30/EU (UKCA Electromagnetic Compatibility Regulations 2016) and / or 2014/35/EU (UKCA Electrical Equipment [Safety] Regulations 2016). The Declaration of Conformity for is available at:

**DEUTSCH** : Dieses Gerät entspricht der CE 2014/30/EU und / oder 2014/35/EU. Die Konformitätserklärung für dieses Produkt finden Sie unter:

**ESPAÑOL** : Este dispositivo cumple con los requerimientos de CE 2014/30/EU y / o 2014/35/EU. La declaración de conformidad esta disponible en:

**FRANÇAIS** : Cet appareil satisfait aux exigences de CE 2014/30/EU et / ou 2014/35/EU. La Déclaration de Conformité est disponible à:

**POLSKI** : Urządzenie spełnia wymagania CE 2014/30/EU I / lub 2014/35/EU. Deklaracja zgodności dostępna jest na stronie internetowej producenta:

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