



6 100M Copper Ports + 2/3 100M Fiber Ports Layer 2 Managed Industrial Ethernet Switch CLI User Manual

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Preface

Switch CLI user manual has introduced:

- CLI configuration

Audience


This manual applies to the following engineers:





- Network administrators
- Technical support engineers
- Network engineer

Text Format Convention

Format	Description
" "	Words with "" represent the interface words. Such as: "Port No.".
>	Multi-level path is separated by ">". Such as opening the local connection path description: Open "Control Panel> Network Connection> Local Area Connection".
Light Blue Font	It represents the words clicked to achieve hyperlink. The font color is as follows: 'Light Blue'.
About this chapter	The section 'about this chapter' provide links to various sections of this chapter, as well as links to the Principles Operations Section of this chapter.

Symbols

Format	Description
 Notice	Remind the announcements in the operation, improper operation may result in data loss or equipment damage.

Format	Description
 Warning	Pay attention to the notes on the mark, improper operation may cause personal injury.
 Note	Make a necessary supplementary instruction for operation description.
 Key	Configuration, operation, or tips for device usage.
 Tip	Pay attention to the operation or information to ensure success device configuration or normal working.

Port Convention

The port number in this manual is only an example, and does not represent the actual port with this number on the device. In actual use, the port number existing on the device shall prevail.

Revision Record

Version No.	Date	Revision note
01	09/20/2022	Product release

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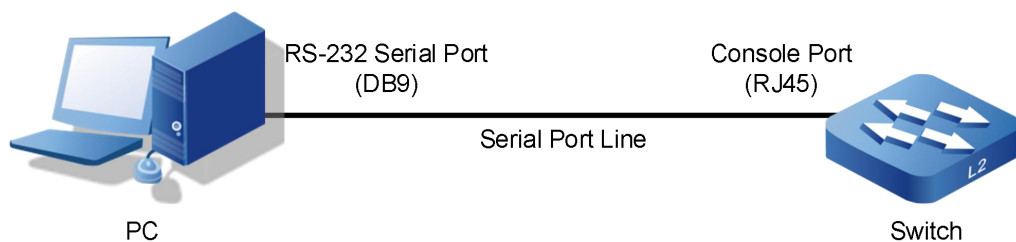
1 Log in to the CLI Configuration Interface

1.1 Login to the Switch via Console Port

The PC can log in to the command line interface of the device by connecting to the Console port.

Operation steps

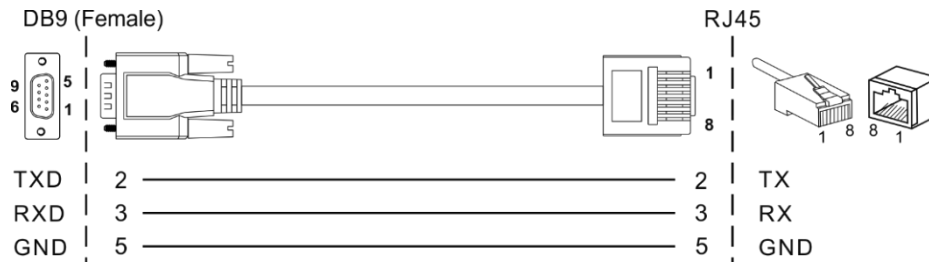
Step 1 Connect the serial port of the computer to the Console port of the device through the serial port line to establish a local configuration environment, as shown in the topology diagram below.



- 1 Connect DB9 at one end of serial port line to RS-232 serial port of PC.
- 2 Connect the RJ45 on the other end of the serial line to the Console port of the device.

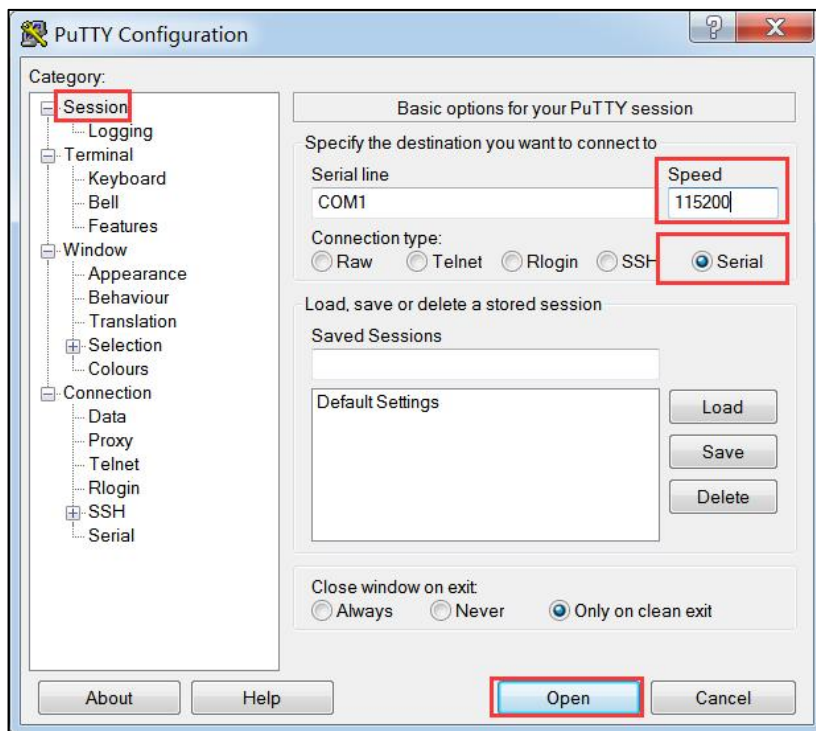
Note:

Diagram of internal connection line of serial port line/communication cable is shown below.



Step 2 Open the terminal simulation software on the PC, create a new connection, and set the interface and communication parameters of the connection. (Using PuTTY as an example here.)

- 1 Open PuTTY and click "Session" on the menu bar.
- 2 In the "Basic options for your PuTTY session" input box on the right, do the following:
 - Select "Connection type" to "Serial".
 - Enter "115200" in the "Speed" text box;
 - Click "Open".



- 3 The "COM1-PuTTY" command line edit dialog box pops up. Press enter key to enter user name and password. The user name and password of the device are both admin by default, as shown below.



```

COM1 - PuTTY
Username:admin
Password:*****
  Pass !
Switch#
Switch#
Switch#

```

Step 3 End.

1.2 Login to the Switch via Telnet

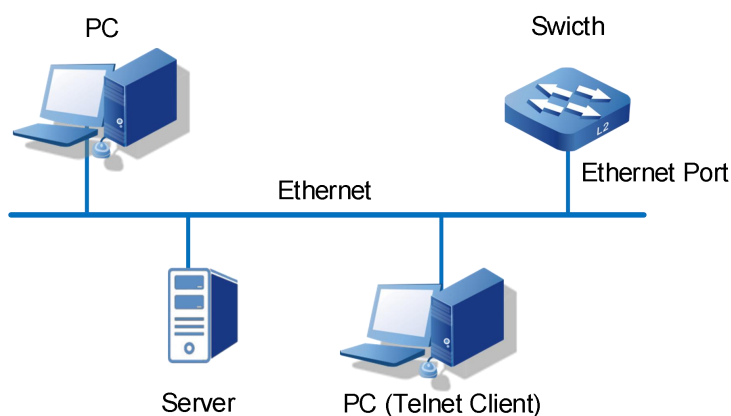
Through Telnet client login to the command line interface of the device, the client and the device should meet the following requires:

1. Configure the IP address of the switch correctly.
2. If the Telnet client and the device are in the same LAN, the IP address of the device and the client must be configured in the same network segment. Otherwise, the route between Telnet client and device must be accessible.

User can log in to the switch device through the Telnet client and configure the device if the two requires above are met.

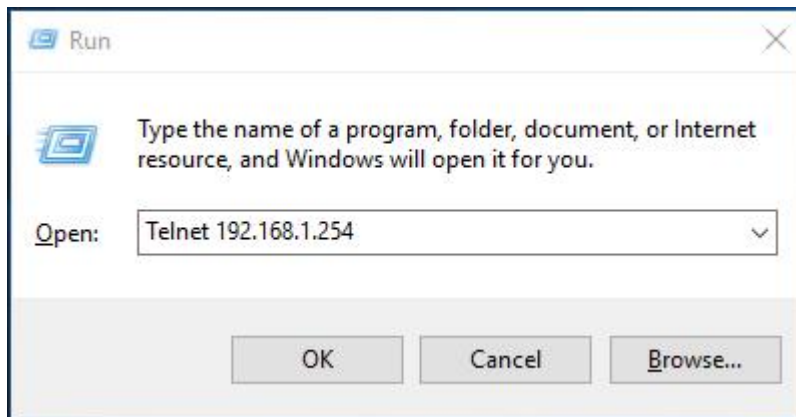
Operation Steps

Step 1 As shown in the figure below, set up the configuration environment to connect the Ethernet port of the computer to the Ethernet port of the device through the LAN.



Step 2 Run the Telnet client on the computer and input the administrative IP address of the Ethernet port connected the computer to the switch, as shown in the figure below.

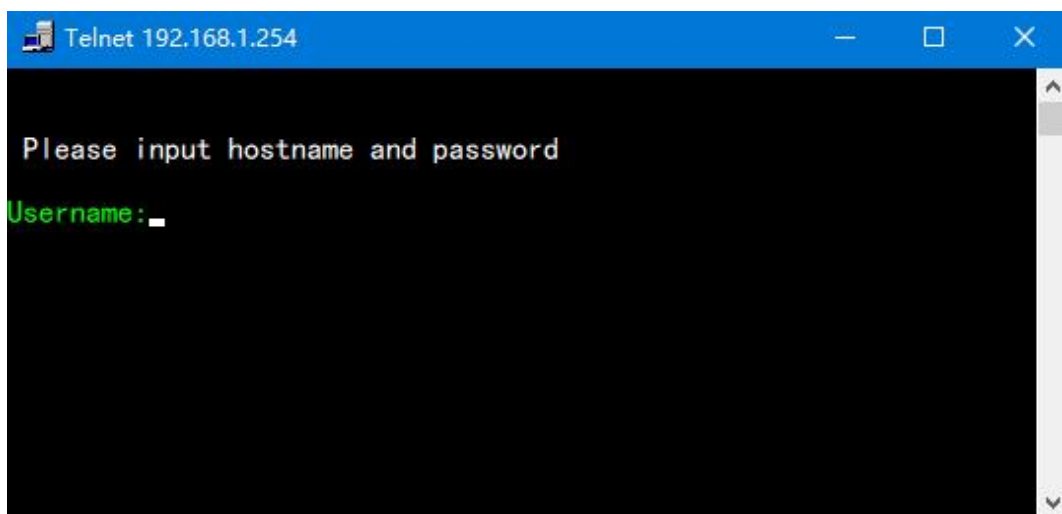
- 1 Press "Win+R" to pop up the running window;
- 2 Enter "Telnet+ space + device IP address" in the "Open (O)" input box.
- 3 Click "OK" button.



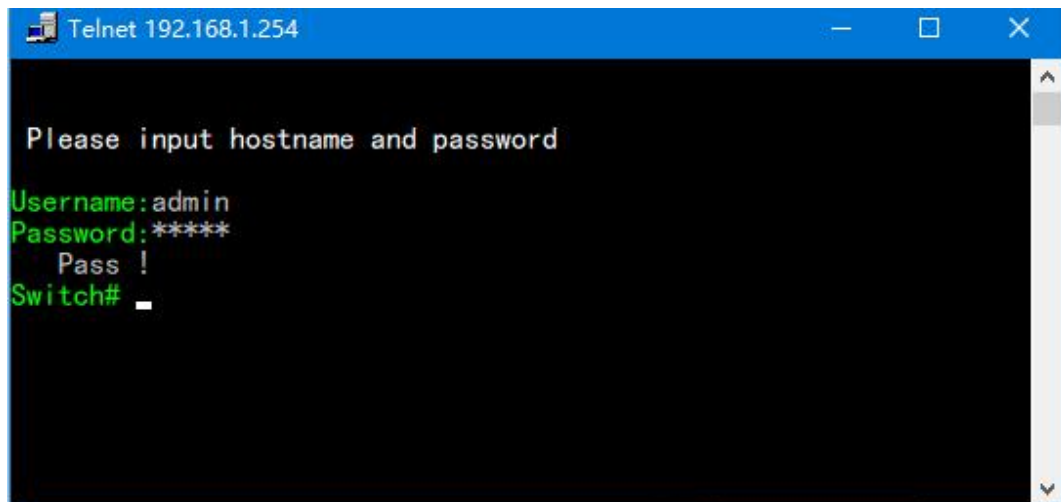
Note:

- Using the command line prompt interface of Win7/Win8/Win10 and other operating systems to configure the device needs to enable Telnet client in advance, user can check and enable Telnet client in the Windows function window under the path of "Control Panel > Program and Function > Enable or Disable Windows function", if Telnet client has been enabled, user can ignore this instruction.
- If the computer operating system does not support Telnet clients, a third party software PuTTY can be used as a Telnet client.
- The default IP address of the device is "192.168.1.254".

Step 3 Click "OK" and start the Telnet connection request. After successful connection, the interface displays "Please input hostname and password", as shown below.



Step 4 Enter the correct username and password. After the username and password are verified, "Pass!" will be displayed. As the picture below:



```
Telnet 192.168.1.254

Please input hostname and password
Username: admin
Password: *****
Pass !
Switch#
```

Note:

Refer to the contents of Chapter “Login to the WEB Interface” of “User Manual” for device’s default username and password. The user name and password are generally admin by default, and admin12345 for some industry-specific devices by default.

Step 5 End.

1.3 Command Line Interface

The switch provides a command line interface and configuration commands to users for easy configuration and management. The command line interface has the following features:

- Local configuration through the Console port;
- Support history command save, 10 can be saved. Saved history command information can be selected through the upper and lower arrow key.
- User can enter “help” or “?” to get help;
- Command input supports Tab key intelligent completion;
- The command line interpreter adopts an incomplete search method for keywords, and the user only needs to type conflict-free keywords, for example, for the config command, just type conf.

1.3.1 Command Line Online Help

CLI provides the following kinds of online help:

- Complete help;
- Partial help.

Complete help

1) In any view, enter <?> to get all commands and their simple description in this view.

```
Switch# ?

List          --List commands of current menu
Help          --Help commands of current menu
Quit          --Quit from CLI
Exit          --Exit from current menu
Reboot        --Reboot switch
```

... More screen display has been omitted.

2) Enter a command followed by “?” separated by space, all keywords and their simple description would be listed if this location has keywords.

```
Switch(information)# show ?

mac           --Device MAC Address
version       --Device version
others        --Device type,name,etc
```

Partial help

1) Enter a character string followed by <?>, all character string that start with this character string will be listed.

```
Switch# M?

Manage      <dir>  --Enter system manage menu
MultiFilter <dir>  --Enter Multicast Filtering menu
Multicast   <dir>  --Enter static multicast filters menu
Mirror      <dir>  --Enter port mirror menu
```

2) Enter first several letters of the command and press <Tab>, if regard the first keyword of the entered letters as unique, then complete keyword would be displayed.

```
Switch# inf press <Tab>
Switch# information
```

1.3.2 Command Line Common Error

All commands typed by the user, if they pass the syntax check will be executed correctly; otherwise, error messages are reported to the user. Common error messages are shown in the table below.

English error message	Cause of Error
Invalid Command	No command found
	No keyword found
	Parameter type error
	Parameter value out of range
Incomplete Command	The input command is incomplete
Too many parameters	Too many parameters

1.3.3 History Command

Command line interface provides features like Doskey, which can save history Command entered by user automatically. User can call history Commands saved by command line interface at any time and execute them repeatedly.

Access history command:

Operation	Key	Result
Visit last history command	The up cursor key<↑>	If there are earlier history commands, the last history command would be fetched
Visit next history command	The down cursor key<↓>	If there are later history commands, the next history command would be fetched

1.3.4 Common Command

The regular command is the most frequently used command. For the convenience of operation, the command List, Help, Quit, Exit and Reboot is arranged in all modes.

Common Command:

Operation	Command	Note
Lists the names of command in this mode	List	Execute in any mode
Lists the names of command and their help information in this mode	Help	Execute in any mode
From the current mode back to the login interface	Quit	Execute in any mode
From the current mode back to the last mode, can not back to login interface	Exit	Execute in any mode
Reboot the device	Reboot	Execute in any mode

Configuration Instance

1) Returns the previous layer from port configuration mode, enter the following bold font command and press enter key.

```
Switch(Port) # exit
Switch#
```

2) View the command format name in VLAN setting mode, enter the following bold font command and press enter key.

```
Switch(VLAN) # list
List
Help
Quit
Exit
Reboot
Save_Config
Root
Show vlantype
Enable
PVLANSetting <dir>
QVLANSetting <dir>
```

3) restart the settings in the information view, enter the following bold font command and press enter.

```
Switch(information) # reboot
<12>June 1 08:03:19 tshell: will reboot device
Please waiting.....
```

```
Switch(information)# <12>June  1 08:03:21 switch_task: system
reboot

> bootloader V1.1
> Status : 40404040

> FS OK
> copying image [1122236 bytes] to SDRAM
\ | /
- RT -   Thread Operating System
/ | \   4.0.5 build Aug 19 2022 17:01:26
2006 - 2021 Copyright by rt-thread team
RTC init
ram make file system
nor fs test OK
<14>June  1 08:00:01 main: MAC: 00-22-6F-00-00-01
<14>June  1 08:00:01 goAhead: goahead create / copy web files
<15>June  1 08:00:01 goAhead: goahead: 2: Version: 5.1.5
<15>June  1 08:00:01 goAhead: goahead: 2: Started http://*:80
<15>June  1 08:00:01 goAhead: goahead: 2: Started https://*:443
<12>June  1 08:00:01 main: boot type 0x00000002
enable watchdog 000037A0
```

Please input hostname and password

2 TFTP Configuration Command

Enter TFTP Configuration View.

Operation	Command	Note
Enter TFTP configuration view	TFTP	Execute in the system view

```
Switch# TFTP
Switch(TFTP)#
```

2.1 TFTP Configuration

TFTP configuration command

Operation	Command	Note
The address of TFTP server	Server <ip_address>	<ip_address> : TFTP server IP address, for example 192.168.1.254
Upload Configuration	Get <File_name>	<File_name> : program name, such as XXXX. cfg.
Download Configuration File	Put <File_name>	<File_name> : program name, such as XXXX. cfg.

2.2 Display TFTP Configuration Information

Display TFTP configuration information.

Operation	Command	Note
-----------	---------	------

Operation	Command	Note
Display TFTP Configuration Information	Show TFTP_config	Execute in the TFTP view

Configuration Instance

Display TFTP configuration information.

```
Switch(TFTP)# show tFTP_config  
TFTP Server ip: 192.168.1.1
```

3 Manage Configuration Command

Enter system management view

Operation	Command	Note
Enter system management view	Manage	Execute in the system view

```
Switch# manage
Switch(Manage)#
```

3.1 Network Diagnosis Setting

Enter system management view:

Operation	Command	Note
Network Diagnosis Setting	Ping <IP_address &domain_name > <options> <content> <options> <content> <options>	<IP_address &domain_name> : IP address or domain name, for example 192.168.1.254 <options>: <ul style="list-style-type: none"> -t:Time To Live -l:Data size -n:Number of echo requests to send <content> : the parameter that matches -t/-l/-n

Configuration Instance

The Ping address of the device is 192.168.5.117, and the packet size is 64, 2 messages will be sent.

```
Switch(Manage)# ping 192.168.5.117 -l 64 -n 2
Pinging 192.168.5.117 with 64 bytes of data:
Reply from 192.168.5.117: bytes=64 time<0ms TTL=64
Reply from 192.168.5.117: bytes=64 time<0ms TTL=64
Ping statistics for 192.168.5.117:
    Packets: Sent = 2, Received = 2, Lost = 0 (0.000000% loss).
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

3.2 Modify the MAC Address of the Device

Operation	Command	Note
Modify the MAC Address of the Device	show ModifyMAC <xx-xx-xx>	<xx-xx-xx>:MAC address

3.3 Display Device Network Address

View IP, subnet mask, default gateway of the device.

Operation	Command	Note
Display IP, subnet mask, default gateway of the device.	show net_address	Execute in system management view

Configuration Instance

View IP, subnet mask, default gateway of the device.

```
Switch(Manage)# show net_address
-----
---
Device IP address   : 192.168.1.254
Device mask address : 255.255.255.0
Device gateway     : 192.168.1.1
DNS1 address       : 8.8.8.8
IP mode            : Static
```

```

DNS mode          :   Static
-----
---
IPv6 Linklocal Addr :   fe80::3a73:2390:9018:bbf1 PREFERRED
IPv6 Global Addr   :   :: INVALID
IPv6 Anycast Addr  :   ::
IPv6 Default Router :   ::
IPv6 DNS           :   ::
IPv6 Prefix        :   3ffe:501:ffff:100::/64

```

3.4 IP Address, Default Gateway, DNS Address Settings

The user can set the device IP, the default gateway address with the following command.

Operation	Command	Note
Device IP address configuration	IP <IP_address> <mask>	<IP_address>: IP address <mask>: subnet mask
Default gateway configuration	Gateway <gateway>	<gateway>: gateway address
DNS server address configuration	DNS <Server>	<Server>: DNS address

Configuration Instance

Configure the IP address of the device to 192.168.5.25, the subnet mask to 255.255.255.0 and the default gateway to 192.168.5.1

```

Switch (Manage) # IP 192.168.5.25 255.255.255.0
[OK]
Switch (Manage) # gateway 192.168.5.1
[OK]

```

3.5 IP/DNS Mode Settings

Set the IP address or DNS address to static or dynamic.

Operation	Command	Note
Set IP address to static or dynamic.	set_IP_mode {Static Auto}	{Static Auto}: <ul style="list-style-type: none"> Static: static IP Auto: dynamic IP
Set DNS address to static or dynamic	Set_DNS_mode {Static Auto}	{Static Auto}: <ul style="list-style-type: none"> Static: static DNS Auto dynamic DNS

3.6 Set WiFi Module Address

Operation	Command	Note
Set WiFi Module Address	qca ip <ip_address>	<ip_address>: IP address, for example 192.168.1.254

3.7 Restore Factory Settings

The user can restore the device to factory settings with the following command.

Operation	Command	Note
Restore the device to factory settings.	Restore	Execute in system management view

Configuration Instance

Restore the device to factory settings.

```
Switch (manage) # restore
Restore Settings or not? (yes/no) yes //press <Y>
Wait.....
```

3.8 Configure Log

Operation	Command	Note
Clear log	Clrlog	—
Log server setting	Syslog <ip_address> <port_num>	<ip_address>: IP address <port_num>: port number
Check log Server Configuration	Show Syslog_config	

3.9 DHCP Automatic Acquisition of IP

Users can enable DHCP clients to automatically obtain the IP address assigned by DHCP server.

Operation	Command	Note
DHCP Enable Configuration	DHCP {enable disable}	{enable disable}: Enable or disable DHCP.

3.10 User Name and Password Settings

The user can set the user name and password with the following command.

Operation	Command	Note
Index	Index {0-4}	{0 1 2} <ul style="list-style-type: none"> • 0:Administrator • 1:Administrator or Observer • 2:Administrator or Observer • 3:Administrator or Observer • 4:Administrator or Observer
Access level	Limit {0 1}	{0 1}: <ul style="list-style-type: none"> • 0:Observer • 1:Administrator
User name configuration	Hostname <hostname>	<hostname>: username string

Operation	Command	Note
Password configuration	Password <password> <password>	<password> : password string

4 Port Configuration Command

Enter port configuration view.

Operation	Command	Note
Enter port configuration view	Port	Execute in the system view

```
Switch# Port
Switch(Port)#
```

4.1 Port Information Display

Port state and configuration information

Operation	Command	Note
Port state information display	Show state <portlist>	<portlist>: 1,2,3,.....or all
Port configuration information display	Show config <portlist>	<portlist>: 1,2,3,.....or all

Configuration Instance

Display state information of port 1.

```
Switch(Port)# show state 1
```

```
port_1  Port_enable  Link_status  Speed  Mode  Flow  Interface  Media  MTU  Description
         enable      LOS          auto   auto  disable TX          copper  1522
```

2) Display configuration information of port 1.

```
Switch(Port)# show config 1
```

```
Speed  Mode  Port_status  Flow_contorl  Interface_type
```

```
port 1 Auto FULL Enable Disable TX
```

4.2 Port Enable

The user can enable or disable ports using the following commands. By default, the port is enabled.

Operation	Command	Note
Port Enable	enable <portlist> {enable disable}	<portlist>: 1,2,3,.....or all

Configuration Instance

Disable port 1.

```
Switch (Port) # enable 1 disable
[OK]
```

4.3 Port Flow Control

Enable or disable port flow control.

Operation	Command	Note
Enable port flow control	Flow-con <portlist> enable	<portlist>: 1,2,3,.....or all
Disable port flow control	Flow-con <portlist> disable	<portlist>: 1,2,3,.....or all

Configuration Instance

Enable port 2 flow control

```
Switch (Port) # flow-con 2 enable
[OK]
```

4.4 Port Speed and Working Mode

Configure the speed and duplex state of the port

Operation	Command	Note
Configure the speed and duplex mode of the port	Mode <portlist> {10h 10f 100h 100f 1000h auto}	<portlist>: 1,2,3,.....or all Mode: <ul style="list-style-type: none"> • 10h: 10Mbps half duplex; • 10f: 10Mbps full duplex; • 100h: 100Mbps half duplex; • 100f: 100Mbps full duplex; • 1000h: 1000Mbps half duplex • Auto: auto-negotiation

Configuration Instance

Configure the speed of Port 3 to 100Mbps and working mode to half duplex.

```
Switch (Port) # mode 3 100h
[OK]
```

5 Bandwidth Configuration Command

Enter bandwidth management view

Operation	Command	Note
Enter bandwidth management view	Bandwidth	Execute in the system view

```
Switch# bandwidth
Switch(Bandwidth) #
```

5.1 Bandwidth Configuration

Ingress bandwidth and egress bandwidth configuration commands.

Operation	Command	Note
Limit package type	Config intype <portlist> {0 1 2 3}	<portlist>: 1,2,3,.....or all; 0-1-2-3 <ul style="list-style-type: none"> • 0: all frames; • 1: broadcast, multicast and flood unicast data frames; • 2: broadcast and multicast packages only; • 3: broadcast package only

Operation	Command	Note
Configure ingress bandwidth	Config inrate <portlist> <low_bw> <normal_bw> <medium_bw> <high_bw>	<portlist>: 1,2,3,.....or all; <low_bw> : low priority queue bandwidth (128k, 256k, 512k, 1M, 2M, 4M, 8M, 16M, 32M, 64M, 128M, 256M, 0 means unlimited); <Normal_bw>: bandwidth of normal priority queue, 1-2 times of lower priority bandwidth; <medium_bw>: bandwidth of medium priority queue, 1-2 times of ordinary low priority bandwidth; <high_bw>: bandwidth of high priority queue, 1-2 times medium priority bandwidth
Configure egress bandwidth	Config egrate <portlist> <bandwidth>	<portlist>: 1,2,3,.....or all; <bandwidth> : 128k, 256k, 512k, 1M, 2M, 4M, 8M, 16M, 32M, 64M, 128M, 256M, 0 means unlimited

Configuration Instance

Set the restrict packet types of port 1 to broadcast packets only, low priority to 128K, normal priority to 256K, medium priority to 512K, high priority to 1M.

```
Switch(Bandwidth)# config intype 1 3
[OK]
Switch(Bandwidth)# config inrate 1 128k 256k 512k 1m
[OK]
```

Configure the egress bandwidth of port 1 as unlimited.

```
Switch(Bandwidth)# config egrate 1 0
[OK]
```

5.2 Bandwidth Display

Display commands of ingress bandwidth and egress bandwidth.

Operation	Command	Note
View limit package type	Show intype <portlist>	<portlist>: 1,2,3,.....or all

Operation	Command	Note
View ingress bandwidth information	Show inrate <portlist>	<portlist>: 1,2,3,.....or all
View egress bandwidth information	Show egrate <portlist>	<portlist>: 1,2,3,.....or all

Configuration Instance

Display ingress bandwidth, egress bandwidth, and limited packet types of port 1.

```
Switch(Bandwidth)# show inrate 1
  port 1 egress bandwidth: unlimited
Switch(Bandwidth)# show egrate 1
  port 1 egress bandwidth: unlimited
Switch(Bandwidth)# show intype 1
  port 1 Limit packets: Broadcast only
```

6 MultiFilter Configuration Command

Enter the multicast filter view.

Operation	Command	Note
Enter the multicast filter configuration view	Multifilter	Execute in the system view

```
Switch# multiFilter
Switch(MultiFilter)#
```

6.1 Multicast Filtering

Multicast filtering

Operation	Command	Note
Configure multicast filtering enable	Drop unknown_multicast {enable disable}	{enable disable}: <ul style="list-style-type: none"> enable disable

6.2 IGMP Snooping Configuration Command

IGMP-snooping configuration

Operation	Command	Note
Configure routing port	Set route {0 1}	{0 1}: <ul style="list-style-type: none"> 0:dynamic 1:static
Configure IGMP snooping enable	Set IGMP {enable disable}	{enable disable}: <ul style="list-style-type: none"> Enable Disable

Operation	Command	Note
Configure IGMP query enable	Set query {enable disable}	{enable disable}: <ul style="list-style-type: none"> • Enable • Disable
Configure the IGMP query interval	Config query <time>	<time>:60-300s
Configure group survival time	Config Age <time>	<time>:120-300s
Configure IGMP port list	Config igmp <portlist>	<portlist>: 1,2,3,.....or all
Display IGMP information	Show IGMP	Execute in the multicast filtering view

Configuration Instance

Enable IGMP snooping and IGMP query, query interval set to 125s and display IGMP information.

```
Switch(MultiFilter)# set igmp enable
[OK]
Switch(MultiFilter)# set query enable
[OK]
Switch(MultiFilter)# config query 125
[OK]
Switch(MultiFilter)# show igmp
IGMP Snooping query time 125 seconds
[ 1] MAC List: 01-00-5E-00-00-FB Port: 16
```

7 Multicast Configuration Command

Enter the static multicast filter view.

Operation	Command	Note
Enter the static multicast view	Multicast	Execute in the system view

```
Switch# multicast
Switch(Multicast) #
```

7.1 Display Multicast Filter List

Display command of static multicast address.

Operation	Command	Note
Displays static multicast filter address	Show multicast	Execute in the multicast view

Configuration Instance

Displays information of the static address table.

```
Switch(Multicast) # show multicast
( 1) MAC : 01-22-33-44-55-66
      PORT: 1,2,3
```

7.2 Add Static Multicast Address

Multicast address adding command

Operation	Command	Note
Add multicast address	Add <macaddress> <portlist>	<macaddress>: multicast address in XY-XX-XX-XX-XX-XX or XY.XX.XX.XX.XX.XX, X is any hexadecimal number <portlist>: 1,2,3,.....or all

Configuration Instance

Add a multicast address of 01-22-33-44-55-66 with member ports of 1,2,3.

```
Switch(Multicast) # add 01.22.33.44.55.66 1-3
[OK]
```

7.3 Delete Static Multicast Address

Command of deleting multicast address

Operation	Command	Note
Delete multicast address	Delete <1-15>	<1-15> : entry 1-15 of multicast address

Configuration Instance

Delete entry 1 of static multicast address.

```
Switch(Multicast) # delete 1
[OK]
```

8 QoS Configuration Command

Enter QoS configuration view.

Operation	Command	Note
Enter QoS configuration view	QoS	Execute in the system view

```
Switch# QoS
Switch(QoS)#
```

8.1 QoS Queue Mechanism Configuration

QoS queue mechanism configuration command.

Operation	Command	Note
QoS Queue Mechanism Configuration	Queuingm {0 1}	{0 1}: <ul style="list-style-type: none"> • 0: weighted average scheduling algorithm • 1: strict priority scheduling algorithm

Configuration Instance

QoS queue mechanism was set as weighted average scheduling algorithm (8:4:2:1).

```
Switch(QoS)# queuingm 0
[OK]
```

8.2 DSCP and QoS Enablement

DSCP and CoS enablement configuration command

Operation	Command	Note
DSCP and QoS enablement	Enable <portlist> {0 1 2 3}	<portlist>: 1,2,3,.....or all 0-1-2-3 <ul style="list-style-type: none"> • 0:Forbid • 1:use CoS • 2:use DSCP • 3:all use

Configuration Instance

1) Enable the Cos of port 1, 3, 4 and 6.

```
Switch(QoS) # enable 1,3,4,6 1
[OK]
```

2) Enable Dscp of port 2, 3, 5 and 6.

```
Switch(QoS) # enable 2,3,5,6 2
[OK]
```

8.3 Dscp/Tos Value Mapping

The user can configure the Dscp/Tos value mapping by using the following command.

Operation	Command	Note
CoS mapping configuration	Config cos <coslist> <classlist>	<coslist> : CoS mapping value, 0, 1, 2-7 <classlist>: <ul style="list-style-type: none"> • L:low • N:normal • M:medium • H:high

Operation	Command	Note
Dscp value mapping configuration	Config dscp <dscplist> <classlist>	<dscplist> : ToS mapping value, 1, 2, 3-64 <classlist>: <ul style="list-style-type: none"> • L:low • N:normal • M:medium • H:high

Configuration Instance

1) set 0, 2, 5, and 7 of CoS value to correspond to the priority queues of Low, Normal, Medium, and High respectively.

```
Switch(QoS)# config cos 0,2,5,7 1,n,m,h
CoS value:0   priority:Low
CoS value:2   priority:Normal
CoS value:5   priority:Medium
CoS value:7   priority:High
```

2) set 1,17,42 and 62 of Dscp values to correspond to the priority queues of Low, Medium, High and Normal.

```
Switch(QoS)# config dscp 1,17,42,62 1,m,h,n
DSCP ( 1) :Low           DSCP (17) :Medium       DSCP (42) :High
DSCP (62) :Normal
```

8.4 Default Port Priority Configuration

The user can configure the default port priority using the following command.

Operation	Command	Note
Default Port Priority Configuration	Default priority <portlist> <0-7>	<portlist>: 1,2,3,.....or all <0-7> : port priority

Configuration Instance

Set the default priority of port 1 to 3.

```
Switch(QoS)# default priority 1 3
[OK]
```

8.5 Display QoS Configuration Information

The user can view the QoS information using the following command.

Operation	Command	Note
View the QoS queue mechanism	Show queuingm	Execute in QoS view
View CoS value mapping	Show cos <coslist>	<coslist> : cos mapping value, 0, 1, 2-7
View ToS value mapping	Show Dscp <dscplist>	<dscplist> : dscp mapping value, 1, 2, 3-64
View ToS/CoS enable state	Show state <portlist>	<portlist>: 1,2,3,.....or all
View the default port priority	Show default <portlist>	<portlist>: 1,2,3,.....or all;

9 Email Configuration Command

Enter mail alarm configuration view.

Operation	Command	Note
Enter mail alarm configuration view	Email	Execute in the system view

```
Switch# email
Switch(Email)#
```

9.1 Configure Mail Alarm Information

Configure Mail Alarm information.

Operation	Command	Note
Enable Mail Alarm	Set email {enable disable}	{enable disable}: <ul style="list-style-type: none"> • Enable • Disable
Mail Server Address	Set Server <mail-server>	<Mail-server>: mail server address
Receiver	Set recipient <mail-address>	<Mail-address>: receiver address
Sender address and password	Set send <mail-address> <password>	<Mail-address>: sender address <password>:password

Operation	Command	Note
Mail Interval	Set interval {0 1 2 4 12 24}	{0 1 2 4 12 24}: <ul style="list-style-type: none"> • 0: anytime • 1: 1 hour • 2: 2 hours • 4: 4 hours • 12: 12 hours • 24: 24 hours
Send system test mail	send email	Display mail sending status information

Configuration Instance

Enable/disable E-mail alarm.

```
Switch (Email) # set email enable
[OK]
```

9.2 Display Mail Alarm Information

Display mail alarm information view

Operation	Command	Note
Display mail alarm information view	Show email	Execute in the system view

Configuration Instance

Display mail alarm information

```
Switch (Email) # show email
Email alarm : Enable
Email server : smtp.163.com
Recipient   :
Send address :
Send Password: *****
Mail time interval: Anytime
```

10 LoopDetection Configuration Command

Enter the loop protection view.

Operation	Command	Note
Enter the loop protection view	LoopDetection	Execute in the system view

```
Switch# LoopDetection
Switch(Loop_Detection)#
```

10.1 Display Port State

Display port status.

Operation	Command	Note
Display port state	Show Status <portlist>	<portlist>: 1,2,3,.....or all

Configuration Instance

Display loop detection status of Port 1.

```
Switch(Loop)# show status 1
Loop Time: 30
Range Time: 3
STATE          ENABLE      Trap
port 1 Link    Disable    Disable
```

10.2 Enable Port Loopback Detection

Enable port loopback detection;

Operation	Command	Note
Enable port loopback detection	Enable <portlist> <enable disable>	<portlist>: 1,2,3,.....or all <enable disable>: <ul style="list-style-type: none"> • Enable • Disable

Configuration Instance

Set port 1 to enable loop detection:

```
Switch(Loop_Detection) # enable 1 enable
[OK]
```

10.3 Enable the Port to Send Trap

Enable the port to send trap:

Operation	Command	Note
Enable the port to send trap	Trap Enable <portlist> <enable disable>	<portlist>: 1,2,3,.....or all <enable disable>: <ul style="list-style-type: none"> • Enable • Disable

Configuration Instance

Set port 1 to enable sending trap function:

```
Switch(Loop_Detection) # trap enable 1 enable
[OK]
```

10.4 Configure Loop Detection Time

Configure loop detection time.

Operation	Command	Note
Loop detection time after loop formation	Config_LoopTime <time>	<time>: time interval, 1-600, unit: second.

Operation	Command	Note
Loop detection time before loop formation	Config_RangeTime <time>	<time>: time interval, 1-60, unit: second.

Configuration Instance

Set the loop detection interval to 5 seconds.

```
Switch(Loop_Detection) # config_RangeTime 10  
[OK]
```

11 DHCP Configuration Command

Enter DHCP configuration view.

Operation	Command	Note
Enter DHCP Configuration view	DHCP	Execute in the system view

```
Switch# DHCP
Switch (DHCP) #
```

11.1 DHCP Enable

Enable/disable DHCP configuration command.

Operation	Command	Note
Enable/disable DHCP	Enable {0 1}	{0 1}: <ul style="list-style-type: none"> • Disable • Enable

11.2 Configure DHCP Parameter

Configure DHCP information.

Operation	Command	Note
Set default domain name	Domain name <domain name>	<domain name>: default domain name
Set default gateway	Default gw <Default gw>	<Default gw>: default gateway

Operation	Command	Note
Set DNS1 address	Dns1 address <Dns1 address>	<Dns1 address>: DNS1 address
Set DNS2 address	Dns2 address <Dns2 address>	<Dns2 address>: DNS2 address
Set lease	Config Lease <time>	<time> : valid time, 1-360 hours optional.
Add	Add <IP_Address> <port>	<IP_Address>: IP address <port>: port number
Delete	Delete <IP_Address>	<IP_Address>: IP address
Wireless	Wireless <start_IP> <end_IP>	Set the address range of IP address assigned to the wireless access terminal. <start_IP>: Start IP Address <end_IP>: End IP Address

Configuration Instance

Set DHCP lease

```
Switch(DHCP)# config 1
[OK]
```

12 VLAN Configuration Command

Enter vlan configuration view:

Operation	Command	Note
Enter Vlan configuration view	Vlan	Execute in the system view

```
Switch# vlan
Switch(VLAN) #
```

12.1 VLAN Type Configuration and Display

VLAN type configuration and display commands.

Operation	Command	Note
Enter Vlan information view	Show vlantype	Execute in VLAN view
Select the Vlan type	Enable {0 1}	{0 1}: <ul style="list-style-type: none"> 0: port-based VLAN VLAN of 1:802.1Q

Configuration Instance

Enable port VLAN and display the VLAN type.

```
Switch(VLAN) # enable 0
Based on port VLAN is enable!
[OK]
```

```
Switch(VLAN) # show vlantype
Based on port VLAN is enable!
```

12.2 Port-based VLAN

Enter port VLAN view.

Operation	Command	Note
Port VLAN view	PVLANSSetting	Execute in VLAN view

```
Switch(VLAN) # PVLANSSetting
Switch(PortVlan) #
```

Port VLAN configuration

Operation	Command	Note
Add Vlan	Add <item> <portlist>	<item> : VLAN ID range 1-4094 <portlist>: 1,2,3,.....or all
Delete VLAN	Delete <items>	<items>: 1, 4, 5-4094 or all
View Vlan information	Show vlan <items>	<items>: 1, 4, 5-4094 or all

Configuration Instance

Add VLAN 2 with port members of port 2 and port 3.

```
Switch(PortVlan) # add 2 2,3
[OK]
```

12.3 IEEE802.1Q VLAN

Enter 802.1Q VLAN view

Operation	Command	Note
802.1Q Vlan view	QVLANSSetting	Execute in VLAN view

```
Switch(Vlan) # qVLANSSetting
Switch(IEEEVlan) #
```

802.1Q VLAN Configuration

Operation	Command	Note
Set port type	Config type <portlist> {Trunk Access}	<portlist>: 1,2,3,.....or all {Trunk Access}: <ul style="list-style-type: none"> • Trunk: keep VID unchanged • Access: replace VID with port default VID
Pvid setting	config pvid <portlist> <pvid>	<portlist> : 1, 2, 3... or all, 0 represents the CPU port <pvid>:1-4094
Add Vlan	Add <vid> <portlist> <typelist>	<vid>:1-4094 <portlist> : 1, 2, 3... or all, 0 represents the CPU port <typelist>: <ul style="list-style-type: none"> • M:UnModified • U:UnTagged • T:Tagged
Delete VLAN	Delete <vidlist>	<vidlist>: 1-4094 or all
View vlan information	Show qvlan <vidlist>	<vidlist>: 1-4094 or all
View port pvid	Show pvid <portlist>	<portlist> : 1, 2, 3... or all, 0 represents the CPU port
View port type	Show type <portlist>	<portlist> : 1, 2, 3... or all, 0 represents the CPU port

Configuration Instance

Add VLAN 3, port 2-3, member type UnModified.

```
Switch(IEEEVlan)# add 3 2-3 M
[OK]
```

13 Ring Configuration Command

Enter ring configuration view.

Operation	Command	Note
Enter ring configuration view	ring	Execute in the system view

```
Switch# ring
Switch(Ring)#
```

13.1 Enable or Disable Ring Network Function

Users can set up ring network enable by using the following command.

Operation	Command	Note
Ring network enable	enable {3 4 5}	{3 4 5}: <ul style="list-style-type: none"> • 3: enable ring3; • 4: enable rstp; • 5: enable MRP;
Ring network close	close ring	Execute in Ring network view

Configuration Instance

Enable ring3

```
Switch(Ring)# enable 3
[OK]
```

13.2 Ring3 Configuration

Once Ring3 is enabled, Ring3 can be set using the following command.

Operation	Command	Note
Configure ring3	Config ring3 {1 2} <ID> <Looptype> <port> <hellotime> {Master Slave}	{1 2}: 1-2 represents ring group 1-2 <id> : represents the ring network identity, and the value is 0-255 <LoopType>: represents ring type <ul style="list-style-type: none"> • 0:Single • 1:Couple: • 2:chain • 3:Daul_homing <portlist>: enter two ring network ports, separate by commas <hellotime> : value range is 0-300 {Master Slave}: this parameter is only valid for single ring, and other ring network types also need to enter numbers, but it has no practical significance <ul style="list-style-type: none"> • 0: master,single-ring station • 1: slave, single ring slave station
Modify ring3	Modify ring3 {1 2} <options> <parameter>	{1 2}: 1-2 represents ring group 1-2 <options>: <ul style="list-style-type: none"> • -h represents Hellotime; • -i represents ring identification; • -p represents ring network port <parameter>: parameters matched with -h -i -p

Configuration Instance

Configure Port 2 and Port 3 to the first group loop port, loop id is 1, hellotime is 0 and loop type is Couple.

```
Switch(Ring)#Enable 3 //enable Ring3
[OK]
Switch(Ring)#config ring3 1 1 1 2,3 0 0 // configure port 2,3 to
Ring3, Ring type to Couple
```

[OK]

13.3 RSTP Configuration

Once RSTP is enabled, RSTP can be set using the following command.

Operation	Command	Note
Displays the current configuration of RSTP	Show rstp_p <portlist>	<portlist>: 1,2,3,.....or all
Modify RSTP port	Modify rstp_p <portlist > <options><parameter>	<portlist>: 1,2,3,.....or all <options>: <ul style="list-style-type: none"> • C: path cost • P: port priority • T: point-to-point network connection • D: directly connect terminal • E: join STP structure <parameter>
Configure rstp	Modify rstp_s <options> <parameter>	<options>: <ul style="list-style-type: none"> • P: switch priority (0、4096、8192、12288、16384、20480、24576、28672、32768、36864、40960、45056、49152、53248、57344、61440) • I: polling interval (1~10s) • D: forward delay time (4~30s) • S: address life time (6~40s) <parameter>

Configuration Instance

1. Configure the path cost of RSTP port 1 to 2000.

```
Switch(Ring)# modify rstp_p 1 c 2000
```

[OK]

Tip: This configuration will be validated after restarting

- view rstp port 1's information

```
Switch(Ring)# show rstp_p 1
Port      Path cost      Priority      P2P      Edge      Enable
1         2000           128          Auto     N         N
```

- Configure priority of switch of rstp to 4096

```
Switch(Ring)# modify rstp_s p 4096
[OK]
Tip: This configuration will be validated after restarting
```

13.4 Display RSTP Current Status

After configuring RSTP, user can use the following command to view the current status of RSTP.

Operation	Command	Note
Display RSTP current status	RSTP Status	Execute in Ring network view

13.5 Display Ring Network Configuration Information

After configuring ring network, user can use the following command to view ring network configuration information.

Operation	Command	Note
Display Ring Network Configuration Information	Show ring_config	Execute in Ring network view
Display ring network status	Show ring_state	

Configuration Instance

View the current Ring network configuration information

```
Switch(Ring)# show ring_config
Ring III Enable
```

```
Group:1 ID: 1 port: 1, 2 type:      Single Hello_time: 0*100ms  
state:Disable  
Group:2 ID: 2 port: 3, 4 type:      Single Hello_time: 0*100ms  
state:Disable
```

14 Dot1x Configuration Command

Enter Dot1x Configuration View.

Operation	Command	Note
Enter Dot1x Configuration view	Dot1x	Execute in the system view

```
Switch#Dot1x
Switch(Dot1x)#
```

14.1 Enable Dot1x Authentication

Operation	Command	Note
Enable Dot1x Authentication	switch(dot1x)# enable dot1x	—
Disable Dot1x Authentication	switch(dot1x)# disable dot1x	—
Enable/disable authentication of ports	Port {enable disable} <portlist>	{enable disable} <ul style="list-style-type: none"> • Enable; • Disable <portlist>: 1,2,3,.....or all

14.2 Configure Dot1x Authentication Parameter

Operation	Command	Note
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Operation	Command	Note
Select Radius server mode	switch(dot1x)# auth-mode {local_type server_type}	{local_type server_type} <ul style="list-style-type: none"> local_type: local; server_type: remote.
Add username and password	switch(dot1x)# add-user name < name > passwd < passwd >	< name >: Username of local authentication < passwd >: Password of local authentication
Delete username and password	switch(dot1x)# del-user name < name >	< name >: Username of local authentication
Set the reauthorization period	Switch(dot1x)# reauth-period <seconds>	<seconds>: The range of authentication upgrade interval is 60~4096, unit: second.
Set the authentication server address, port number and shared password value	Switch(dot1x)# auth-server ip <ip_address> port_num <port_num> shared_secret <secret>	<ip_address>: authentication server address; <port-num>: port number; <secret>:shared password for authentication

15 Trunk Configuration Command

Enter port trunking view.

Operation	Command	Note
Enter port trunking configuration view	trunk	Execute in the system view

```
Switch# trunk
Switch(Trunk)#
```

15.1 Port Trunking Configuration

The user can configure the port trunking using the following command.

Operation	Command	Note
Port Trunking Configuration	Config <trunkgroup> <portlist>	<trunkgroup> : trunk group 0, 1, 2; <portlist>: trunking port 1,2,3,.....or all
Port trunking clear	Clean <trunkgroup>	<trunkgroup> : 0, 1, 2 respectively represent the trunk group 0, 1, 2; All represents all trunk groups

Configuration Instance

Set ports 2 and 3 to trunk group 1.

```
Switch (Trunk) # config 1 2,3
[OK]
```

15.2 Port Trunking Display

Users can view port trunking configuration information using the following command.

Operation	Command	Note
Display configuration information of port trunking	Show <trunkgroup>	<trunkgroup> : 0, 1, 2 respectively represent the trunk group 0, 1, 2; All represents all trunk groups

Configuration Instance

View the port trunking information of trunk group 1.

```
Switch(Trunk)# show 1  
Group: 1  
state: enable  
Port: 2,3
```

16 Access Configuration Command

Enter Access Ctrl view.

Operation	Command	Note
Enter MAC Port Lock view	Access	Execute in the system view

```
Switch# access
Switch(Access)#
```

16.1 MAC Port Lock Configuration

MAC Port Lock configuration command

Operation	Command	Note
Add MAC Port Lock information	Add <macaddress> <port>	<macaddress> : unicast MAC address and the format is XX.XX.XX.XX.XX.XX or XX-XX-XX-XX-XX-XX. <portlist>: 1,2,3,.....or all;
Delete MAC port lock message	Delete <1-16>	<1-16>:MAC port locks the entry in the information

Configuration Instance

1) add a MAC Port Lock message

```
Switch(Access)# add 02.00.00.00.00.02 2
MAC address: 02.00.00.00.00.02      Port: 2
[OK]
```

2) delete a MAC Port Lock message

```
Switch(Access)# delete 2  
[OK]
```

16.2 Display MAC Port Lock Information

Display MAC Port Lock information

Operation	Command	Note
Display MAC Port Lock view	Show lock	Execute in the Access Control view

Configuration Instance

Display MAC Port Lock information

```
Switch(Access)# show lock  
Num      MAC address      PORT  
  1      0200.0000.0002  fe2
```

17 SNMP Configuration Command

Enter SNMP configuration view.

Operation	Command	Note
Enter SNMP configuration view	SNMP	Execute in the system view

```
Switch# snmp
Switch(Snmp)# ?
```

17.1 Configure Private OID

Community name and gateway address configuration commands.

Operation	Command	Note
Configure SNMP Read/Write community	Config private_oid <oid>	<oid>: such as 31258 or 49763

Configuration Instance

Configure private OID to 123456.

```
Switch(Snmp)# config private_oid 123456
[OK]
```

17.2 SNMP Trap Configuration

Trap information is the information sent by the Agent to NMS to inform the management process of the situation on the device end.

Operation	Command	Note
Set the destination host and message type for receiving SNMP Trap messages.	snmp-server host <ip> <name> {trapV1 trapV2c trapV3 informV2c informV3}	Managed device that sends an active alert to the NMS. After the inform alarm is sent out, it will wait for the confirmation message from NMS, and if no confirmation message is received, it will resend the Inform message; Trap message has no confirmation process. <ip> IP address of the destination host; <name> the community name of SNMPv1/v2c or the username of SNMPv3; {trapV1 trapV2c trapV3 informV2c informV3} <ul style="list-style-type: none"> • trapV1: send snmpV1 trap • trapV2c: send snmpV2c trap • trapV3: send snmpV3 trap • informV2c: send snmpv2 inform • informV3: send snmpV3 inform
Cancel the destination host receiving SNMP Trap message.	no snmp-server host <ip>	<ip> IP address of the destination host
Check SNMP Trap configuration	show snmp host	—

17.3 Configure Community Name

Set the community name, SNMP v1/v2c version uses the group name to restrict access rights. This command can be used to configure the group name, read or write view rights and access control policies.

Operation	Command	Note
Add a new community name	snmp-server community <name> view <name> {ro wo rw}	community <name> SNMP community name view <name>SNMP MIB view name {ro wo rw} read-only, write-only or read-write permission
Delete a community name	no snmp-server community <name>	<name> SNMP Community Name
Display community name	show snmp community	—

17.4 Configure SNMP Group

Configure a new SNMP group and set the secure mode and corresponding SNMP view of the SNMP group.

Operation	Command	Note
Add a SNMP group	snmp-server group <name> {auth noauth priv} {read write notify} <name> {read write notify} <name> {read write notify} <name>	<name>: group name {auth noauth priv} group adopts safe modes such as authentication mode, no authentication mode or encryption mode {read write notify} specifies the read, write or notify view for the group. <name> the name of the read, write or notify view
Delete a SNMP group	no snmp-server group <name>	<name>: group name

17.5 Configure SNMP V3 User

SNMPv3 adopts User-Based Security Model (USM) authentication mechanism. Network manager can configure authentication and encryption function. Authentication is used to verify the validity of the packet sender and prevent unauthorized users from accessing it. Encryption encrypts the transmission packet

between NMS and Agent to prevent eavesdropping. It adopts authentication and encryption function to provide higher security for the communication between NMS and Agent.

Operation	Command	Note
Add a user that can access SNMP engine	snmp-server user <name> group <name> auth {md5 sha} <password> priv {des aes} <password>	user <name>:V3 用户名 group <name>:组名 auth {md5 sha} <password>: authentication method of authentication information, Md5 is information digest algorithm 5; Sha is a secure hash algorithm. priv {des aes} <password>: v3 user data encryption algorithm, Des: data encryption algorithm is used for encryption; Aes: advanced encryption standard is used for encryption.
Delete a V3 user	no snmp-server user <name>	<name>: V3 username
Display V3 user	show snmp user	—

17.6 SNMP Display

SNMP display command.

Operation	Command	Note
Display SNMP Information	Show snmp	Execute in SNMP view

18 Trap Configuration Command

Enter Trap configuration view.

Operation	Command	Note
Enter Trap configuration view	Trap	Execute in the system view

```
Switch# trap  
Switch(Trap)#
```

18.1 Trap Configuration Information Display

Show Trap alarm event threshold information.

Operation	Command	Note
Show Trap alarm event threshold	Show	Execute in the Trap view

19 Alarm Configuration Command

Enter alarm configuration view.

Operation	Command	Note
Enter alarm configuration view	Alarm	Execute in the system view

```
Switch# alarm
Switch(Alarm)#
```

19.1 Alarm Configuration/Delete

The user can configure the alarm using the following commands.

Operation	Command	Note
Enable/disable alarm	Alarm set {enable disable}	{enable disable}: <ul style="list-style-type: none"> • Enable • Disable
Set the relay alarm state to normally open or normally closed when there is no alarm.	Relay type {0 1}	{0 1}: <ul style="list-style-type: none"> • 0: Disable • 1: Enable

Operation	Command	Note
Configure the power supply alarm.	Power set <powerID> {enable disable}	<powerID>: <ul style="list-style-type: none"> • 1: represents the first power supply • 2: represents the second power supply • All: all the power supplies {enable disable}: <ul style="list-style-type: none"> • Enable • Disable
Configure the port alarm.	Port relay <portlist> {enable disable}	<portlist>: 1,2,3,.....or all {enable disable}: <ul style="list-style-type: none"> • Enable • Disable
close the alarm information	Close alarm	Execute in alarm view

Configuration Instance

1) enable the alarm of port 1, 3, 5 and 7.

```
Switch(Alarm) # port relay 1,3,5,7 enable
[OK]
```

2) disable the alarm function.

```
Switch (Alarm) # close alarm
[OK]
```

19.2 Display Alarm Information

The user can view the alarm information using the following command.

Operation	Command	Note
Display alarm state	Show alarm	—
Show relay status information in the state of no alarm.	Show relaytype	Execute in alarm view

Operation	Command	Note
Display power supply alarm information	Show power {1 2 all}	{1 2 all}: 1: represents the first power supply; 2: represents the second power supply; All: represents all the power supply
Displays alarm information of the port	Show port <portlist>	<portlist>: 1,2,3,.....or all

Configuration Instance

View alarm information of the port

```
Switch(Alarm) # show relaytype
Relay normal open, will close when alarm active
```

20 Statistics Configuration Command

Enter port statistics configuration view.

Operation	Command	Note
Enter port statistics view	Statistics	Execute in the system view

```
Switch# statistics
Switch(Statistics)#
```

20.1 Port Statistics Configuration View

Port statistics configuration.

Operation	Command	Note
Count the frame number and type of ports	Show frames <port>	<portlist>: 1,2,3,.....or all
Clean up the frame count	Clean frames	Execute in port statistics view
Total statistical flow of the port	Show traffic <port>	<portlist>: 1,2,3,.....or all
Clean up the total statistical flow	Clean traffic	Execute in port statistics view
Displays information of the MAC address table	Show mac <port>	<portlist>: 1,2,3,.....or all

Configuration Instance

1) Count the frame number and types of port 5.

```
Switch(Statistics)# show frames 5
InUnicasts      2386          OutUnicasts     3534
InMulticasts    12915         OutMulticasts   149
InBroadcasts    26715         OutBroadcasts   37
InDrop          0             OutDrop         0
InPause         0             OutPause        0
Undersize       0             Collisions      2
Oversize        0             Multiple        1
Fragments       0             Late            0
Jabber          0             Conflict        0
SysbolErr       0             ResBusy         0
```

2) Display the total flow of Port 5

```
Switch(Statistics)# show traffic 5
Tx              2985150
Rx              5209616
Unicast         6260
Multicast       13165
Broadcast       26838
Error           2
```

21 Mirror Configuration Command

Enter port mirroring configuration view.

Operation	Command	Note
Enter port mirroring configuration view	Mirror	Execute in the system view

```
Switch# mirror
Switch(Mirror) #
```

21.1 Port Mirroring Configuration/Delete

The user can configure/delete the port mirroring using the following command.

Operation	Command	Note
Configure ingress mirroring	Config Ingress <mirror_port>	<mirror_port > : mirror port 1, 2, 3... Or all
Configure egress mirroring	Config Egress <mirror_port>	<mirror_port > : mirror port 1, 2, 3... Or all
Configure collect port	Config Collect <mirror_port>	<mirror_port >: represents collect port 1, 2, 3... or all
Delete mirror information	Close mirror	Execute in port mirroring view
Clean ingress mirror data	Clean Ingress	Execute in port mirroring view
Clean egress mirror data	Clean Egress	Execute in port mirroring view

21.2 Displays Port Mirroring Information

View mirror information command:

Operation	Command	Note
Display mirror information	Show mirror	Execute in port mirroring view

Configuration Instance

View port mirroring information.

```
Switch(Mirror)#show mirror  
Ingress Mirror portlist: 2,3  
Egress Mirror portlist: 2,3  
Collect port : 5
```

22 Time Configuration Command

Enter time configuration view.

Operation	Command	Note
Enter time configuration view	Time	Execute in the system view

```
Switch# time
Switch(Time)#
```

22.1 Time Configuration

Time Configuration Command

Operation	Command	Note
Time Configuration Enable	Time {enable disable}	{enable disable}: <ul style="list-style-type: none"> • Enable • Disable
World time zone selection	Zone <time-zone>	<time-zone>: world time zone, range -12 to +12
NTP server address	server <ntp-server>	<ntp-server>: NTP server address
Time update interval	Interval <Time>	<Time>: time update interval, unit: seconds

Configuration Instance

Set the corresponding mapping value of the world time zone to + 8.

```
Switch(Time)# zone +8  
[OK]
```

22.2 Displays the Time Configuration View

Displays the time configuration information.

Operation	Command	Note
Displays the time configuration information	Show time	Execute in the time view

Configuration Instance

Displays time configuration information.

```
Switch(Time)# show time  
Time anable : Enable  
Time zone   : 8  
NTP server  : time-a.nist.gov  
System time : time-a.nist.gov
```

23 Information Configuration Command

Enter device information view:

Operation	Command	Note
Enter device information view	information	Execute in the system view

```
Switch# information
Switch(information)#
```

23.1 Display Device Information

Display device information command.

Operation	Command	Note
Display system version	show version	Executable in the device information view
Display device MAC address	show mac	Executable in the device information view
Display model, name of the device	show others	Executable in the device information view

23.2 Configure Device Information

Configure device information, including type, name, description of the device, contact information, and so on.

Operation	Command	Note
Configure Device Information	Config <options> <string>	<options>: <ul style="list-style-type: none"> • -t: device type • -n: device name • -p: device description • -c: contact information • <string>: parameter



Notice

Input type should conform to GB2312 code type, otherwise display error will occur.

23.3 Clean up Device Information

Clean up device information, including type, name, number, description of the device and contact information.

Operation	Command	Note
Clean up Device Information	Clean <options>	<options>: <ul style="list-style-type: none"> • -t: device type • -n: device name • -p: device description • -c: contact information

24 LLDP Configuration Command

Enter LLDP View

Operation	Command	Note
Enter LLDP configuration view	LLDP	Execute in the system view

```
Switch# lldp  
Switch(Lldp)#
```

24.1 LLDP Enable

Enable/disable LLDP configuration command

Operation	Command	Note
Enable/disable LLDP	Enable {0 1}	{0 1}: <ul style="list-style-type: none">• 0: disable• 1: Enabled

24.2 Display LLDP Information

Display LLDP information

Operation	Command	Note
Display LLDP configuration	show LLDP_config	Execute in LLDP configuration view

Operation	Command	Note
Display LLDP neighbor information	Show neighbors	Execute in LLDP configuration view

24.3 LLDP Configuration

LLDP configuration command

Operation	Command	Note
Send LLDP configuration	Config <Tx_Interval_setting>	<Tx_Interval_setting>:Tx Interval [5-32768]
Port configuration	Port <portlist> {0:Disable 1:Rx_Tx 2:Tx_Only 3:Rx_Only}	<portlist>: 1,2,3,.....or all 0-1-2-3 <ul style="list-style-type: none"> • 0:Disabled • 1:Rx Tx • 2:Tx only • 3:Rx only