# **PacketMAX**<sup>TM</sup>

# **Advanced Features**

Web GUI User Guide By Garland Technology

AF40G24AC



#### Garland Technology: Advanced Features System Firmware Rev Level: 3.0.9

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#### **Revision History**

| Date       | Version  | Description      |
|------------|----------|------------------|
| 09/09/2020 | 3.0.6.r2 | Previous release |





#### 1.1 Declaration

This document updates at irregular intervals because of product upgrade or other reason.

This document is for your reference only.

# 1.1 Suggestion feedback

If you have any questions when using our product and reading this document, please contact us:

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## **1.1** Audience

This document is for the following audiences:

- System maintenance engineers
- Debugging and testing engineers
- Network monitoring engineers
- Field maintenance engineers





#### 1.1 Overview

This chapter describes how to configure the switch to start the Web management function.

# **1.2 Manage network port IP address and gateway configuration**

Before you can manage the switch through the Web, you need to configure the IP address and gateway of the management network port through the command line.

E.g :

Switch(config)# management ip address 10.10.39.101/23 Switch(config)# management route add gateway 10.10.39.254

The default IP address is 10.10.10.200

# **1.3 User account and password configuration**

The user account and password for WEB management need to be configured through the command line. E.g:

Switch (config)#username admin privilege 4 password gtadmin1

The default user and password is admin, gtadmin1

# 1.4 Web page login

Open the browser (not recommended to use IE), enter the switch management address, login page shown in Figure.



# Login

+ Login

| Enter usernar | me |  |  |
|---------------|----|--|--|
| Password      |    |  |  |
| assword       |    |  |  |

#### login page

In the login page, enter the username and password you have created, click "Login", then enter the main page, as shown in Figure.

|   | D  |  |  |             |  |        |   |   | Hi: admin | Logout |
|---|--|--|--|-------------|--|--------|---|---|-----------|--------|
| Device Summary<br>• System Management<br>• Interface Management<br>• Authentication Management<br>• TAP Management<br>• Security<br>• Tools<br>Dehvicit Tau a |  |  | 9 111<br>10 12   |             | <b>1</b><br><b>1</b><br><b>1</b><br><b>1</b><br><b>1</b><br><b>1</b><br><b>1</b><br><b>1</b><br><b>1</b><br><b>1</b> | 21     | 23<br>23<br>24  |   |           |        |
| kesoorsave  | SFP Active<br>Product ID<br>Device Name<br>Serial Number<br>Software Version<br>Image Name | SFP Inactive<br>PacketMAX-<br>Switch<br>E200GD1871<br>AggregatorO<br>AggregatorO | SFP Disable<br>AF40G24AC<br>006<br>IS-3.0.9<br>IS-AF40G24AC-v3 | RJ45 Active | RJ45 Inactive  | RJ45 I | Disable<br>Hardware Version<br>BootRom Version<br>EPLD Version<br>MGMT-IF MAC Address<br>Uptime | 4.0<br>8.1.3<br>3.1<br>F0 33 C5 F1.51.40<br>10 days, 22 hours, 23 minutes |           |        |

#### main page

#### main page parameters

| Parameter item | Description            |
|----------------|------------------------|
| 1              | Vendor icon            |
| 2              | Login Username         |
| 3              | Navigation sidebar     |
| 4              | Operation display area |



Equipment Overview

# 2.1 Overview

This chapter describes the display items of the main page and their parameters, including the device interface panel, device information and equipment working status monitoring area.

Click "Device Overview" in the navigation bar to switch from other pages to the main page. The interface area of the main page of the device interface shows the status of each interface, as shown in Figure.



Interface Panel

The ports on the page correspond to the actual physical ports on the switch, while distinguishing between optical and electrical ports. The status of the port is distinguished by the color of the picture, including "active", "inactive", "off".

# 2.2 Device Information

The device information section of the main page, as shown in Figure.



#### PacketMAX Advanced Features | AF40G24AC

| Product ID       | PacketMAX-AF40G24AC                  |
|------------------|--------------------------------------|
| Device Name      | Switch                               |
| Serial Number    | E200GD187006                         |
| Software Version | AggregatorOS-3.0.9                   |
| Image Name       | AggregatorOS-AF40G24AC-v3.0.9-en.bin |

| Hardware Version    | 4.0                           |
|---------------------|-------------------------------|
| BootRom Version     | 8.1.3                         |
| EPLD Version        | 3.1                           |
| MGMT-IF MAC Address | F0:93:C5:F1:51:40             |
| Uptime              | 10 days, 22 hours, 26 minutes |

#### Device information panel

#### Device information panel

| Parameter item   | Description                              |
|------------------|--|
| Product ID       | Switch hardware model                    |
| Device Name      | Switch name                              |
| Software version | Switch software version                  |
| Image Name       | Start the mirror name                    |
| Hardware Version | Switch hardware version                  |
| Serial Number    | Switch serial number                     |
| MAC Address      | The MAC address of the switch system     |
| Uptime           | The switch has been running for the time |

# 2.3 Equipment monitoring

The main page of the device monitoring section, as shown in Figure..

| Power   |        | Status      | Mode         | CPU Usage |        | •          | Memory Usage |      |        |
|---------|--------|-------------|--------------|-----------|--------|------------|--------------|------|--------|
| psu0    |        | ок          | AC           |           | 21.28% |            | 22.74%       | 6    |        |
| psu1    |        | FAIL        | -            |           | Fan    | Speed Rate |              | Mode | Status |
| Sensor  | Status | Temperature | Position     |           | fan0   | 40%        |              | AUTO | *      |
| sensor0 | ОК     | 46          | AROUND_CHIP  |           | fan1   | 40%        |              | AUTO | *      |
| sensor1 | ок     | 71          | SWITCH_CHIP0 |           | fan2   | 40%        |              | AUTO | *      |
|         |        |             |              |           | fan3   | 40%        |              | AUTO | *      |

#### device monitor panel



Monitor power parameters

| Parameter item | Description  |
|----------------|--|
| Power          | The serial number of the switch power supply             |
| Status         | Corresponding to the status of the numbered power supply |
| Mode           | Corresponds to the mode of the power supply              |

#### Monitor warm pass parameters

| Parameter item | Description   |
|----------------|---|
| Sensor         | The serial number of the switch warm pass             |
| Status         | Corresponding to the number of warm state             |
| Temperature    | Corresponding to the temperature of the temperature   |
| Position       | Corresponding to the number of warmth of the location |

Monitor CPU utilization and memory utilization parameters

| Parameter item | Description               |
|----------------|---------------------------|
| CPU Usage      | System CPU utilization    |
| Memory Usage   | System memory utilization |

#### Monitor fan parameters

| Parameter item | Description |
|----------------|-------------|
|----------------|-------------|



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| Fan        | Number of the switch fan                      |
|------------|---|
| Speed Rate | Corresponding to the speed ratio of the fan   |
| Mode       | Corresponds to the pattern of the fan         |
| Status     | Corresponds to the status of the numbered fan |

#### Monitor the refresh time configuration

| Configuration item       | Description  |
|--------------------------|--|
| Refresh interval(Second) | Set the page to automatically refresh the interval |



# System Management

## 1.1 Overview

This chapter describes the various parts of the system administration, including file management, upgrade management, system configuration, log management, SNMP management, and time management.

#### **1.2 File management**

Click "System Management"> "File Management" to enter the file management page, the page is divided into file management options, boot and flash use size, file management information, as shown in Figure. Page click on the "Boot files", "Startup config files", "Log files" can view different types of file information

| Options         | 2ptions          |                                      | boot flash   |   |   |      |
|-----------------|------------------|--------------------------------------|--|---|---|------|
| <b>Ŧ</b> Filter | filter           | Order File                           | name V Reverse order Select all Clear all Inverse                                | 25%///6/  | 7887M   |      |
| Flash files     | Boot files       | Startup config files                 | Log files  |   |   | file |
|                 |                  |                                      |  |   |   |      |
|                 | #                | Size                                 | Last modify  | Filename  | Options   |      |
|                 | #                | Size<br>12.234K                      | Last modify<br>2019-06-13 16:45:29   | Filename<br>logo.gif                                  | Options   |      |
|                 | #<br>1<br>2      | Size<br>12.234K<br>1.305K            | Last modify<br>2019-06-13 16:45:29<br>2021-04-08 21:47:45                        | Filename<br>logo.gif<br>startup-config.conf           | Options   |      |
|                 | #<br>1<br>2<br>3 | Size<br>12.234K<br>1.305K<br>62.457K | Last modify<br>2019-06-13 16:45:29<br>2021-04-08 21:47:45<br>2021-04-19 15:42:13 | Filename<br>logo.gif<br>startup-config.conf<br>syslog | Options           ±         ±         ±           ±         ±         ±   |      |
|                 | #<br>1<br>2<br>3 | Size<br>12.234K<br>1.305K<br>62.457K | Last modify<br>2019-06-13 16-45 29<br>2021-04-08 21:47:45<br>2021-04-19 15:42:13 | Filename<br>logo gif<br>startup-config.conf<br>syslog | Options           1 |      |

sh files

management page

flash file option configuration

| Configuration item | Description                          |
|--------------------|--------------------------------------|
| <b>→</b> ]         | Download the corresponding boot file |
| <b>1</b>           | Delete the corresponding boot file   |
|                    | Back up the corresponding boot file  |



#### **1.2.2** Boot file information

Click on the "Boot files" can view the boot file information page, boot file page shown in Figure.

| Flash files | Boot files | Startup config files Log files |                                      |               |                    |         |
|-------------|------------|--------------------------------|--------------------------------------|---------------|--------------------|---------|
| . #         | Size       | Last modify                    | Filename                             | Current image | Next startup image | Options |
| 1           | 25.472M    | 2021-03-29 13:57:02            | AggregatorOS-AF40G24AC-v3.0.9-en.bin | ✓             | ✓                  | ± 🗊 4   |
| 2           | 1.129K     | 2000-03-28 16:34:33            | F093C5F15141.1.llc                   |               |                    | 1 î 🗸 3 |
|             |            |                                |                                      |               |                    |         |
| D 10        |            |                                |                                      |               |                    |         |

boot file page

| Parameter item     | Description  |
|--------------------|--|
| #                  | boot file number   |
| Size               | Corresponds to the size of the boot file                         |
| Last modify        | Corresponding number The last time the boot file was modified    |
| Filename           | Corresponding to the name of the boot file                       |
| Current image      | Corresponding number Whether the boot file is the current mirror |
| Next startup image | Corresponding number The boot file is the next boot image        |
| Options            | Corresponding to the number of boot file support options         |

boot file parameters

boot file option configuration

| Configuration item | Description                          |
|--------------------|--------------------------------------|
| <u>±</u>           | Download the corresponding boot file |
| â                  | Delete the corresponding boot file   |



| ✓  | Set the corresponding boot file for the<br>next boot image, restart after the entry<br>into force |
|----|---|
| Ľ. | Back up the corresponding boot file   |

### **1.2.3 Start the configuration file information**

Click "Startup Config files" to view the startup configuration file information page, start the configuration file page as shown in Figure.

| Flash  | files Boot file | s Startup config files | Log files           |                     |                |         |
|--------|-----------------|------------------------|---------------------|---------------------|----------------|---------|
|        | #               | Size                   | Last modify         | Filename            | Startup config | Options |
|        | 1               | 1.305K                 | 2021-04-08 21:47:45 | startup-config.conf | ✓              | ± .8    |
|        |                 |                        |                     |                     |                |         |
| Startu | up config files |                        |                     |                     |                |         |

start the configuration file page

| Parameter item | Description   |
|----------------|---|
| #              | Start the configuration file number   |
| Size           | Corresponding number starts the size of the configuration file                      |
| Last modify    | Corresponding number The last time the configuration file was modified              |
| Filename       | Corresponding to the name of the startup configuration file                         |
| Startup config | Corresponding number The startup<br>configuration file is configured for<br>startup |
| Options        | Corresponding number The option to start the configuration file support             |

start the configuration file parameters



start the configuration file option configuration

| Configuration item | Description   |
|--------------------|---|
| <u></u>            | Download the startup configuration file for the corresponding number                      |
|                    | Delete the startup configuration file for the corresponding number                        |
|                    | Set the corresponding startup<br>configuration file for the next startup<br>configuration |
|                    | Back up the startup configuration file for the corresponding number                       |

## **1.2.4 Log file information**

Click "Log files" to view the log file information page, log file page shown in Figure.

| Size | Last modify | Filename         | Options                   |
|------|-------------|------------------|---------------------------|
|      |             |                  |                           |
|      | Size        | Size Last modify | Size Last modify Filename |

log file parameter

log file parameters

| Parameter item | Description   |
|----------------|---|
| #              | Log file number                                       |
| Size           | Corresponds to the size of the log file               |
| Last modify    | Corresponds to the date the log file is last modified |
| Filename       | Corresponds to the name of the log file               |
| Options        | Corresponding to the options supported                |



| by the number log file |  |
|------------------------|--|
|------------------------|--|

#### log file parameters

| Configuration item | Description                                      |
|--------------------|--|
| Ł                  | Download the corresponding log file              |
| <b>D</b>           | Delete the log file for the corresponding number |
| - J                | Back up the corresponding log file               |

## 1.3 Update management

Click "System Management"> "Update Management" to enter the upgrade management page, as shown in Figure.

| Select image file(Upload files to boot) Choose File No file chosen | Current Information                             |  |
|--|---|--|
|  | Image Name AggregatorOS-AF40G24AC-v3.0.9-en.bin |  |
| Upload and apply Upload only                                       | Software Version 3.0.9                          |  |
|  |   |  |
| Select local file(Upload files to flash)                           |   |  |
| Choose File No file Chosen   |   |  |
| Upload   |   |  |

update management configuration

update management configuration

| Configuration item | Description                                 |
|--------------------|---|
| Select image file  | Select the image file(Upload files to boot) |
| Upload and apply   | Upload and upgrade the image file           |
| Upload only        | Only upload image files                     |



| Select local file | Select local file(Upload files to flash) |
|-------------------|--|
| Upload only       | Only upload local files                  |

update management parameters

| Parameter item   | Description              |
|------------------|--------------------------|
| Image Name       | current system image     |
| Software Version | current software version |

### **1.4** System configuration

Click "System Management"> "System Configuration" to enter the system configuration page, as shown in Figure. Click " OK " to save the configurations

| Base Settings |                |      |
|---------------|----------------|------|
| Management IP | 10.10.39.11/23 | ✔ ОК |
| Gateway       | 10.10.39.254   | ✓ ОК |
| Hostname      | DUT1           | • ок |

system configuration

## 1.5 Log management

Click "System Management"> "Log Management" to enter the log management page, click the "global configuration", "module search", "keyword search" different ways to manage the log.

#### **1.5.1 Global configuration**

Click "Global Configuration" to view the global configuration page of the log management. The global configuration is shown in Figure.



| Global Configuration   |             |                           |        |
|--|-------------|---------------------------|--------|
| Enable the log server  | On          |                           |        |
| Enable the log file  | on          |                           |        |
| Enable the log merge   | on          |                           |        |
| Level of system timestamp  | bsd         |                           |        |
| Level of cache logs  | debug       |                           |        |
| Level of system logs   | Information |                           |        |
| Level of severity logs   | warning •   |                           |        |
| Size of the log buffer   | 10~1000     | Submit                    |        |
| Address of the log servers   | mgmt        | A.B.C.D Address of server | Submit |
| Log Statistics   |             |                           |        |
| Enable the log server  | Enable      |                           |        |
| Enable the log file  | Enable      |                           |        |
| Enable the log merge   | Enable      |                           |        |
| Level of cache logs  | debug       |                           |        |
| Level of system logs   | information |                           |        |
| Level of severity logs   | warning     |                           |        |
| Size of the log buffer   | 500         |                           |        |
| The sector secto |             |                           |        |

#### log global configuration

#### global configuration

| Configuration item        | Description  |
|---------------------------|--|
| Enable the log server     | Configure whether to enable Server   |
| Enable the log file       | Configure whether to enable logging file   |
| Enable the log merge      | Configure whether to enable logging merge  |
| Level of system timestamp | Configure the timestamp format of log<br>information, including: date, bsd, iso,<br>none                                   |
| Level of system logs      | Configure the system log level,<br>including: emergency, alert, critical,<br>error, warning, notice, information,<br>debug |
| Level of cache logs       | Configure the cache log level, including:<br>emergency, alert, critical, error,<br>warning, notice, information, debug     |



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| Level of severity logs     | Configure the severity log level,<br>including: emergency, alert, critical,<br>error, warning, notice, information,<br>debug |
|----------------------------|--|
| Size of the log buffer     | Configure the cache size, valid values: 10-1000  |
| Address of the log servers | Configure the IP address of the<br>Outbound Management port of the<br>Server   |

#### log statistics parameters

| Parameter item         | Description                             |
|------------------------|---|
| Enable the log server  | Whether the server is currently enabled |
| Enable the log file    | Whether the file is currently enabled   |
| Enable the log merge   | Whether the merge is currently enabled  |
| Level of system logs   | Current system log level                |
| Level of cache logs    | Current cache log level                 |
| Level of severity logs | Current severity log level              |
| Size of the log buffer | Current cache size                      |
| Timestamp              | The current timestamp format            |

## 1.5.2 Module lookup

Click "Module lookup" to view the log management module lookup page, the module looks like Figure.



| Global Configuration Module lookup           | Keyword lookup |       |          |         |
|--|----------------|-------|----------|---------|
| According Severity all  According Module all |                |       |          |         |
| Jpdate Flush                                 |                |       |          |         |
| Log information                              |                |       |          |         |
| Time   | Module         | Event | Severity | Content |

#### module lookup

module lookup configuration

| Configuration item | Description   |
|--------------------|---|
| According Severity | The module is searched by level, including:0-7  |
| According Module   | Module search by module, the module<br>includes: All, AAA, FAN, INTERFACE,<br>LAG, NTP, POWER, PSU, SYSTEM,<br>TEMPERATURE, TRANSCEIVER, SSHD |
| Update             | Refresh all logs  |
| Flush              | Delete all logs   |

log information parameters

| Parameter item | Description  |
|----------------|--|
| Time           | Corresponding log generated time                   |
| Module         | Corresponds to the module to which the log belongs |
| Event          | Corresponding log events                           |
| Severity       | Corresponds to the priority of the log             |
| Content        | Corresponds to the contents of the log record      |



#### 1.5.3 Keyword lookup

Click on "keyword" to view the log management keyword search, keyword search shown in Figure.

| Global Configuration | Module lookup | Keyword lookup |       |          |         |
|----------------------|---------------|----------------|-------|----------|---------|
| Keyword System       |               |                |       |          |         |
| Update Flush         |               |                |       |          |         |
| Log information      |               |                |       |          |         |
| Time                 |               | Module         | Event | Severity | Content |

#### keyword lookup

keyword lookup configuration

| Configuration item | Description           |
|--------------------|-----------------------|
| Keyword            | Log search by keyword |
| Update             | Refresh all logs      |
| Flush              | Delete all logs       |

#### log information parameters

| Parameter item | Description  |
|----------------|--|
| Time           | Corresponding log generated time                   |
| Module         | Corresponds to the module to which the log belongs |
| Event          | Corresponding log events                           |
| Severity       | Corresponds to the priority of the log             |
| Content        | Corresponds to the contents of the log record      |



## **1.6 Snmp management**

Click "System Management"> "Snmp Management" to enter the Snmp management page, click "SNMP Server Configuration", "SNMP Community Configuration" to carry out the relevant configuration.

#### 1.6.1 Server configuration

Click "SNMP Server Configuration " to view the server configuration page for Snmp management, as shown in Figure.

| SNMP Server Configuration | SNMP Community Configuration | SNMP-v3 trap Configuration   |       |
|---------------------------|------------------------------|--|-------|
|                           |                              |  |       |
| Global Configuration      |                              |  |       |
| Enable Snmp Server        | Off                          |  |       |
| Enable Snmp Trap          | off                          |  |       |
| Set Snmp Version          | all                          | ·  |       |
| Set Trap Target Address   | mgmt                         | A.B.C.D. Address of target serve     Snmp community string     udpport 0-65535     State | ubmit |

Server configuration

Server configuration parameters

| Configuration item      | Description  |
|-------------------------|--|
| Enable Snmp Server      | Configure whether to enable SNMP                         |
| Enable Snmp             | Configure whether to enable Trap                         |
| Set Snmp Version        | Set version, version includes:all、v1、v2c                 |
| Set Trap Target Address | Set the IP address and community name of the Trap server |

# 1.6.2 Community configuration

Click "community configuration" to view the SNMP management and community configuration page, as shown in Figure.



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| SNMP Server Configuration | SNMP Community Configuration | SNMP-v3 trap Configuration |               |         |
|---------------------------|------------------------------|----------------------------|---------------|---------|
| Community Configuration   |                              |                            |               |         |
| Set Community             | Community Name               |                            | Submit        |         |
| Community Information     |                              |                            |               |         |
| #                         | Community-<br>Name Commun    | ity-Access                 | Security-name | Options |

#### community configuration

community parameters configuration

| Configuration item | Description   |
|--------------------|---|
| Set Community      | Set the Community name and permissions, permissions include: read-only and read and write |

#### community parameters

| Parameter        | Description   |
|------------------|---|
| #                | Corresponds to the number of<br>Community                               |
| Name             | Corresponding to the name Community                                     |
| Community-Access | Corresponding number Community permissions                              |
| Security-name    | Corresponding number Community security name                            |
| Options          | Corresponding number Community support options, options include: delete |

#### 1.6.3 SNMP-v3 trap configuration

Click "SNMP-v3 trap configuration" to view the SNMP management and SNMP-v3 trap configuration page, as shown in Figure.



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#### snmp trap configuration

| SNMP Server Conf           | iguration SNMP Community Configura | ation SNMP-v3 trap Configuration |                                  |                     |                 |        |
|----------------------------|------------------------------------|----------------------------------|----------------------------------|---------------------|-----------------|--------|
|                            |                                    |                                  |                                  |                     |                 |        |
| V3 trap Configure          | ation                              |                                  |                                  |                     |                 |        |
| Context                    | Context name                       | Submit                           |                                  |                     |                 |        |
| Usm-user<br>Configuration  | Usm-user name                      |                                  |                                  |                     |                 |        |
| Password<br>Configuration  | ~                                  | Authentication password          | ~                                | Encryption password | Submit          |        |
| Notify                     | Notify Name                        | Taglist Name                     | ~                                | Submit              |                 |        |
| Set Trap Target<br>params  | Target param name                  | Usm-user name                    | ~                                | Submit              |                 |        |
| Set Trap Target<br>Address | Target address name                | Target param name                | A.B.C.D Address of target server | Taglist name        | udpport 0-65535 | Submit |

## 1.7 Time management

Click "System Management"> "Time Management" to enter the time management page, as shown in Figure  $_{\circ}$ 

| Global Configuration |                              |                           |              |  |  |
|----------------------|------------------------------|---------------------------|--------------|--|--|
| System Time          | 06:35:19 Fri Mar 20 2020 UTC | Refresh                   |              |  |  |
| Set Time             | 2020 3                       | 20 06                     | 35 19 Submit |  |  |
| Set Ntp Server       | mgmt 💌                       | A.B.C.D Address of server | Submit       |  |  |
| Timestamp sync       | off                          |                           |              |  |  |

#### time management

time management configuration

| Configuration item | Description                          |  |  |  |
|--------------------|--------------------------------------|--|--|--|
| System Time        | the current system time              |  |  |  |
| Set Time           | Set the system time                  |  |  |  |
| Set NTP Server     | Set the IP address of the NTP server |  |  |  |



# Port management

### 1.1 Overview

This chapter describes the port configuration on the switch.

#### 1.2 Port state

This section describes how to configure and view the port connection status.

#### **1.2.1 Basic information**

Click "Interface Management">"Interface Status" to enter the port state home page, as shown in Figure . This page shows the working status of each port on the switch. Click on the relevant state to enter the corresponding port state configuration.

| Port      |        |        |            |       |          |        |             |       |        |
|-----------|--------|--------|------------|-------|----------|--------|-------------|-------|--------|
| Port      | Status | Duplex | Svlan-tpid | Speed | Phy-Type | Filter | Description | Split | Enable |
| eth-0-1/1 | down   | auto   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | Yes   | on     |
| eth-0-1/2 | down   | auto   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | Yes   | on     |
| eth-0-1/3 | down   | auto   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | Yes   | on     |
| eth-0-1/4 | down   | auto   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | Yes   | On     |
| eth-0-2   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-3   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | On     |
| eth-0-4   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-5   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | On     |
| eth-0-6   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-7   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-8   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-9   | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-10  | down   | full   | 0x8100     | 40G   | UNKNOWN  | N/A    | N/A         | No    | On     |
| eth-0-11  | down   | full   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-12  | down   | full   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | No    | on     |
| eth-0-13  | down   | full   | 0x8100     | AUTO  | UNKNOWN  | N/A    | N/A         | No    | on     |
|           |        |        |            |       |          |        |             |       |        |

Port state


Port state parameters

| Parameter item | Description  |
|----------------|--|
| Port           | Displays the port name   |
| Status         | Displays the link status of the port (up or down)  |
| Duplex         | Displays the duplex mode of the port (<br>auto, full, half)                                      |
| Svlan-tpid     | Displays the svlan-tpid(0x8100,0x88A8,<br>0x9100) for the corresponding port                     |
| Speed          | Displays the operating rate of the port (<br>auto, 10,100,1000,2.5G, 5G, 10G, 25G,<br>40G, 100G) |
| Phy-Type       | Displays the physical type of the port   |
| Filter         | Display port filtering   |
| Description    | Displays the description of the port   |
| Split          | Displays the split of the port(yes, no)  |
| Enable         | Displays the port enable   |

# 1.2.2 Port property configuration

# **Port duplex configuration**

Click on the port duplex function, enter the port duplex configuration, as shown in Figure. Click "OK" to complete the configuration.





Port duplex configuration

Duplex configuration parameters

| Configuration item | Description                            |
|--------------------|--|
| full               | Configure the port as full duplex mode |
| half               | Configure the port as half duplex mode |
| auto               | Configure the port as auto duplex mode |

### Port rate configuration

Click on the port rate attribute, enter the port rate configuration, as shown in Figure, click "OK" to complete the configuration

| Speed      | AUTO  | • |      |       |
|------------|-------|---|------|-------|
|            | AUTO  |   |      |       |
|            | 10    |   |      |       |
|            | 100   |   |      |       |
|            | 1000  |   |      | Close |
|            | 2.5G  |   | V OR |       |
|            | 5G    |   |      |       |
|            | 10G   |   |      |       |
| in down au | 1 40G |   | WN   | N/A   |
|            | 100G  |   |      |       |

### Port rate configuration

#### Rate configuration parameters

| Configuration item | Description                           |
|--------------------|---------------------------------------|
| AUTO               | Configure the port as auto            |
| 10                 | Configure the port at a rate of 10M   |
| 100                | Configure the port at a rate of 100M  |
| 1000               | Configure the port at a rate of 1000M |
| 2.5G               | Configure the port at a rate of 2.5G  |
| 5G                 | Configure the port at a rate of 5G    |



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| 10G  | Configure the port at a rate of 10G  |
|------|--------------------------------------|
| 25G  | Configure the port at a rate of 25G  |
| 40G  | Configure the port at a rate of 40G  |
| 100G | Configure the port at a rate of 100G |

### Port filtering configuration

Click on the port filter attributes, enter the port filter configuration, as shown in Figure, click "OK" to complete the configuration.

| Enable<br>Flow Name | •          |
|---------------------|------------|
|                     | ✓ OK Close |

### Port filtering configuration

Filtering configuration parameters

| Configuration item | Description   |
|--------------------|---|
| Enable             | Configure whether the port is enabled for filtering |
| Flow Name          | Configure the name of the port to filter            |

### Port description configuration

Click the port description attribute, enter the port description configuration, as shown in Figure, click "OK" to complete the configuration.



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| Enable      | on               |     |         |
|-------------|------------------|-----|---------|
| Description | Port description | ]   |         |
|             |                  | ∢ок | × Close |

Port description configuration

Describe the configuration parameters

| Configuration item | Description                           |
|--------------------|---------------------------------------|
| Enable             | Configure whether the port is enabled |
| Description        | Configure the description of the port |

# Port split configuration

#### Port split configuration:

Click the port description attribute, enter the port description configuration, as shown in Figure, click "OK" to complete the configuration.

| eth-0-1<br>Notice:Configuration sho | ould be writen in startup-o | config, and take effect a | at next reload | ×       |
|-------------------------------------|-----------------------------|---------------------------|----------------|---------|
| Split Port                          | 10giga                      | •                         | 1              |         |
|                                     | 10giga<br>40giga            |                           |                |         |
|                                     |                             |                           | ✓ок            | X Close |

#### Port split configuration

Split port configuration parameters

| Configuration item | Description                             |
|--------------------|---|
| Prompt information | The split configuration will be written |



|            | to startup-config and will take effect<br>after reboot |
|------------|--|
| Split Port | Configure split points for10giga, 40giga               |

Click on the port split attribute "Yes", enter the port split configuration, as shown in Figure, click "OK" to complete the configuration.



Port split configuration

Port split configuration parameters

| Configuration item | Description   |
|--------------------|---|
| Prompt information | The split configuration will be written<br>to startup-config and will take effect<br>after reboot |
| Prompt information | Indicates whether the current port state<br>is aggregated and whether the port is<br>split        |

Clear the split port:

Click the split attribute "NO" to split the port, enter the clear port split configuration, as shown in Figure, click "clear" to complete the configuration.



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| eth-0-3<br>Notice:Configuration sho | uld be writen in startup-config, and take eff | ect at next reload | × |
|-------------------------------------|---|--------------------|---|
| Split Port                          | 10giga  | •                  |   |
|                                     |   | 🗸 Clear 🛛 🗱 Close  | e |

Clear the split port

Clear the split configuration

| Configuration item | Description   |
|--------------------|---|
| Prompt information | The split configuration will be written<br>to startup-config and will take effect<br>after reboot |
| Split Port         | Configure split points for10giga, 40giga  |

Click the split attribute "YES" to split the port, enter the clear port split configuration, as shown in Figure 4 10, click "OK" to complete the configuration.



#### Clear the split port

Clear the split configuration

| Configuration item | Description  |
|--------------------|--|
| Prompt information | The split configuration will be written to startup-config and will take effect |



| after reboot                        |   |
|-------------------------------------|---|
| Prompt information is split and agg | er the current port state<br>regates the port |

# Port enable configuration

Click the enable attribute of the port to select whether to enable the port.

Enable configuration parameters

| Configuration item | Description                                  |
|--------------------|--|
| Enable             | Configure whether the port is enabled or not |

# **1.3 Port statistics**

This section describes how to view the statistics for a port.

# **1.3.1 Basic information**

Click "Interface Management">"Interface Stats" to enter the port statistics main page, as shown in Figure.

| ptions    |         |               |                   |                          |                         |              |           |              |            |                          |                       |
|-----------|---------|---------------|-------------------|--------------------------|-------------------------|--------------|-----------|--------------|------------|--------------------------|-----------------------|
| Select al | I Clea  | r all Inverse | Update Statistics | Single Port Transmit/Rec | eive Rate Stat All Port | s Transmit/I | Receive I | Flow Stat    |            |                          |                       |
|           |         |               |                   |                          |                         |              |           |              |            |                          |                       |
|           |         |               |                   | Input Stat               |                         |              |           |              |            | Output Stat              |                       |
|           | Port    | Packets Stat  | Bytes Stat        | Input Rate(packets/sec)  | Input Rate(bits/sec)    | Errors       | CRC       | Packets Stat | Bytes Stat | Output Rate(packets/sec) | Output Rate(bits/sec) |
| ett       | n-0-1/1 | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| _ etr     | 1-0-1/2 | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| etr       | 1-0-1/3 | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| etr       | n-0-1/4 | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| ) et      | th-0-2  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| ) et      | th-0-3  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| ] et      | th-0-4  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | Ō                        | 0                     |
| ] et      | th-0-5  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | Ō                        | 0                     |
| _ et      | th-0-6  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| _ et      | th-0-7  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| _ et      | th-0-8  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| ] et      | th-0-9  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |
| ] et      | h-0-10  | 0             | 0                 | 0                        | 0                       | 0            | 0         | 0            | 0          | 0                        | 0                     |



Port statistics parameters

| Parameter item | Description  |
|----------------|--|
|                | Corresponding port selection box                         |
| Port           | Corresponding port name                                  |
| Packet Input   | Correspondent packets of incoming packets                |
| Bytes Input    | Corresponds to the incoming byte of the port statistics  |
| Packet Output  | Correspond to the outbound packet statistics of the port |
| Bytes Output   | Corresponding port outbound byte statistics              |

# 1.3.2 Update and clear statistics

Select the corresponding port selection box, click "Update Statistics" to update the corresponding port statistics, as shown in Figure.

| ( | Options  |         |                |            |                          |                       |        |         |                 |                |        |   |
|---|----------|---------|----------------|------------|--------------------------|-----------------------|--------|---------|-----------------|----------------|--------|---|
|   | Select   | all C   | lear all Inver | se Update  | e Statistics Single Port | Transmit/Receive Rate | e Stat | All Por | ts Transmit/Rec | eive Flow Stat |        |   |
|   |          |         |                |            |                          |                       |        |         |                 |                |        |   |
|   |          |         |                |            |                          |                       |        |         |                 |                |        | Modify  |
|   |          |         |                |            | Input Stat               |                       |        |         |                 |                | Out    | Port  |
|   | <b>~</b> | Port    | Packets Stat   | Bytes Stat | Input Rate(packets/sec)  | Input Rate(bits/sec)  | Errors | CRC     | Packets Stat    | Bytes Stat     | Output | eth-0-1/1 eth-0-1/2 eth-0-1/3 eth-0-1/4 eth-0-2 eth-0-3 eth-0-4 eth-0-5                               |
|   | 🗹 etl    | h-0-1/1 | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        | eth-0-14 eth-0-15 eth-0-16 eth-0-17 eth-0-18 eth-0-19 eth-0-20<br>eth-0-14 eth-0-23 eth-0-23 eth-0-24 |
|   | 🗹 eti    | h-0-1/2 | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        | euro-21 euro-22 euro-23 euro-24   |
|   | 🗹 ett    | h-0-1/3 | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        | Clear Statistics  |
|   | 🗹 ett    | h-0-1/4 | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | e e      | th-0-2  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | e e      | th-0-3  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | 🖌 e      | th-0-4  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | 🖌 e      | th-0-5  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | 🗹 e      | th-0-6  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | 🗹 e      | th-0-7  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | ✓ e      | th-0-8  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | 🖌 e      | th-0-9  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   | 🗸 et     | h-0-10  | 0              | 0          | 0                        | 0                     | 0      | 0       | 0               | 0              |        |   |
|   |          |         |                |            |                          |                       |        |         |                 |                |        |   |

### Update and clear statistics



Update and clear statistics configuration

| Configuration item | Description                              |
|--------------------|--|
| Update Statistics  | Update the corresponding port statistics |
| Clear Statistics   | Clear the corresponding port statistics  |

# **1.3.3 Statistical details**

Click the corresponding port name to enter the detailed statistics page of the port, as shown in Figure.







Detail

| Packets Input                     | 0 |
|-----------------------------------|---|
| Bytes Input                       | 0 |
| Packets Output                    | 0 |
| Bytes Output                      | 0 |
| 5 Minute Input Rate(packets/sec)  | 0 |
| 5 Minute Input Rate(bits/sec)     | 0 |
| Input Unicast Packet              | 0 |
| Input Broadcast Packet            | 0 |
| Input Multicast Packet            | 0 |
| Input Runts                       | 0 |
| Input Giants                      | 0 |
| Input Errors                      | 0 |
| Input CRC                         | 0 |
| Input Frame                       | 0 |
| Input Pause                       | 0 |
| 5 Minute Output Rate(packets/sec) | 0 |
| 5 Minute Output Rate(bits/sec)    | 0 |
| Output Unicast Packet             | 0 |
| Output Broadcast Packet           | 0 |
| Output Multicast Packet           | 0 |
| Output Errors                     | 0 |
| Output Pause                      | 0 |
|                                   |   |



statistical details

Statistical details parameters

| Parameter item | Description                               |
|----------------|---|
| Packets Input  | Correspondent packets of incoming packets |

 $\times$ 



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| Bytes Input                      | Corresponds to the incoming byte of the port statistics  |
|----------------------------------|--|
| Packets Output                   | Correspond to the outbound packet statistics of the port   |
| Bytes Output                     | Corresponding port outbound byte statistics  |
| 5 Minute Input Rate(packets/sec) | Corresponding port 5 minutes into the direction of the message rate (packet / sec)                 |
| 5 Minute Input Rate(bits/sec)    | Corresponding port 5 minutes into the direction of the message rate (bits / sec)                   |
| Input Unicast Packet             | Corresponds to the statistics of unicast packets in the incoming direction of the port             |
| Input Broadcast Packet           | Corresponds to the statistics of the<br>broadcast packets in the incoming<br>direction of the port |
| Input Multicast Packet           | Correspond to the statistics of multicast<br>packets in the inbound direction of the<br>port       |
| Input Runts                      | Corresponding port in the direction of the ultra-short frame statistics                            |
| Input Giants                     | Corresponding port in the direction of the large frame statistics                                  |
| Input Errors                     | Corresponds to the statistics of the<br>error frame in the incoming direction of<br>the port       |
| Input CRC                        | Corresponds to the statistics of the CRC   |



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|                                  | in the incoming direction of the port   |
|----------------------------------|---|
| Input Frame                      | Corresponds to the statistics of the total<br>number of frames in the incoming<br>direction of the port |
| Input Pause                      | Corresponds to the statistics of the<br>Pause frame in the incoming direction<br>of the port            |
| 5 Minute Output Rate(packes/sec) | Corresponding port 5 minutes outbound packet rate (packet / s)  |
| 5 Minute Output Rate (bits/sec)  | Corresponding port 5 minutes outbound message rate (bits per second)                                    |
| Output Unicast Packet            | Correspond to the statistics of unicast<br>packets in the outbound direction of the<br>port             |
| Output Broadcast Packet          | Corresponds to the statistics of the<br>broadcast packets in the outbound<br>direction of the port      |
| Output Multicast Packet          | Correspond to the statistics of multicast<br>packets in the outbound direction of the<br>por            |
| Output Errors                    | Corresponds to the statistics of the<br>error frame in the outbound direction of<br>the port            |
| Output Pause                     | Corresponds to the statistics of the<br>Pause frame in the outbound direction<br>of the port            |

# **1.4 Link aggregation**

This section describes how to configure and view static link aggregation ports.



# **1.4.1 Basic information**

Click "Interface Management">"Link Aggregation" to enter the link aggregation main page. You can view the basic information of link aggregation, as shown in Figure.

E IInk Aggregation Name Load Balance Mode Protocol Group State Ports in Bundle Member Ports Max Ports

Link aggregation

link aggregation parameters

| Configuration item    | Description  |
|-----------------------|--|
| #                     | Link aggregation number  |
| Link Aggregation Name | Corresponding number of aggregated port names  |
| Load Balance Mode     | Corresponding number of load ports for<br>aggregated ports, including:static、<br>round-robin |
| Protocol              | Corresponding number aggregation port protocol mode  |
| Group State           | Corresponds to the status of the numbered aggregation port                                   |
| Ports in Bundle       | Corresponding number The current number of bundled ports                                     |
| Member Ports          | Corresponding number of member ports   |
| Max Ports             | Corresponding number Maximum<br>number of member ports                                       |

# **1.4.2 Global configuration**

Link aggregation global configuration, you can configure the load sharing hash field. Figure shows the configuration of the link aggregation globally.



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| Global Configuration          |                  |
|-------------------------------|------------------|
| Load Balance Hash Field       |                  |
| dst-ip                        | On               |
| dst-mac                       | Off              |
| dst-port-I4                   | On               |
| gre-key                       | Off              |
| inner-dst-ip                  | Off              |
| inner-dst-mac                 | Off              |
| inner-dst-port-l4             | Off              |
| inner-ip-protocol             | Off              |
| inner-src-ip                  | Off              |
| inner-src-mac                 | Off              |
| inner-src-port-I4             | Off              |
| ip-protocol                   | Off              |
| nvgre-flow-id                 | Off              |
| nvgre-vsid                    | Off              |
| src-ip                        | on               |
| src-mac                       | Off              |
| src-port-I4                   | on               |
| vxlan-vni                     | Off              |
| Load Balance Tunnel Hash Mode |                  |
| mode                          | both outer inner |

### Global configuration

### Global configuration

| Configuration item | Description   |
|--------------------|---|
| dst-ip             | Configure whether the load is balanced<br>according to the destination IP address<br>of the packet  |
| dst-mac            | Configure whether the load is balanced<br>according to the destination MAC<br>address of the packet |
| dst-port-l4        | Whether the configuration is based on<br>the TCP / UDP L4 destination port<br>number load balancing |



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| gre-key       | Whether the configuration is balanced<br>according to the key field of gre in the<br>message                 |
|---------------|--|
| Inner-dst-ip  | Whether the configuration is based on<br>the IP address load balancing in the<br>packet                      |
| inner-dst-mac | Whether the configuration is based on<br>the MAC address load balancing in the<br>packet                     |
| inner-src-ip  | Whether the configuration is based on<br>the load balancing of the inner source IP<br>address of the packet  |
| inner-src-mac | Whether the configuration is based on<br>the load balancing of the inner source<br>MAC address of the packet |
| ip-protocol   | Whether the configuration is balanced<br>according to the IP protocol load in the<br>packet                  |
| nvgre-flow-id | Whether the configuration matches the<br>flow-id field of the nygre packet in the<br>packet                  |
| nvgre-vsid    | Whether the configuration matches the vsid field of the nvgre packet in the packet                           |
| src-ip        | Configure whether the load is balanced<br>according to the source IP address in<br>the packet                |
| src-mac       | Configure whether the load is balanced<br>according to the source MAC address in<br>the packet               |



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| src-port-l4 | Configure whether the load balancing is<br>based on the port number of the L4 of<br>tcp / udp in the packet |
|-------------|---|
| vxlan-vni   | Configure whether the load is balanced<br>according to the vnilan of the vxlan in<br>the packet             |
| mode        | Configure the Hash mode of load<br>balance tunnel, includes both, outer<br>and inner.                       |

# **1.4.3 Link aggregation configuration**

### Add the aggregation group

Click "Add" to enter the aggregation group to increase the page, select the port and aggregation group, click "Submit" to complete the aggregation group to increase.

| Agg mode select | static-channel-group Y Link Aggregation Name | ıg 1       | Load Balance Mode static ~ |            |            |
|-----------------|--|------------|----------------------------|------------|------------|
| 🗆 eth-0-1       | <b>Z</b> eth-0-2                             | deth-0-3   | <b>2</b> eth-0-4           | 🗹 eth-0-5  | 🗌 eth-0-6  |
| eth-0-7         | 🗆 eth-0-8                                    | 🗌 eth-0-9  | 🗆 eth-0-10                 | 🗆 eth-0-11 | 🗌 eth-0-1  |
| eth-0-13        | 🗌 eth-0-14                                   | eth-0-15   | 🗆 eth-0-16                 | 🗌 eth-0-17 | 🗌 eth-0-1  |
| eth-0-19        | 🗌 eth-0-20                                   | 🗌 eth-0-21 | 🗆 eth-0-22                 | eth-0-23   | 🗌 eth-0-2- |
| eth-0-25        | 🗆 eth-0-26                                   | eth-0-27   | 🗆 eth-0-28                 | eth-0-29   | 🗌 eth-0-3  |
| eth-0-31        | 🗆 eth-0-32                                   | 🗌 eth-0-33 | 🗆 eth-0-34                 | eth-0-35   | 🗌 eth-0-3  |
| eth-0-37        | 🗌 eth-0-38                                   | 🗌 eth-0-39 | 🗆 eth-0-40                 | 🗌 eth-0-41 | 🗌 eth-0-4  |
| eth-0-43        | 🗌 eth-0-44                                   | eth-0-45   | 🗆 eth-0-46                 | 🗆 eth-0-47 | 🗌 eth-0-4  |
| eth-0-49        | 🗆 eth-0-50                                   | eth-0-51   | 🗆 eth-0-52                 | eth-0-53   | 🗌 eth-0-5  |
|                 |  |            |                            |            |            |



### Delete the aggregation group

Select the number corresponding to the aggregation group and click xx to delete the corresponding numbered aggregation group, as shown in Figure.

| + A | dd | Delete                |                   |          |             |                 |                                 |           |
|-----|----|-----------------------|-------------------|----------|-------------|-----------------|---------------------------------|-----------|
|     | #  | Link Aggregation Name | Load Balance Mode | Protocol | Group State | Ports in Bundle | Member Ports                    | Max Ports |
|     | 1  | agg1                  | static            | static   | L2          | 0               | eth-0-2 eth-0-3 eth-0-4 eth-0-5 | 16        |

delete the aggregation group



### Configure the load sharing mode

Click "Load Balance Mode" to enter the configuration load sharing mode page, as shown in Figure.

| Agg mode select | static-channel-group ¥ | Link Aggregation Name | agg | <1-16> | Load Balance Mode | static | ~ |
|-----------------|------------------------|-----------------------|-----|--------|-------------------|--------|---|
| Agg mode select | static-channel-group   | Enn Aggregation nume  | agg | 31-102 | Loud Dulunde mode | Static |   |

load balance mode

load balance mode configuration

| Configuration item | Description  |
|--------------------|--|
| Agg                | Configure the corresponding agg  |
| Mode               | Configure the load balancing mode for the corresponding agg, including:static、 |
|                    | round-robin  |

# 1.5 Optical module status

This section focuses on the status of the optical module

### **1.5.1 Basic information**

Click "Interface Management">"Transceiver Status" to enter the main page of the optical module status, you can view the basic status of the optical module status, as shown in Figure.

| Transceiver |      |        |    |     |
|-------------|------|--------|----|-----|
| Port        | Туре | Vendor | PN | S/N |

#### optical module status

#### optical module status parameters

| Parameter item | Description                             |
|----------------|---|
| Port           | Corresponding port name                 |
| Туре           | Corresponds to the type of port optical |



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|        | module  |
|--------|---|
| Vendor | Corresponding to the port optical module manufacturers      |
| PN     | Corresponds to the part number of the port optical module   |
| S/N    | Corresponds to the serial number of the port optical module |



# Certification management

# 1.1 Overview

This chapter describes the authentication management on the switch.

# **1.2** AAA authentication

This section describes how to configure and view AAA authentication.

### **1.2.1 Basic information**

Click "Authentication Management">"AAA" to enter the main page of the authentication. This page can check the basic information of AAA authentication, as shown in Figure.

|                      |     | Δ./ |
|----------------------|-----|-----|
| AAA Enable           | off |     |
| Global Configuration |     |     |

authentication

AAA authentication parameters

| Parameter item   | Description                               |
|------------------|---|
| #                | Corresponding AAA authentication number   |
| Method List Type | The number of the corresponding number    |
| Name             | Corresponding number of name              |
| State            | Corresponding to the status of the number |
| List             | A list of the corresponding numbers, the  |



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|         | list includes:none, local, tacplus, radius             |
|---------|--|
| Options | The corresponding number of options, including: delete |

# **1.2.2** Global configuration

Click the "AAA Enable" button to select whether to enable AAA authentication, as shown in Figure.

| Global Configuration |    |
|----------------------|----|
| AAA Enable           | on |

AAA authentication global configuration

# **1.2.3** Authentication configuration

Click the corresponding list of parameters to enter the authentication configuration page, as shown in Figure.

| Name        | default                    |   |
|-------------|----------------------------|---|
| Method List | none                       | ] |
|             | local<br>tacplus<br>radius |   |
|             | none                       |   |
|             |                            |   |

AAA authentication configuration

authentication configuration parameters

| Configuration item | Description   |
|--------------------|---|
| Name               | Displays the authentication configuration name is default                               |
| Method List        | Configure the authentication method,<br>including:none, tacplus, local, radius,<br>line |



# **1.3** Tacacs authentication

This section describes the configuration and viewing Tacacs authentication.

# **1.3.1 Basic information**

Click "Authentication Management">"Tacacs"to enter the Tacacs main page, this page can view the Tacacs authentication basic information, as shown in Figure.

| Tacacs Server |             |     |      |         |         | Add Server |
|---------------|-------------|-----|------|---------|---------|------------|
| #             | Server Host | VRF | Port | Timeout | Retries | Secret     |

#### Tacacs authentication

Tacacs authentication parameters

| Parameter item | Description                                     |
|----------------|---|
| #              | Corresponding Tacacs certification number       |
| Server Host    | Corresponding number Server host                |
| Port           | Corresponding number port number,<br>default 49 |
| Timeout        | Corresponding numbering timeout, in seconds     |
| Retries        | Number of retries for the corresponding number  |
| Secret         | Corresponding number of keys                    |

### 1.3.2 Add the server

Click "Add Server" to enter the T server configuration page, as shown in Figure.

| -<br>- | Add          |         | × |               |
|--------|--------------|---------|---|---------------|
|        | Server Host  | mgmt    | ~ |               |
| 3.0.9  | Host Address | A.B.C.D |   | echnology.com |
|        | Key String   | off     |   |               |
|        | Auth Port    | off     |   |               |

Retries

off



add the server

add server configuration

| Configuration item | Description                                       |
|--------------------|---|
| Server Host        | Configure the IP address of the Tacacs server     |
| Key String         | Enabler Key String                                |
| Value              | Configure the specified key for the Tacacs server |

### **1.3.3 Delete the server**

Click the Delete button to complete the removal of the server configuration.

#### delete the server

| Configuration item | Description  |
|--------------------|--|
|                    | Delete the corresponding number of<br>Tacacs servers |

# 1.4 Radius authentication

This section describes how to configure and view Radius authentication.



# **1.4.1 Basic information**

Click "Authentication Management">" Radius" to enter the Radius main page, this page can view the Radius authentication basic information, as shown in Figure.

| Global Configurati | ion         |     |        |         |         | 🌣 Modify   |
|--------------------|-------------|-----|--------|---------|---------|------------|
|                    | Deadtime    | 1   | ïmeout | Retries |         | Secret     |
|                    | 5           |     | 5      | 3       |         | N/A        |
|                    |             |     |        |         |         |            |
| Radius Server      |             |     |        |         |         | Add Server |
| #                  | Server Host | VRF | Port   | Timeout | Retries | Secret     |
|                    |             |     |        |         |         |            |

Radius authentication

global configuration parameters

| Parameter item | Description   |
|----------------|---|
| Deadtime       | Display the dead time of Radius, in minutes             |
| Timeout        | Show Radius timeout, in seconds                         |
| Retries        | Show the number of retries for Radius                   |
| Secret         | Displays the key for Radius. If no key is displayed N/A |

Radius authentication parameters

| Parameter item | Description   |
|----------------|---|
| #              | Corresponds to the number of the Radius server                      |
| Server Host    | The corresponding Radius server IP address                          |
| Port           | Corresponding number of the Radius server port number, default 1812 |
| Secret         | Displays the key for Radius. If no key is displayed N/A             |



# 1.4.2 Add the server

Click "add server" to enter the R server configuration page, as shown in Figure.

| Add          | ×            |
|--------------|--------------|
| Server Host  | mgmt         |
| Host Address | A.B.C.D      |
| Key String   | Off          |
| Auth Port    | Off          |
| Retries      | Off          |
| Timeout      | off          |
|              |              |
|              | ✓ OK K Close |

#### add the server

add server configuration

| Configuration item | Description                                   |
|--------------------|---|
| Server Host        | Configure the IP address of the Radius server |

### **1.4.3 Delete the server**

Click the Delete button to complete the removal of the server configuration

#### delete the server

| Configuration item | Description                            |
|--------------------|--|
| <b>1</b>           | Delete the corresponding Radius server |



# Tap management

# 1.1 Overview

This chapter describes the tap management on the switch.

# **1.2** TAP

# 1.2.1 Tap statistics

Click "Tap Management">"Tap" to enter the Tap main page, this page can view the Tap statistics, as shown in Figure.

| TAP Statis | tics   |                |                       | + Add TAP Group      | Truncation |
|------------|--------|----------------|-----------------------|----------------------|------------|
| #          | TAP Id | TAP Group Name | TAP Group Description | TAP Group truncation | Options    |
| 1          | 10     | TG1            | N/A                   | NO                   | 1          |
|            |        |                |                       |                      |            |

### Tap statistics

Tap statistics parameters

| Parameter item        | Description   |
|-----------------------|---|
| #                     | Corresponds to Tap number   |
| Tap Id                | The corresponding number of Tap ID                                  |
| Tap Group Name        | The corresponding group name of the tap                             |
| Tap Group Description | Correspond to the description of Tap                                |
| Tap Group truncation  | Whether the corresponding tap is enabled for truncation             |
| Options               | Corresponding to the number of Tap options, options include: delete |



# 1.2.2 Global configuration

On the main page of Tap statistics. Click xx, xx, xx can be the corresponding global configuration.

### Add a set of Tap

Click "Add Tap Group", you can enter the page to increase Tap, as shown in Figure.

| Tap Group Name | Configure group name | ]   |         |
|----------------|----------------------|-----|---------|
| Tap Group ID   | 0                    | ]   |         |
|                |                      | ∢ок | X Close |

add Tap

add Tap configuration

| Configuration item | Description                  |
|--------------------|------------------------------|
| Tap Group Name     | Configure the Tap group name |
| Tap Group ID       | Configure the Tap ID         |

### Message truncated

Click "Truncation" to enter the page where the configuration message is truncated, as shown in Figure.

message truncated



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| Truncation Length    | ×            |
|----------------------|--------------|
| Truncation Enable On |              |
| 64 ~ 144             |              |
|                      | ✓ OK K Close |

#### message truncated configuration

| Configuration item | Description                                     |
|--------------------|---|
| Truncation Enable  | Configure whether to enable packet truncation   |
| Truncate length    | Configure the truncation of packets(<br>64~144) |

# Timestamp

Click "Timestamp" to enter the page with configuration timestamp, as shown in Figure.



| Configuration item | Description |
|--------------------|-------------|
|--------------------|-------------|



| Timestamp Enable | Configure whether to enable timestamp                    |
|------------------|--|
| dst-mac          | Configure the destination MAC with the timestamp message |
| src-mac          | Configure the source MAC with the timestamp message      |
| Туре             | Configure the Ethernet type to carry timestamp packets   |

# **1.2.3 Tap statistics configuration**

Click on the corresponding tap information, enter the corresponding number of Tap information configuration.

### **Attribute configuration**

Click on the Tap group name information to enter the Tap property configuration, see section "Attribute configuration".

### **Describe configuration**

Click on Tap's description to enter the Tap description configuration, as shown in Figure.



| Configuration item | Description |
|--------------------|-------------|
|--------------------|-------------|



| Enable                | Whether the accessories are enabled |
|-----------------------|-------------------------------------|
| Tap Group Description | Configure the description of Tap    |

### **Option configuration**

Click the Tap option to delete the corresponding tap.

Tap option configuration

| Configuration item | Description                  |  |  |
|--------------------|------------------------------|--|--|
| 曲                  | Delete the corresponding tap |  |  |

# **1.2.4 Attribute information**

Click the Tap group name information to enter the Tap's attribute information page.

### **Incoming direction information**

On the Tap attribute page, click xx to view the Tap orientation information, as shown in Figure.

|   | Ingress  | 🔳 Egress    |         |           |            |            |            |           |           |           | + Add   |
|---|----------|-------------|---------|-----------|------------|------------|------------|-----------|-----------|-----------|---------|
| # | Port     | Inner Match | Untag   | Vlan mark | Truncation | edit-macda | edit-macsa | edit-ipda | edit-ipsa | edit-vlan | Options |
| 1 | eth-0-31 | N/A         | Disable | N/A       | Disable    | N/A        | N/A        | N/A       | N/A       | N/A       | â       |
|   |          |             |         |           |            |            |            |           |           |           |         |

#### incoming direction information

incoming direction parameters

| Parameter item | Description                        |
|----------------|------------------------------------|
| #              | Configure the port number          |
| Port           | Corresponding number of port names |



| Inner Matche | Match the number of the inner match name               |  |  |
|--------------|--|--|--|
| Untag        | Corresponding number of VLAN stripping                 |  |  |
| VLAN mark    | Corresponding number of VLAN tags                      |  |  |
| Truncation   | whether the corresponding truncation is enabled        |  |  |
| Edit-macda   | Corresponding number Edit the destination MAC          |  |  |
| Edit-macsa   | Corresponding number Edit the source<br>MAC            |  |  |
| Edit-ipda    | Corresponding number Edit the destination IP           |  |  |
| Edit-ipsa    | Corresponding number Edit the source                   |  |  |
| Edit-vlan    | Corresponding number Edit the VLAN                     |  |  |
| Options      | The corresponding number of options, including: delete |  |  |

# Out of direction information

On the Tap attribute page, click xx to view the Tap outbound information, as shown in Figure.

| 🔳 Ingress 🛛 📕 | Egress  |           | + Add   |
|---------------|---------|-----------|---------|
| #             | Port    | Timestamp | Options |
| 1             | eth-0-2 | NO        | â       |
|               |         |           |         |

### out of direction information



out of direction parameters

| Parameter item | Description  |
|----------------|--|
| #              | Configure the port number                              |
| Port           | Corresponding number of port names                     |
| Timestamp      | Corresponding number timestamp                         |
| Options        | The corresponding number of options, including: delete |

### Attribute configuration

On the Tap's Properties page, click "Add" to enter the Tap property configuration page.

### **Incoming direction configuration**

In the Tap's attribute information page, select "ingress" in the direction to enter the inbound configuration, as shown in Figure.

| Direction   | ingress 💌 |
|-------------|-----------|
| Port        | •         |
| Truncation  | off       |
| Untag       | Disable   |
| Vlan mark   | off       |
| Flow Match  | off       |
| Edit packet | Off       |

| ✓ ОК | × Close |
|------|---------|
|------|---------|

### incoming direction configuration



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### incoming direction configuration

| Configuration item | Description   |
|--------------------|---|
| Direction          | The direction of the Tap port, the direction includes:ingress and egress  |
| Port               | Configure the corresponding port  |
| Truncation         | Configure whether to enable packet<br>truncation. If enabled, all subsequent<br>configuration items will be canceled, as<br>shown in Figure "enable packet<br>truncation r"   |
| Untag              | Configure whether to enable VLAN<br>stripping. If enabled, the VLAN tag<br>configuration item will be canceled. As<br>shown in Figure "enable VLAN stripping"   |
| VLAN mark          | Configure whether to enable VLAN<br>tagging. If enabled, the VLAN stripping<br>configuration item will be canceled  |
| Flow Match         | Configure whether to enable inner layer<br>matching. If enabled, select the<br>corresponding flow table. The edit<br>message configuration item will be<br>canceled, as shown in Figure "enable<br>inner layer matching"  |
| Edit packet        | Configure whether to enable the editing<br>packet. If enabled, the configuration of<br>the editing packet is shown in Table<br>"edit the message configuration". The<br>configuration of the inner layer will be<br>canceled, as shown in Figure "enable<br>editing messages" |



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| Direction  | ingress • |
|------------|-----------|
| Port       | eth-0-1 🔻 |
| Truncation | on        |
|            |           |



#### enable packet truncation

| Direction   | ingress 💌     |
|-------------|---------------|
| Port        | eth-0-1       |
| Truncation  | Off           |
| Untag       | double-vlan 💌 |
| Flow Match  | Disable       |
| Edit packet | double-vlan   |
| Luit puonet | outer-vlan    |
|             | inner-vlan    |
|             | ✓ OK × Close  |

enable VLAN stripping



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| Direction  | ingress      |
|------------|--------------|
| Port       | eth-0-1      |
| Truncation | Off          |
| Untag      | Disable      |
| Vlan mark  | Off          |
| Flow Match | on           |
| Flow       | -            |
|            |              |
|            | TIOW1        |
|            | ✓ OK K Close |
|            |              |

enable inner layer matching



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| Direction   | ingress 💌           |
|-------------|---------------------|
| Port        | eth-0-1             |
| Truncation  | Off                 |
| Untag       | Disable             |
| Vlan mark   | Off                 |
| Edit packet | on                  |
| Edit-macda  | On                  |
| Dst-mac     | mac in HHHH.HHHH.HH |
| Edit-macsa  | on                  |
| Src-mac     | mac in HHHH.HHHH.HH |
| Edit-ipda   | on                  |
| Dst-ip Type | ipv4 💌              |
| Dst-ip      | A.B.C.D             |
| Edit-ipsa   | on                  |
| Src-ip Type | ipv4 💌              |
| Src-ip      | A.B.C.D             |
| Edit-vlan   | on                  |
| ID          | 1~4094              |



### enable editing messages

### edit the message configuration

| Configuration item | Description                                 |
|--------------------|---|
| Edit packet        | Configure whether to enable editing packets |



| Edit-macda | Configure whether to enable the edit destination MAC address |
|------------|--|
| Dst-mac    | Configure the destination MAC                                |
| Edit-macsa | Configure whether to enable the edit source MAC address      |
| Src-mac    | Configure the source MAC                                     |
| Edit-ipda  | Configure whether to enable the edit destination IP address  |
| Src-ip     | Configure the destination IP                                 |
| Edit-ipsa  | Configure whether to enable the edit source IP address       |
| Src-ip     | Configure the source IP                                      |
| Edit-vlan  | Configure whether to enable the edit<br>VLAN                 |
| ID         | Configure the VLAN ID  |

#### DacketNAX Advanced

# Out of direction configuration

On the Tap property configuration page, select "egress" in the direction to enter the inbound configuration, as shown in Figure.

| Port eth-0-1 ▼ | Direction | egress 🔻  |
|----------------|-----------|-----------|
| Timestamp      | Port      | eth-0-1 🔻 |
|                | Timestamp | off       |



#### out of direction configurations


out of direction configuration

| Configuration item | Description  |
|--------------------|--|
| Direction          | The direction of the Tap port, the direction includes:ingress and egress |
| Port               | Configure the corresponding port   |
| Timestamp          | Configure whether to enable timestamp                                    |

# 1.3 UDF configuration

This section describes the UDF of the configuration and view.

## **1.3.1 UDF statistics**

Click "Tap Management">"UDF" to enter the main page of the UDF. This page can view the configuration of the UDF, as shown in Figure.

| UDF Config |          |           | + Add UDF |
|------------|----------|-----------|-----------|
| #          | UDF Name | UDF Type  | Options   |
| 1          | 0        | l2 header | C III     |

#### UDF statistics

UDF statistics parameters

| Parameter item | Description  |
|----------------|--|
| #              | Correspond to the number of the UDF  |
| UDF Name       | Corresponding to the name of the UDF   |
| UDF Type       | Corresponding to the description of the UDF  |
| Options        | The options for the corresponding<br>numbering UDF include options for<br>configuration and deletion |



## **1.3.2 Global configuration**

In the main page of the UDF configuration, click "Add UDF" to perform the corresponding global configuration.

### Add UDF

Click "Add UDF" to enter the main page of the UDF configuration. This page can view the configuration of the UDF, as shown in Figure.

| Add UDF |           |                   | × |
|---------|-----------|-------------------|---|
|         | l2 header | •                 |   |
| UDF ID  | 0         | •                 |   |
|         |           | ✓ Add UDF X Close | 2 |

#### add a UDF

add a class of UDF configuration

| Configuration item | Description                  |
|--------------------|------------------------------|
| UDF Type           | Configure the type of UDF    |
| UDF ID             | Configure the ID of UDF(0-3) |

## **1.3.3 UDF configuration**

Click on the corresponding number of UDF name, enter the corresponding number of UDF information configuration.

### **UDF information**

Click the name information of the UDF to view the specific information of the UDF, as shown in Figure.



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| UDF ID | UDF Type  | UDF Config  |  |
|--------|-----------|---|--|
| 0      | l2 header | Udf Index 0<br>Udf Type : I2 header<br>Udf Match-Field:ether-type 0x800 0x0<br>Offset : 35[36[37]38 |  |

#### UDF information

flow information parameters

| Parameter item | Description                            |
|----------------|--|
| UDF ID         | Corresponding to the UDF number        |
| UDF Type       | The corresponding type of UDF          |
| UDF config     | The corresponding configuration of UDF |

## **Option configuration**

Click the UDF option information to enter the properties of the UDF configuration and delete the configuration.

options configuration

| Configuration item | Description  |
|--------------------|--|
| ũ                  | Enter the properties of the UDF<br>configuration, see section "Attribute<br>configuration" |
| Ē                  | Delete the corresponding numbered UDF  |

## **1.3.4 Attribute configuration**

Click on the UDF option information, enter the UDF attribute configuration, as shown in Figure.



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| Match Ether Type | on           |
|------------------|--------------|
| Value            | 0x600-0xFFFF |
| L2 UDF Offset0   | on           |
| Value            | 0~63         |
| L2 UDF Offset1   | on           |
| Value            | 0~63         |
| L2 UDF Offset2   | on           |
| Value            | 0~63         |
| L2 UDF Offset3   | on           |
| Value            | 0~63         |



#### attribute configuration

attribute configuration

| Configuration item | Description                                     |
|--------------------|---|
| Match Ether Type   | Configure the Ether Type of the UDF             |
| L2 UDF Offset0     | The position of the first L2 UDF offset (0-63)  |
| L2 UDF Offset1     | The position of the second L2 UDF offset (0-63) |
| L2 UDF Offset2     | The position of the third L2 UDF offset (0-63)  |
| L2 UDF Offset3     | The position of the fourth L2 UDF offset (0-63) |



# **1.4** Flow

This section describes the flow chart statistics and their properties of the configuration and view.

## **1.4.1 Flow statistics**

Click "Tap Management">"Flow" to enter the main page of the flow table. This page can view the statistics of the flow table, as shown in Figure.

| # | Flow Name | Remark | Decap   | Options |
|---|-----------|--------|---------|---------|
| 1 | ri -      | N/A    | Disable | + 🛍     |

#### flow statistics

flow statistics parameters

| Parameter item | Description   |
|----------------|---|
| #              | Correspond to the number of the flow statistics   |
| Flow Name      | Corresponding to the name of the flow   |
| Remark         | Corresponding to the description of the flow  |
| Decap          | Does the corresponding number flow enable decapsulation.  |
| Options        | The options for the corresponding<br>numbering flow include options for<br>configuration and deletion |

# 1.4.2 Global configuration

In the main page of the flow chart statistics, click xx to perform the corresponding global configuration.



### Add a class of flow

Click "Add Flow" to enter the main page of the flow table. This page can view the statistics of the flow table, as shown in Figure.

| Flow Name | New Flow Name |            |         |
|-----------|---------------|------------|---------|
| Decap     | off           |            |         |
|           |               | ✓ Add Flow | X Close |

add a class of flow

add a class of flow configuration

| Configuration item | Description                               |
|--------------------|---|
| Flow Name          | Configure the names of such flow          |
| Decap              | Configure whether to enable decapsulation |

**NOTE** If you enable decapsulation, the UDF attribute configuration option is canceled, instead of the inner layer matching attribute configuration option.

### **1.4.3 Flow statistics configuration**

Click on the corresponding number of flow chart information, enter the corresponding number of flow table information configuration.

### **Flow information**

Click the name information of the flow table to view the specific information of the flow table, as shown in Figure.

| # | Flow Entry                                       | Options |
|---|--|---------|
| 1 | sequence-num 10 permit any src-ip any dst-ip any | Ĩ       |



flow information

flow information parameters

| Parameter item | Description  |
|----------------|--|
| #              | Corresponding to the flow number                       |
| Flow Entry     | The corresponding number of flow                       |
| Options        | The corresponding number of options, including: delete |

### **Describe the configuration**

Click the description of the flow table to view the description of the flow table, as shown in Figure.

| Enable | on               |      |         |
|--------|------------------|------|---------|
| Remark | Flow description | ]    |         |
|        |                  |      |         |
|        |                  | ✔ ОК | 🗙 Close |

#### describe the information

describe the configuration

| Configuration item | Description   |
|--------------------|---|
| Enable             | Configure whether to enable the description configuration |
| Remark             | Configure the description of the flow                     |

## **Option configuration**

Click the flow table option information to enter the properties of the flow table configuration and delete the configuration.



#### options configuration

| Configuration item | Description   |
|--------------------|---|
| +                  | Enter the properties of the flow table<br>configuration, see section "Attribute<br>configuration" |
| Î                  | Delete the corresponding numbered flow  |

# **1.4.4 Attribute configuration**

Click on the flow table option information, enter the flow table attribute configuration, as shown in Figure.



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Match Rule

| Action             | permit 💌 |
|--------------------|----------|
| IP protocol number | any -    |
| Filter Type        | ipv4 💌   |
| Ether Type         | off      |
| Src-ip             | off      |
| Dst-ip             | off      |
| DSCP               | Off      |
| Ip-precedence      | Off      |
| Options            | Off      |
| Fragment           | Off      |
| Src-mac            | Off      |
| Dst-mac            | Off      |
| cos                | Off      |
| Inner COS          | Off      |
| VLAN               | off      |
| Inner VLAN         | off      |
| UDF                | Off      |

#### Action

| Truncation       | off     |
|------------------|---------|
| Untag            | Disable |
| Vlan mark        | off     |
| Edit packet      | off     |
| Add I2gre        | off     |
| Add I3gre        | off     |
| Add Vxlan        | off     |
| Add Erspantype-1 | off     |
| Add Erspantype-2 | off     |





#### attribute configuration

#### attribute configuration

| Configuration item | Description  |
|--------------------|--|
| Action             | Configure the behavior of the flow table<br>on the port, including:permit and deny   |
| IP protocol number | Select the corresponding IP protocol<br>number, including: any, tcp, udp, gre,<br>nvgre, icmp, igmp, mpls, pppoe(vxlan is<br>udp protocol, pbb is mpls protocol),<br>you can also select num, enter 0 ~ 255<br>protocol number |
| Filter Type        | Configure filter type, including: ipv4, ipv6   |
| Ether Type         | Configure whether enable or disable<br>ethertype; if enables, then needs to<br>configure the value and wildcard.   |
| Src-IP             | Configure the source IP address; if<br>enables, it needs to configure the<br>source ip address and source wildcard.  |
| Dst-IP             | Configure the destination IP address; if<br>enables, it needs to configure the<br>destination ip address and destination<br>wildcard   |
| DSCP               | Configure to enable or disable DSCP; if<br>enables, it needs to configure a value<br>between 0 and 63  |
| lp-precedence      | Configure the IP precedence  |
| Options            | Configure to enable or disable options   |
| Fragment           | Configure to enable or disable fragment  |



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| Src-mac      | Configure the source MAC address. If<br>enabled, you need to select the<br>corresponding type and enter the source<br>MAC address, as shown in Figure "source<br>MAC"                |
|--------------|--|
| Dst-mac      | Configure the destination MAC address.<br>If enabled, you need to select the<br>corresponding type and enter the<br>destination MAC address, as shown in<br>Figure "destination MAC" |
| COS          | Configure enable or disable COS, if<br>enables, it needs to setup the COS value<br>which is between 0 and 7.   |
| Inner COS    | Configure enable or disable COS, if<br>enables, it needs to setup the COS value<br>which is between 0 and 7.   |
| VLAN         | If the VLAN is enabled, enable ID and<br>anti-mask if it is enabled, as shown in<br>Figure "VLAN"  |
| Inner VLAN   | If the inner VLAN is enabled, enable ID and anti-mask if it is enabled   |
| Strip-header | Configure enable or disable COS<br>Strip-header, and Strip-header is only<br>support udp,gre,nvgre,mpls,pppoe<br>protocol, as shown in Figure<br>"Strip-header"                      |
| Truncation   | Configure whether to enable truncation.<br>If enables, the rest of the configuration<br>items will disappear   |
| Untag        | Configure whether to enable VLAN stripping. It includes: disable,  |



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|                  | double-vlan, outer-vlan, inner-vlan   |
|------------------|---|
| VLAN mark        | If the VLAN mark is enabled, the untag will be disappeared                  |
| Edit packet      | If the Edit packet is enabled, as shown in Figure "enable editing messages" |
| Add L2gre        | Configure whether to enable Layer 2<br>GRE encapsulation                    |
| Add L3gre        | Configure whether to enable Layer 3<br>GRE encapsulation                    |
| Add Vxlan        | Configure whether to enable VXLAN encapsulation                             |
| Add Erspantype-1 | Configure whether to enable<br>Erspantype-1 encapsulation                   |
| Add Erspantype-2 | Configure whether to enable<br>Erspantype-2 encapsulation                   |



#### source MAC

| Dst-mac | on                  |
|---------|---------------------|
| Туре    | any host MAC        |
| Dst-mac | mac in HHHH.HHHH.HH |

destination MAC



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| I ON            |
|-----------------|
| <b>)</b> 1~4094 |
| a OxO           |
|                 |

#### VLAN

| UDF           | on                          |
|---------------|-----------------------------|
| Туре          | Layer 2 Layer 3 Layer 4     |
| L2 UDF ID     | 0 -                         |
| Offset Opt    | 🗹 udf0 🔍 udf1 🔍 udf2 🔍 udf3 |
| UDF0 type     | value                       |
| UDF0 Value    | 0x0~0xFF                    |
| UDF0 Wildcard | 0x0~0xFF                    |
| UDF1 type     | value 🔻                     |
| UDF1 Value    | 0x0~0xFF                    |
| UDF1 Wildcard | 0x0~0xFF                    |
| UDF2 type     | value 🔻                     |
| UDF2 Value    | 0x0~0xFF                    |
| UDF2 Wildcard | 0x0~0xFF                    |
| UDF3 type     | value 🔻                     |
| UDF3 Value    | 0x0~0xFF                    |
| UDF3 Wildcard | 0x0~0xFF                    |

L2 UDF



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| UDF      | on                      |  |
|----------|-------------------------|--|
| Туре     | Layer 2 Layer 3 Layer 4 |  |
| Value    | 0xFFFFFFF               |  |
| Wildcard | 0xFFFFFFF               |  |
| Offset   | 0~60                    |  |

#### L3 UDF

| UDF      | on                      |
|----------|-------------------------|
| Туре     | Layer 2 Layer 3 Layer 4 |
| Value    | 0xFFFFFFF               |
| Wildcard | 0xFFFFFFF               |
| Offset   | 0~60                    |

L4 UDF



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| Act            | ion      |
|----------------|----------|
| Strip-header   | on       |
| Strip-position | on       |
| Туре           | L2 L3 L4 |
| Strip-offset   | on       |
| Value          | 0~30     |
| Vlan mark      | Off      |
| Edit packet    | on       |
| Add-macaddr    | Off      |
| Edit-macda     | on       |
| Dst-mac        | a.a.a    |
| Edit-macsa     | on       |
| Src-mac        | b.b.b    |
| Edit-ipda      | off      |
| Edit-ipsa      | off      |
| Edit-vlan      | Off      |

✓ OK X Close

Strip-header



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Match Rule

| ActionpermitIP protocol numberanyanyipv4Filter Typeipv4OffoffSource TypeoffSource wildcard0.0.0Dst-ipoffOffoffIp-precedenceoffOptionsoffSr-macoffSr-macoffInner COSoffInner CVLANoff               |                    |          |
|--|--------------------|----------|
| IP protocol numberanyanyipv4Filter TypeoffEther TypeoffSource IP1.1.1.1Source wildcard0.0.0.0Dst-ipoffOffoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffOstanactionoffInner COSoffInner VLANoff | Action             | permit 💌 |
| Filter TypeIpv4Ether TypeoffSource IP1.1.1.1Source wildcard0.0.0.0Dst-ipoffOff0Ip-precedenceoffOptionsoffSrc-macoffSrc-macoffOst-macoffInner COSoffVLANoff   | IP protocol number | any 💌    |
| Ether TypeoffSrc-iponSource IP1.1.1.1Source wildcard0.0.0OffoffDSCPoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffOst-macoffInner COSoffVLANoffInner VLANoff                                    | Filter Type        | ipv4 💌   |
| Src-ipOnSource IP1.1.1.1Source wildcard0.0.0Dst-ipoffDSCPoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffOst-macoffInner COSoffVLANoffInner VLANoff  | Ether Type         | off      |
| Source IP1.1.1.1Source wildcard0.0.0.0Dst-ipoffDSCPoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffOst-macoffInner COSoffVLANoffInner VLANoff  | Src-ip             | on       |
| Source wildcard0.0.0Dst-ipoffDSCPoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffOst-macoffInner COSoffInner VLANoff   | Source IP          | 1.1.1.1  |
| Dst-ipoffDSCPoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffDst-macoffCOSoffInner COSoffVLANoffInner VLANoff  | Source wildcard    | 0.0.0.0  |
| DSCPoffIp-precedenceoffOptionsoffFragmentoffSrc-macoffObt-macoffCOSoffInner COSoffVLANoffInner VLANoff   | Dst-ip             | off      |
| Ip-precedenceoffOptionsoffFragmentoffSrc-macoffDst-macoffCOSoffInner COSoffVLANoffInner VLANoff  | DSCP               | off      |
| OptionsoffFragmentoffSrc-macoffDst-macoffCOSoffInner COSoffVLANoffInner VLANoff  | Ip-precedence      | off      |
| FragmentoffSrc-macoffDst-macoffCOSoffInner COSoffVLANoffInner VLANoff  | Options            | off      |
| Src-mac     Off       Dst-mac     Off       COS     Off       Inner COS     Off       VLAN     Off       Inner VLAN     Off  | Fragment           | off      |
| Dst-mac     off       COS     off       Inner COS     off       VLAN     off       Inner VLAN     off  | Src-mac            | off      |
| COS     Off       Inner COS     Off       VLAN     Off       Inner VLAN     Off  | Dst-mac            | Off      |
| Inner COS     off       VLAN     off       Inner VLAN     off  | cos                | off      |
| VLAN Off Inner VLAN Off  | Inner COS          | off      |
| Inner VLAN Off   | VLAN               | Off      |
|  | Inner VLAN         | off      |

Action

on

Truncation



enable packet truncation



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Action

| Untag       | double-vlan     | • |      |   |      |   |
|-------------|-----------------|---|------|---|------|---|
| Vlan mark   | Disable         |   |      |   |      |   |
|             | <br>double-vlan |   |      |   |      |   |
| Edit packet | outer-vlan      |   |      |   |      |   |
|             | inner-vlan      |   |      |   |      |   |
|             |                 | _ |      | _ |      |   |
|             |                 |   | 🗸 ОК |   | Clos | е |

enable VLAN stripping



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| Action      |                     |  |  |
|-------------|---------------------|--|--|
| Untag       | Disable             |  |  |
| Vlan mark   | off                 |  |  |
| Edit packet | on                  |  |  |
| Add-macaddr | off                 |  |  |
| Edit-macda  | on                  |  |  |
| Dst-mac     | mac in HHHH.HHHH.HH |  |  |
| Edit-macsa  | on                  |  |  |
| Src-mac     | mac in HHHH.HHHH.HH |  |  |
| Edit-ipda   | on                  |  |  |
| Dst-ip Type | ipv4 💌              |  |  |
| Dst-ip      | A.B.C.D             |  |  |
| Edit-ipsa   | on                  |  |  |
| Src-ip Type | ipv4 -              |  |  |
| Src-ip      | A.B.C.D             |  |  |
| Edit-vlan   | on                  |  |  |
| Туре        | Add Edit            |  |  |
| ID          | 1~4094              |  |  |



enable editing messages



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Action

| Add I2gre        | on                  |
|------------------|---------------------|
| L2gre-src-ip     | A.B.C.D             |
| L2gre-dest-ip    | A.B.C.D             |
| L2gre-dest-mac   | mac in HHHH.HHHH.HH |
| L2gre-key-length | 24 💌                |
| L2gre-key-num    | 1~16777215          |
|                  |                     |



#### Add L2gre

| Action         |                     |  |
|----------------|---------------------|--|
| Add I3gre      | on                  |  |
| L3gre-src-ip   | A.B.C.D             |  |
| L3gre-dest-ip  | A.B.C.D             |  |
| L3gre-dest-mac | mac in HHHH.HHHH.HH |  |

| 🗸 ок | 🗙 Close |
|------|---------|
|------|---------|

Add L3gre



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#### Action

| Add Vxlan      | on                  |
|----------------|---------------------|
| VxIan-dest-mac | mac in HHHH.HHHH.HH |
| Vxlan-src-ip   | A.B.C.D             |
| Vxlan-dest-ip  | A.B.C.D             |
| Vxlan-dst-port | Off                 |
| VxIan-src-port | Off                 |
| Vxlan-vni-num  | 1~16777215          |

| 🗸 ок | × Close |
|------|---------|
|------|---------|

#### Add Vxlan

| Action                |                     |  |
|-----------------------|---------------------|--|
| Add Erspantype-1      | on                  |  |
| Erspantype-1-dest-mac | mac in HHHH.HHHH.HH |  |
| Erspantype-1-src-ip   | A.B.C.D             |  |
| Erspantype-1-dest-ip  | A.B.C.D             |  |
|                       |                     |  |



#### Add Erspantype-1



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#### Action

| Add Erspantype-2      | on                  |
|-----------------------|---------------------|
| Erspantype-2-dest-mac | mac in HHHH.HHHH.HH |
| Erspantype-2-src-ip   | A.B.C.D             |
| Erspantype-2-dest-ip  | A.B.C.D             |
| Erspantype-2-spanid   | 1~1023              |
|                       |                     |



#### Add Erspantype-2

enable editing messages configuration

| Configuration item | Description  |
|--------------------|--|
| Edit packet        | Configure whether to enable editing packets  |
| Add-macaddress     | Configure whether to enable to add mac<br>address, if enable, then needs to<br>configure source mac and destination<br>mac address |
| Edit-macda         | Configure whether to enable the edit destination MAC address   |
| Dst-mac            | Configure the destination MAC  |
| Edit-macsa         | Configure whether to enable the edit source MAC address  |
| Src-mac            | Configure the source MAC   |
| Edit-ipda          | Configure whether to enable the edit destination IP address  |



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| Dst-ip Type | Configure destination ip type                          |  |
|-------------|--|--|
| Dst-ip      | Configure destination ip                               |  |
| Edit-ipsa   | Configure whether to enable the edit source IP address |  |
| Src-ip Type | Configure source ip type                               |  |
| Src-ip      | Configure the source IP                                |  |
| Edit-vlan   | Configure whether to enable the edit<br>VLAN           |  |
| Туре        | Configure Type, including add and edit                 |  |
| ID          | Configure the VLAN ID                                  |  |

# 1.5 Inner layer matching

This section describes the configuration and view of the statistics of the inner flow chart and its properties

## **1.5.1 Inner flow statistics**

Click "Tap Management">"Inner Match" to enter the inner layer matching the main page, this page can view the inner flow chart statistics, as shown in Figure.

| # | Flow Name | Remark | Options |
|---|-----------|--------|---------|
| 1 | acl1      | N/A    | + 🛍     |

#### inner flow statistics

inner flow statistics parameters

| Parameter item | Description                                       |
|----------------|---|
| #              | Corresponding to the inner flow statistics number |
| Flow Name      | Corresponds to the name of the inner stream       |



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| Remark  | Corresponding number description of inner layer flow  |  |
|---------|---|--|
| Options | The options for the numbering inner<br>layer flow table include: configuration<br>properties and deletion |  |

# **1.5.2 Global configuration**

In the inner flow chart statistics on the main page, click "Add Inner-match Flow" can be the corresponding global configuration.

### Add a class of inner flow

Click "Add Flow" to enter the main page of the flow table. This page can view the statistics of the flow table, as shown in Figure.

| Flow Name | New Flow Name |            |         |
|-----------|---------------|------------|---------|
|           |               | ✓ Add Flow | X Close |

add a class of inner flow

add a class of inner flow configuration

| Configuration item | Description                              |
|--------------------|--|
| Flow Name          | Configure the names of such inner stream |

## **1.5.3 Inner flow statistics configuration**

Click on the corresponding number of the inner flow chart information, enter the corresponding number of inner flow chart information configuration



### **Inner flow information**

Click the name information of the inner stream table to view the specific information of the inner flow chart, as shown in Figure.

| # | Flow Entry                                     | Options |
|---|--|---------|
| 1 | sequence-num 1 match any src-ip any dst-ip any | Ê       |

inner flow information

inner flow information parameters

| Parameter item | Description  |
|----------------|--|
| #              | Corresponding to the inner flow meter number           |
| Flow Entry     | The corresponding number of flow                       |
| Options        | The corresponding number of options, including: delete |

### **Describe the configuration**

Click the description of the inner flow meter to view the description of the inner flow table, as shown in Figure.





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| Enable | Configure whether to enable the description configuration |
|--------|---|
| Remark | Configure the description of the inner flow meter         |

## **Option configuration**

Click the option information of the inner flow table to enter the properties of the inner flow table and delete the configuration .

#### option configuration

| Configuration item | Description   |
|--------------------|---|
| +                  | Enter the properties of the flow table<br>configuration, see section "Attribute<br>configuration" |
| â                  | Delete the inner stream table for the corresponding number  |

# **1.5.4 Attribute configuration**

Click the "+" symbol under "Options", enter the corresponding flow attribute configuration, as shown in Figure.



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| IP protocol number | any 💌  |
|--------------------|--------|
| Filter TYPE        | ipv4 💌 |
| Ether Type         | off    |
| src-ip             | Off    |
| dst-ip             | Off    |
| DSCP               | Off    |
| Ip-precedence      | Off    |
| Options            | Off    |
| Fragment           | Off    |
| src-mac            | Off    |
| dst-mac            | Off    |
| cos                | Off    |
| Inner COS          | Off    |
| VLAN               | Off    |
| Inner VLAN         | Off    |
|                    |        |



acl attribute configuration

#### attribute configuration

| Configuration item | Description   |
|--------------------|---|
| IP protocol number | Select the corresponding IP protocol<br>number, including: any, tcp, udp, icmp<br>and igmp. You can also select num,<br>enter 0 ~ 255 protocol number |
| Filter Type        | Configure filter type, including: ipv4, ipv6  |
| Ether Type         | Configure Ethertype   |



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| Src-IP        | Configure the source IP address   |
|---------------|---|
|               |   |
| Dst-IP        | Configure the destination IP address  |
| DSCP          | Configure to enable DSCP  |
| lp-precedence | Configure the IP precedence   |
| Options       | Configure enable or disable options   |
| Fragment      | Configure enable or disable fragment  |
| Src-mac       | Configure the source MAC address. If<br>enabled, you need to select the<br>corresponding type and enter the source<br>MAC address, as shown in the following<br>Figure "source MAC"               |
| Dst-mac       | Configure the destination MAC address.<br>If enabled, you need to select the<br>corresponding type and enter the<br>destination MAC address, as shown in<br>the followingFigure "destination MAC" |
| COS           | Configure to enable or disable COS  |
| Inner COS     | Configure to enable or disable inner COS  |
| VLAN          | If the VLAN is enabled, enable ID and<br>anti-mask if it is enabled, as shown in<br>the followingFigure "VLAN"  |
| Inner VLAN    | Configure to enable or disable Inner<br>VLAN. If enables, it needs to setup inner<br>VLAN ID and wildcar  |

| src-mac | on                  |
|---------|---------------------|
| Туре    | any host MAC        |
| src-mac | mac in HHHH.HHHH.HH |



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#### source MAC

| dst-mac | on                  |
|---------|---------------------|
| Туре    | any host MAC        |
| dst-mac | mac in HHHH.HHHH.HH |

#### destination MAC

| VLAN     | on     |
|----------|--------|
| ID       | 1~4094 |
| Wildcard | 0x0    |

VLAN

## **1.6** Access control list

This section describes the configuration and view of the statistics of the access control list and its attributes.

### **1.6.1 Access control list statistics**

Click "Tap Management">"Acl"to enter the access control list main page, this page can view the access control list statistics, as shown in Figure.

| # | Name | Remark | Options |
|---|------|--------|---------|
| 1 | acl  | N/A    | + 🛍     |

#### access control list statistics

access control list statistics parameters

| Parameter item | Description  |
|----------------|--|
| #              | The number of the corresponding access control list statistics |
| Name           | Corresponds to the name of the access control list             |



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| Remark  | Correspondence number access control list description  |
|---------|--|
| Options | Corresponding number access control<br>list options, options include:<br>configuration properties and delete |

# **1.6.2 Global configuration**

In the main page of the access control list statistics, click "Add Acl" to perform the corresponding global configuration

### Add access control list

Click "Add Acl", you can enter the page to increase the access control list, as shown in Figure.

| Name | New ACL Name |         |         |
|------|--------------|---------|---------|
|      |              | Add Acl | X Close |

add access control list

add access control list configuration

| Configuration item | Description   |
|--------------------|---|
| Name               | Configure to increase the name of the access control list |

## **1.6.3 Access control list configuration**

Click on the corresponding number to increase the access control list information, enter the corresponding number of access control list to increase the information configuration.



### Access control list information

Click to increase the name of the access control list information, you can view the specific information to increase the access control list, as shown in Figure.

| # | Entry  | Options |
|---|--|---------|
| 1 | sequence-num 10 permit any src-ip any dst-ip any | â       |

access control list information

access control list information parameters

| Parameter item | Description  |
|----------------|--|
| #              | Corresponds to the access control list number          |
| Entry          | Corresponding number entry                             |
| Options        | The corresponding number of options, including: delete |

## Describe the configuration

Click the description of the access control list to view the description of the access control list, as shown in Figure.

| Enable                 | on              |             |      |         |
|------------------------|-----------------|-------------|------|---------|
| Remark                 | ACL description |             |      |         |
|                        |                 |             |      |         |
|                        |                 |             | 🗸 ОК | 🗱 Close |
| describe the configura | ation           |             |      |         |
| describe the configura | ation           |             |      |         |
| Configuration item     |                 | Description |      |         |



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| Enable | Configure whether to enable the description configuration |
|--------|---|
| Remark | Configure a description of the access control list        |

## **Option configuration**

Click the access control list option to access the configuration and delete configuration of the access control list.

#### option configuration

| Configuration item | Description  |
|--------------------|--|
| +                  | Enter the attribute configuration of the access control list see section "Attribute configuration" |
| â                  | Delete the access control list for the corresponding number  |

# **1.6.4 Attribute configuration**

Click the "+" symbol under "Options", enter the corresponding ACL attribute configuration, as shown in Figure.



Add

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 $\times$ 

| Action             | permit 💌 |
|--------------------|----------|
| IP protocol number | any 💌    |
| Filter TYPE        | ipv4 💌   |
| Ether Type         | off      |
| Src-ip             | off      |
| Dst-ip             | off      |
| DSCP               | off      |
| Ip-precedence      | off      |
| Options            | off      |
| Fragment           | off      |
| Src-mac            | off      |
| Dst-mac            | off      |
| cos                | off      |
| Inner COS          | off      |
| VLAN               | Off      |
| Inner VLAN         | off      |



### acl attribute configuration

#### attribute configuration

| Configuration item | Description   |
|--------------------|---|
| Action             | Configure the behavior of the flow table<br>on the port, including: permit and deny                                 |
| IP protocol number | Select the corresponding IP protocol<br>number, including: any, tcp, udp, you<br>can also select num, enter 0 ~ 255 |



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|               | protocol number   |
|---------------|---|
| Filter Type   | Configure filter type, including: ipv4, ipv6  |
| Ether Type    | Configure Ethertype   |
| Src-IP        | Configure the source IP address   |
| Dst-IP        | Configure the destination IP address  |
| DSCP          | Configure to enable DSCP  |
| lp-precedence | Configure the IP precedence   |
| Options       | Configure enable or disable options   |
| Fragment      | Configure enable or disable fragment  |
| Src-mac       | Configure the source MAC address. If<br>enabled, you need to select the<br>corresponding type and enter the source<br>MAC address, as shown in the following<br>Figure "source MAC"               |
| Dst-mac       | Configure the destination MAC address.<br>If enabled, you need to select the<br>corresponding type and enter the<br>destination MAC address, as shown in<br>the followingFigure "destination MAC" |
| COS           | Configure to enable or disable COS  |
| Inner COS     | Configure to enable or disable inner COS  |
| VLAN          | If the VLAN is enabled, enable ID and<br>anti-mask if it is enabled, as shown in<br>the followingFigure "VLAN"  |
| Inner VLAN    | Configure to enable or disable Inner<br>VLAN. If enables, it needs to setup inner<br>VLAN ID and wildcar  |



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| Src-mac | on                  |
|---------|---------------------|
| Туре    | any host MAC        |
| Src-mac | mac in HHHH.HHHH.HH |

#### source MAC

| Dst-mac | on                  |
|---------|---------------------|
| Туре    | any host MAC        |
| Dst-mac | mac in HHHH.HHHH.HH |

#### destination MAC

| VLAN     | on     |
|----------|--------|
| ID       | 1~4094 |
| Wildcard | 0x0    |

#### VLAN

# **1.7 TAP Statistics**

This section describes the configuration and view of the statistics of the flow in ingress interface.

Click "Tap Management">"TAP Statistics"to enter the main page, this page can view the flow statistics of all interfaces , as shown in Figure.

| Port List                           |          |          |          |          |          |          |          |          |           |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| aeth 0 1                            | eth 0.2  | eth 0.3  | eth 0.4  | eth 0.5  | eth 0.6  | eth 0.7  | eth 0.9  | eth 0.0  | eth 0, 10 |
| •601-0-1                            | 601-0-2  | 6014040  | 601-0-4  | 601-0-0  | 601-0-0  | 601-0-7  | 601-0-0  | 601-0-0  | 601-0-10  |
| eth-0-11                            | eth-0-12 | eth-0-13 | eth-0-14 | eth-0-15 | eth-0-16 | eth-0-17 | eth-0-18 | eth-0-19 | eth-0-20  |
| eth-0-21                            | eth-0-22 | eth-0-23 | eth-0-24 | eth-0-25 | eth-0-26 | eth-0-27 | eth-0-28 | eth-0-29 | eth-0-30  |
| eth-0-31                            | eth-0-32 | eth-0-33 | eth-0-34 | eth-0-35 | eth-0-36 | eth-0-37 | eth-0-38 | eth-0-39 | eth-0-40  |
| eth-0-41                            | eth-0-42 | eth-0-43 | eth-0-44 | eth-0-45 | eth-0-46 | eth-0-47 | eth-0-48 | eth-0-49 | eth-0-50  |
| eth-0-51 eth-0-52 eth-0-53 eth-0-54 |          |          |          |          |          |          |          |          |           |
|                                     |          |          |          |          |          |          |          |          |           |
| Flow Statistics                     |          |          |          |          |          |          |          |          |           |
| Interface-                          |          |          |          |          |          |          |          |          |           |

#### TAP statistics



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# **1.7.2 Flow statistics of interface**

| •eth-0-1         eth-0-2         eth-0-3         eth-0-4         eth-0-5         eth-0-6         eth-0-7         eth-0-8         eth-0-9         eth-0-10           eth-0-11         eth-0-12         eth-0-13         eth-0-14         eth-0-15         eth-0-16         eth-0-17         eth-0-18         eth-0-19         eth-0-20           eth-0.21         eth-0-13         eth-0-14         eth-0-25         eth-0-26         eth-0-27         eth-0-28         eth-0-30         eth-0-40  | Port List   |          |          |          |          |          |          |          |          |          |
|---|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| eth-0-11         eth-0-12         eth-0-13         eth-0-13         eth-0-14         eth-0-25         eth-0-26         eth-0-27         eth-0-28         eth-0-29         eth-0-20         eth-0-23         eth-0-23         eth-0-24         eth-0-25         eth-0-26         eth-0-27         eth-0-28         eth-0-29         eth-0-30   | •eth-0-1  | eth-0-2  | eth-0-3  | eth-0-4  | eth-0-5  | eth-0-6  | eth-0-7  | eth-0-8  | eth-0-9  | eth-0-10 |
| eth-0-21         eth-0-23         eth-0-23         eth-0-24         eth-0-25         eth-0-26         eth-0-27         eth-0-28         eth-0-29         eth-0-30           eth-0-31         eth-0-32         eth-0-33         eth-0-34         eth-0-35         eth-0-36         eth-0-37         eth-0-38         eth-0-40         et   | eth-0-11  | eth-0-12 | eth-0-13 | eth-0-14 | eth-0-15 | eth-0-16 | eth-0-17 | eth-0-18 | eth-0-19 | eth-0-20 |
| efh-0-31         efh-0-32         efh-0-33         efh-0-45         efh-0-36         efh-0-37         efh-0-38         efh-0-40   | eth-0-21  | eth-0-22 | eth-0-23 | eth-0-24 | eth-0-25 | eth-0-26 | eth-0-27 | eth-0-28 | eth-0-29 | eth-0-30 |
| eth-041         eth-043         eth-043         eth-045         eth-046         eth-047         eth-048         eth-049         eth-049 <t< th=""><th>eth-0-31</th><th>eth-0-32</th><th>eth-0-33</th><th>eth-0-34</th><th>eth-0-35</th><th>eth-0-36</th><th>eth-0-37</th><th>eth-0-38</th><th>eth-0-39</th><th>eth-0-40</th></t<>   | eth-0-31  | eth-0-32 | eth-0-33 | eth-0-34 | eth-0-35 | eth-0-36 | eth-0-37 | eth-0-38 | eth-0-39 | eth-0-40 |
| eth0-51         eth0-53         eth0-54           Flow Statistics         Interface: eth0-1           Interface: eth0-1           Match Dytes: 200<br>Match Dytes: 200<br>Match Dytes: 200  | eth-0-41  | eth-0-42 | eth-0-43 | eth-0-44 | eth-0-45 | eth-0-46 | eth-0-47 | eth-0-48 | eth-0-49 | eth-0-50 |
| Flow Statistics Interface: eth-0-1 Flow Name flow1 Match Rule: sequence-trum 10 permit any src-ip any dsLip any Match Rule: sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any dsLip any Match Rule: Sequence-trum 10 permit any src-ip any Match Rule: Sequence-trum 10 | eth-0-51  | eth-0-52 | eth-0-53 | eth-0-54 |          |          |          |          |          |          |
| Flow Name flow1 Match Rule : sequence-runn 10 permit any src-ip any dst-ip any Match Bytes : 200 Match Pacets: 2  | Interface: eth-0-1  |          |          |          |          |          |          |          |          |          |
| Flow Name flow1<br>Match Rule :<br>sequence-rum 10 permit any src-ip any dsi-ip any<br>Match Ryles : 200<br>Match Pauletes :2   | Interface: eth-0-1  |          |          |          |          |          |          |          |          |          |
| Match Rose :<br>sequence-num 10 permit any src-ip any dsi-ip any<br>Match Pysies: 20<br>Match Paciets: 2  | Flow Name flow1   |          |          |          |          |          |          |          |          |          |
|   | Match Rule :<br>sequence-rum 10 permit any src-ip any dsI-ip any<br>Match Byes : 200<br>Match Packets : 2 |          |          |          |          |          |          |          |          |          |
| Iotal Match Byles : 200 Iotal Match Packets: 2  |   |          |          |          |          |          |          |          |          |          |

flow statistics



It only displays the flow statistics of interface which applies flow

in the tap-group.





# 1.1 Overview

This chapter mainly describes Ping, Traceroute, restart / save the use and information on the page, the user can use these tools for basic network diagnosis.

# 1.2 Ping

Users can use ping to detect and diagnose current network conditions and analyze the resulting information.

### **1.2.1 Tool use**

Click "Tool">"Ping"to enter the ping tool main page, ping the use of options shown in Figure, click "OK" to use.

| Options |      |   |       |   |                |           |    |  |
|---------|------|---|-------|---|----------------|-----------|----|--|
| VRF ID: | mgmt | • | Count | 4 | Destination IP | 127.0.0.1 | ок |  |

Ping tool

Ping tool configuration

| Configuration item | Description  |
|--------------------|--|
| VRF ID             | Configure the vrf where the ping packet is specified, default mgmt |
| Count              | Configure the specified number of pings                            |
| Destination IP     | Configure the destination IP address                               |


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# 1.2.2 Console information

And then use the ping tool, the ping results and then the lower part of the display, as shown in Figure.

#### Console

```
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.199 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.098 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.096 ms
64 bytes from 127.0.0.1: icmp_seq=4 ttl=64 time=0.072 ms
```

--- 127.0.0.1 ping statistics ---4 packets transmitted, 4 received, 0% packet loss, time 299ms rtt min/avg/max/mdev = 0.072/0.116/0.199/0.049 ms

Ping console information

## 1.3 Traceroute

Traceroute is a small tool to confirm that the message passes through the destination IP address of the router. Its implementation principle is to determine the destination route by sending ICMP packets of different TTL.

### **1.3.1 Tool use**

Click "Tool">" Traceroute"to enter the ping tool main page, ping the use of options shown in Figure, click "OK" to use.

| Options |      |   |                |           |                |   |    |
|---------|------|---|----------------|-----------|----------------|---|----|
| VRF ID: | mgmt | • | Destination IP | 127.0.0.1 | timeout/second | 5 | ок |

### traceroute tool

traceroute tool configuration

| Configuration item | Description  |
|--------------------|--|
| VRF ID             | Configure the vrf where the ping packet is specified, default mgmt |



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| Destination IP | Configure the destination IP address |
|----------------|--------------------------------------|
| Timeout/second | Configure timeout time / sec         |

# **1.3.2** Console information

And then use the Traceroutetool, the t result is displayed at the bottom of the option, as shown in Figure.

Console

| traceroute to 127.0.0.1 (127.0.0.1), 30 hops max, 38 byte packets |  |
|---|--|
| 1 localhost (127.0.0.1) 0.037 ms 0.023 ms 0.015 ms                |  |

traceroute console information

# 1.4 Reboot/Save

Click "Reboot/Save" to enter the reboot / save main page, as shown in Figure.



reboot/save parameters

reboot/save configuration

| Configuration item | Description   |  |
|--------------------|---|--|
| Reboot             | Reboot the switch   |  |
| Save               | Save the current configuration to the configuration file                        |  |
| Save and reboot    | Save the current configuration to the configuration file and restart the switch |  |

For questions, please contact Garland Technology Support at: 8AM-9PM (CST) Monday - Friday (Except for observed US Holidays) Tel: 716.242.8500 Online: www.garlandtechnology.com/support