Content

Chapter 1 Commands for Show

1.1 clear history all-users

Command: clear history all-users

Function: Clear the command history of all users saved by the switch.

Command Mode: Admin mode

Usage Guide: Using this command can clear the command history of all users.

Example:

Switch#clear history all-users

1.2 clear logging

Command: clear logging {sdram | nvram}

Function: This command is used to clear all the information in the log buffer zone.

Command Mode: Admin Mode

Usage Guide: When the old information in the log buffer zone is no longer concerned, we can use this command to clear all the information.

Example: Clear all information in the log buffer zone sdram.

Switch#clear logging sdram

Related Command: show logging buffered

1.3 history all-users max-length

Command: history all-users max-length <count>

Function: Set the max command history of all users saved by the switch.

Parameter: <count>: the command history number can be saved, ranging from 100 to 1000

Command Mode: Global mode

Usage Guide: The system can save 100 recent command history of all users at best by default, using this command can set the max command history number.

Example:

Switch(config)#history all-users max-length 500

1.4 logging

Command: logging { <ipv4-addr> | *<ipv6-addr>* } [facility *<local-number>*] [level *<severity>*]

no logging { <ipv4-addr> | *<ipv6-addr>* } [facility *<local-number>*]

Function: The command is used to configure the output channel of the log host. The "no" form of this command will disable the output at the log host output channel.

Parameter: *<ipv4-addr>* is the IPv4 address of the host, *<ipv6-addr>* is the IPv6 address of the host; *<local-number>* is the recording equipment of the host with a valid range of local0～local7, which is in accordance with the facility defined in the RFC3164; *<severity>* is the severity threshold of the log information severity level. The rule of the log information output is explained as follows: only those with a level equal to or higher than the threshold will be outputted. For detailed description on the severity please refer to the operation manual.

Command Mode: Global Mode

Default: No log information output to the log host by default. The default recorder of the log host is the local0; the default severity level is warnings.

Usage Guide: Only when the log host is configured by the logging command, this command will be available. We can configure many IPv4 and IPv6 log hosts.

Example 1: Send the log information with a severity level equal to or higher than warning to the log server with an IPv4 address of 100.100.100.5, and save to the log recording equipment local1.

Switch(config)# logging 100.100.100.5 facility local1 level warnings

Example 2: Send the log information with a severity level equal to or higher than informational to the log server with an IPv6 address of 3ffe:506:1:2::3, and save to the log recording equipment local5.

Switch(config)# logging 3ffe:506:1:2::3 facility local1 level informational

1.5 logging executed-commands

Command: logging executed-commands {enable | disable}

Function: Enable or disable the logging executed-commands.

Parameter: None.

Command Mode: Global mode.

Default: Disable state.

Usage Guide: After enable this command, the commands executed by user at the

console, telnet or ssh terminal will record the log, so it should be used with the logging LOGHOST command.

Example: Enable the command and send the commands executed by user into log host (10.1.1.1)

Switch(Config)#logging 10.1.1.1

Switch(Config)#logging executed-commands enable

1.6 logging source-ip

Command: logging source-ip {<ipv4-address> | <ipv6-address>}

              no logging source-ip {<ipv4-address> | <ipv6-address>}

Function：Configure IPv4 or IPv6 address used in sending log; the no command deletesthis address.

Parameters：*<ipv4-address>* is IPv4 address used in sending log, the format is decimal divided by point. **<ipv6-address>** is IPv6 address used in sending log, the format is hexadecimal divided by colon.

Command Mode：Global Mode.

Default：The log sent to log host selects source address according to the interface address sent by log packets.

Usage Guide：There is no this configuration as default. Select source address according to the interface address sent by log packets. When it is configured, adopt the configured source address as the source address of log packets.

Example 1：Configure IP address used in sending log.

Switch(config)# logging source-ip 1.1.1.1

Example 2：Delete the configured resource address used in sending ipv6 log packets.

Switch(config)# no logging source-ip 2001::1

1.7 logging source-ip flags

Command: logging source-ip flags

              no logging source-ip flags

Function：This command is the source IPv4 or IPv6 address that the log sent to log host uses when adding the sending log; the no command make that the log sent to log host does not include the source IPv4 or IPv6 address.

Command Mode：Global Mode.

Default：The log sent to log host does not include the source IPv4 or IPv6 address.

Usage Guide：Before using this command, use **logging** command to configure log host

and configure the source IPv4 or IPv6 address used in sending log. There is no this configuration as default, the log sent to log host does not include the source IPv4 or IPv6 address. When configure it and configure the source IPv4 or IPv6 address at the same time, the content of log will include the configured source address; otherwise, the log sent to log host does not include the source IPv4 or IPv6 address used by sending log.

Example： Enable the function of log adding the source IPv4 or IPv6 address used by sending log.

Switch(config)# logging source-ip flags

1.8 logging loghost sequence-number

Command: logging loghost sequence-number

            no logging loghost sequence-number

Function: Add the loghost sequence-number for the log; the no command does not include the loghost sequence-number.

Command Mode: Port mode

Default: Do not include the sequence-number.

Usage Guide: Use logging command to configure the loghost before this command is set.

Example: Open the loghost sequence-number.

Switch(config)# logging loghost sequence-number

1.9 ping

Command: ping [[src *<source-address>*] { *<destination-address>* | host *<hostname>* }]

Function: Issue ICMP request to remote devices, check whether the remote device can be reached by the switch.

Parameters: *<source-address>* is the source IP address where the ping command is issued, with IP address in dotted decimal format. *<destination-address>* is the target IP address of the ping command, with IP address in dotted decimal format. *<hostname>* is the target host name of the ping command, which should not exceed 64 characters.

Default: 5 ICMP echo requests will be sent. The default packet size and time out is 56 bytes and 2 seconds.

Command Mode: Admin mode

Usage Guide: When the ping command is entered without any parameters, interactive configuration mode will be invoked. And ping parameters can be entered interactively.

Example:

Example 1: To ping with default parameters.

Switch#ping 10.1.128.160

Type ^c to abort.

Sending 5 56-byte ICMP Echos to 10.1.128.160, timeout is 2 seconds.

...!!

Success rate is 40 percent (2/5), round-trip min/avg/max = 0/0/0 ms

In the example above, the switch is made to ping the device at 10.1.128.160. The command did not receive ICMP reply packets for the first three ICMP echo requests within default 2 seconds timeout. The ping failed for the first three tries. However, the last two ping succeeded. So the success rate is 40%. It is denoted on the switch "." for ping failure which means unreachable link, while "!" for ping success, which means reachable link.

Example 2: Use ping command with source address configuration, and leave other fields to default.

Switch#ping src 10.1.128.161 10.1.128.160

Type ^c to abort.

Sending 5 56-byte ICMP Echos to 10.1.128.160, using source address 10.1.128.161, timeout is 2 seconds.

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms

In the example above, 10.1.128.161 is configured as the source address of the ICMP echo requests, while the destination device is configured to be at 10.1.128.160. The command receives all the ICMP reply packets for all of the five ICMP echo requests. The success rate is 100%. It is denoted on the switch "." for ping failure which means unreachable link, while "!" for ping success, which means reachable link.

Example 3: Ping with parameters entered interactively.

Switch#ping

VRF name：

Target IP address：10.1.128.160

Use source address option[n]: y

Source IP address: 10.1.128.161

Repeat count [5]: 100

Datagram size in byte [56]：1000

Timeout in milli-seconds [2000]: 500

Extended commands [n]: n

Display Information	Explanation

VRF name	VRM name. If MPLS is not enabled, this field will be left empty.
Target IP address：	The IP address of the target device.
Use source address option[n]	Whether or not to use ping with source address.
Source IP address	To specify the source IP address for ping.
Repeat count [5]	Number of ping requests to be sent. The default value is 5.
Datagram size in byte [56]	The size of the ICMP echo requests, with default as 56 bytes.
Timeout in milli-seconds [2000]:	Timeout in milli-seconds, with default as 2 seconds.
Extended commands [n]:	Whether or to use other extended options.

1.10 ping6

**Command: ping6 [<dst-ipv6-address> | host *<hostname>* | src *<src-ipv6-address>*
{*<dst-ipv6-address >* | host *<hostname>*}]**

Function: To check whether the destination network can be reached.

Parameters: *<dst-ipv6-address>* is the target IPv6 address of the ping command.
<src-ipv6-address> is the source IPv6 address where the ping command is issued.
<hostname> is the target host name of the ping command, which should not exceed 64
characters.

Default: Five ICMP6 echo request will be sent by default, with default size as 56 bytes,
and default timeout to be 2 seconds.

Command Mode: Normal user mode

Usage Guide: When the ping6 command is issued with only one IPv6 address, other
parameters will be default. And when the ipv6 address is a local data link address, the
name of VLAN interface should be specified. When the source IPv6 address is specified,
the command will fill the icmp6 echo requests with the specified source address for ping.

Example:

(1) To issue ping6 command with default parameters.

Switch>ping6 2001:1:2::4

Type ^c to abort.

Sending 5 56-byte ICMP Echos to 2001:1:2::4, timeout is 2 seconds.

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/320/1600 ms

(2) To issue the ping6 command with source IPv6 address specified.

switch>ping6 src 2001:1:2::3 2001:1:2::4

Type ^c to abort.

Sending 5 56-byte ICMP Echos to 2001:1:2::4, using src address 2001:1:2::3, timeout is 2 seconds.

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms

(3) To issue the ping6 command with parameters input interactively.

switch>ping6

Target IPv6 address:fe80::2d0:59ff:feb8:3b27

Output Interface: vlan1

Use source address option[n]:y

Source IPv6 address: fe80::203:fff:fe0b:16e3

Repeat count [5]:

Datagram size in byte [56]:

Timeout in milli-seconds [2000]:

Extended commands [n]:

Type ^c to abort.

Sending 5 56-byte ICMP Echos to fe80::2d0:59ff:feb8:3b27, using src address fe80::203:fff:fe0b:16e3, timeout is 2 seconds.

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 1/4/16 ms

Display Information	Explanation
ping6	The ping6 command
Target IPv6 address	The target IPv6 address of the command.
Output Interface	The name of he VLAN interface, which should be specified when the target address is a local data link address.
Use source IPv6 address [n]:	Whether or not use source IPv6 address. Disabled by default.
Source IPv6 address	Source IPv6 address.
Repeat count[5]	Number of the ping packets.
Datagram size in byte[56]	Packet size of the ping command. 56 byte by default.
Timeout in milli-seconds[2000]	Timeout for ping command. 2 seconds by default.
Extended commands[n]	Extended configuration. Disabled by default.

!	The network is reachable.
.	The network is unreachable.
Success rate is 100 percent(8/8), round-trip min/avg/max = 1/1/1ms	Statistic information, success rate is 100 percent of ping packet.

1.11 show boot-files

This command is not supported by the switch.

1.12 show debugging

**Command: show debugging {bgp | dvmrp | igmp | ipv6 | mld | nsm | ospf | other |
pim | rip | spanning-tree | vrrp}**
Function: Display the debug switch status.
Usage Guide: If the user needs to check what debug switches have been enabled, **show
debugging** command can be executed.
Command mode: Admin Mode
Example: Check for currently enabled debug switch.
Switch#show debugging ospf
OSPF debugging status:
   OSPF all IFSM debugging is on
   OSPF packet Hello detail debugging is on
   OSPF packet Database Description detail debugging is on
   OSPF packet Link State Request detail debugging is on
   OSPF packet Link State Update detail debugging is on
   OSPF packet Link State Acknowledgment detail debugging is on
   OSPF all LSA debugging is on
   OSPF all NSM debugging is on
   OSPF all events debugging is on
   OSPF all route calculation debugging is on
Switch#
Relative command: debug

1.13 show fan

Command: show fan

Function: Show fan information of switch.

Parameter: None.

Command Mode: Any modes.

Usage Guide: Check fan information of switch.

Example: Show the current fan information of switch.

Switch(Config)#show fan

Fan board information:

Fan No	Status	Speed
1	Normal	High
2	Normal	High
3	Normal	High
4	Normal	High

1.14 show flash

Command: show flash

Function: Show the size of the files which are reserved in the system flash memory.

Command Mode: Admin Mode and Configuration Mode.

Example: To list the files and their size in the flash.

Switch#show flash

boot.rom	329, 828 1900-01-01 00:00:00 --SH
boot.conf	94 1900-01-01 00:00:00 --SH
nos.img	2, 449, 496 1980-01-01 00:01:06 ----
startup-config	2, 064 1980-01-01 00:30:12 ----

1.15 show history

Command: show history

Function: Display the recent user command history.

Command mode: Admin Mode

Usage Guide: The system holds up to 20 commands the user entered, the user can use the UP/DOWN key or their equivalent (ctrl+p and ctrl+n) to access the command history.

Example:

Switch#show history

enable

config

interface ethernet 1/0/3

enable

dir

show ftp

1.16 show history all-users

Command: show history all-users [detail]

Function: Show the recent command history of all users.

Parameter: [detail] shows user name of the executing command. IP address of the user will be shown when logging in the executing command through Telnet or SSH.

Command Mode: Admin and configuration mode

Usage Guide: This command is used to show the recent command history of all users, including time, logging type, executing command, etc.

Notice: The user can only check the command history of other users whose purview should not be higher than oneself.

Example:

Switch(config)#show history all-users detail

Time	Type	User	Command
0w 0d 0h 2m	Telnet/SSH	admin	show history all-users detail 192.168.1.2:1419
0w 0d 0h 1m	Telnet/SSH	admin	show history all-users 192.168.1.2:1419
0w 0d 0h 1m	Console	Null	show history all-users
0w 0d 0h 1m	Console	Null	end
0w 0d 0h 1m	Console	Null	ip address 192.168.1.1 255.255.255.0
0w 0d 0h 0m	Console	Null	in v 1
0w 0d 0h 0m	Console	Null	telnet-server enable

1.17 show logging buffered

Command: show logging buffered [level {*critical* | *warnings*} | range *<begin-index>* *<end-index>*]

Function: This command displays the detailed information in the log buffer channel. This command is not supported on low end switches.

Parameter:level {*critical | warnings*} means the level of critical information.

<begin-index> is the index start value of the log message, the valid range is 1-65535,
<end-index> is the index end value of the log message, and the valid range is 1-65535.
When only display logging buffered information of the line card must be added range
parameter, but the main control has not the request.

Command Mode: Admin and Configuration Mode.

Default: No parameter specified indicates all the critical log information will be displayed.

Usage Guide: Warning and critical log information is saved in the buffer zone. When
displayed to the terminal, their display format should be: index ID time <level> module ID
[mission name] log information.

Example 1: Display the critical log information in the log buffer zone channel and related
to the main control with index ID between 940 and 946.

Switch#show logging buffered level critical range 940 946

Example 2: Display all the information which level is warning and above in the log buffer
zone channel.

Switch#show logging buffered level warning

1.18 show logging executed-commands state

Command: show logging executed-commands state

Function: Show the state of logging executed-commands.

Parameter: None.

Command Mode: Admin mode.

Default: None.

Usage Guide: Use this command to display the state (enable or disable).

Example:

Switch#show logging executed-commands state

Logging executed command state is enable

1.19 show logging source

Command: show logging source mstp

Function: Show the log information source of MSTP module.

Parameters: None.

Default: None.

Command mode: Admin and configuration mode.

Usage Guide: Check the log information source (include information channel, the
information severity level) by **show logging mstp** command.

Example: Show the log information source of MSTP.

Switch#show logging source mstp

system module log switch status:

Channel	Onoff	Severity
logbuff	on	warning
loghost	on	warning
terminal	on	warning

1.20 show memory

Command: show memory [usage]

Function: Display the contents in the memory.

Parameter: usage means memory use information.

Command mode: Admin Mode

Usage Guide: This command is used for switch debug purposes. The command will interactively prompt the user to enter start address of the desired information in the memory and output word number. The displayed information consists of three parts: address, Hex view of the information and character view.

Example:

Switch#show memory

start address : 0x2100

number of words[64]:

```
002100:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002110:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002120:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002130:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002140:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002150:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002160:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
002170:   0000 0000 0000 0000    0000 0000 0000 0000    *................*
```

1.21 show running-config

Command: show running-config

Function: Display the current active configuration parameters for the switch.

Default: If the active configuration parameters are the same as the default operating parameters, nothing will be displayed.

Command mode: Admin Mode

Usage Guide: When the user finishes a set of configuration and needs to verify the configuration, show running-config command can be used to display the current active parameters.

Example:

Switch#show running-config

1.22 show startup-config

Command: show startup-config

Function: Display the switch parameter configurations written into the Flash memory at the current operation; those are usually also the configuration files used for the next power-up.

Default: If the configuration parameters read from the Flash are the same as the default operating parameter, nothing will be displayed.

Command mode: Admin Mode

Usage Guide: The **show running-config** command differs from **show startup-config** in that when the user finishes a set of configurations, **show running-config** displays the added-on configurations whilst **show startup-config** won't display any configurations. However, if **write** command is executed to save the active configuration to the Flash memory, the displays of **show running-config** and **show startup-config** will be the same.

1.23 show switchport interface

Command: show switchport interface [ethernet *<IFNAME>*]

Function: Show the VLAN port mode, VLAN number and Trunk port messages of the VLAN port mode on the switch.

Parameter: *<IFNAME>* is the port number.

Command mode: Admin mode

Example: Show VLAN messages of port ethernet 1/0/1.

Switch#show switchport interface ethernet 1/0/1

Ethernet1/0/1

Type :Universal

Mac addr num : No limit

Mode :Trunk

Port VID :1

Trunk allowed Vlan :ALL

Displayed Information	Description
Ethernet1/0/1	Corresponding interface number of the Ethernet.
Type	Current interface type.
Mac addr num	Numbers of interfaces with MAC address learning ability.
Mode: Trunk	Current interface VLAN mode.
Port VID :1	Current VLAN number the interface belongs.
Trunk allowed Vlan :ALL	VLAN permitted by Trunk.

1.24 show tcp

Command: show tcp

Function: Display the current TCP connection status established to the switch.

Command mode: Admin Mode

Example:

Switch#show tcp

LocalAddress	LocalPort	ForeignAddress	ForeignPort	State
0.0.0.0	23	0.0.0.0	0	LISTEN
0.0.0.0	80	0.0.0.0	0	LISTEN

Displayed information	Description
LocalAddress	Local address of the TCP connection.
LocalPort	Local pot number of the TCP connection.
ForeignAddress	Remote address of the TCP connection.
ForeignPort	Remote port number of the TCP connection.
State	Current status of the TCP connection.

1.25 show tcp ipv6

Command: show tcp ipv6

Function: Show the current TCP connection.

Command mode: Admin and configuration mode.

Example:

Switch#show tcp ipv6

LocalAddress	LocalPort	RemoteAddress	RemotePort	State
IF VRF				
::	80	::	0	LISTEN
0 0				
::	23	::	0	LISTEN
0 0				

Displayed Information	Explanation
LocalAddress	Local IPv6 address of TCP connection
LocalPort	Local port of TCP connection
RemoteAddress	Remote IPv6 address of TCP connection
RemotePort	Remote Port of TCP connection
State	The current state of TCP connection
IF	Local port index of TCP connection
VRF	Virtual route forward instance

1.26 show telnet login

Command: show telnet login

Function: List information of currently available telnet clients which are connected to the switch.

Command Mode: Admin Mode and Configuration Mode.

Usage Guide: This command used to list the information of currently available telnet clients which are connected to the switch.

Example:

Switch#show telnet login

Authenticate login by local.

Login user:

aa

1.27 show temperature

Command: show temperature

Function: Show the temperature of the CPU.

Parameters: None.

Command Mode: Any modes

Usage Guide: This command can be used to monitor the CPU temperature of the switch.

Example: Show the temperature of the CPU of the switch.

Switch(Config)#show temperature

Temperature: 47.0625 ℃

1.28 show tech-support

Command: show tech-support

Function: Display various information about the switch and the running tasks. This command is used to diagnose the switch by the technical support specialist.

Command Mode: Admin mode and configuration mode

Usage Guide: When failure occurred on the switch, this command can be used to get related information, in order to diagnose the problems.

Example:

Switch#show tech-support

1.29 show udp

Command: show udp

Function: Display the current UDP connection status established to the switch.

Command mode: Admin Mode

Example:

Switch#show udp

LocalAddress	LocalPort	ForeignAddress	ForeignPort	State
0.0.0.0	161	0.0.0.0	0	CLOSED
0.0.0.0	123	0.0.0.0	0	CLOSED
0.0.0.0	1985	0.0.0.0	0	CLOSED

Displayed information	Description
LocalAddress	Local address of the UDP connection.

LocalPort	Local pot number of the UDP connection.
ForeignAddress	Remote address of the UDP connection.
ForeignPort	Remote port number of the UDP connection.
State	Current status of the UDP connection.

1.30 show udp ipv6

Command: *show* **udp ipv6**
Function: Show the current UDP connection.
Command mode: Admin and configuration mode.
Example:

LocalAddress	LocalPort	RemoteAddress	RemotePort	State
::	69	::	0	CLOSED
::	1208	::	0	CLOSED

Displayed Information	Explanation
LocalAddress	Local IPv6 address of UDP connection
LocalPort	Local port of UDP connection
RemoteAddress	Remote IPv6 address of UDP connection
RemotePort	Remote Port of UDP connection
State	The current state of UDP connection

1.31 show version

Command: show version
Function: Display the switch version.
Command mode: Admin Mode
Usage Guide: Use this command to view the version information for the switch, including hardware version and software version.
Example:
Switch#show version

1.32 traceroute

**Command: traceroute [source <ipv4-addr>] { <ip-addr> / host <hostname> } [hops
<hops>] [timeout <timeout>]**

Function: This command is tests the gateway passed in the route of a packet from the source device to the target device. This can be used to test connectivity and locate a failed sector.

Parameter: *<ipv4-addr>* is the assigned source host IPv4 address in dot decimal format. ***<ip-addr>*** is the target host IP address in dot decimal format. ***<hostname>*** is the hostname for the remote host. ***<hops>*** is the maximum gateway number allowed by Traceroute command. ***<timeout>*** Is the timeout value for test packets in milliseconds, between 100 -10000.

Default: The default maximum gateway number is 30, timeout in 2000 ms.

Command mode: Admin Mode

Usage Guide: Traceroute is usually used to locate the problem for unreachable network nodes.

1.33 traceroute6

Command: traceroute6 *[*source <addr>*]* {<ipv6-addr> | host <hostname>} *[hops* <hops>] *[timeout* <timeout>]

Function: This command is for testing the gateways passed by the data packets from the source device to the destination device, so to check the accessibility of the network and further locating the network failure.

Parameter*:* <addr> is the assigned source host IPv6 address in colonned hex notation. ***<ipv6-addr>*** is the IPv6 address of the destination host, shown in colonned hex notation; ***<hostname>*** is the name of the remote host; ***<hops>*** is the max number of the gateways the traceroute6 passed through, ranging between 1-255; ***<timeout>*** is the timeout period of the data packets, shown in millisecond and ranging between 100~10000.

Default: Default number of the gateways passes by the data packets is 30, and timeout period is defaulted at 2000ms.

Command Mode: Admin Mode

Usage Guide: Traceroute6 is normally used to locate destination network inaccessible failures.

Example:

Switch# traceroute6 2004:1:2:3::4

Relevant Command: ipv6 host

Chapter 2 Commands for Reload Switch after Specified Time

2.1 reload after

Command: reload after {[<*HH:MM:SS*>] [days <*days*>]}

Function: Reload the switch after a specified period of time.

Parameters: <*HH:MM:SS*> the specified time, HH (hours) ranges from 0 to 23, MM (minutes) and SS (seconds) range from 0 to 59.

<*days*> the specified days, unit is day, range from 1 to 30.

time and day may be configured at the same time or configured solely.

Command Mode: Admin mode

Usage Guide: With this command, users can reboot the switch without shutdown its power after a specified period of time, usually when updating the switch version. The switch can be rebooted after a period of time instead of immediately after its version being updated successfully. This command will not be reserved, which means that it only has one-time effect. After this command is configured, it will prompt the reboot information when user logging in the switch by telnet.

Example: Set the switch to automatically reload after 2 days, 10 hours and 1 second.

Switch#reload after 10:00:01 days 2

Process with reboot after? [Y/N] y

Related Commands: reload, reload cancel, show reload

2.2 reload cancel

Command: reload cancel

Function: Cancel the specified time period to reload the switch.

Parameters: None

Command Mode: Admin mode.

Usage Guide: With this command, users can cancel the specified time period to reload the switch, that is, to cancel the configuration of command "reload after". This command will not be reserved.

Example: Prevent the switch to automatically reboot after the specified time.

Switch#reload cancel

Reload cancel successful.

Related Commands: reload, reload after, show reload

2.3 show reload

Command: show reload

Function: Display the user's configuration of command "reload after".

Parameters: None.

Command Mode: Admin and configuration mode

Usage Guide: With this command, users can view the configuration of command "reload after" and check how long a time is left before rebooting the switch.

Example: View the configuration of command "reload after". In the following case, the user set the switch to be rebooted in 10 hours and 1 second, and there are still 9 hours 59 minutes and 48 seconds left before rebooting it.

Switch#show reload

 The original reload after configuration is 10:00:01.

 System will be rebooted after 09:59:48 from now.

Related Commands: reload, reload after, reload cancel

Chapter 3 Commands for Debugging and Diagnosis for Packets Received and Sent by CPU

3.1 clear cpu-rx-stat protocol

Command: clear cpu-rx-stat protocol[<protocol-type>]

Function: Clear the statistics of the CPU received packets of the protocol type.

Parameter: *<protocol-type>* is the type of the protocol of the packet, including dot1x, stp, snmp, arp, telnet, http, dhcp, igmp, ssh, bgp, bgp4plus, rip, ripng, ospf, ospfv3, pim, pimv6, unknown-mcast, unknow-mcast6, mld

Command Mode: Global Mode

Usage Guide: This command clear the statistics of the CPU received packets of the protocol type, it is supposed to be used with the help of the technical support.

Example: Clear the statistics of the CPU receives ARP packets.

Switch(config)#clear cpu-rx-stat protocol arp

3.2 cpu-rx-ratelimit channel

This command is not supported by the switch.

3.3 cpu-rx-ratelimit enhanced

This command is not supported by the switch.

3.4 cpu-rx-ratelimit protocol

Command: cpu-rx-ratelimit protocol *<protocol-type> <packets>*

           no cpu-rx-ratelimit protocol *<protocol-type>*

Function: Set the max rate of the CPU receiving packets of the protocol type, the no command set the max rate to default.

Parameter: <protocol-type> is the type of the protocol, including dot1x, stp, snmp, arp,

telnet, http, dhcp, igmp, ssh, bgp, bgp4plus, rip, ripng, ospf, ospfv3, pim, pimv6, unknown-mcast, unknow-mcast6, mld; ***<packets>*** is the max rate of CPU receiving packets of the protocol type, its range is 1-2000 pps.

Command Mode: Global Mode

Default: A different default rate is set for the different type of protocol.

Usage Guide: The rate limit set by this command have an effect on CPU receiving packets, so it is supposed to be used with the help of the technical support.

Example: Set the rate of the ARP packets to 500pps.

Switch(config)#cpu-rx-ratelimit protocol arp 500

3.5 cpu-rx-ratelimit queue-length

Command: cpu-rx-ratelimit queue-length <queue-id> <qlen-value>

 no cpu-rx-ratelimit queue-length <queue-id>

Function: Set the length of the specified queue, the no command set the length to default.

Parameter: <queue-id> is the index of specified queue, the range of the queue-id is <0-7>. **<qlen-value>** is the queue's length, the range of length is <0-500>pkts, 0 indicates closing the queue.

Command Mode: Global Mode

Default: Default length is 100pkts.

Usage Guide: The queue length set by this command have an effect on CPU receiving packets, so it is supposed to be used with the help of the technical support.

Example: Set the length of queue 2 to 150pkts.

Switch(config)#cpu-rx-ratelimit queue-length 2 150

3.6 cpu-rx-ratelimit total

Command: cpu-rx-ratelimit total *<packets>*

 no cpu-rx-ratelimit total

Function: Set the total rate of the CPU receiving packets, the no command sets the total rate of the CPU receiving packets to default.

Parameter: <packets> is the max number of CPU receiving packets per second.

Command Mode: Global Mode

Default: 1200pps.

Usage Guide: The total rate set by the command have an effect on CPU receiving

packets, so it is supposed to be used with the help of the technical support.

Example: Set the total rate of the CPU receive packets to 1500pps.

Switch(config)#cpu-rx-ratelimit total 1500

3.7 debug driver

Command: debug driver {receive | send} [interface {<*interface-name*> | all}] [protocol {<*protocol-type*> | discard | all}] [detail]

                no debug driver {receive | send}

Function: Turn on the on-off of showing the information of the CPU receiving or sending packets, the "**no debug driver {receive | send}**" command turns off the on-off.

Parameter: receive | send show the information of receiving or sending packets;

interface {<*interface-list*>| all}: interface-list is the Ethernet port number, **all** indicate all the Ethernet ports.

protocol {<*protocol-type*>| discard | all}: protocol-type is the type of the protocol of the packet, including snmp, telnet, http, dhcp, igmp, hsrp, arp, bgp, rip, ospf, pim, ssh, vrrp, ripng, ospfv3, pimv6, icmpv6, bgp4plus, unknown-mcast, unknown-mcast6, ttl0-2cpu, isis, dot1x, gvrp, stp, lacp, cluster, mld, vrrpv3, ra, uldp, lldp, eapou **all** means all of the protocol types, **discard** means all the discarded packets. **Detail** show detail information.

Command Mode: Admin Mode

Usage Guide: This command is used to debug, it is supposed to be used with the help of the technical support.

Example: Turn on the on-off for showing the receiving packets.

Switch#debug driver receive

3.8 protocol filter

Command: protocol filter {protocol-type}

no Protocol filter **{protocol-type}**

Function: Turn on/off the corresponding treatment of the named protocol packets.

Parameter: <*protocol-type*> stands for protocol type, it can be configured:

{arp|bgp|dhcp|dhcpv6|hsrp|http|igmp|ip|ldp|mpls|ospf|pim|rip|snmp|telnet|vrrp}

Command Mode: Admin Mode

Usage Guide: This command turns on/off the corresponding treatment of the named protocol packets, and it is used to debug and diagnose the switch. Please use it with direction of the manufacturers technical personnel.

Example: Turn on the treatment of the arp protocol packets.

Switch#protocol filter arp

3.9 show cpu-rx protocol

Command: show cpu-rx protocol [*<protocol-type>*]

Function: Show the statistics of the CPU received packets of the specified protocol type.

Parameter: *<protocol- type>* is the protocol type of the packets, if do not input parameters, show all statistic packets.

Command Mode: Admin and configuration mode

Default: None.

Usage Guide: This command is used to debug, it is supposed to be used with the help of the technical support.

Example: Show the statistics of CPU receiving ARP packets.

Switch#show cpu-rx protocol arp

Type	Rate-limit	TotPkts	CurState
arp	500	3	allowed