

S3250 Series Switches

CLI Reference Guide

Models: S3250-16TF-U, S3250-24TF-U

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Chapter 1 ARP Learning Configuration Commands

1.1 arp <ip> <mac>

Command function	Command format
Configure a short static ARP table	arp <ip> <mac>

Parameter Description

Parameter	Description	Value range
ip	IP address	/
mac	MAC address	/

1.2 arp <ip> <mac> vlan <vlan-id>

Command function	Command format
Configure a long static ARP table	arp <ip> <mac> vlan <vlan-id> [interface ethernet <port-id>]

Parameter Description

Parameter	Description	Value range
ip	IP address	/
mac	MAC address	/
vlan-id	vlan number	/
port-id	port number	/

1.3 arp aging-time

Command function	Command format
Configure ARP aging time	arp aging-time <time> no arp aging-time

Parameter Description

Parameter	Description	Value range
time	/	3-2880 minutes

1.4 arp peer

Command function	Command format
Configure ARP peer	arp peer <ip> <mac> <ethernet <port-num>> no arp peer

Parameter Description

Parameter	Description	Value range
ip	IP address	/
mac	MAC address	/
port-num	port number	/

1.5 arp bind dynamic

Command function	Command format
Convert dynamic ARP entries to static ones	arp bind dynamic <ip all>

Parameter Description

Parameter	Description	Value range
ip	IP address	/
all	All dynamic arp	/

1.6 no arp

Command function	Command format
Delete ARP table entries	no arp < dynamic static all ip vlan<vlan-id> interface ethernet<port-num>>

Parameter Description

Parameter	Description	Value range
ip	IP address	/
all	All arp	/
dynamic	dynamic	/
static	static	/
vlan-id	vlan number	/
port-num	port number	/

1.7 show arp

Command function	Command format
Display ARP table entries	show arp < dynamic static all <i>ip</i> mac vlan < <i>vlan-id</i> > interface ethernet < <i>port-num</i> >>

Parameter Description

Parameter	Description	Value range
ip	IP address	/
all	All arp	/
dynamic	dynamic	/
static	static	/
mac	mac address	/
vlan-id	vlan number	/
port-num	port number	/

1.8 arp overwrite

Command function	Command format
Handle ARP conflict packets under a physical interface	arp overwrite no arp overwrite

Parameter Description

None

1.9 gratuitous-arp

Command function	Command format
Configure the interface to send gratuitous ARP packets when the port is up	gratuitous-arp no gratuitous-arp

Parameter Description

None

1.10 arp reply-repeat

Command function	Command format
Enable ARP reply-repeat functionality under a physical interface	arp reply-repeat no arp reply-repeat

Parameter Description

None

1.11 arp reply-repeat [times]

Command function	Command format
Configure the number of arp responses per unit time globally	arp reply-repeat [times <times>] [interval <mseconds>] no arp-reply-repeat [times <times>] [interval <mseconds>]

Parameter Description

Parameter	Description	Value range
times	times	1-3
mseconds	time in ms	10-1000ms

1.12 show arp aging-time

Command function	Command format
Show arp aging-time	show arp aging-time

Parameter Description

None

1.13 show arp overwrite

Command function	Command format
Show arp overwrite	show arp overwrite [interface ethernet <port-num>]

Parameter Description

None

1.14 show arp peer

Command function	Command format
Show arp peer	show arp peer

Parameter Description

None

1.15 show arp reply-repeat

Command function	Command format
Show arp reply-repeat	show arp reply-repeat [interface ethernet <port-num>]

Parameter Description

None

Chapter 2 ARP Proxy Configuration Commands

2.1 arp-proxy

Command function	Command format
Enable the ARP proxy function for a VLAN	arp-proxy no arp-proxy

Parameter Description

None

2.2 arp-proxy broadcast

Command function	Command format
Enable the ARP proxy broadcast function for a VLAN	arp-proxy broadcast no arp-proxy broadcast

Parameter Description

None

2.3 show arp-proxy

Command function	Command format
Show arp-proxy	show arp-proxy

Parameter Description

None

Chapter 3 IPv6 ND Configuration Commands

3.1 ipv6 neighbor <ipv6> <mac>

Command function	Command format
Configure a short static entry in the ND table	ipv6 neighbor <ipv6> <mac>

Parameter Description

Parameter	Description	Value range
ipv6	ipv6 address	/
mac	mac address	/

3.2 ipv6 neighbor <ipv6> <mac> <vlan-id>

Command function	Command format
Configure a long static entry in the ND table	ipv6 neighbor <ipv6> <mac> [vlan-id] [<port-id>]

Parameter Description

Parameter	Description	Value range
ipv6	ipv6 address	/
mac	mac address	/
vlan-id	vlan number	/
port-id	port number	/

3.3 ipv6 neighbor <ipv6> <mac> <vlan-id> <port-id>

Command function	Command format
Configure a static ND table entry	ipv6 neighbor <ipv6> <mac> <vlan-id> <port-id>

Parameter Description

Parameter	Description	Value range
ipv6	ipv6 address	/
mac	mac address	/
vlan-id	vlan number	/
port-id	port number	/

3.4 ipv6 neighbors max-learning-num

Command function	Command format
Global or port configuration for maximum number of neighbors limit	ipv6 neighbors max-learning-num <i><num></i> no ipv6 neighbors max-learning-num

Parameter Description

Parameter	Description	Value range
num	/	1-2000

3.5 show ipv6 neighbors max-learning-num

Command function	Command format
Display the maximum number of neighbors that can be learned	show ipv6 neighbors max-learning-num

Parameter Description

None

3.6 ipv6 nd reachable-time

Command function	Command format
Configure reachable-time state aging time for global or Layer 3 interface	ipv6 nd reachable-time <i><time></i> no ipv6 nd reachable-time

Parameter Description

Parameter	Description	Value range
time	/	1-3600s

3.7 ipv6 nd dad attempts

Command function	Command format
Configure the number of dad messages sent globally or through Layer 3 interface	ipv6 nd dad attempts <times> no ipv6 nd dad attempts

Parameter Description

Parameter	Description	Value range
times	/	0-20

3.8 ipv6 nd ns retrans-time

Command function	Command format
Configure the retransmission interval of ns packets for global or Layer 3 interface	ipv6 nd ns retrans-time <seconds> no ipv6 nd ns retrans-time

Parameter Description

Parameter	Description	Value range
seconds	/	1-3600s

3.9 ipv6 nd ra interval

Command function	Command format
Layer 3 interface configuration retransmission ra message interval	ipv6 nd ra interval <max-seconds> <min-seconds> no ipv6 nd ra interval

Parameter Description

Parameter	Description	Value range
max-seconds	maximum interval	4-1800
min-seconds	minimum interval	3-1350

3.10 ipv6 nd ra halt

Command function	Command format
Suppress RA messages on Layer 3 interface	ipv6 nd ra halt no ipv6 nd ra halt

Parameter Description

None

3.11 ipv6 nd ra hop-limit

Command function	Command format
Configure the hop-limit value for RA messages sent from Layer 3 interface	ipv6 nd ra hop-limit <num> no ipv6 nd ra hop-limit

Parameter Description

Parameter	Description	Value range
num	/	0-255

3.12 ipv6 nd ra prefix

Command function	Command format
Configure the prefix parameters for RA messages on Layer 3 interface	ipv6 nd ra prefix <id> <ipv6-net> [valid-lifetime preferred-lifetime] [off-link] [no-autoconfig] no ipv6 nd ra prefix

Parameter Description

Parameter	Description	Value range
id	prefix ID	/
valid-lifetime	valid lifetime	0-4294967295 s
preferred-lifetime	preferred lifetime	0-4294967295 s
no-autoconfig	prevent automatic allocation	/
off-link	used for connection determination	/

3.13 ipv6 nd ra router-lifetime

Command function	Command format
Configure the router-lifetime value in RA messages on Layer 3 interface	ipv6 nd ra router-lifetime <second> no ipv6 nd ra router-lifetime

Parameter Description

Parameter	Description	Value range
second	/	0-9000

3.14 show ipv6 nd dad attempts

Command function	Command format
Show the number of dad messages sent	show ipv6 nd dad attempts

Parameter Description

None

3.15 show ipv6 nd reachable-time

Command function	Command format
Show the reachable state time	show ipv6 nd reachable-time

Parameter Description

None

3.16 show ipv6 nd ns retrans-time

Command function	Command format
Show the retransmission time for NS messages	show ipv6 nd ns retrans-time

Parameter Description

None

3.17 show ipv6 nd ra halt

Command function	Command format
Display whether RA suppression is enabled on Layer 3 interface	show ipv6 nd ra halt

Parameter Description

None

3.18 show ipv6 nd ra hop-limit

Command function	Command format
Display the hop-limit value for RA messages	show ipv6 nd ra hop-limit

Parameter Description

None

3.19 show ipv6 nd ra interval

Command function	Command format
Display the interval for RA message advertisements	show ipv6 nd ra interval

Parameter Description

None

3.20 show ipv6 nd ra prefix

Command function	Command format
Display the prefixes advertised in RA messages	show ipv6 nd ra interval

Parameter Description

None

3.21 show ipv6 nd ra router-lifetime

Command function	Command format
Display the router lifetime advertised in RA messages	show ipv6 nd ra router-lifetime

Parameter Description

None

Chapter 4 DHCP-Snooping Configuration Commands

4.1 dhcp-snooping

Command function	Command format
The (no) dhcp-snooping command enables (or disables) the DHCP-Snooping function globally or in VLAN mode	dhcp-snooping no dhcp-snooping

Parameter Description

None

4.2 dhcp-snooping trust

Command function	Command format
The (no) dhcp-snooping trust command configures (or removes) a trusted port in VLAN or port mode	dhcp-snooping trust no dhcp-snooping trust

Parameter Description

None

4.3 dhcp-snooping fast-remove

Command function	Command format
The (no) dhcp-snooping fast-remove command configures (or removes) actions when a port link goes down	dhcp-snooping fast-remove

Parameter Description

None

4.4 dhcp-snooping max-learn-num

Command function	Command format
------------------	----------------

The (no) dhcp-snooping max-learn-num value command configures (or restores) the maximum number of users allowed to connect on a port in port or VLAN mode

dhcp-snooping max-learn-num 2

Parameter Description

Parameter	Description	Value range
value	Maximum number of allowed DHCP clients	0-2048

4.5 show dhcp-snooping interface

Command function	Command format
------------------	----------------

The show dhcp-snooping interface [ethernet port-id] command displays the DHCP-Snooping configuration for a port

show dhcp-snooping interface

Parameter Description

Parameter	Description	Value range
port-id	port number	Depends on the physical switch ports

4.6 show dhcp-snooping vlan

Command function	Command format
------------------	----------------

The show dhcp-snooping vlan vlan-id command displays the DHCP-Snooping configuration for a VLAN

show dhcp-snooping vlan <vlan-id>

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN id	1-4094

4.7 show dhcp-snooping clients

Command function	Command format
The show dhcp-snooping clients command displays the DHCP-Snooping client entries	show dhcp-snooping clients

Parameter Description

None

4.8 clear dhcp-snooping

Command function	Command format
The clear dhcp-snooping [ip-address mac vlan vid interface ethernet port-id] command deletes dynamic entries recorded by DHCP-Snooping	clear dhcp-snooping 192.168.1.1

Parameter Description

Parameter	Description	Value range
ip-address	Valid IPv4 address	Configurable IPv4 address
mac	mac address	48-bit binary number, e.g., X:X:X:X:X
vlan-id	vlan id	1-4094
port-id	port number	Depend on the physical switch

4.9 dhcp-snooping dhcp-server

Command function	Command format
The (no) dhcp-snooping dhcp-server [ip-address] command adds or removes a	dhcp-snooping dhcp-server 192.168.1.1 (no) dhcp-snooping dhcp-server 192.168.1.1

DHCP server binding to DHCP-Snooping

Parameter Description

Parameter	Description	Value range
ip-address	Valid IPv4 address	/

Chapter 5 DHCP-Option82 Configuration Commands

5.1 dhcp-option82

Command function	Command format
(no) dhcp-option82 command global/interface/VLAN switch	dhcp-option82

Parameter Description

None

5.2 dhcp-option82 device-id

Command function	Command format
The (no) dhcp-option82 device-id command configures (or removes) whether the sub-option includes device ID information	dhcp-option82 device-id

Parameter Description

None

5.3 dhcp-option82 format

Command function	Command format
The dhcp-option82 format [normal verbose user-defined] command configures (or removes) the DHCP- Option82 format	dhcp-option82 format user-defined

Parameter Description

None

5.4 dhcp-option82 format verbose

Command function	Command format
The dhcp-option82 format verbose node-identifier [hostname mac user-defined <defined-string>] command configures (or removes) the verbose format for custom configurations	dhcp-option82 format verbose node-identifier user-defined string

Parameter Description

Parameter	Description	Value range
defined -string	User-defined format ID	1-128 characters

5.5 dhcp-option82 information format

Command function	Command format
The dhcp-option82 information format [ascii hex] command configures (or removes) the encapsulation format for verbose mode	dhcp-option82 information format ascii no dhcp-option82 information format

Parameter Description

None

5.6 dhcp-option82 strategy

Command function	Command format
The dhcp-option82 strategy [drop keep replace] command configures (or removes) the handling strategy for DHCP packets with existing Option82 fields at the port or VLAN level	dhcp-option82 strategy replace no dhcp-option82 strategy

Parameter Description

Parameter	Description	Value range
drop	Drops DHCP packets with Option82	/
keep	Keeps DHCP packets with Option82	/
replace	Replaces the Option82 field in DHCP	/

5.7 dhcp-option82 circuit-id user-defined

Command function	Command format
The dhcp-option82 circuit-id user-defined <string> command configures (or removes) a custom circuit ID at the port or VLAN level	dhcp-option82 circuit-id user-defined string no dhcp-option82 circuit-id user-defined

Parameter Description

Parameter	Description	Value range
string	User-defined format ID	1-128 characters

5.8 dhcp-option82 remote-id user-defined

Command function	Command format
Configure (or remove) a custom remote ID at the port or VLAN level	dhcp-option82 remote-id user-defined string no dhcp-option82 remote-id user-defined

Parameter Description

Parameter	Description	Value range
string	User-defined format ID	1-128 characters

5.9 show dhcp-option82

Command function	Command format
The show dhcp-option82 [vlan [vlan-id] interface ethernet port-id] command	Show dhcp-option82 interface ethernet 0/0/1

displays the configuration details for

DHCP-Option82

Parameter Description

Parameter	Description	Value range
vlan-id	vlan id	1-4094
port-id	port number	Depend on the physical switch

Chapter 6 DHCPv6-Snooping Configuration Commands

6.1 dhcpv6-snooping

Command function	Command format
The (no) dhcpv6-snooping command enables (or disables) the DHCPv6 Snooping feature globally	dhcpv6-snooping no dhcpv6-snooping

Parameter Description

None

6.2 dhcpv6-snooping trust

Command function	Command format
The (no) dhcpv6-snooping trust command configures (or removes) trusted ports in port mode	dhcpv6-snooping no dhcpv6-snooping

Parameter Description

None

6.3 dhcpv6-snooping port-down-action fast-remove

Command function	Command format
The (no) dhcpv6-snooping port-down-action fast-remove command configures (or removes) the global action for port link down events	dhcpv6-snooping port-down-action fast-remove

Parameter Description

None

6.4 dhcpv6-snooping max-clients

Command function	Command format
------------------	----------------

The (no) dhcpv6-snooping max-clients value command configures (or restores) the maximum number of clients allowed to connect to a port or VLAN

dhcpv6-snooping max-learn-num 2

Parameter Description

Parameter	Description	Value range
value	Maximum number of DHCP clients allowed	0-2048

6.5 show dhcpv6-snooping clients

Command function	Command format
------------------	----------------

The show dhcpv6-snooping clients command displays DHCPv6 Snooping client table entries

show dhcpv6-snooping clients

Parameter Description

None

6.6 show dhcpv6-snooping interface

Command function	Command format
------------------	----------------

The show dhcpv6-snooping interface [ethernet port-id] command displays the configuration of DHCPv6 Snooping ports

show dhcpv6-snooping interface

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the switch's physical ports

6.7 show dhcpv6-snooping vlan

Command function	Command format
The show dhcpv6-snooping vlan vlan-id command displays the configuration of DHCPv6 Snooping on VLANs	show dhcpv6-snooping vlan 2

Parameter Description

Parameter	Description	Value range
vlan-id	vlan id	1-4094

6.8 clear dhcpv6-snooping

Command function	Command format
The clear dhcpv6-snooping [ip ipv6-address mac mac vlan vid interface ethernet port-id] command removes dynamic entries recorded by DHCPv6 Snooping	clear dhcpv6-snooping ip 2::1

Parameter Description

Parameter	Description	Value range
ipv6-address	Valid IPv6 address	128-bit binary number, format: X:X:X:X:X:X
mac	mac address	48-bit binary number, e.g., X:X:X:X:X
vlan-id	vlan id	1-4094
port-id	port number	Depend on the physical switch

Chapter 7 DHCPv6 Option18 Configuration Commands

7.1 dhcpv6-snooping information option 18

Command function	Command format
The (no) dhcpv6-snooping information option 18 command enables (or disables) the DHCPv6 Option18 feature	dhcpv6-snooping information option 18 no dhcpv6-snooping information option 18

Parameter Description

None

7.2 dhcpv6-snooping information interface-id

Command function	Command format
The (no) dhcpv6-snooping information interface-id [hostname ipv4-address ipv4-address ipv6-address ipv6-address string string user-defined user-defined] command enables (or removes) the DHCPv6 Remote ID content	dhcpv6-snooping information interface-id ipv6-address 1::1 no dhcpv6-snooping information interface-id

Parameter Description

Parameter	Description	Value range
hostname	Switch name	/
ipv4-address	Valid IPv4 address	32-bit binary number, format: X.X.X.X
v6-address	Valid IPv6 address	128-bit binary number, format: X:X:X:X:X:X
string	User-defined string	1–64 characters
user-defined	User-defined formatted string	1–128 characters

7.3 show dhcpv6-snooping information

Command function	Command format
The show dhcpv6-snooping information command displays DHCPv6 Option18 information	show dhcpv6-snooping information

Parameter Description

None

Chapter 8 DHCPv6 Option37 Configuration Commands

8.1 dhcpv6-snooping information option 37

Command function	Command format
The (no) dhcpv6-snooping information option 37 command enables (or disables) the DHCPv6 Option37 feature	dhcpv6-snooping information option 37 no dhcpv6-snooping information option 37

Parameter Description

None

8.2 dhcpv6-snooping information remote-id

Command function	Command format
The (no) dhcpv6-snooping information remote-id [hostname ipv4-address ipv4-address ipv6-address ipv6-address string string user-defined user-defined] command enables (or removes) the DHCPv6 Remote ID content	dhcpv6-snooping information remote-id ipv6-address 1::1 no dhcpv6-snooping information remote-id

Parameter Description

Parameter	Description	Value range
hostname	Switch name	/
ipv4-address	Valid IPv4 address	32-bit binary number, format: X.X.X.X
v6-address	Valid IPv6 address	128-bit binary number, format: X:X:X:X:X:X
string	User-defined string	1–64 characters
user-defined	User-defined formatted string	1–128 characters

8.3 show dhcpv6-snooping information

Command function	Command format
The show dhcpv6-snooping information command displays DHCPv6 Option37 information	show dhcpv6-snooping information

Parameter Description

None

Chapter 9 IPv4 IF-VLAN Interface Configuration Commands

9.1 interface vlan-interface

Command function	Command format
The (no) interface vlan-interface vid command is used to configure or delete a common VLAN interface	interface vlan-interface 1 no interface vlan-interface 1

Parameter Description

Parameter	Description	Value range
vlan-id	vlan id	1-4094

9.2 ip address

Command function	Command format
The (no) ip address [ipaddress primary] mask override command configures or deletes an IP address for a common VLAN interface	ip address 1.1.1.1 255.255.255.0 ip address 1.1.1.1 255.255.255.0 override ip address primary 1.1.1.1 no ip address no ip address 1.1.1.1 255.255.255.0

Parameter Description

Parameter	Description	Value range
ip address	Valid IP address	32-bit binary number, format: X.X.X.X
primary	Configures the IP address as primary	N/A
mask	Subnet mask	255.0.0.0–255.255.255.252
override	Overrides the primary IP address	N/A

9.3 ip address range

Command function	Command format
------------------	----------------

The (no) ip address range start-ipadd end-ipadd command configures or deletes an IP address range for a common VLAN interface

ip address range 1.1.1.1 1.1.1.2
no ip address range
no ip address range 1.1.1.1 1.1.1.2

Parameter Description

Parameter	Description	Value range
start-ipadd	Start of the valid IP address range	32-bit binary number, format: X.X.X.X
end-ipadd	End of the valid IP address range (must be ≥ start-ipadd)	Same as above

9.4 ip address dhcp

Command function	Command format
The (no) ip address dhcp command configures or deletes the acquisition of an IP address for a common VLAN interface via DHCP	ip address dhcp no ip address dhcp

Parameter Description

None

9.5 ip address bootp

Command function	Command format
The (no) ip address bootp command configures or deletes the acquisition of an IP address for a common VLAN interface via BOOTP	ip address bootp no ip address bootp

Parameter Description

None

9.6 ip icmp host-unreachable

Command function	Command format
The ip icmp host-unreachable send enable disable command configures or deletes ICMP host-unreachable functionality	ip icmp host-unreachable send enable ip icmp host-unreachable send disable

Parameter Description

None

9.7 ip icmp mask-request

Command function	Command format
The ip icmp mask-request receive enable disable command configures or deletes ICMP mask-request functionality	ip icmp mask-request receive enable ip icmp mask-request receive disable

Parameter Description

None

9.8 description

Command function	Command format
The (no) description string command adds or deletes description information for the interface	(no)description vlan1

Parameter Description

Parameter	Description	Value range
string	Description information	Any characters except ?, spaces require quotes

9.9 show ip interface

Command function	Command format
------------------	----------------

The show ip interface vlan-interface
command displays the IP address
configuration information for the interface

show ip interface vlan-interface 1

Parameter Description

Parameter	Description	Value range
vlan-interface	VLAN interface	1-4094

Chapter 10 IPv4 SuperVLAN Interface Configuration Commands

10.1 interface supervlan-interface

Command function	Command format
The (no) interface supervlan-interface vid command is used to configure or delete a common SuperVLAN interface	interface supervlan-interface 1 no interface supervlan-interface 1

Parameter Description

Parameter	Description	Value range
vid	VLAN ID	1-4094

10.2 subvlan

Command function	Command format
The (no) subvlan [vid vlan-list] command configures or deletes the sub-VLANs under a SuperVLAN	subvlan 2,3,4-10 no subvlan 2,3,4-10

Parameter Description

Parameter	Description	Value range
vid	VLAN ID	1-4094
vlan-list	List of VLAN IDs	A string of numbers (e.g., 1,2,3-10), 1-128 characters, no spaces

10.3 ip address

Command function	Command format
The (no) ip address [ipaddress primary] mask override command configures or deletes an IP address for a	ip address 1.1.1.1 255.255.255.0 ip address 1.1.1.1 255.255.255.0 override ip address primary 1.1.1.1 no ip address no ip address 1.1.1.1 255.255.255.0

common VLAN interface

Parameter Description

Parameter	Description	Value range
ip address	Valid IP address	32-bit binary number, format: X.X.X.X
primary	Configures the IP address as primary	N/A
mask	Subnet mask	255.0.0.0–255.255.255.252
override	Overrides the primary IP address	N/A

10.4 ip address dhcp

Command function	Command format
The (no) ip address dhcp command configures or deletes the acquisition of an IP address for a common VLAN interface via DHCP	ip address dhcp no ip address dhcp

Parameter Description

None

10.5 ip address bootp

Command function	Command format
The (no) ip address bootp command configures or deletes the acquisition of an IP address for a common VLAN interface via BOOTP	ip address bootp no ip address bootp

Parameter Description

None

10.6 ip address range

Command function	Command format
The (no) ip address range start-ipadd end-ipadd command configures or deletes an IP address range for a common VLAN interface	ip address range 1.1.1.1 1.1.1.2 no ip address range no ip address range 1.1.1.1 1.1.1.2

Parameter Description

Parameter	Description	Value range
start-ipadd	Start of the valid IP address range	32-bit binary number, format: X.X.X.X
end-ipadd	End of the valid IP address range (must be ≥ start-ipadd)	Same as above

10.7 ip icmp host-unreachable

Command function	Command format
The ip icmp host-unreachable send enable disable command configures or deletes ICMP host-unreachable functionality	ip icmp host-unreachable send enable ip icmp host-unreachable send disable

Parameter Description

None

10.8 ip icmp mask-request

Command function	Command format
The ip icmp mask-request receive enable disable command configures or deletes ICMP mask-request functionality	ip icmp mask-request receive enable ip icmp mask-request receive disable

Parameter Description

None

10.9 description

Command function	Command format
The (no) description string command adds or deletes description information for the interface	(no)description vlan1

Parameter Description

Parameter	Description	Value range
string	Description information	Any characters except ?, spaces require quotes

10.10 show ip interface

Command function	Command format
The show ip interface supervlan-interface command displays the IP address configuration information for the interface	show ip interface supervlan-interface 1

Parameter Description

Parameter	Description	Value range
supervlan-interface	SuperVLAN interface	1-128

Chapter 11 IPv6 IF-Vlan Interface Configuration Command

11.1 ipv6 address

Command function	Command format
The (no) ipv6 address [ipv6-address prefix-length] eui-64 command configures or removes the interface EUI-64 formatted site-local address and global unicast address.	
The (no) ipv6 address [ipv6-address prefix-length] command configures or removes the manually specified site-local address and global unicast address for the interface.	<pre> ipv6 address 2001::1/64 eui-64 no ipv6 address 2001::1/64 eui-64 ipv6 address autoconfig no ipv6 address autoconfig ipv6 address fe91::11 link-local no ipv6 address fe91::11 link-local </pre>
The (no) ipv6 address autoconfig command configures or removes the interface automatically specified site-local address and global unicast address.	
The (no) ipv6 address ipv6-address link-local command configures or removes the manually specified link-local address.	

Parameter Description

Parameter	Description	Value range
ipv6-address	Configurable valid IPv6 address	128-bit binary number in the format X:X:X:X:X:X
prefix-length	IPv6 address mask	1-128

11.2 ipv6 neighbors max-learning-num

Command function	Command format
The (no)ipv6 neighbors max-learning-num number command configures or deletes the number of neighbor cache entries	ipv6 neighbors max-learning-num 2 no ipv6 neighbors max-learning-num

Parameter Description

Parameter	Description	Value range
number	Number of neighbor cache entries	1-2000

11.3 ipv6 forwarding

Command function	Command format
The (no)ipv6 forwarding command enables or disables IPv6 forwarding	(no)ipv6 forwarding

Parameter Description

None

11.4 ipv6 neighbor

Command function	Command format
The ipv6 neighbor ipv6-address mac-address [vlan-id device/slot/port] command configures a static neighbor table entry	ipv6 neighbor 2000::1 02:23:23:23:23:23 ipv6 neighbor 2000::1 02:23:23:23:23:23 1 0/0/1

Parameter Description

Parameter	Description	Value range
ipv6-address	Configurable valid IPv6 address	128-bit binary, format: X:X:X:X:X:X

mac-address	MAC address	48-bit binary, format: X:X:X:X:X
vlan-id	VLAN ID	Range: 1-4094
device/slot/port	Port ID	/

11.5 no ipv6 neighbor

Command function	Command format
The no ipv6 neighbor {dynamic static all} command deletes neighbor table entries. The no ipv6 neighbor ipv6-address command deletes a neighbor table entry based on the IPv6 address.	no ipv6 neighbor all no ipv6 neighbor 2000::1

Parameter Description

Parameter	Description	Value range
ipv6-address	Configurable valid IPv6 address	128-bit binary, format: X:X:X:X:X:X

11.6 ipv6 nd ns retrans-time

Command function	Command format
The (no)ipv6 nd ns retrans-time value command configures or deletes the time interval for sending Neighbor Solicitation (NS) messages on global and management VLAN interfaces.	ipv6 nd ns retrans-time 20 no ipv6 nd ns retrans-time

Parameter Description

Parameter	Description	Value range
value	Retransmission time interval	1-3600

11.7 ipv6 nd dad attempts

Command function	Command format
The (no)ipv6 nd dad attempts value command configures or deletes the number of Neighbor Solicitation (NS) messages sent during Duplicate Address Detection (DAD) on global and management VLAN interfaces	ipv6 nd dad attempts 20 no ipv6 nd dad attempts

Parameter Description

Parameter	Description	Value range
value	Number of DAD attempts	0-20

11.8 ipv6 nd reachable-time

Command function	Command format
The (no)ipv6 nd reachable-time value command configures or deletes the time a neighbor remains reachable on global and management VLAN interfaces	ipv6 nd reachable-time 2 no ipv6 nd reachable-time

Parameter Description

Parameter	Description	Value range
value	Reachable time	1-3600

11.9 ipv6 pathmtu value

Command function	Command format
The (no)ipv6 pathmtu value command configures or deletes the Maximum Transmission Unit (MTU) for an IPv6 interface	ipv6 pathmtu 1280 no ipv6 pathmtu

Parameter Description

Parameter	Description	Value range
value	Maximum Transmission Unit value	1280-1500

11.10 ipv6 nd ra halt

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra halt command enables or disables the sending of Router Advertisements (RA) on a management VLAN interface

ipv6 nd ra halt

Parameter Description

None

11.11 ipv6 nd ra hop-limit

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra hop-limit value command configures or deletes the hop limit for Router Advertisements (RA) on a management VLAN interface

ipv6 nd ra hop-limit 2

Parameter Description

Parameter	Description	Value range
value	Hop limit for RA	0-255

11.12 ipv6 nd ra interval

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra interval max-interval min-interval command configures or

ipv6 nd ra interval 4 4

deletes the time interval for sending Router

Advertisements (RA) on global and
management VLAN interfaces

Parameter Description

Parameter	Description	Value range
max-interval	Maximum interval for RA sending	4-1800
min-interval	Minimum interval for RA sending	3-1350

11.13 ipv6 nd ra prefix

Command function	Command format
The (no)ipv6 nd ra prefix prefix-name ipv6-address valid-lifetime preferred-lifetime [no-autoconfig off-link] command configures or deletes the Router Advertisement address prefix on a management VLAN interface	ipv6 nd ra prefix 4 2000::1/64

Parameter Description

Parameter	Description	Value range
prefix-name	Prefix identifier name	1-32 characters
ipv6-address	Configured valid IPv6 address	128-bit binary number, format X:X:X:X:X:X
valid-lifetime	Valid lifetime of the prefix	0-4294967295
preferred-lifetime	Preferred lifetime of the prefix	0-4294967295
no-autoconfig	Prefix cannot be used for auto address configuration	N/A

off-link	Prefix cannot be used for link detection	N/A
----------	--	-----

11.14 ipv6 nd ra router-lifetime

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra router-lifetime value command configures or deletes the router lifetime for Router Advertisements (RA) on a management VLAN interface

ipv6 nd ra router-lifetime 4

Parameter Description

Parameter	Description	Value range
router-lifetime	Router lifetime for RA	0-9000

11.15 ipv6 icmpv6 multicast-echo-reply enable

Command function	Command format
------------------	----------------

The (no)ipv6 icmpv6 multicast-echo-reply enable command enables the device to respond with an Echo Reply message when it receives a multicast Echo Request message

ipv6 icmpv6 multicast-echo-reply enable

Parameter Description

None

11.16 show ipv6 icmpv6 multicast-echo-reply

Command function	Command format
------------------	----------------

The show ipv6 icmpv6 multicast-echo-reply command displays information about the multicast Echo Reply message

show ipv6 icmpv6 multicast-echo-reply

Parameter Description

None

11.17 show ipv6 interface

Command function	Command format
The show ipv6 interface [vlan-inter supervlan-inte] command displays the IPv6 address configuration information for an interface	show ipv6 interface vlan-interface 1 show ipv6 interface supervlan-interface 1

Parameter Description

Parameter	Description	Value range
supervlan-inter	Super VLAN interface	1-128
vlan-inter	VLAN interface	1-4094

11.18 show ipv6 neighbors

Command function	Command format
The show ipv6 neighbors [ipv6-add all dynamic static mac mac-add max-learning-num] command displays the IPv6 neighbor entries for an interface	show ipv6 neighbors all

Parameter Description

Parameter	Description	Value range
mac-add	Configurable corresponding MAC address	48-bit binary number, format X:X:X:X:X

11.19 show ipv6 nd dad attempts

Command function	Command format
The show ipv6 nd dad attempts command displays the number of Neighbor	show ipv6 nd dad attempts

Solicitation messages sent during Duplicate
Address Detection (DAD)

Parameter Description

None

11.20 show ipv6 nd ns retrans-time

Command function	Command format
The show ipv6 nd ns retrans-time command displays the time interval for sending Neighbor Solicitation messages	show ipv6 nd ns retrans-time

Parameter Description

None

11.21 show ipv6 nd ra

Command function	Command format
The show ipv6 nd ra command displays Neighbor Discovery (ND) Router Advertisement (RA) configuration information	show ipv6 nd ra halt show ipv6 nd ra hop-limit show ipv6 nd ra Interval show ipv6 nd ra Prefix show ipv6 nd ra router-lifetime

Parameter Description

None

11.22 show ipv6 nd reachable-time

Command function	Command format
The show ipv6 nd reachable-time command displays the time for which the neighbor remains in a reachable state	show ipv6 nd reachable-time

Parameter Description

None

11.23 show ipv6 route

Command function	Command format
The show ipv6 route command displays the IPv6 routing table	show ipv6 route

Parameter Description

None

Chapter 12 IPv6 SuperVlan Interface Configuration Commands

12.1 ipv6 address

Command function	Command format
The (no)ipv6 address [ipv6-address][prefix-length] eui-64 command configures or deletes the interface's EUI-64 formatted site-local address and global unicast address.	
The (no)ipv6 address [ipv6-address][prefix-length] command configures or deletes manually specified site-local and global unicast addresses on the interface.	<pre> ipv6 address 2001::1/64 eui-64 no ipv6 address 2001::1/64 eui-64 ipv6 address autoconfig no ipv6 address autoconfig ipv6 address fe91::11 link-local no ipv6 address fe91::11 link-local </pre>
The (no)ipv6 address autoconfig command configures or deletes the interface's automatically assigned site-local and global unicast addresses.	
The (no)ipv6 address ipv6-address link-local command configures or deletes a manually specified link-local address.	

Parameter Description

Parameter	Description	Value range
ipv6-address	A valid IPv6 address (128-bit binary number)	X:X:X:X:X:X(Hexadecimal format)
prefix-length	IPv6 address mask	1-128

12.2 ipv6 neighbors max-learning-num

Command function	Command format
------------------	----------------

The (no)ipv6 neighbors max-learning-num number command configures or deletes the neighbor cache size in global mode

ipv6 neighbors max-learning-num 2
no ipv6 neighbors max-learning-num

Parameter Description

Parameter	Description	Value range
number	Number of neighbor cache entries	1-2000

12.3 ipv6 nd ns retrans-time

Command function	Command format
The (no)ipv6 nd ns retrans-time value command configures or deletes the retransmission time interval for sending Neighbor Solicitation (NS) messages	ipv6 nd ns retrans-time 20 no ipv6 nd ns retrans-time

Parameter Description

Parameter	Description	Value range
value	Retransmission time interval for sending NS messages	1-3600

12.4 ipv6 nd dad attempts value

Command function	Command format
The (no)ipv6 nd dad attempts value command configures or deletes the number of Neighbor Solicitation messages sent during Duplicate Address Detection (DAD)	ipv6 nd dad attempts 20 no ipv6 nd dad attempts

Parameter Description

Parameter	Description	Value range
value	Number of DAD attempts (NS messages sent)	0-20

12.5 ipv6 nd reachable-time

Command function	Command format
The (no)ipv6 nd reachable-time value command configures or deletes the time duration for maintaining the reachability state of a neighbor	ipv6 nd reachable-time 2 no ipv6 nd reachable-time

Parameter Description

Parameter	Description	Value range
value	Reachable time duration for maintaining neighbor state	1-3600

12.6 ipv6 pathmtu value

Command function	Command format
The (no)ipv6 pathmtu value command configures or deletes the Maximum Transmission Unit (MTU) on the IPv6 interface	ipv6 pathmtu 1280 no ipv6 pathmtu

Parameter Description

Parameter	Description	Value range
value	Maximum Transmission Unit (MTU) value	1280-1500

12.7 ipv6 nd ra halt

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra halt command toggles the sending of Router Advertisements (RA)

ipv6 nd ra halt

Parameter Description

None

12.8 ipv6 nd ra hop-limit

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra hop-limit value command configures or deletes the hop limit for Router Advertisements

ipv6 nd ra hop-limit 2

Parameter Description

Parameter	Description	Value range
value	Hop limit for Router Advertisements	0-255

12.9 ipv6 nd ra interval

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra interval max-interval min-interval command configures or deletes the time interval for sending Router Advertisements

ipv6 nd ra interval 4 4

Parameter Description

Parameter	Description	Value range
max-interval	Maximum interval for RA messages	4-1800
min-interval	Minimum interval for RA messages	3-1350

12.10 ipv6 nd ra prefix

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra prefix prefix-name ipv6-

address valid-lifetime preferred-lifetime

[no-autoconfig | off-link] command

ipv6 nd ra interval 4 4

configures or deletes a router

advertisement address prefix

Parameter Description

Parameter	Description	Value range
prefix-name	Prefix identifier name	1-32 characters
ipv6-address	Configured valid IPv6 address	128-bit binary number, format X:X:X:X:X:X
valid-lifetime	Valid lifetime of the prefix	0-4294967295
preferred-lifetime	Preferred lifetime of the prefix	0-4294967295
no-autoconfig	Prefix cannot be used for auto address configuration	N/A
off-link	Prefix cannot be used for link detection	N/A

12.11 ipv6 nd ra router-lifetime

Command function	Command format
------------------	----------------

The (no)ipv6 nd ra router-lifetime value

command configures or deletes the router

lifetime for Router Advertisement (RA)

ipv6 nd ra router-lifetime 4

messages

Parameter Description

Parameter	Description	Value range
router-lifetime	Router lifetime	0-9000

12.12 show ipv6 interface

Command function	Command format
The show ipv6 interface [vlan-inter supervlan-inte loopback-inter] command displays IPv6 address configuration information for an interface	show ipv6 interface vlan-interface 1 show ipv6 interface supervlan-interface 1 show ipv6 interface loopback-interface 1

Parameter Description

Parameter	Description	Value range
supervlan-inter	SuperVlan interface	1-128
loopback-inter	Loopback interface	0-1
vlan-inter	VLAN interface	1-4094

12.13 show ipv6 neighbors

Command function	Command format
The command show ipv6 neighbors [ipv6-add all dynamic static mac mac-add max-learning-num] displays the IPv6 neighbor table entries for an interface	show ipv6 neighbors all

Parameter Description

Parameter	Description	Value range
mac-add	Configures a MAC address for a specific port	48-bit binary number, format: X:X:X:X:X

12.14 show ipv6 nd dad attempts

Command function	Command format
The show ipv6 nd dad attempts command displays the number of Neighbor	show ipv6 nd dad attempts

Solicitation messages sent during Duplicate
Address Detection (DAD)

Parameter Description

None

12.15 show ipv6 nd ns retrans-time

Command function	Command format
The show ipv6 nd ns retrans-time command displays the time interval for sending Neighbor Solicitation (NS) messages	show ipv6 nd ns retrans-time

Parameter Description

None

12.16 show ipv6 nd reachable-time

Command function	Command format
The show ipv6 nd reachable-time command displays the time for maintaining the neighbor reachable state	show ipv6 nd reachable-time

Parameter Description

None

12.17 show ipv6 route

Command function	Command format
The show ipv6 route command displays the IPv6 routing table	show ipv6 route

Parameter Description

None

Chapter 13 EFM Configuration Commands

13.1 efm

Command function	Command format
------------------	----------------

The (no) efm command enables or disables EFM on a port in port mode. By default, EFM is disabled

efm

Parameter Description

None

13.2 efm mode

Command function	Command format
------------------	----------------

The efm mode [passive | active] command sets the operating mode for EFM on the port in port mode

efm mode passive

Parameter Description

Parameter	Description	Value range
passive	Passive mode	None
active	Active mode	None

13.3 efm pdu-timeout

Command function	Command format
------------------	----------------

The (no) efm pdu-timeout value command configures (or restores) the interval for sending OAM PDU (Protocol Data Unit) messages on the port in port mode

efm pdu-timeout 1
no efm pdu-timeout

Parameter Description

Parameter	Description	Value range
value	OAM PDU transmission interval (seconds), default is 1 second	1-60

13.4 efm link-timeout

Command function	Command format
The (no) efm link-timeout value command configures (or restores) the link timeout for EFM detection on the port in port mode	efm link-timeout 10 no efm link-timeout

Parameter Description

Parameter	Description	Value range
value	Timeout for EFM detection (seconds), default is 5 seconds	3-300

13.5 efm remote-response-timeout

Command function	Command format
The (no) efm remote-response-timeout value command configures (or restores) the remote response timeout on the port in port mode	efm remote-response-timeout 10 no efm remote-response-timeout

Parameter Description

Parameter	Description	Value range
value	Remote response timeout (seconds), default is 2 seconds	1-10

13.6 efm remote-failure

Command function	Command format
The (no) efm remote-failure [link-fault dying-gasp critical-event] command enables or disables remote fault detection features on the port in port mode	efm remote-failure link-fault no efm remote-failure link-fault

Parameter Description

None

13.7 efm link-monitor

Command function	Command format
The (no) efm link-monitor [errored-symbol-period errored-frame errored-frame-period errored-frame-seconds] command enables (or disables) link monitoring functionality on the port in port mode	efm link-monitor errored-frame-period no efm link-monitor errored-frame-period

Parameter Description

None

13.8 efm link-monitor errored-symbol-period window

Command function	Command format
The (no) efm link-monitor errored-symbol-period window high th-value1 low th-value2 command configures (or restores) the detection window for errored symbol period events on the port in port mode	efm link-monitor errored-symbol-period window high 2 low 2 no efm link-monitor errored-symbol-period window

Parameter Description

Parameter	Description	Value range
win-value	Configures the high 4 bytes for errored	0-4294967295

symbol period event parameters

win-value2	Configures the low 4 bytes for errored symbol period event parameters	0-4294967295
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13.9 efm link-monitor errored-symbol-period threshold

Command function	Command format
------------------	----------------

The (no) efm link-monitor errored-symbol-period threshold high th-value1 low th-value2 command configures (or restores) the detection threshold for errored symbol period events on the port in port mode

efm link-monitor errored-symbol-period threshold high 2 low 2
no efm link-monitor errored-symbol-period threshold

Parameter Description

Parameter	Description	Value range
th-value1	Configures the high 4 bytes for errored symbol period event parameters	0-4294967295
th-value2	Configures the low 4 bytes for errored symbol period event parameters	0-4294967295

13.10 efm link-monitor errored-frame window

Command function	Command format
------------------	----------------

The (no) efm link-monitor errored-frame window win-value command configures (or restores) the detection window for errored frame events on the port in port mode

efm link-monitor errored-frame window 10
no efm link-monitor errored-frame window

Parameter Description

Parameter	Description	Value range
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win-value	Configures the window (in milliseconds) for errored frame events	10-600
-----------	---	--------

13.11 efm link-monitor errored-frame threshold

Command function	Command format
The (no) efm link-monitor errored-frame threshold th-value command configures (or restores) the detection threshold for errored frame events on the port in port mode	efm link-monitor errored-frame threshold 1 no efm link-monitor errored-frame threshold

Parameter Description

Parameter	Description	Value range
th-value1	Configures the threshold (number of errored frames) for errored frame events	1-4294967295

13.12 efm link-monitor errored-frame-period window

Command function	Command format
The (no) efm link-monitor errored-frame-period window win-value command configures (or restores) the detection window for errored frame period events on the port in port mode	efm link-monitor errored-frame-period window 10 no efm link-monitor errored-frame-period window

Parameter Description

Parameter	Description	Value range
win-value	Configures the window (in frames) for errored frame period events	1-4294967295

13.13 efm link-monitor errored-frame-period threshold

Command function	Command format
The (no) efm link-monitor errored-frame-period threshold th-value command configures (or restores) the detection threshold for errored frame period events on the port in port mode	efm link-monitor errored-frame-period threshold 1 no efm link-monitor errored-frame-period threshold

Parameter Description

Parameter	Description	Value range
th-value1	Configures the threshold (number of errored frames) for errored frame period events	1-4294967295

13.14 efm link-monitor errored-frame-seconds window

Command function	Command format
The (no) efm link-monitor errored-frame-seconds window win-value command configures (or restores) the detection window for errored frame second summary events on the port in port mode	efm link-monitor errored-frame-seconds window 100 no efm link-monitor errored-frame-seconds window

Parameter Description

Parameter	Description	Value range
win-value	Configures the window (in 100 millisecond units) for errored frame second summary events	100-9000

13.15 efm link-monitor errored-frame-seconds threshold

Command function	Command format
------------------	----------------

The (no) efm link-monitor errored-frame-seconds threshold th-value command configures (or restores) the detection threshold for errored frame seconds summary events in port mode

efm link-monitor errored-frame-seconds threshold 1
no efm link-monitor errored-frame-seconds threshold

Parameter Description

Parameter	Description	Value range
th-value	Sets the threshold for errored frame seconds summary events (number of errored seconds)	1-900

13.16 efm remote-loopback

Command function	Command format
The (no) efm remote-loopback command enables (or disables) the remote loopback function in port mode	efm remote-loopback no efm remote-loopback

Parameter Description

None

13.17 efm remote-loopback ignore

Command function	Command format
The efm remote-loopback ignore command rejects remote-originated remote loopback requests in port mode	efm remote-loopback ignore

Parameter Description

None

13.18 efm remote-loopback process

Command function	Command format
The efm remote-loopback process command processes remote-originated remote loopback requests in port mode	efm remote-loopback process

Parameter Description

None

13.19 efm remote-loopback start|stop

Command function	Command format
The efm remote-loopback [start stop] command initiates (or stops) a remote loopback request in port mod	efm remote-loopback start

Parameter Description

None

13.20 efm variable-retrieval

Command function	Command format
The (no) efm variable-retrieval command enables (or disables) remote MIB variable retrieval in port mode	efm variable-retrieval no variable-retrieval

Parameter Description

None

13.21 show efm port

Command function	Command format
The show efm port port-id-list remote-mib [phyadminstate autonegadminstate]	show efm port 1 remote-mib autonegadminstate

command retrieves the remote MIB
variable values for the port in port mode

Parameter Description

Parameter	Description	Value range
port-id-list	Port ID list (Port range: 1-254)	1-64 characters

13.22 show efm remote-mib

Command function	Command format
The show efm remote-mib [fecability fecmode] command retrieves the global MIB variable values of the remote device in port mode	show efm remote-mib fecability

Parameter Description

None

13.23 show efm status interface

Command function	Command format
The show efm status interface [ethernet port-id] command displays the EFM protocol running status	show efm status interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Based on the physical port of the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

13.24 show efm summary

Command function	Command format
------------------	----------------

The show efm summary command displays
EFM summary information

show efm summary

Parameter Description

None

13.25 show efm discovery interface

Command function	Command format
The show efm discovery interface [ethernet port-id] command displays EFM discovery information	show efm discovery interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Based on the physical port of the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

13.26 show efm statistics interface

Command function	Command format
The show efm statistics interface [ethernet port-id] command displays the EFM protocol	show efm statistics interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Based on the physical port of the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

13.27 clear efm statistics interface

Command function	Command format
------------------	----------------

The clear efm statistics interface
[ethernet port-id] command clears the EFM
protocol message statistics

clear efm statistics interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Based on the physical port of the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

Chapter 14 CFM Configuration Commands

14.1 cfm md

Command function	Command format
------------------	----------------

The cfm md md-index command
enters the maintenance domain
configuration mode

cfm md 1

Parameter Description

Parameter	Description	Value range
md-index	Maintenance domain index	1-4294967295

14.2 no cfm md

Command function	Command format
------------------	----------------

The no cfm md md-index command
deletes a maintenance domain

no cfm md 1

Parameter Description

Parameter	Description	Value range
md-index	Maintenance domain index	1-4294967295

14.3 cfm md format none level

Command function	Command format
------------------	----------------

The cfm md format none level md-
level command configures an unnamed
maintenance domain and specifies only the
maintenance domain level

cfm md format none level 2

Parameter Description

Parameter	Description	Value range
md-level	Maintenance domain level	0-7

14.4 cfm md format

Command function	Command format
The cfm md format [dns-name name dns-name mac-uint name mac-name string name string-name none] level md-level command configures an unnamed maintenance domain and specifies only the maintenance domain level	cfm md format mac-uint name 00:0a:5a:00:00:01-12 level 2

Parameter Description

Parameter	Description	Value range
dns-name	DNS name as a string, following the RFC1035 DNS name syntax	1-43 characters
mac-name	MAC address + 2-byte unsigned integer value	13-23 characters
string-name	Any string	1-43 characters
md-level	Maintenance domain level	0-7
none	No primary name represented	/

14.5 cfm ma

Command function	Command format
The cfm ma ma-index command creates a maintenance association in the cfm-md mode and enters the maintenance association configuration mode	cfm ma 1

Parameter Description

Parameter	Description	Value range
md-index	Maintenance association index	1-4294967295

14.6 no cfm ma

Command function	Command format
The no cfm ma ma-index command deletes a maintenance association configuration in the cfm-md mode	no cfm ma 1

Parameter Description

Parameter	Description	Value range
md-index	Maintenance association index	1-4294967295

14.7 cfm ma format

Command function	Command format
The cfm ma format [primary-vid vlan-name string string uint16 uint16-name vpn-id vpn-name] primary-vlan vlan-id command configures the name of a maintenance association and the primary VLAN association in the cfm-md-ma mode	cfm ma format string name df primary-vlan 2

Parameter Description

Parameter	Description	Value range
vlan-name	Primary VLAN ID (1-4094)	1-4094
string	Any string	1-45 characters
uint16-name	2-byte unsigned integer value (0-65535)	0-65535
vpn-name	RFC2685 VPN ID (3-byte VPN OUI + 4-byte VPN index)	3-17 characters

vlan-id

VLAN ID

1-4094

14.8 cfm mep

Command function	Command format
The cfm mep mep-id direction [up down] [primary-vlan vlan-id] interface ethernet port-id command creates a maintenance endpoint in the cfm-md-ma mode and specifies its associated port	cfm mep 1 direction down interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191
vlan-id	Primary VLAN ID (1-4094)	1-4094
port-id	Port ID	Based on physical switch port, e.g., 0/0/1-0/1/4

14.9 cfm mep

Command function	Command format
The cfm mep mep-id state [enable disable] command enables or disables the management state of a maintenance endpoint in the cfm-md-ma mode	cfm mep 1 state disable

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191

14.10 cfm mep

Command function	Command format
The (no) cfm mep mep-id priority-id command configures (or deletes) the priority used by a maintenance endpoint for sending CCM and LTM in the cfm-md-ma mode	cfm mep 1 priority 1 no cfm mep 1 priority

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191
priority-id	Priority ID	0-7

14.11 cfm rmep

Command function	Command format
The (no) cfm rmep rmep-id mep mep-id command creates (or deletes) a remote maintenance endpoint and specifies its corresponding local maintenance endpoint in the cfm-md-ma mode	cfm rmep 1 mep 1 no cfm rmep 1

Parameter Description

Parameter	Description	Value range
rmep-id	RMEP identifier	1-8191
mep-id	MEP identifier	1-8191

14.12 cfm mip

Command function	Command format
The (no) cfm mip mip-id interface	cfm mip 1 interface ethernet 0/0/1 no cfm mip 1

ethernet port-id command creates (or deletes) a maintenance intermediate point and specifies its associated port in the cfm-md-ma mode

Parameter Description

Parameter	Description	Value range
mip-id	MIP identifier	1-8191
port-id	Port ID	Based on physical switch port, e.g., 0/0/1-0/1/4

14.13 cfm cc interval

Command function	Command format
The (no) cfm cc interval [1 10 60 600] command sets or deletes the interval for sending CCMs from the maintenance endpoint in the cfm-md-ma mode	cfm cc interval 1 no cfm cc interval

Parameter Description

None

14.14 cfm mep

Command function	Command format
The cfm mep mep-id cc [enable disable] command enables or disables the CCM sending function of a maintenance endpoint in the cfm-md-ma mode	cfm mep 1 cc enable

Parameter Description

Parameter	Description	Value range
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rmep-id

RMEP identifier

1-8191

14.15 cfm loopback mep

Command function	Command format
The cfm loopback mep mep-id [dst-mac mac-address dst-mep rmep-id] [priority pri-id count pkt-num length data-len data pkt-data] command starts a loopback function in the cfm-md-ma mode	cfm loopback mep 1 dst-mep 2 count 1 data 2 priority 2 length 2

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191
mac-address	Destination MAC address	48-bit binary number, format X:X:X:X:X:X
rmep-id	RMEP identifier	1-8191
pri-id	Packet priority	0-7
pkt-num	Packet count	1-1024
data-len	Data length in packet	1-1500
pkt-data	Data content in packet	1-400

14.16 cfm linktrace mep

Command function	Command format
The cfm linktrace mep mep-id [dst-mac mac-address dst-mep rmep-id] [timeout pkt-time ttl pkt-ttl flag [use-mpdb unuse-mpdb]] command starts a link trace function in the cfm-md-ma mode	cfm linktrace mep 1 dst-mep 2 count 1 data 2 priority 2 length 2

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191
mac-address	Destination MAC address	48-bit binary number, format X:X:X:X:X:X
rmep-id	RMEP identifier	1-8191
pkt-time	Timeout time (3-60 seconds)	3-60
pkt-ttl	Initial TTL value	1-255

14.17 cfm eth-slm mep

Command function	Command format
The cfm eth-slm mep mep-id [dst-mac mac-address dst-mep rmep-id] [timeout pkt-time priority priority-id interval second count packet-num] command performs frame loss detection in the cfm-md-ma mode	cfm eth-slm mep 1 dst-mep 1 timeout 3 priority 3 interval 2 count 3

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191
mac-address	Destination MAC address	48-bit binary number, format X:X:X:X:X:X
rmep-id	RMEP identifier	1-8191
pkt-time	Timeout duration (seconds)	3-60
pri-id	Packet priority level	0-7
second	Interval time (seconds)	1-30

pkt-num Number of packets 1–1024

14.18 cfm eth-2dm mep

Command function	Command format
The cfm eth-2dm mep mep-id [dst-mac mac-address dst-mep rmep-id] [timeout pkt-time priority priority-id interval second count packet-num] command is used to perform frame delay measurement in the cfm-md-ma mode	cfm eth-2dm mep 1 dst-mep 1 timeout 3 priority 3 interval 2 count 3

Parameter Description

Parameter	Description	Value range
mep-id	MEP identifier	1-8191
mac-address	Destination MAC address	48-bit binary number, format X:X:X:X:X:X
rmep-id	RMEP identifier	1-8191
pkt-time	Timeout duration (seconds)	3–60
pri-id	Packet priority level	0–7
second	Interval time (seconds)	1–30
pkt-num	Number of packets	1–1024

14.19 clear cfm cc

Command function	Command format
The clear cfm cc command clears the CCM statistics information	clear cfm cc

Parameter Description

None

14.20 clear cfm cc database

Command function	Command format
------------------	----------------

The clear cfm cc database command clears the CCM database information

clear cfm cc database

Parameter Description

None

14.21 show cfm md

Command function	Command format
------------------	----------------

The show cfm md [md-index] command displays maintenance domain information

show cfm md 1

Parameter Description

Parameter	Description	Value range
md-index	Maintenance domain index	1-4294967295

14.22 show cfm ma

Command function	Command format
------------------	----------------

The show cfm ma command displays maintenance association information

show cfm ma

Parameter Description

None

14.23 show cfm mp local

Command function	Command format
------------------	----------------

The show cfm mp local command displays local maintenance point information

show cfm mp local

Parameter Description

None

14.24 show cfm mp remote

Command function	Command format
The show cfm mp remote command displays remote maintenance point information	show cfm mp remote

Parameter Description

None

14.25 show cfm cc

Command function	Command format
The show cfm cc command displays CCM statistics information	show cfm cc

Parameter Description

None

14.26 show cfm cc database

Command function	Command format
The show cfm cc database command displays CCM database information	show cfm cc database

Parameter Description

None

14.27 show cfm errors

Command function	Command format
------------------	----------------

The show cfm errors command displays
CFM alarm information.

show cfm errors

Parameter Description

None

Chapter 15 POE Power Configuration Commands

15.1 poe

Command function	Command format
The poe command configures the POE switch in port mode. The no poe command disables POE	poe no poe

Parameter Description

None

15.2 poe max-power

Command function	Command format
The poe max-power value command configures (or restores) the maximum output power for the entire system in global mode	poe max-power 20 no poe max-power

Parameter Description

Parameter	Description	Value range
value	System power in watts	1-370, based on the current system power display

15.3 poe max-power

Command function	Command format
The poe max-power value command configures (or restores) the maximum output power in port mode	poe max-power 20 no poe max-power

Parameter Description

Parameter	Description	Value range
value	Power per port in watts	1-30

15.4 poe traps

Command function	Command format
The [no] poe traps value enable command configures the power alert reporting function in global mode	poe traps 1 Poe traps enable

Parameter Description

Parameter	Description	Value range
value	Energy consumption percentage	1-99

15.5 poe sysmarks method

Command function	Command format
The poe sysmarks method [res res+cap] command configures the capacitor detection method in global mode	poe sysmarks method res

Parameter Description

None

15.6 poe status poll

Command function	Command format
The [no] poe status poll command enables or disables port status polling in global mode	poe status poll

Parameter Description

None

15.7 poe standard

Command function	Command format
The poe standard [ieee802.3af ieee802.3at] command configures the standard to use in port mode	poe standard ieee802.3af

Parameter Description

None

15.8 poe priority

Command function	Command format
The poe priority [low high critical] command configures the priority level for POE in port mode	poe priority low

Parameter Description

Parameter	Description	Value range
low	Lowest port priority (default)	None
high	High priority	None
critical	Highest port priority	None

15.9 poe force power on

Command function	Command format
The poe force power on command configures forced power supply in port mode. The no poe force power command removes forced power supply	poe force power on no poe force power

Parameter Description

None

15.10 show poe

Command function	Command format
The show poe [interface [ethernet port-id]] command displays POE information for a port or the entire system	show poe interface ethernet 0/0/1 show poe

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

Chapter 16 802.1Q Configuration Commands

16.1 vlan

Command function	Command format
The vlan vlan-list command is used to create VLANs globally.	vlan 2,4,6,7-20
The no vlan [all vlan-list] command deletes VLANs globally	no vlan 2,4,6,7-20 no vlan all

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID(s)	A numerical string, case-insensitive, no spaces, length 1-128, range 1-4094
all	All VLANs	None

16.2 Switchport

Command function	Command format
The (no) switchport [ethernet all] command adds or removes a port in VLAN mode	(no) switchport ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
ethernet	Port ID	A numeric string, case-insensitive, no spaces, length 5-6, matching physical switch ports
all	All ports	None

16.3 switchport pvid

Command function	Command format
The (no) switchport pvid vlan-id command adds or removes the PVID on a port	(no) switchport pvid 1

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

16.4 switchport link-type

Command function	Command format
The (no) switchport link-type [access hybrid trunk] command changes the link type of the port.	(no)switchport link-type access

Parameter Description

None

16.5 switchport trunk allowed vlan

Command function	Command format
The (no) switchport trunk allowed vlan [vlan-list all] command adds or removes VLANs from a trunk port	(no) switchport trunk allowed vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID(s)	A numerical string, case-insensitive, no spaces, length 1-128, range 1-4094
all	All VLANs	None

16.6 switchport trunk tagged pvid

Command function	Command format
The (no) switchport trunk tagged pvid command adds or removes the tagged PVID for trunk ports	(no) switchport trunk tagged pvid

Parameter Description

None

16.7 switchport hybrid untagged vlan

Command function	Command format
The (no) switchport hybrid untagged vlan [vlan-list all] command adds or removes VLANs from a hybrid untagged port	(no)switchport hybrid untagged vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID(s)	A numerical string, case-insensitive, no spaces, length 1-128, range 1-4094
all	All VLANs	None

16.8 switchport hybrid tagged vlan

Command function	Command format
The (no) switchport hybrid tagged vlan [vlan-list all] command adds or removes VLANs from a hybrid tagged port	(no)switchport hybrid tagged vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID(s)	A numerical string, case-insensitive, no spaces, length 1-128, range 1-4094
all	All VLANs	None

16.9 priority

Command function	Command format
The (no) priority value command adds or removes priority from a port	(no)priority 1

Parameter Description

Parameter	Description	Value range
value	Priority	0-7

16.10 ingress acceptable-frame

Command function	Command format
The (no) ingress acceptable-frame [tagged all untagged] command adds or removes the types of frames that a port can accept	(no)ingress acceptable-frame tagged

Parameter Description

Parameter	Description	Value range
tagged	Accept only tagged frames	None
all	Accept all frames	None
untagged	Accept only untagged frames	None

16.11 ingress filtering

Command function	Command format
The (no) ingress filtering command enables or disables ingress filtering on a port	(no) ingress filtering

Parameter Description

None

16.12 interface vlan-interface

Command function	Command format
The (no) interface vlan-interface vlan-id command adds or removes a VLAN Layer 3 interface	(no) interface vlan-interface 2

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

16.13 description

Command function	Command format
The (no) description string command adds or removes a description for a VLAN	(no)description vlan1

Parameter Description

Parameter	Description	Value range
string	VLAN description	Any characters except ?, spaces require quotes

16.14 show interface vlan brief

Command function	Command format
The show interface vlan brief command displays the VLAN information of all interfaces on the switch.	show interface vlan brief
The show interface vlan brief ethernet port-id command displays the VLAN information for a specific port	show interface vlan brief ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/0/28

16.15 show vlan brief

Command function	Command format
The show vlan command displays the VLAN information on the switch.	show vlan
The show vlan brief command displays information on all VLANs	Show vlan brief

Parameter Description

None

Chapter 17 QinQ Configuration Commands

17.1 qinq

Command function	Command format
The (no) qinq command enables or disables QinQ. By default, QinQ is disabled	(no)qinq

Parameter Description

None

17.2 qinq inner-tpid

Command function	Command format
The (no) qinq inner-tpid protocol-number command inserts or deletes the QinQ inner protocol number	(no)qinq inner-tpid 0001

Parameter Description

Parameter	Description	Value range
protocol-number	Protocol number	1-FFFF

17.3 qinq mode

Command function	Command format
The (no) qinq mode [customer uplink] command configures or deletes the QinQ mode on a port. By default, the mode is set to uplink	qinq mode customer qinq mode uplink no qinq mode

Parameter Description

None

17.4 qinq outer-tpid

Command function	Command format
The (no) qinq outer-tpid protocol-number command configures or deletes the outer VLAN protocol number for traffic leaving the port. The default value is 0x8100	qinq outer-tpid 9100 no qinq outer-tpid

Parameter Description

Parameter	Description	Value range
protocol-number	Protocol number	1-FFFF

17.5 vlan pass-through

Command function	Command format
The vlan pass-through start-vlan end-vlan command configures QinQ pass-through VLANs on a port	vlan pass-through 2 3

Parameter Description

Parameter	Description	Value range
start-vlan	Starting VLAN	1-4094
end-vlan	Ending VLAN	1-4094

17.6 no vlan pass-through

Command function	Command format
The no vlan pass-through [all start-vlan end-vlan] command deletes QinQ pass-through configurations on a port	no vlan pass-through all no vlan pass-through 2 3

Parameter Description

Parameter	Description	Value range
start-vlan	Starting VLAN	1-4094
end-vlan	Ending VLAN	1-4094
all	All configurations	None

17.7 vlan insert

Command function	Command format
------------------	----------------

The vlan insert start-vlan end-vlan service-vlan command configures dynamic QinQ on a port

vlan insert 1 2 3

Parameter Description

Parameter	Description	Value range
start-vlan	Starting VLAN	1-4094
end-vlan	Ending VLAN	1-4094

17.8 no vlan insert

Command function	Command format
------------------	----------------

The no vlan insert [all|start-vlan end-vlan service-vlan] command deletes dynamic QinQ configurations on a port

no vlan insert 1 2 3

no vlan insert all

Parameter Description

Parameter	Description	Value range
start-vlan	Starting VLAN	1-4094
end-vlan	Ending VLAN	1-4094
all	All configurations	None

17.9 show qinq

Command function	Command format
The show qinq command displays the QinQ configuration information	show qinq

Parameter Description

None

17.10 show vlan pass-through

Command function	Command format
The (no) gvrp command enables or disables GVRP functionality. By default, GVRP is disabled	show vlan pass-through

Parameter Description

None

Chapter 18 GVRP Configuration Commands

18.1 gvrp

Command function	Command format
------------------	----------------

The (no) gvrp command enables or disables GVRP functionality. By default, GVRP is disabled

(no)gvrp

Parameter Description

None

18.2 garp permit vlan

Command function	Command format
------------------	----------------

The (no) garp permit vlan vlan-list command configures or deletes VLANs that GARP is allowed to publish

garp permit vlan 2-100
no garp permit vlan 2-100

Parameter Description

Parameter	Description	Value range
-----------	-------------	-------------

vlan-list	VLAN ID list	A string of numbers, case-insensitive, no spaces, length between 1-128, range 1-4094
-----------	--------------	--

18.3 garp permit multicast

Command function	Command format
------------------	----------------

The (no) garp permit multicast mac-address <mac-add> vlan vlan-list command configures or deletes multicast VLANs that GARP is allowed to publish

garp permit multicast mac-address 01:00:5e:00:00:01 vlan 2
no garp permit multicast mac-address 01:00:5e:00:00:01 vlan 2

Parameter Description

Parameter	Description	Value range
mac-address	Multicast MAC address	MAC address: 01:00:5e:H:H:H
vlan-list	VLAN ID list	A string of numbers, case-insensitive, no spaces, length between 1-128, range 1-4094

18.4 garp forbid vlan

Command function	Command format
The (no) garp forbid vlan vlan-list command configures or deletes VLANs that are prohibited from being propagated on the port. By default, no VLANs are prohibited	garp forbid vlan 2-100 no garp forbid vlan 2-100

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID list	A string of numbers, case-insensitive, no spaces, length between 1-128, range 1-4094

18.5 show gvrp

Command function	Command format
The show gvrp command displays whether the GVRP functionality is enabled. By default, it is disabled	show gvrp

Parameter Description

None

18.6 show gvrp interface

Command function	Command format
The show gvrp interface command displays the GVRP configuration on all ports	show gvrp interface

Parameter Description

None

18.7 show gvrp interface ethernet

Command function	Command format
The show gvrp interface ethernet port-id command displays the GVRP configuration on a specific port	show gvrp interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/0/28

18.8 show garp permit

Command function	Command format
The show garp permit [multicast[vlan]] command displays the GARP configuration	show garp permit vlan

Parameter Description

None

Chapter 19 VLAN Conversion Configuration Commands

19.1 vlan swap

Command function	Command format
------------------	----------------

The vlan swap start-vlan end-vlan swap-vlan command is used to configure VLAN swapping on a port

vlan swap 1 2 2 0

Parameter Description

Parameter	Description	Value range
start-vlan	Starting VLAN	1-4094
end-vlan	Ending VLAN	1-4094
swap-vlan	Swap VLAN	1-4094

19.2 show vlan-swap

Command function	Command format
------------------	----------------

The show vlan swap [ethernet port-id] command displays the VLAN swap configuration

show vlan swap [ethernet port-id]

Parameter Description

None

Chapter 20 VLAN-MAC Table Configuration Commands

20.1 vlan-mac-table mac-address

Command function	Command format
The (no) vlan-mac-table mac-address mac-add vlan-id pri command configures or deletes VLANs based on a specific MAC address.	 vlan-mac-table mac-address 1:1:1:1:1 2 3 no vlan-mac-table mac-address 1:1:1:1:1

Parameter Description

Parameter	Description	Value range
mac-add	MAC Address	Valid MAC address
vlan-id	VLAN ID	1-4094
pri	Priority	0-7

20.2 no vlan-mac-table mac-address

Command function	Command format
The no vlan-mac-table mac-address command is used to delete all MAC-based VLAN configurations	no vlan-mac-table no vlan-mac-table mac-address

Parameter Description

None

20.3 show vlan-mac-table mac-address

Command function	Command format
The show vlan-mac-table mac-address [mac-address] command is used to view the MAC-based VLAN configuration	show vlan-mac-table mac-address 2:2:2:2:2

Parameter Description

Parameter	Description	Value range
mac-add	MAC Address	Valid MAC address

Chapter 21 Vlan-Protocol Configuration Commands

21.1 vlan-protocol

Command function	Command format
The (no)vlan-protocol profile <index> frame-type frametype ether-type [vlan-id] command is used to globally configure or delete a protocol-based VLAN	<pre> vlan-protocol profile 1 frame-type llc ether-type 9100 vlan-protocol profile 1 frame-type ethernet2 ether-type 9100 vlan-protocol profile 1 frame-type snap ether-type 9100 no vlan-protocol profile </pre>

Parameter Description

Parameter	Description	Value range
frametype	Ethernet frame type	llc, ethernet2, snap
ether-type	Protocol number	1-FFFF
index	Index number	1-8

21.2 vlan-protocol profile

Command function	Command format
The (no)vlan-protocol profile[index] vlan[vlan-id] command configures or deletes the protocol-based VLAN for a specific port	<pre> (no) vlan-protocol profile 1 vlan 1 </pre>

Parameter Description

None

21.3 no vlan-protocol profile

Command function	Command format
The no vlan-protocol profile command deletes all configurations for protocol-based VLANs	<pre> no vlan-protocol profile </pre>

Parameter Description

None

21.4 show vlan-protocol profile

Command function	Command format
The show vlan-protocol profile command displays all configurations for protocol-based VLANs	show vlan-protocol profile 1

Parameter Description

None

21.5 show vlan-protocol interface

Command function	Command format
The show vlan-protocol interface ethernet port-id vlan-id command displays all configurations for protocol-based VLANs for a specific interface	show vlan-protocol interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

Chapter 22 Storm Suppression Configuration Commands

22.1 storm-suppression

Command function	Command format
The storm-suppression [broadcast multicast unicast] [kbps kbps-value pct pct-value pps pps-value] command configures the type of storm suppression and the threshold values.	storm-control broadcast pct 1

Parameter Description

Parameter	Description	Value range
kbps-value	Value in kbps	16-1000000
pct-value	Percentage of port bandwidth	1-99%
pps-value	Value in packets per second	1-249999

22.2 storm-suppression mode

Command function	Command format
The storm-suppression mode [byte pct pkt] command configures the storm suppression mode globally	storm-suppression mode byte

Parameter Description

Parameter	Description	Value range
byte	Based on number of bytes	None
pct	Based on port bandwidth percentage	None
pkt	Based on number of packets	None

22.3 no storm-suppression

Command function	Command format
The no storm-suppression [broadcast multicast unicast] command deletes storm suppression on the interface	no storm-suppression broadcast

Parameter Description

None

22.4 show storm-suppression

Command function	Command format
The show storm-suppression [ethernet port-id] command displays the configured storm suppression type and threshold values for a port	show storm-suppression ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

Chapter 23 Isolate-Port Configuration Commands

23.1 no isolate-port uplink

Command function	Command format
The no isolate-port uplink [all ethernet port-id] command deletes an uplink port in port mode	no isolate-port uplink all

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

23.2 isolate-port uplink ethernet

Command function	Command format
The isolate-port uplink ethernet port-id command specifies a specific uplink port in port mode	isolate-port uplink ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

23.3 show isolate-port

Command function	Command format
The show isolate-port command displays the configured isolated ports	show isolate-port

Parameter Description

None

Chapter 24 Port-Security Configuration Commands

24.1 port-security enable|disable

Command function	Command format
The port-security enable command enables port security on a port, while port-security disable disables it	port-security enable port-security disable

Parameter Description

None

24.2 port-security permit|deny mac-address

Command function	Command format
The [no] port-security [permit deny] mac-address mac-address [vlan-id vlan-id ip-address ip-address] command configures or deletes MAC address rules for port security	port-security permit mac-address 2:2:2:2:2:2 ip-address 2.2.2.2 no port-security permit mac-address 2:2:2:2:2:2 ip-address 2.2.2.2

Parameter Description

Parameter	Description	Value range
mac-address	Unicast MAC address	X:X:X:X:X:X
vlan-id	VLAN ID	1-4094
ip-address	IP address	X.X.X.X

24.3 show port-security mac-address

Command function	Command format
The show port-security mac-address [ethernet port-id] command displays the MAC address rules configured for port	show port-security mac-address ethernet 0/0/1

security

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

24.4 port-security permit|deny ip-address

Command function	Command format
The [no] port-security [permit deny] ip-address start-ip [to end-ip] command configures or deletes IP address rules for port security	port-security permit ip-address 1.1.1.1 to 2.2.2.2 no port-security permit ip-address 1.1.1.1 to 2.2.2.2

Parameter Description

Parameter	Description	Value range
start-ip	Starting IP address	X.X.X.X
end-ip	Ending IP address	X.X.X.X

24.5 show port-security ip-address

Command function	Command format
The show port-security ip-address [ethernet port-id] command displays the IP address rules configured for port security	show port-security ip-address ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

24.6 port-security maximum

Command function	Command format
The [no] port-security maximum value command configures or deletes the maximum address count rule	port-security maximum 2 no port-security maximum

Parameter Description

Parameter	Description	Value range
value	Maximum address count	0-4000

24.7 port-security permit mac-address sticky

Command function	Command format
The [no] port-security permit mac-address sticky command enables or disables the sticky MAC address feature	no port-security permit mac-address sticky

Parameter Description

None

24.8 port-security permit mac-address sticky

Command function	Command format
The [no] port-security permit mac-address sticky mac-address [vlan-id vlan-id] command configures (or deletes) a MAC STICKY rule	port-security permit mac-address sticky 2:2:2:2:2:2 no port-security permit mac-address sticky 2:2:2:2:2:2

Parameter Description

Parameter	Description	Value range
mac-address	Unicast MAC address	128-bit binary number in the format X:X:X:X:X:X

vlan-id	VLAN identifier	1-4094
---------	-----------------	--------

24.9 show port-security

Command function	Command format
The show port-security [ethernet port-id] command displays the security configuration	show port-security ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

24.10 no port-security all

Command function	Command format
The no port-security all command deletes all port security-related configurations	no port-security all

Parameter Description

None

24.11 port-security violation

Command function	Command format
The [no] port-security violation log-interval command configures or deletes the log interval for port security violations	(no) port-security violation log-interval 1

Parameter Description

Parameter	Description	Value range
log interval time	Log interval value	0-86400

24.12 show port-security active-address

Command function	Command format
The show port-security active-address [configured learned ethernet port-id] command displays active entries	show port-security active-address interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

24.13 no port-security active-address

Command function	Command format
The no port-security active-address [configured learned all] command deletes current active entries	no port-security active-address all

Parameter Description

Parameter	Description	Value range
configured	Active configured address	None
learned	Active learned address	None
all	All active addresses	None

24.14 port-security aging static

Command function	Command format
The [no] port-security aging static command configures the static address aging switch	port-security aging static

Parameter Description

None

24.15 port-security aging time

Command function	Command format
------------------	----------------

The [no] port-security aging time value command configures (or deletes) the port address aging time

port-security aging time 3**Parameter Description**

Parameter	Description	Value range
value	Aging time value (minutes)	1-1440

24.16 port-security violation

Command function	Command format
------------------	----------------

The [no] port-security violation [protect | restrict | shutdown] command configures (or deletes) the action taken upon receiving an illegal packet

port-security violation protect**Parameter Description**

Parameter	Description	Value range
protect	Drop the packet	None
restrict	Drop the packet and alert	None
shutdown	Drop the packet, alert, and shutdown the port	None

24.17 port-security recovery

Command function	Command format
------------------	----------------

The [no] port-security recovery command configures (or deletes) the automatic recovery feature after a shutdown

port-security recovery

Parameter Description

None

24.18 port-security recovery time

Command function	Command format
------------------	----------------

The [no] port-security recovery time value command configures (or deletes) the automatic recovery time after a shutdown

port-security recovery time 1

Parameter Description

Parameter	Description	Value range
value	Automatic recovery time value (minutes)	1-3660

24.19 show port-security recovery

Command function	Command format
------------------	----------------

The show port-security recovery [ethernet port-id] command displays the configuration for automatic recovery after a shutdown

show port-security recovery ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

Chapter 25 PPPoE+ Configuration Commands

25.1 pppoeplus

Command function	Command format
The [no] pppoeplus command enables or disables the PPPoE+ feature in port mode	pppoeplus

Parameter Description

None

25.2 pppoeplus trust

Command function	Command format
The [no] pppoeplus trust command configures (or deletes) the uplink port as a trusted port in port mode	pppoeplus trust

Parameter Description

None

25.3 show pppoeplus interface

Command function	Command format
The show pppoeplus interface [ethernet port-id] command displays the configuration information	show pppoeplus interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical port, e.g., for a switch with 28 ports: 0/0/1-0/1/4

25.4 pppoeplus strategy

Command function	Command format
The [no] pppoeplus strategy [drop keep replace] command configures (or deletes) the handling strategy for vendor-specific options in port mode	pppoeplus strategy drop

Parameter Description

Parameter	Description	Value range
drop	Discard packets with vendor-specific options	None
keep	Retain packets with vendor-specific options	None
replace	Replace the contents of vendor-specific options	None

25.5 pppoeplus drop

Command function	Command format
The [no] pppoeplus drop [padi pado] command configures (or deletes) the strategy for discarding specific packets in port mode	pppoeplus drop padi

Parameter Description

Parameter	Description	Value range
padi	Discard PADI and PADR packets	None
pado	Discard PADO and PADS packets	None

25.6 pppoeplus type

Command function	Command format
------------------	----------------

The [no] pppoeplus type [huawei | standard | self-defined [circuit-id { [circuit-string] [vlan] [port] [switch-mac] [hostname] [client-mac] } | remote-id { [remote-string] [switch-mac] [hostname] [client-mac] }] command configures (or changes) the message type

pppoeplus type self-defined circuit-id vlan port switch-mac hostname client-mac string
no pppoeplus type

Parameter Description

Parameter	Description	Value range
circuit-string	Custom string	1-63 characters
remote-string	Custom string	1-63 characters

25.7 pppoeplus format

Command function	Command format
------------------	----------------

The [no] pppoeplus format [binary | ascii] command configures (or changes) the format

pppoeplus format binary

Parameter Description

Parameter	Description	Value range
ascii	Use ASCII format	None
binary	Use binary format	None

25.8 pppoeplus delimiter

Command function	Command format
------------------	----------------

The [no] pppoeplus delimiter [colon | dot | pound | slash | space] command configures (or changes) the delimiter

pppoeplus delimiter colon

Parameter Description

Parameter	Description	Value range
colon	Use colon (:) as delimiter	None
dot	Use dot (.) as delimiter	None
pound	Use pound (#) as delimiter	None
slash	Use slash (/) as delimiter	None
space	Use space as delimiter	None

25.9 pppoeplus circuit-id

Command function	Command format
------------------	----------------

The [no] pppoeplus circuit-id circuit-string
command configures (or changes) the
virtual circuit ID in port mode

pppoeplus circuit-id string

Parameter Description

Parameter	Description	Value range
circuit-string	Custom string	1-63 characters

Chapter 26 IP Source Guard Configuration Commands

26.1 ip source

Command function	Command format
------------------	----------------

The [no] ip source [ip|ip-mac|ip-mac-vlan] command is used in port mode to configure (or delete) the filtering method

ip source ip

Parameter Description

Parameter	Description	Value range
ip	The port filters packets based only on the source IP address of the IP packet.	None
ip-mac	The port filters packets based on the source IP and MAC address of the IP packet.	None
ip-mac-vlan	The port filters packets based on the source IP, MAC address, and VLAN of the IP packet.	None

26.2 show ip source

Command function	Command format
------------------	----------------

The show ip source command is used to view the configuration information

show ip source

Parameter Description

None

26.3 ip source binding

Command function	Command format
------------------	----------------

The [no] ip source binding ip-address [mac-address [interface ethernet port-id vlan vlan-id]] command is used to configure (or

**ip source binding 1.1.1.1 2:2:2:2:2:2 interface ethernet 0/0/1
vlan 1**

delete) a binding entry

Parameter Description

Parameter	Description	Value range
ip-address	Configurable valid IP address	32-bit binary number, format: X.X.X.X
mac-address	Configurable corresponding port MAC address	48-bit binary number, format: X:X:X:X:X:X
port-id	Port number	Defined by switch physical ports, e.g., 28-port switch: 0/0/1-0/1/4
vlan-id	VLAN ID number	1-4094

26.4 show ip source binding

Command function	Command format
The show ip source binding [ip-address] command is used to view the binding entry configuration information	show ip source binding 1.1.1.1

Parameter Description

Parameter	Description	Value range
ip-address	Configurable valid IP address	32-bit binary number, format: X.X.X.X

26.5 ip source vlan

Command function	Command format
The [no] ip source vlan vlan-id command is used to enable or disable the VLAN filtering function	ip source vlan 1

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID number	1-4094

26.6 show ip source vlan

Command function	Command format
The show ip source vlan command is used to view the configuration information	show ip source vlan

Parameter Description

None

26.7 ip source permit-igmp

Command function	Command format
The [no] ip source permit-igmp command is used to configure (or delete) whether to filter IGMP	ip source permit-igmp

Parameter Description

None

26.8 show ip source permit-igmp

Command function	Command format
The show ip source permit-igmp command is used to view the configuration information	show ip source permit-igmp

Parameter Description

None

Chapter 27 IPv6-Source Configuration Commands

27.1 ipv6-source-guard

Command function	Command format
The [no] ipv6-source-guard command is used in port mode to configure (or delete) the filtering method	ipv6-source-guard

Parameter Description

None

27.2 show ipv6-source-guard

Command function	Command format
The show ipv6-source-guard command is used in port mode to display the filtering method configuration	show ipv6-source-guard

Parameter Description

None

27.3 ipv6-source-guard bind ip

Command function	Command format
The ipv6-source-guard bind ip ipv6-address [[[mac mac-address] interface ethernet port-id] vlan vlan-id] command is used in global mode to configure (or delete) binding entries	ipv6-source-guard bind ip 2::1 mac 2:2:2:2:2:2 interface ethernet 0/0/1 v 1

Parameter Description

Parameter	Description	Value range
ipv6-address	Configurable valid IPv6 address	128-bit binary number, format:

X:X:X:X:X:X		
mac-address	Configurable corresponding port MAC address	48-bit binary number, format: X:X:X:X:X:X
port-id	Port number	Based on the switch's physical port, e.g., for a 28-port switch: 0/0/1-0/1/4
vlan-id	VLAN number	1-4094

27.4 show ipv6-source-guard bind

Command function	Command format
The show ipv6-source-guard bind [ipv6-address] command is used in global mode to display binding entries	show ipv6-source-guard bind ip 2::1

Parameter Description

Parameter	Description	Value range
ipv6-address	Configurable valid IPv6 address	128-bit binary number, format: X:X:X:X:X:X

27.5 ipv6-source-guard vlan

Command function	Command format
The [no] ipv6-source-guard vlan vlan-id command is used to enable or disable VLAN filtering	ipv6-source-guard vlan 1

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN number	1-4094

27.6 show ipv6-source-guard vlan

Command function	Command format
The show ipv6-source-guard vlan command is used to display VLAN configuration information	show ipv6-source-guard vlan

Parameter Description

None

Chapter 28 802.1X Configuration Commands

28.1 dot1x

Command function	Command format
The dot1x enable disable command enables or disables global 802.1X functionality in global mode	dot1x enable

Parameter Description

None

28.2 dot1x eap-relay enable|disable

Command function	Command format
The dot1x eap-relay enable disable command configures the protocol interaction between the system and the RADIUS server in global mode	dot1x eap-finish

Parameter Description

Parameter	Description	Value range
disable	EAP local termination	None
enable	EAP transfer continuation	None

28.3 dot1x port-method

Command function	Command format
The dot1x port-method [macbased portbased] command enables 802.1X authentication on the port in port mode	dot1x port-method portbased

Parameter Description

None

28.4 dot1x port-control

Command function	Command format
The [no] dot1x port-control [auto forceauthorized forceunauthorized] command configures (or deletes) the port control mode in port mode	dot1x port-control auto

Parameter Description

None

28.5 dot1x re-authenticate

Command function	Command format
The dot1x re-authenticate command triggers immediate re-authentication on the port in port mode	dot1x re-authenticate

Parameter Description

None

28.6 dot1x re-authentication

Command function	Command format
The [no] dot1x re-authentication command enables (or disables) periodic re-authentication on the port in port mode	dot1x re-authentication

Parameter Description

None

28.7 dot1x timeout re-authperiod

Command function	Command format
------------------	----------------

The [no] dot1x timeout re-authperiod time command configures (or deletes) the periodic re-authentication time on the port in port mode

dot1x timeout re-authperiod 10

Parameter Description

None

28.8 dot1x multicast-trigger

Command function	Command format
The [no] dot1x multicast-trigger command enables (or disables) the multicast trigger feature on the port in port mode	dot1x multicast-trigger

Parameter Description

None

28.9 dot1x multicast-period

Command function	Command format
The [no] dot1x multicast-period <time> command configures (or restores) the message sending interval on the port in port mode	dot1x multicast-period 30

Parameter Description

Parameter	Description	Value range
time	Period for sending the multicast message (in seconds), default is 60s	10-600

28.10 dot1x max-user-num

Command function	Command format
------------------	----------------

The [no] dot1x max-user-num user-num
command configures (or deletes) the
maximum number of users allowed
through authentication on the port in port
mode

dot1x max-user-num 1

Parameter Description

Parameter	Description	Value range
user-num	Number of users	1-100

28.11 dot1x user cut

Command function	Command format
------------------	----------------

The dot1x user cut [username user-name |
mac-address mac-address] command
removes a specified online user in global
mode

dot1x user cut mac-address 2:2:2:2:2:2

Parameter Description

Parameter	Description	Value range
user-name	Username to be removed	1-32 characters
mac-address	MAC address of the port to be removed	48-bit binary number, format: X:X:X:X:X:X

28.12 dot1x keepalive

Command function	Command format
------------------	----------------

The [no] dot1x keepalive command enables
(or disables) the heartbeat detection
feature on the port in port mode

dot1x keepalive

Parameter Description

None

28.13 dot1x keepalive period

Command function	Command format
------------------	----------------

The [no] dot1x keepalive period time command configures (or restores) the heartbeat detection time in global mode

dot1x keepalive period 2**Parameter Description**

Parameter	Description	Value range
-----------	-------------	-------------

Parameter	Description	Value range
time	Interval for sending keepalive messages (in seconds), default is 25s	1-3600

28.14 dot1x timeout quiet-period

Command function	Command format
------------------	----------------

The [no] dot1x timeout quiet-period time command configures (or restores) the quiet period in global mode

dot1x timeout quiet-period 2**Parameter Description**

Parameter	Description	Value range
-----------	-------------	-------------

Parameter	Description	Value range
time	Quiet period duration (in seconds), default is 0s	0-600

28.15 dot1x timeout server-timeout

Command function	Command format
------------------	----------------

The [no] dot1x timeout server-timeout time command configures (or restores) the server timeout duration in global mode

dot1x timeout server-timeout 20**Parameter Description**

Parameter	Description	Value range
time	Server timeout duration (in seconds), default is 30s	15-3600

28.16 dot1x timeout supp-timeout

Command function	Command format
The [no] dot1x timeout supp-timeout time command configures (or restores) the client timeout duration in global mode	dot1x timeout supp-timeout 20

Parameter Description

Parameter	Description	Value range
time	Server timeout duration (in seconds), default is 30s	15-3600

28.17 dot1x portbased host-mode

Command function	Command format
The dot1x portbased host-mode [multi-hosts single-host] command configures (or deletes) the host mode in port-based authentication mode	dot1x portbased host-mode single-host

Parameter Description

None

28.18 dot1x guest-vlan

Command function	Command format
The dot1x guest-vlan <vlan-id> command configures (or deletes) the guest VLAN for the port	dot1x guest-vlan 10

Parameter Description

None

28.19 dot1x max-authfail

Command function	Command format
The dot1x max-authfail <times> command configures (or deletes) the maximum number of authentication failures for the port	dot1x dot1x max-authfail 10

Parameter Description

Parameter	Description	Value range
time	Number of authentication failures	1–10

28.20 dot1x default-active-vlan

Command function	Command format
The dot1x default-active-vlan <vlan-id> command configures (or deletes) the default active VLAN for the port. The default active VLAN is used when the 802.1X user passes authentication on the Radius server but no VLAN is assigned. In this case, the user can only access resources in the default active VLAN	dot1x default-active-vlan 10

Parameter Description

None

28.21 dot1x eapol-relay

Command function	Command format
------------------	----------------

The dot1x eapol-relay command configures
(or deletes) the EAPOL message relay
function on the port

dot1x eapol-relay

Parameter Description

None

28.22 dot1x eapol-relay uplink

Command function	Command format
------------------	----------------

The dot1x eapol-relay uplink command
configures (or deletes) the uplink port
function for EAPOL message relay

dot1x eapol-relay uplink

Parameter Description

None

28.23 dot1x max-req

Command function	Command format
------------------	----------------

The dot1x max-req <timers>
command configures (or restores) the
number of times to resend the eap-
request/identity message when the client
does not respond to eap-response/identity
messages

dot1x max-req 2

Parameter Description

Parameter	Description	Value range
time	Maximum number of message transmissions	1–10

28.24 dot1x max-reauth

Command function	Command format
The dot1x max-reauth <timers> command configures (or restores) the number of times to resend the eap-request/md5 challenge message when the client does not respond to eap-response/md5 challenge messages	dot1x max-reauth 2

Parameter Description

Parameter	Description	Value range
time	Maximum number of message transmissions	1–10

28.25 dot1x critical-vlan

Command function	Command format
The dot1x critical-vlan <vlan-id> command configures (or deletes) the VLAN to be joined in case of authentication failure due to server unreachability	dot1x critical-vlan 10

Parameter Description

None

28.26 dot1x native-vlan-free

Command function	Command format
The dot1x native-vlan-free command enables or disables the feature that allows unauthenticated users to communicate within the VLAN of the PVID (Port VLAN ID)	dot1x native-vlan-free

Parameter Description

None

28.27 dot1x guest-acl

Command function	Command format
The dot1x guest-acl <string> command configures (or deletes) the guest ACL for the port	dot1x guest-acl 123@5

Parameter Description

Parameter	Description	Value range
string	Guest ACL	STRING <1-64> using delimiters for the ACL list

28.28 dot1x radius-acl-format

Command function	Command format
The dot1x radius-acl-format { integer string } command configures (or deletes) the ACL number format to be issued	dot1x radius-acl-format integer

Parameter Description

None

28.29 dot1x station-move

Command function	Command format
The dot1x station-move enable disable command enables or disables the authentication port migration feature in port mode. When the migration feature is enabled, users authenticated on one port can migrate to another port for re-	dot1x station-move enable

authentication. Before authentication on the new port, the original port's authentication result will be deleted. When disabled, users cannot migrate to another port unless offline from the original port

Parameter Description

None

28.30 dot1x syslog

Command function	Command format
The dot1x syslog enable/disable command enables or disables the failure message prompt feature in global mode	dot1x syslog enable

Parameter Description

None

28.31 show dot1x multicast-trigger

Command function	Command format
The show dot1x multicast-trigger [interface ethernet port-id] command displays the watchdog feature of the 802.1X authentication port	show dot1x multicast-trigger interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the physical port of the switch (e.g., 0/0/1-0/1/4 on a 28-port switch)

28.32 show dot1x interface

Command function	Command format
------------------	----------------

The show dot1x interface [interface ethernet port-id] command displays the switch port configuration information

show dot1x interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the physical port of the switch (e.g., 0/0/1-0/1/4 on a 28-port switch)

28.33 show dot1x users

Command function	Command format
------------------	----------------

The show dot1x users [{interface ethernet port-id} | {mac-address mac-address}] command displays the 802.1X session

show dot1x users interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the physical port of the switch (e.g., 0/0/1-0/1/4 on a 28-port switch)
mac-address	Unicast MAC address	A 48-bit binary number, formatted as X:X:X:X:X:X

28.34 show dot1x eapol-relay

Command function	Command format
The show dot1x eapol-relay [interface ethernet port-id] command displays the EAPOL relay configuration	show dot1x eapol-relay interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the physical port of the switch (e.g., 0/0/1-0/1/4 on a 28-port switch)

28.35 show dot1x keepalive

Command function	Command format
The show dot1x keepalive [interface ethernet port-id] command displays the heartbeat detection feature configuration	show dot1x keepalive interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the physical port of the switch (e.g., 0/0/1-0/1/4 on a 28-port switch)

28.36 show dot1x config-vlan

Command function	Command format
The show dot1x config-vlan [interface ethernet port-id] command displays the guest VLAN information	show dot1x config-vlan interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on the physical port of the switch (e.g., 0/0/1-0/1/4 on a 28-port switch)

28.37 show dot1x port-auth

Command function	Command format
The show dot1x port-auth command checks whether authentication is enabled on the port	show dot1x port-auth

Parameter Description

None

28.38 show dot1x timeout

Command function	Command format
The show dot1x timeout command displays the silent time, client timeout, and server timeout settings	show dot1x timeout

Parameter Description

None

28.39 show dot1x

Command function	Command format
The show dot1x command checks whether the authentication system is enabled and displays the authentication type	show dot1x

Parameter Description

None

28.40 show dot1x guest-acl

Command function	Command format
The show dot1x guest-acl command displays the guest ACL configuration	show dot1x guest-acl

Parameter Description

None

28.41 show dot1x radius-acl

Command function	Command format
The show dot1x radius-acl command displays the name or number of the ACL issued by the RADIUS server	show dot1x radius-acl

Parameter Description

None

Chapter 29 Radius Configuration Commands

29.1 aaa

Command function	Command format
Enter AAA configuration mode	aaa

Parameter Description

None

29.2 radius host

Command function	Command format
In AAA mode, configure the radius name and enter radius-name mode	radius host <radius-name> no radius host [radius-name]

Parameter Description

Parameter	Description	Value range
radius-name	RADIUS server name	STRING<1-32>

29.3 primary-auth-ip

Command function	Command format
In radius-name mode, configure the primary authentication server's IP address	primary-auth-ip <ip> <port> no primary-auth-ip

Parameter Description

Parameter	Description	Value range
ip	IP address of the server	/
port	TCP port number	1-65535

29.4 second-auth-ip

Command function	Command format
In radius-name mode, configure the secondary authentication server's IP address	second-auth-ip <ip> <port> no second-auth-ip

Parameter Description

Parameter	Description	Value range
ip	IP address of the server	/
port	TCP port number	1-65535

29.5 primary-acct-ip

Command function	Command format
In radius-name mode, configure the primary accounting server's IP address	primary-acct-ip <ip> <port> no primary-acct-ip

Parameter Description

Parameter	Description	Value range
ip	IP address of the server	/
port	TCP port number	1-65535

29.6 second-acct-ip

Command function	Command format
In radius-name mode, configure the secondary accounting server's IP address	second-acct-ip <ip> <port> no second-acct-ip

Parameter Description

Parameter	Description	Value range
ip	IP address of the server	/

port	TCP port number	1-65535
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29.7 auth-secret-key

Command function	Command format
In radius-name mode, configure the shared secret key for communication with the authentication server	auth-secret-key <key> no auth-secret-key

Parameter Description

Parameter	Description	Value range
key	/	STRING<1-16>

29.8 acct-secret-key

Command function	Command format
In radius-name mode, configure the shared secret key for communication with the accounting server	acct-secret-key <key> no acct-secret-key

Parameter Description

Parameter	Description	Value range
key	/	STRING<1-16>

29.9 realtime-account

Command function	Command format
In radius-name mode, configure the interval for sending accounting messages	realtime-account < interval <second>> no realtime-account

Parameter Description

Parameter	Description	Value range
-----------	-------------	-------------

second

/

1-255 (default: 60s)

29.10 preemption-time

Command function	Command format
In radius-name mode, configure the preemption timer	preemption-time <time> no preemption-time

Parameter Description

Parameter	Description	Value range
time	/	0-1440 minutes

29.11 username-format

Command function	Command format
In radius-name mode, configure whether the username should include the domain	username-format <with-domain without-domain >

Parameter Description

Parameter	Description	Value range
without-domain	Username without domain	/
with-domain	Username with domain	/

29.12 nas-ipaddress

Command function	Command format
In radius-name mode, configure the NAS IP address to be sent to the RADIUS server	nas-ipaddress <ip> no nas-ipaddress

Parameter Description

Parameter	Description	Value range
ip	NAS IP address	/

29.13 accounting-on

Command function	Command format
In AAA mode, configure the number of accounting messages to be sent	accounting-on enable <num> accounting-on disable

Parameter Description

Parameter	Description	Value range
num	Number of accounting messages	1-255

29.14 radius 8021p

Command function	Command format
In AAA mode, configure the RADIUS-issued port priority	radius 8021p enable radius 8021p disable

Parameter Description

None

29.15 radius accounting

Command function	Command format
In AAA mode, enable the RADIUS accounting feature	radius accounting no radius accounting

Parameter Description

None

29.16 radius attribute

Command function	Command format
------------------	----------------

In AAA mode, configure the sending of
client version information to the RADIUS
server

radius attribute client-version
no radius attribute client-version

Parameter Description

None

29.17 radius bandwidth-limit

Command function	Command format
In AAA mode, configure RADIUS-issued port bandwidth control	radius bandwidth-limit enable radius bandwidth-limit disable

Parameter Description

None

29.18 radius config-attribute

Command function	Command format
In AAA mode, modify the RADIUS attribute number	radius config-attribute access- bandwidth<downlink unit uplink> dscp mac-address-number <vendor type>

Parameter Description

Parameter	Description	Value range
vendor type	Attribute number	1-500

29.19 radius mac-address-number

Command function	Command format
In AAA mode, configure the RADIUS-issued port MAC address count limit	radius mac-address-number enable radius mac-address-number disable

Parameter Description

None

29.20 radius server-disconnect

Command function	Command format
In AAA mode, configure to disconnect the user when there is no response to the accounting message	radius server-disconnect drop 1x no radius server-disconnect drop 1x

Parameter Description

None

29.21 radius vlan

Command function	Command format
In AAA mode, configure the RADIUS-issued port PVID (Port VLAN Identifier)	radius vlan enable radius vlan disable

Parameter Description

None

29.22 h3c-cams

Command function	Command format
In AAA mode, configure the H3C CAMS (Centralized Access Management System) compatibility feature	h3c-cams { enable disable }

Parameter Description

None

29.23 dnrate-value

Command function	Command format
In AAA mode, configure the upstream rate attribute value when the h3c-cams enable feature is enabled	dnrate-value <value>

Parameter Description

Parameter	Description	Value range
value	/	1-32 (default: 5)

29.24 uprate-value

Command function	Command format
In AAA mode, configure the upstream rate attribute value when the h3c-cams enable feature is enabled	uprate-value <value>

Parameter Description

Parameter	Description	Value range
value	/	1-32 (default: 2)

29.25 domain

Command function	Command format
In AAA mode, configure the domain name and enter the domain-name mode	domain <domain-name>

Parameter Description

Parameter	Description	Value range
domain-name	/	STRING<1-24>

29.26 radius host

Command function	Command format
In domain-name mode, configure the binding of radius-name and enter the radius-name mode	radius host <radius-name binding [radius-name] > no radius host <radius-name>

Parameter Description

Parameter	Description	Value range
radius-name	RADIUS name	STRING<1-32>
binding	Enter radius-name mode	/

29.27 scheme

Command function	Command format
In domain-name mode, configure the domain rule	scheme <local radius none>

Parameter Description

Parameter	Description	Value range
local	Local authentication	/
radius	RADIUS authentication	/
none	No authentication	/

29.28 state

Command function	Command format
In domain-name mode, configure the domain state	state <active block>

Parameter Description

Parameter	Description	Value range
active	Active domain	/
block	Inactive domain	/

29.29 access-limit

Command function	Command format
In domain-name mode, configure the	access-limit <disable enable <num>>

access limit

Parameter Description

Parameter	Description	Value range
disable	No access allowed	/
num	Number of allowed accesses	1-640

29.30 default domain-name

Command function	Command format
In AAA mode, configure the default domain	default domain-name { enable domain-name disable }

Parameter Description

Parameter	Description	Value range
domain-name	/	STRING<1-24>

29.31 show radius host

Command function	Command format
Display the relevant information for the radius-name	show radius host [radius-name]

Parameter Description

None

29.32 show radius attribute

Command function	Command format
Display the RADIUS client version attribute	show radius config-attribute

Parameter Description

None

29.33 show radius config-attribute

Command function	Command format
Display the RADIUS configuration attributes	show radius config-attribute

Parameter Description

None

29.34 show rate-attribute-value

Command function	Command format
Display the rate attribute operational information	show rate-attribute-value

Parameter Description

None

Chapter 30 Muser Configuration Commands

30.1 muser local

Command function	Command format
Configure for local authentication	muser local [none]

Parameter Description

None

30.2 muser radius

Command function	Command format
Configure for RADIUS authentication	muser radius <radius-name> < pap chap> [account] [local none]

Parameter Description

Parameter	Description	Value range
radius-name	RADIUS name	STRING<1-32>
pap	PAP authentication method	/
chap	CHAP authentication method	/
account	Log login/logout time	/
local	Switch to local authentication upon failure	/
none	No authentication upon failure	/

30.3 local-user username

Command function	Command format
In AAA mode, configure local user information. When authenticating using local user information, related user names, passwords, and other information need to	local-user username name [encrypt [password] pwd [vlan vid]

be added to the system

Parameter Description

Parameter	Description	Value range
name	Username	1-64 characters
pwd	Password	1-64 characters

30.4 muser tacacs+

Command function	Command format
Configure for TACACS+ authentication	muser tacacs+

Parameter Description

None

30.5 tacacs+ encrypt-key

Command function	Command format
Configure to encrypt the TACACS+ password for display	tacacs+ encrypt-key no tacacs+ encrypt-key

Parameter Description

None

30.6 tacacs+ authentication-type

Command function	Command format
Configure the TACACS+ authentication method	tacacs+ authentication-type [ascii chap pap] no tacacs+ authentication-type

Parameter Description

Parameter	Description	Value range
ascii	Plain text	/

chap	CHAP	/
pap	PAP	/

30.7 tacacs+ preempt-time

Command function	Command format
Configure the server preempt timer	tacacs+ preempt-time <time> no tacacs+ preempt-time

Parameter Description

Parameter	Description	Value range
time	/	0-1440 minutes

30.8 tacacs+ primary server

Command function	Command format
Configure the primary authentication server parameters	tacacs+ primary server <ip> [encrypt-key <enkey> key <key>] [port <num>][timeout <second>] no tacacs+ primary server

Parameter Description

Parameter	Description	Value range
ip	IP address	/
enkey	Encryption key	STRING<1-66>
key	Plain text password	STRING<1-32>
num	TCP port number	1-65535
second	Timeout in seconds	1-70 (default: 5s)

30.9 tacacs+ secondary server

Command function	Command format
Configure the secondary authentication server parameters	tacacs+ secondary server <ip> [encrypt-key <enkey> key <key>] [port <num>][timeout <second>] no tacacs+ secondary server

Parameter Description

Parameter	Description	Value range
ip	IP address	/
enkey	Encryption key	STRING<1-66>
key	Plain text password	STRING<1-32>
num	TCP port number	1-65535
second	Timeout in seconds	1-70 (default: 5s)

30.10 muser tacacs+ []

Command function	Command format
Configure the usage mode for TACACS+	muser tacacs+ [[author] [account] [command-account] [command-author] [local] [none]]

Parameter Description

Parameter	Description	Value range
author	Authorization	/
account	Accounting	/
command-account	Command-line accounting	/
command-author	Command-line authorization	/
local	Switch to local authentication upon failure	/
none	No authentication upon failure	/

30.11 show muser

Command function	Command format
Display the muser information	show muser [[enable] [login]]

Parameter Description

None

30.12 show tacacs+

Command function	Command format
View the operational information of TACACS+	show tacacs+

Parameter Description

None

Chapter 31 Secondary Password Authentication Configuration Commands

31.1 enable password 0

Command function	Command format
Configure a plain text password	enable password 0 <clear>

Parameter Description

Parameter	Description	Value range
clear	Plain text password	STRING<1-16>

31.2 enable password 7

Command function	Command format
Configure an encrypted password	enable password 7 <encrypt>

Parameter Description

Parameter	Description	Value range
encrypt	Encrypted password	STRING<1-16>

31.3 enable password level

Command function	Command format
Configure a password for different privilege levels	enable password level <id> <0 7> <string> no enable password level <id>

Parameter Description

Parameter	Description	Value range
id	Privilege level	1-15
0	Plain text password	/
7	Encrypted password	/

string	Password	STRING<1-16>
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Chapter 32 Static Route Configuration Commands

32.1 ip route

Command function	Command format
Add a static route entry	ip route dst-net mask next-hop no ip route dst-net mask [next-hop]

Parameter Description

Parameter	Description	Value range
dst-net	Destination network address	0.0.0.0-223.255.255.254
mask	Destination network mask	0.0.0.0-255.255.255.255
next-hop	Next-hop IP address	Must be a Layer 3 interface subnet VLAN address

32.2 show ip route

Command function	Command format
View route entries	show ip route [ip-address [mask] static]

Parameter Description

Parameter	Description	Value range
ip-address	Network of the route entry	0.0.0.0-255.255.255.255
mask	Route entry mask	0.0.0.0-255.255.255.255
static	View static routes	/

Chapter 33 IPv6 Static Route Configuration Commands

33.1 ipv6 route

Command function	Command format
Add a static route entry for IPv6	ipv6 route [dst-net/len] dst-net mask next-hop no ip route dst-net mask [next-hop]

Parameter Description

Parameter	Description	Value range
dst-net	Destination network address	/
len	Mask length	/
mask	Mask for IPv6 route	/
next-hop	Next-hop IPv6 address	Must be a Layer 3 interface subnet VLAN address

33.2 show ipv6 route

Command function	Command format
View IPv6 route entries	show ipv6 route

Parameter Description

None

Chapter 34 Port Statistics Configuration Commands

34.1 show statistics interface ethernet

Command function	Command format
The show statistics interface ethernet port-id command displays all or individual port statistics	<pre>show statistics interface ethernet 0/0/1</pre> <pre>show statistics interface</pre>

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

34.2 clear interface

Command function	Command format
The clear interface [ethernet port-id] command clears all or individual port statistics	<pre>clear interface</pre> <pre>clear interface ethernet 0/0/1</pre>

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

34.3 clear cpu-statistics

Command function	Command format
The clear cpu-statistics command clears the	<pre>clear cpu-statistics</pre>

CPU port statistics

Parameter Description

None

34.4 clear cpu-classification

Command function	Command format
The clear cpu-classification [interface ethernet port-id] command clears the CPU port classification statistics	clear cpu-classification show cpu-classification interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

34.5 port-rate-statistics interval

Command function	Command format
The (no) port-rate-statistics interval value command configures or deletes the rate statistics interval. The default interval is 5 minutes	port-rate-statistics interval 1 no port-rate-statistics interval

Parameter Description

Parameter	Description	Value range
value	Statistics interval time	1-5 minutes

34.6 show statistics interface brief

Command function	Command format
------------------	----------------

The show statistics interface brief [ethernet port-id] command displays statistics for all ports

show statistics interface brief ethernet 0/0/1

Parameter Description

None

34.7 show statistics dynamic

Command function	Command format
The show statistics dynamic [interface]eth-trunk] command displays real-time statistics for all ports	show statistics dynamic interface show statistics dynamic eth-trunk

Parameter Description

None

34.8 show utilization

Command function	Command format
The show utilization [interface]eth-trunk] command displays real-time utilization for all ports	show utilization interface show utilization eth-trunk

Parameter Description

None

34.9 show interface

Command function	Command format
The show interface [ethernet port-id] command displays port information	show interface show interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

Chapter 35 Loopback Detection Configuration Commands

35.1 Loopback

Command function	Command format
------------------	----------------

The loopback command is used to execute internal or external loopback detection, either on a single port or globally

loopback internal
loopback internal

Parameter Description

Parameter	Description	Value range
internal	Internal loopback detection	/
external	External loopback detection	/

35.2 loopback-detection action

Command function	Command format
------------------	----------------

The loopback command is used to execute internal or external loopback detection, either on a single port or globally

loopback-detection action shutdown
show loopback-detection

Parameter Description

Parameter	Description	Value range
discarding	Sets the loopback port to discard mode (default mode)	/
shutdown	Shuts down the loopback port	/

35.3 loopback-detection interface

Command function	Command format
------------------	----------------

The loopback-detection interface command configures or deletes a loopback

loopback-detection interface ethernet 0/0/1

handling port

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

35.4 loopback-detection enable interval-time

Command function	Command format
The loopback-detection interval-time command configures the interval time for loopback detection processing	loopback-detection interval-time 5

Parameter Description

Parameter	Description	Value range
time	Interval time (in seconds, default is 5 seconds)	5-300

35.5 loopback-detection recover-time

Command function	Command format
The loopback-detection recover-time command configures the automatic recovery time for loopback handling	loopback-detection recover-time 5

Parameter Description

Parameter	Description	Value range
time	Recovery time (in seconds, default is 20 seconds, 0 means manual recovery)	0-600

35.6 show loopback-detection

Command function	Command format
The show loopback-detection command displays the current status of loopback detection	show loopback-detection ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

Chapter 36 VCT Detection Configuration Commands

36.1 vct run

Command function	Command format
------------------	----------------

The vct run command executes VCT (Virtual Circuit Testing) detection either globally or on a specific port

vct run

Parameter Description

None

Chapter 37 Port Configuration Commands

37.1 interface ethernet

Command function	Command format
------------------	----------------

The interface ethernet port-id command is used to enter port configuration mode

interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Defined by the physical ports on the switch, e.g., on a 28-port switch: 0/0/1-0/1/4

37.2 duplex

Command function	Command format
------------------	----------------

The (no) duplex [auto | full | half] command configures or deletes the port's duplex mode. The default is auto

duplex auto
no duplex

Parameter Description

Parameter	Description	Value range
auto	Auto negotiation	/
full	Full-duplex mode	/
half	Half-duplex mode	/

37.3 speed

Command function	Command format
------------------	----------------

The (no) speed [10 | 100 | 1000 | auto]

speed 1000

command configures or deletes the port's speed. The default is auto

no speed

Parameter Description

Parameter	Description	Value range
10	10 Mbps	/
100	100 Mbps	/
1000	1000 Mbps	/
auto	Auto negotiation	/

37.4 priority

Command function	Command format
The (no) priority value command adds or removes the port's priority	(no)priority 1

Parameter Description

Parameter	Description	Value range
value	Priority value	0-7

37.5 shutdown

Command function	Command format
The (no) shutdown command enables or disables the port	(no)shutdown

Parameter Description

None

37.6 description

Command function	Command format
------------------	----------------

The (no) description string command adds
or removes a description for the interface.

(no)description vlan1

Parameter Description

Parameter	Description	Value range
string	Description text	Any characters (excluding ?, spaces must be enclosed in quotes)

37.7 switchport

Command function	Command format
The (no) switchport [ethernet all] command adds or removes the port from the VLAN mode	(no) switchport ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
ethernet	Port ID	Defined by the physical port number on the switch
all	All ports	/

37.8 ingress filtering

Command function	Command format
The (no) ingress filtering command adds or removes ingress filtering on the port	(no) ingress filtering

Parameter Description

None

37.9 switchport pvid

Command function	Command format
------------------	----------------

The (no) switchport pvid vlan-id command
adds or removes the PVID for the port

(no) switchport pvid 1

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

37.10 ingress acceptable-frame

Command function	Command format
------------------	----------------

The (no) ingress acceptable-frame [tagged |
all] command adds or removes the types of
frames the port can receive

(no)ingress acceptable-frame tagged

Parameter Description

Parameter	Description	Value range
tagged	Only accept tagged frames	/
all	Accept all frames	/

37.11 switchport trunk allowed vlan

Command function	Command format
------------------	----------------

The (no) switchport trunk allowed vlan
[vlan-list | all] command adds or removes
allowed VLANs for a trunk port

(no) switchport trunk allowed vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID list	1-4094
all	All configured VLANs	/

37.12 switchport hybrid untagged vlan

Command function	Command format
------------------	----------------

The (no) switchport hybrid untagged
vlan [vlan-list | all] command adds or
removes untagged VLANs for a hybrid port

(no)switchport hybrid untagged vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID list	1-4094
all	All configured VLANs	/

37.13 switchport hybrid tagged vlan

Command function	Command format
------------------	----------------

The (no) switchport hybrid tagged vlan
[vlan-list | all] command adds or removes
tagged VLANs for a hybrid port

(no)switchport hybrid tagged vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID list	1-4094
all	All configured VLANs	/

37.14 switchport mode

Command function	Command format
------------------	----------------

The (no) switchport mode [access | hybrid |
trunk] command is used to change the link
type of a port

(no)switchport mode access

Parameter Description

Parameter	Description	Value range
access	Configures a single VLAN for the port	/
hybrid	Configures multiple VLANs for the port	/
trunk	Configures multiple VLANs for the port	/

37.15 show interface ethernet

Command function	Command format
The show interface [ethernet port-id] command is used to view port information	show interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

37.16 show interface brief ethernet

Command function	Command format
The show interface brief ethernet port-id command is used to view brief port information	show interface brief ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

37.17 show description ethernet

Command function	Command format
The show description ethernet port-id command is used to view the description of a specific port The show description command is used to view descriptions of all ports on the switch	<pre>show description ethernet 0/0/1 show description</pre>

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

37.18 show ingress ethernet

Command function	Command format
The show ingress ethernet port-id command is used to view the frame types received by the port and the filtering switch status The show ingress command is used to view the frame types received by all ports	<pre>show ingress ethernet 0/0/1 show ingress</pre>

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

Chapter 38 DDM Detection

38.1 show sfp

Command function	Command format
------------------	----------------

The show sfp [ethernet port-id] command
is used to view optical module device
information

show sfp ethernet 0/1/1

Parameter Description

Parameter	Description	Value range
port-id	Optical interface port ID	0/1/1-0/1/4

Chapter 39 Flow Control

39.1 flow control

Command function	Command format
The (no) flow control command is used to enable or disable the flow control function on a port	Flow control (no)Flow control

Parameter Description

None

39.2 show flow control

Command function	Command format
The show flow control interface [ethernet port-id] command is used to view port flow control configuration	Show flow control interface Show flow control interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

Chapter 40 GMRP Configuration Commands

40.1 gmrp

Command function	Command format
The (no) gmrp command is used to enable (disable) the Group Membership Registration Protocol (GMRP) in global or port mode	gmrp no gmrp

Parameter Description

None

40.2 garp permit multicast mac-address

Command function	Command format
The (no) garp permit multicast mac-address mac vlan vid command is used to configure (delete) the multicast address allowed by the Group Address Registration Protocol (GARP)	garp permit multicast mac-address 01:00:5e:00:01:01 vlan 12 no garp permit multicast mac-address 01:00:5e:00:01:01 vlan 12

Parameter Description

Parameter	Description	Value range
mac	Multicast MAC address	128-bit binary number, format: X:X:X:X:X:X
vid	VLAN ID	1-4094

40.3 show gmrp

Command function	Command format
The show gmrp command is used to view the global GMRP enablement status	show gmrp

Parameter Description

None

40.4 show gmrp interface

Command function	Command format
The show gmrp interface [ethernet port-id] command is used to view the GMRP enablement status on a specific port	show gmrp interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

40.5 show garp permit multicast

Command function	Command format
The show garp permit multicast command is used to view the multicast addresses permitted by GARP	show garp permit multicast

Parameter Description

None

40.6 show multicast

Command function	Command format
The show multicast command is used to view the local multicast groups (including both static and GMRP-learned multicast groups)	show multicast

Parameter Description

None

Chapter 41 IGMP-Snooping Configuration Commands

41.1 igmp-snooping

Command function	Command format
The igmp-snooping command enables the Internet Group Management Protocol (IGMP) Snooping	igmp-snooping no igmp-snooping

Parameter Description

None

41.2 igmp-snooping host-aging-time

Command function	Command format
The igmp-snooping host-aging-time time vlan vid command configures the aging time for dynamic multicast port members	igmp-snooping host-aging-time 10 vlan 1

Parameter Description

Parameter	Description	Value range
time	Aging time (in seconds)	10-1000000
vid	VLAN ID list	1-128

41.3 no igmp-snooping host-aging-time

Command function	Command format
The no igmp-snooping host-aging-time [vlan vid] command removes the dynamic multicast port members' aging time	no igmp-snooping host-aging-time vlan 1

Parameter Description

Parameter	Description	Value range
vid	VLAN ID list	1-128

41.4 igmp-snooping max-response-time

Command function	Command format
The igmp-snooping max-response-time command configures the maximum response time for IGMP queries	igmp-snooping max-response-time 1

Parameter Description

Parameter	Description	Value range
time	Maximum response time (in seconds)	1-100

41.5 no igmp-snooping max-response-time

Command function	Command format
The no igmp-snooping max-response-time command removes the maximum response time configuration for IGMP queries	no igmp-snooping max-response-time

Parameter Description

None

41.6 igmp-snooping fast-leave

Command function	Command format
The igmp-snooping fast-leave command configures the port to operate in fast leave mode for multicast group membership	igmp-snooping fast-leave

Parameter Description

None

41.7 no igmp-snooping fast-leave

Command function	Command format
The no igmp-snooping fast-leave command disables the fast leave mode on the port	no igmp-snooping fast-leave

Parameter Description

None

41.8 igmp-snooping group-limit

Command function	Command format
The igmp-snooping group-limit number command configures the maximum number of multicast groups the port can learn	igmp-snooping group-limit 1

Parameter Description

Parameter	Description	Value range
number	Number of multicast groups	0-507

41.9 no igmp-snooping group-limit

Command function	Command format
The no igmp-snooping group-limit command removes the multicast group limit configuration on the port	no igmp-snooping group-limit

Parameter Description

None

41.10 igmp-snooping overflow-replace

Command function	Command format
The igmp-snooping overflow-replace command configures the action when the port has learned the maximum number of multicast groups	igmp-snooping overflow-replace

Parameter Description

None

41.11 igmp-snooping enable-vlan

Command function	Command format
The igmp-snooping enable-vlan [vlan-list] command configures (or removes) the default learning rules for multicast groups not on the blacklist or whitelist for the specified VLAN	igmp-snooping enable-vlan 1 no igmp-snooping enable-vlan 1

Parameter Description

Parameter	Description	Value range
vlan-list	VLAN ID list	1-128

41.12 igmp-snooping [permit | deny]

Command function	Command format
The igmp-snooping [permit deny] command configures global policies for multicast group management	igmp-snooping permit group all igmp-snooping deny group all igmp-snooping deny group 01:00:5e:00:01:01 vlan 2 no igmp-snooping deny group 01:00:5e:00:01:01 vlan 2 igmp-snooping permit group-range 01:00:5e:00:01:01 multi-count 2 vlan 2
The (no) igmp-snooping [permit deny] group mac vlan vid command configures (or deletes) multicast black/whitelist on a	

port

The (no) igmp-snooping [permit | deny]
group-range mac multi-count num vlan vid
command configures (or deletes) the
multicast black/whitelist on a port by group
range and multicast count

Parameter Description

Parameter	Description	Value range
mac	Multicast MAC address	128-bit binary number, format: X:X:X:X:X:X
num	Number of multicast addresses	1-64
vid	VLAN ID	1-4094

41.13 igmp-snooping querier

Command function	Command format
The (no) igmp-snooping querier command enables or disables the querier functionality	igmp-snooping querier no igmp-snooping querier

Parameter Description

None

41.14 igmp-snooping robust-count

Command function	Command format
The (no) igmp-snooping robust-count [count] command configures or restores the multicast robustness factor	igmp-snooping robust-count 2 no igmp-snooping robust-count

Parameter Description

Parameter	Description	Value range
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count

Robustness factor value, default is 2

1-5

41.15 igmp-snooping last-member-query-interval

Command function	Command format
The (no) igmp-snooping last-member-query-interval value command configures or restores the interval for the last member query message.	igmp-snooping last-member-query-interval 2 no igmp-snooping last-member-query-interval

Parameter Description

Parameter	Description	Value range
value	Interval time, default is 1 second	1-5 seconds

41.16 igmp-snooping version

Command function	Command format
The igmp-snooping version value command configures the version of the IGMP query message	igmp-snooping version 2

Parameter Description

Parameter	Description	Value range
value	IGMP version, default is IGMPv2	2-3

41.17 igmp-snooping querier-vlan

Command function	Command format
The (no) igmp-snooping querier-vlan vlan-id command configures (or deletes) the VLAN for the general query message	igmp-snooping querier-vlan 2 no igmp-snooping querier-vlan 2

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN list	1-128

41.18 igmp-snooping query-interval

Command function	Command format
The (no) igmp-snooping query-interval value command configures (or restores) the interval between sending general query messages	igmp-snooping query-interval 2 no igmp-snooping query-interval

Parameter Description

Parameter	Description	Value range
value	Interval between query messages (in seconds)	1-30000

41.19 igmp-snooping max-response-time

Command function	Command format
The (no) igmp-snooping max-response-time value command configures (or restores) the maximum response time for general query messages	igmp-snooping max-response-time 2 no igmp-snooping max-response-time

Parameter Description

Parameter	Description	Value range
value	Maximum response time (in seconds)	1-100

41.20 igmp-snooping query-source

Command function	Command format
------------------	----------------

The (no) igmp-snooping query-source
ipaddress command configures (or
removes) the source IP address for sending
general query messages

igmp-snooping query-source 1.1.1.1
no igmp-snooping query-source

Parameter Description

Parameter	Description	Value range
ipaddress	Configurable multicast IP address	32-bit binary number, format: X:X:X:X

41.21 igmp-snooping router-port forward

Command function	Command format
The (no) igmp-snooping router-port forward command configures (or removes) the mixed router port function	igmp-snooping router-port forward no igmp-snooping router-port forward

Parameter Description

None

41.22 igmp-snooping router-aging-time

Command function	Command format
The (no) igmp-snooping router-aging- time value command configures (or restores) the aging time for dynamic router ports	igmp-snooping router-aging-time 10 no igmp-snooping router-aging-time

Parameter Description

Parameter	Description	Value range
value	Aging time for router port (in seconds)	10-1000000

41.23 igmp-snooping router-port vlan

Command function	Command format
The (no) igmp-snooping router-port vlan vid interface [all ethernet port-id eth-trunk trunk-id] command configures (or removes) the static router port	igmp-snooping router-port vlan 10 interface ethernet 0/0/1 no igmp-snooping router-port vlan 10 interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
vid	VLAN ID	1-4094
port-id	Port number	Depends on the physical ports (e.g., 0/0/1-0/1/4)
trunk-id	Link aggregation ID	1-31

41.24 igmp-snooping multicast vlan

Command function	Command format
The (no) igmp-snooping multicast vlan vid command configures (or removes) the multicast VLAN for a port	igmp-snooping multicast vlan 1 no igmp-snooping multicast vlan

Parameter Description

Parameter	Description	Value range
vid	VLAN ID	1-4094

41.25 igmp-snooping record-host

Command function	Command format
The (no) igmp-snooping record-host command configures (or removes) the function for recording the host MAC	igmp-snooping record-host no igmp-snooping record-host

address

Parameter Description

None

41.26 igmp-snooping proxy

Command function	Command format
The (no) igmp-snooping proxy command configures (or removes) the multicast packet proxy feature	igmp-snooping proxy no igmp-snooping proxy

Parameter Description

None

41.27 igmp-snooping proxy-source

Command function	Command format
The (no) igmp-snooping proxy-source ipaddress command configures (or removes) the multicast packet proxy source IP address	igmp-snooping proxy-source 1.1.1.1 no igmp-snooping proxy-source

Parameter Description

Parameter	Description	Value range
ipaddress	Configurable valid multicast IP address	32-bit binary, format X:X:X:X

41.28 igmp-snooping drop

Command function	Command format
The (no) igmp-snooping drop [query report] command configures the port to drop query/report packets	igmp-snooping drop report igmp-snooping drop query no igmp-snooping drop report no igmp-snooping drop query

Parameter Description

None

41.29 igmp-snooping preview

Command function	Command format
The (no) igmp-snooping preview command enables (or disables) the multicast preview function	igmp-snooping preview no igmp-snooping preview

Parameter Description

None

41.30 igmp-snooping preview group-ip

Command function	Command format
The (no) igmp-snooping preview group-ip ipaddress vlan vid interface ethernet port-id command configures (or removes) the multicast preview for a specific IP address	igmp-snooping preview group-ip 224.0.1.1 vlan 2 interface ethernet 0/0/1 no igmp-snooping preview group-ip 224.0.1.1 vlan 2 interface ethernet

Parameter Description

Parameter	Description	Value range
ipaddress	Multicast IP address	32-bit binary, format X:X:X:X
vid	VLAN ID	1-128
port-id	Port number	Defined by the physical port (e.g., 0/0/1-0/1/4)

41.31 igmp-snooping preview

Command function	Command format
The (no) igmp-snooping preview [time-once time-once time-interval time-interval	igmp-snooping preview permit-times 1 time-interval 190 time-once 233 time-reset 1800 no igmp-snooping preview permit-times time-interval time-once time-reset

time-reset time-reset permit-times permit-times] command configures (or removes) single preview duration, preview interval, reset time, and the number of allowed previews

Parameter Description

Parameter	Description	Value range
time-once	Single preview duration (seconds)	60-300
time-interval	Preview interval (seconds)	180-600
time-reset	Preview reset duration (seconds)	1800-7200
permit-times	Allowed preview count	1-10

41.32 igmp-snooping profile

Command function	Command format
The (no) igmp-snooping profile profile-id command creates (or removes) a profile and enters profile configuration mode	igmp-snooping profile 1 no igmp-snooping profile 1

Parameter Description

Parameter	Description	Value range
profile-id	Profile ID	1-128

41.33 profile limit

Command function	Command format
The profile limit [permit deny] command configures the profile type in IGMP profile mode	profile limit permit

Parameter Description

Parameter	Description	Value range
permit	Configures the allowed multicast list in the profile	/
deny	Configures the denied multicast list in the profile	/

41.34 ip range

Command function	Command format
The (no) ip range start-ip end-ip [vlan vlan-id] command configures (or removes) the profile IP address range in IGMP profile mode	ip range 224.0.1.1 224.0.1.2 vlan 1 no ip range 224.0.1.1 224.0.1.2 vlan 1

Parameter Description

Parameter	Description	Value range
start-ip	Starting multicast IP address	224.0.0.1-239.255.255.254
end-ip	Ending multicast IP address	224.0.0.1-239.255.255.254
vlan-id	VLAN ID	1-4094

41.35 mac range

Command function	Command format
The (no) mac range start-mac end-mac [vlan vlan-id] command configures (or removes) the MAC address range in IGMP profile mode	mac range 01:00:5e:1:1:1 01:00:5e:1:1:2 vlan 1 no mac range 01:00:5e:1:1:1 01:00:5e:1:1:2 vlan 1

Parameter Description

Parameter	Description	Value range
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start-mac	Starting multicast MAC address	128-bit binary, format X:X:X:X:X
end-mac	Ending multicast MAC address	128-bit binary, format X:X:X:X:X
vlan-id	VLAN ID	1-4094

41.36 description

Command function	Command format
The (no) description STRING<1-32> command configures (or removes) the profile description in IGMP profile mode	description string no description

Parameter Description

None

41.37 igmp-snooping profile refer

Command function	Command format
The (no) igmp-snooping profile refer profile-list command configures (or removes) the port profile reference in port mode	igmp-snooping profile refer 1 no igmp-snooping profile refer 1

Parameter Description

Parameter	Description	Value range
profile-list	List of profile identifiers	1-128 characters

41.38 igmp-snooping static-group

Command function	Command format
The (no) igmp-snooping static-group ipaddress vlan id [all ethernet port-id enter] command configures (cancels) a static multicast address	igmp-snooping static-group 224.1.1.1 vlan 1 ethernet 0/0/9 no igmp-snooping static-group 224.1.1.1 vlan 1 ethernet 0/0/9

Parameter Description

Parameter	Description	Value range
ipaddress	Multicast IP address	224.0.0.1~239.255.255.255
vid	VLAN ID	1-4094
port-id	Port ID	Based on physical port, e.g., for a 28-port switch: 0/0/1-0/1/4

41.39 igmp-snooping static-group proxy

Command function	Command format
The (no) igmp-snooping static-group proxy [interval seconds] command configures (cancels) a static multicast proxy	igmp-snooping static-group 224.1.1.1 vlan 1 ethernet 0/0/9 no igmp-snooping static-group 224.1.1.1 vlan 1 ethernet 0/0/9

Parameter Description

Parameter	Description	Value range
seconds	Interval time	30-300 seconds

41.40 show igmp-snooping

Command function	Command format
The show igmp-snooping command displays the configuration of IGMP Snooping	show igmp-snooping

Parameter Description

None

41.41 show igmp-snooping router-dynamic

Command function	Command format
The show igmp-snooping router-dynamic	show igmp-snooping router-dynamic

command displays the dynamic router
ports detected by IGMP Snooping
information

Parameter Description

None

41.42 show igmp-snooping router-static

Command function	Command format
The show igmp-snooping router-static command is used to display information about statically configured router ports for IGMP Snooping	show igmp-snooping router-static

Parameter Description

None

41.43 show igmp-snooping record-host

Command function	Command format
The show igmp-snooping record-host command is used to display information about the host records maintained by IGMP Snooping	show igmp-snooping record-host interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Defined by the physical port number on the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

41.44 show igmp-snooping preview

Command function	Command format
The show igmp-snooping preview command is used to display information about the multicast preview configuration	show igmp-snooping preview

Parameter Description

None

41.45 show igmp-snooping preview status

Command function	Command format
The show igmp-snooping preview status command is used to display the current operational status of multicast preview channels	show igmp-snooping preview status

Parameter Description

None

41.46 show igmp-snooping profile

Command function	Command format
The show igmp-snooping profile command is used to display the configuration and operational status of IGMP Snooping profiles	show igmp-snooping profile interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
profile-id	Profile ID	1-128
port-id	Port ID	Based on physical port, e.g., for a

		28-port switch: 0/0/1-0/1/4
vlan-id	VLAN ID	1-4094

41.47 show multicast

Command function	Command format
------------------	----------------

The show multicast command is used to display information about multicast tables, including group membership and multicast MAC addresses

show igmp-snooping profile interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
mac	Multicast MAC address	128-bit binary number, format: X:X:X:X:X

41.48 show igmp-snooping static-table

Command function	Command format
------------------	----------------

The show igmp-snooping static-table command is used to display information about the static multicast table configured in IGMP Snooping

Show igmp-snooping static-table

Parameter Description

None

Chapter 42 Static Multicast Configuration Commands

42.1 multicast

Command function	Command format
The multicast command adds (or removes) member ports to a static multicast group	multicast mac-address 01:00:5e:01:01:01 vlan 1 interface ethernet 0/0/1
	no multicast mac-address 01:00:5e:01:01:01 vlan 1 interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
mac	Multicast MAC address	128-bit binary, format: X:X:X:X:X:X
vlan-id	VLAN ID	1-4094
port-id	Port ID	Based on the physical port of the switch (e.g., 0/0/1 to 0/1/4 for a 28-port switch)

42.2 multicast

Command function	Command format
The multicast command creates a proxy port for a static multicast group	multicast mac-address 01:00:5e:01:01:01 vlan 1 proxy-port ethernet 0/0/1
	no multicast mac-address 01:00:5e:01:01:01 vlan 1 proxy-port ethernet

Parameter Description

Parameter	Description	Value range
mac	Multicast MAC address	128-bit binary, format: X:X:X:X:X:X
vlan-id	VLAN ID	1-4094
port-id	Port ID	Based on the physical port of the switch (e.g., 0/0/1 to 0/1/4 for a 28-port switch)

42.3 multicast proxy-interval

Command function	Command format
------------------	----------------

The multicast proxy-interval value command configures (or restores) the time interval for a proxy port to send reports to the multicast source

multicast proxy-interval 10
no multicast proxy-interval

Parameter Description

Parameter	Description	Value range
value	Time interval (seconds)	Default is 10 seconds, range: 1-300 seconds

42.4 show multicast

Command function	Command format
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The show multicast command displays the multicast table information

show multicast

Parameter Description

None

Chapter 43 MLD-Snooping Configuration Commands

43.1 mld-snooping

Command function	Command format
The mld-snooping command enables or disables the Multicast Listener Discovery (MLD) snooping protocol	mld-snooping no mld-snooping

Parameter Description

None

43.2 mld-snooping host-aging-time

Command function	Command format
The mld-snooping host-aging-time time command configures (or restores) the aging time for dynamic multicast port members	mld-snooping host-aging-time 10 no mld-snooping host-aging-time

Parameter Description

Parameter	Description	Value range
time	Aging time (seconds)	10-1000000

43.3 mld-snooping max-response-time

Command function	Command format
The mld-snooping max-response-time time command configures (or restores) the maximum response time for leaving the multicast group	mld-snooping max-response-time 1 no mld-snooping max-response-time

Parameter Description

Parameter	Description	Value range
time	Maximum response time (seconds)	1-100

43.4 mld-snooping fast-leave

Command function	Command format
The mld-snooping fast-leave command configures (or removes) the fast leave mode on a port	mld-snooping fast-leave no mld-snooping fast-leave

Parameter Description

None

43.5 mld-snooping group-limit

Command function	Command format
The mld-snooping group-limit number command configures (or removes) the maximum number of multicast groups that a port can learn	mld-snooping group-limit 1 no mld-snooping group-limit

Parameter Description

Parameter	Description	Value range
number	Multicast group count	0-507

43.6 mld-snooping [permit | deny]

Command function	Command format
The mld-snooping [permit deny] group all command configures the default learning rule for multicast groups that are not in the allow or deny list	mld-snooping permit group all

Parameter Description

None

43.7 mld-snooping

Command function	Command format
The mld-snooping [permit deny] group-range mac multi-count num vlan vid command configures the multicast group whitelist or blacklist on a port	mld-snooping permit group-range 33:33:33:1:1:1 multi-count 2 vlan 1 mld-snooping permit group 33:33:33:1:1:1 vlan 1 no mld-snooping permit group 33:33:33:1:1:1 vlan 1

Parameter Description

Parameter	Description	Value range
mac	Multicast MAC address	33:33:XX:XX:XX:XX
num	Number of MAC addresses	1-64
vid	VLAN ID	1-4094

43.8 mld-snooping querier

Command function	Command format
The mld-snooping querier command enables or disables the querier function	mld-snooping querier no mld-snooping querier

Parameter Description

None

43.9 mld-snooping query-interval

Command function	Command format
The (no)mld-snooping query-interval value command configures (or resets) the interval for sending general query messages.	mld-snooping query-interval 2 no mld-snooping query-interval

Parameter Description

Parameter	Description	Value range
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value	Interval for sending query messages (seconds)	1-30000
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43.10 mld-snooping query-max-respond

Command function	Command format
The (no)mld-snooping query-max-respond value command configures (restores) the maximum response time for general query messages	mld-snooping query-max-respond 2 no mld-snooping query-max-respond

Parameter Description

Parameter	Description	Value range
value	Maximum response time (seconds)	1-25

43.11 mld-snooping router-port forward

Command function	Command format
The (no)mld-snooping router-port forward command configures (removes) the hybrid router port functionality	mld-snooping router-port forward no mld-snooping router-port forward

Parameter Description

None

43.12 mld-snooping router-port-age

Command function	Command format
The (no)mld-snooping router-port-age [on off age-time] command configures (removes) the aging time for dynamic router ports	mld-snooping router-port-age 10 no mld-snooping router-port-age

Parameter Description

Parameter	Description	Value range
age-time	Aging time	10-1000000

43.13 mld-snooping router-port vlan

Command function	Command format
The (no)mld-snooping router-port vlan vid interface [all ethernet port-id] command configures (removes) a static router port	mld-snooping router-port vlan 1 interface all no mld-snooping router-port vlan 1 interface all

Parameter Description

Parameter	Description	Value range
vid	VLAN ID	1-4094
port-id	Port number	Based on the physical port, e.g., for a 28-port switch: 0/0/1-0/1/4

43.14 mld-snooping multicast vlan

Command function	Command format
The (no)mld-snooping multicast vlan vid command configures (removes) the multicast VLAN for a port	mld-snooping multicast vlan 1 no mld-snooping multicast vlan

Parameter Description

Parameter	Description	Value range
vid	VLAN ID	1-4094

43.15 show mld-snooping

Command function	Command format
The show mld-snooping command displays the related configuration of MLD Snooping	show mld-snooping

Parameter Description

None

43.16 show mld-snooping router-dynamic

Command function	Command format
The show mld-snooping router-dynamic command displays dynamic router ports	show mld-snooping router-dynamic

Parameter Description

None

43.17 show mld-snooping router-static

Command function	Command format
The show mld-snooping router-static command displays static router ports	show mld-snooping router-static

Parameter Description

None

43.18 show multicast mld-snooping

Command function	Command format
The show multicast mld-snooping command displays multicast group information	show multicast mld-snooping

Parameter Description

None

Chapter 44 Access Control List Configuration Commands

44.1 access-list

Command function	Command format
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The access-list num match-order [auto | config] command configures the match order for an Access Control List (ACL).

access-list 1999 match-order auto

Parameter Description

Parameter	Description	Value range
num	Access control list number	1-2999

44.2 access-list ip-acl

Command function	Command format
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The access-list ip-acl num [match-order [auto | config]] command configures a Layer 3 Access Control List (ACL).

The full command syntax for configuring a Layer 3 ACL is: { permit | deny } [ip-protocol protocol] [established] { source-IPv4/v6/masklength | any | ipv6any } [source-port wildcard] { dest-IPv4/v6 dest-wildcard | any | ipv6any } [dest-port wildcard] [icmp-type icmp-code] [igmp-type] [traffic-class traffic-class] [precedence precedence] [tos tos] [dscp dscp] [fragments] [time-range name]

access-list 1999 match-order auto

Parameter Description

Parameter	Description	Value range
num	Layer 3 ACL number	1-999

protocol	Protocol type carried by IP	0-255 (numeric), or names like GRE, ICMP, IGMP, IPinIP, OSPF, TCP, UDP, ICMPv6
established	SYN flag in TCP	Enabled when SYN flag is set
source-IPv4/v6/masklength	Source address information for ACL rule	Source IPv4/v6 address and mask length (32 for host address), or any/ipv6any
dest-IPv4/v6/masklength	Destination address information for ACL rule	Destination IPv4/v6 address and mask length (32 for host address), or any/ipv6any
source-port / dest-port wildcard	Source and destination port numbers (TCP/UDP)	Wildcard (inverted mask) for port range
icmp-type icmp-code	ICMP message type and code	Valid when protocol is ICMP/ICMPv6
igmp-type	IGMP message type	Valid when protocol is IGMP
traffic-class	Traffic class in IPv6 header	Only for IPv6 packets
precedence	Precedence field for message priority	0-7
tos	Type of service (TOS) priority	0-15
dscp	Differentiated Services Code Point (DSCP) priority	0-63
fragments	Fragmented packets	Applies to non-first fragments only
time-range name	Time range for ACL rule	1-32 characters, excluding ?

44.3 no access-list

Command function	Command format
The no access-list [num all step] command deletes an ACL based on its	access-list 1999 match-order auto

number

Parameter Description

Parameter	Description	Value range
num	Layer 3 ACL number	1-999

44.4 access-list mac-acl

Command function	Command format
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The access-list num { permit | deny } [mac-pro protocol] [cos vlan-pri] ingress { { [inner-vid vid] [start-vlan-id end-vlan-id] [source-mac-addr source-mac-wildcard] [interface interface-num] } | any } egress { { [dest-mac-addr dest-mac-wildcard] [interface interface-num] } | any } [time-range name] command configures a Layer 2 Access Control List (MAC ACL)

access-list mac-acl 1000 match-order auto
permit any any
access-list 1000 permit any any

Parameter Description

Parameter	Description	Value range
num	Layer 2 ACL number	1000-1999
protocol	Ethernet frame protocol type	Hexadecimal (0-FFFF), options include ARP, IP, RARP
cos	VLAN tag priority	0-7
ingress	Incoming direction	None
inner-vid	Inner VLAN ID for double-tagged packets	1-4094
start-vlan-id end-vlan-id	VLAN range	For double-tagged packets, it's the outer tag; for single-tagged, it's the tag itself

source-mac-addr source-mac-wildcard	Source MAC address options	Wildcard can define a MAC address range
interface interface-num	Physical port number	Ingress and egress ports
any	Any address	For both ingress and egress directions
time-range name	Time range for ACL rule	1-32 characters, excluding "?"

44.5 access-list hybrid-acl

Command function	Command format
The access-list num { permit deny } [mac-pro protocol] [ip-pro protocol] [cos vlan-pri] [established] { source-IPv4/v6/masklength any ipv6any } [source-port wildcard] ingress { { [inner-vid vid] [start-vlan-id end-vlan-id] [source-mac-addr source-mac-wildcard] [interface interface-num] } any } egress { { [dest-mac-addr dest-mac-wildcard] [interface interface-num] } any } { dest-IPv4/v6 dest-wildcard any ipv6any } [dest-port wildcard] [icmp-type icmp-code] [igmp-type] [traffic-class traffic-class][precedence precedence] [tos tos] [dscp dscp] [fragments] [time-range name] command configures a hybrid access control list	access-list 2000 permit anyip anyip access-lis 2000 permit anymac anymac

Parameter Description

Parameter	Description	Value range
num	Layer 2 access control list number	2000-2999
mac-pro protocol	Protocol type carried by Ethernet frames	Represented in hexadecimal, range 0-FFFF. Optional values: arp, ip, rarp

cos	VLAN tag priority	0-7
ingress	Ingress direction	N/A
inner-vid	Inner VLAN ID value for double-tagged frames	1-4094
start-vlan-id end-vlan-id	Range for VLAN IDs	For double-tagged frames, it's the outer VLAN ID range; for single-tagged frames, it's the VLAN ID itself
source-mac-addr source-mac-wildcard	Source MAC address option	source-mac-wildcard can represent a range of source MAC addresses
interface interface-num	Physical port number	Differentiate between ingress and egress ports
any	Any address	Differentiate between ingress and egress directions
ip-pro protocol	Protocol type carried by IP	Values range from 1-255 when represented by numbers. Optional values: GRE, ICMP, IGMP, IPinIP, OSPF, TCP, UDP, ICMPv6
established	SYN flag in TCP	Activated when the SYN flag is set to 1
{ source-IPv4/v6/masklength any ipv6any }	Source address information for ACL rules	source-IPv4/v6/masklength is used to specify the source IP address (IPv4/v6) range. IPv4 addresses are in dotted decimal notation; IPv6 addresses are in hexadecimal. A mask length of 32 represents a host address. any or ipv6any represents any source address.

{ dest-IPv4/v6/masklength any ipv6any }	Destination address information for ACL rules	dest-IPv4/v6 dest-wildcard is used to specify the destination IP address (IPv4/v6) range. IPv4 addresses are in dotted decimal notation; IPv6 addresses are in hexadecimal. A mask length of 32 represents a host address. any or ipv6any represents any destination address.
source-port/ dest-port wildcard	TCP/UDP source and destination port number	Wildcard – inverse mask to specify the port range
icmp-type icmp-code	ICMP message type	Effective only when protocol is set to icmp/icmpv6
igmp-type	IGMP message type	Effective only when protocol is set to igmp
traffic-class	Traffic class in IPv6 header	Effective only for IPv6 packets
precedence	Packet precedence	IP precedence values range from 0-7
tos	Packet TOS (Type of Service)	Values range from 0-15
dscp	DSCP priority	Values range from 0-63
fragments	Indicate fragmented packets	Rule definition is effective only for non-initial fragments
time-range name	Custom time range with a name	1-32 characters, excluding "?"

44.6 show access-list config

Command function	Command format
The show access-list config command displays the configured access control list	show access-list config 1

(ACL) information

Parameter Description

Parameter	Description	Value range
num	Access control list number	1-2999

44.7 show access-list config statistic

Command function	Command format
The show access-list config statistic command displays the number of configured access control lists	show access-list config statistic

Parameter Description

None

44.8 show access-list runtime statistic

Command function	Command format
The show access-list runtime statistic command displays the statistics of active ACLs	show access-list runtime statistic

Parameter Description

None

44.9 show access-list runtime

Command function	Command format
The show access-list runtime command displays the runtime information of access control lists	show access-list runtime 1

Parameter Description

Parameter	Description	Value range
num	Access control list number	1-2999

44.10 time-range

Command function	Command format
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The time-range name command creates a time range and enters the time range configuration mode

time-range time1

Parameter Description

Parameter	Description	Value range
num	Segment name (up to 32 bytes, must start with [a-z,A-Z], case insensitive)	1-32 characters

44.11 absolute

Command function	Command format
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The (no) absolute [start start-time start-day [end end-time end-day]] command configures (or deletes) an absolute time range

absolute start 1:1:1 2017/1/1 end 1:1:1 2017/12/1
no absolute start 1:1:1 2017/1/1 end 2:2:2 2017/12/1

Parameter Description

Parameter	Description	Value range
start-time	Start time	00:00:00-23:59:59
start-day	Start date (YYYY/MM/DD)	2000/01/01-2099/12/31
end-time	End time	00:00:00-23:59:59
end-day	End date (YYYY/MM/DD)	2000/01/01-2099/12/31

44.12 periodic

Command function	Command format
The (no) periodic week start-time to end-time command configures (or deletes) a relative time range	periodic daily 1:1:1 to 2:2:2 no periodic daily 1:1:1 to 2:2:2

Parameter Description

Parameter	Description	Value range
week	Specific day(s) of the week	daily, fri, mon, sat, sun, thu, tue, wed, weekdays, weekend
start-time	Start time	00:00:00-23:59:59
end-time	End time	00:00:00-23:59:59

44.13 no time-range

Command function	Command format
The no time-range [all name name] command deletes a time range	no time-range all

Parameter Description

Parameter	Description	Value range
num	Segment name (up to 32 bytes, must start with [a-z,A-Z], case insensitive)	1-32 characters

44.14 show time-range

Command function	Command format
The show time-range [name name all statistic] command displays the running access control list information	show time-range all

Parameter Description

Parameter	Description	Value range
num	Segment name (up to 32 bytes, must start with [a-z,A-Z], case insensitive)	1-32 characters

44.15 access-group

Command function	Command format
The access-group [ip-acl ip-num] [mac-acl mac-num] [hybrid-acl hyb-num] [subitem sub-num] [in] command activates an access control list	access-group mac-acl 1000 subitem 1 in

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
sub-num	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127

44.16 no access-group

Command function	Command format
The no access-group [all ip-acl ip-num] [mac-acl mac-num] [hybrid-acl hyb-num] [subitem sub-num] [in] command deactivates an access control list	no access-group mac-acl 1000 subitem 1 in

Parameter Description

Parameter	Description	Value range
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ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
sub-num	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127

Chapter 45 QoS Configuration Commands

45.1 rate-limit

Command function	Command format
The rate-limit input [ip-acl ip-num] [mac-acl mac-num] [hybrid-acl hyb-num] [subitem sub-num] target-rate command configures traffic rate limiting in global mode	
The rate-limit input [ip-acl ip-num] [mac-acl mac-num] [hybrid-acl hyb-num] [subitem sub-num] two-rate-policer policer-id command configures a two-rate three-color policing strategy (handling actions for three different color packets) in global mode	rate-limit input hybrid-acl 2000 subitem 1 64 rate-limit input ip-acl 1 two-rate-policer 1

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
sub-num	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127
target-rate	Maximum rate (in kbps), should be a multiple of 16	16-1000000
policer-id	Two-rate three-color policing strategy ID	0-255

45.2 two-rate-policer

Command function	Command format
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The two-rate-policer policer-id cir cir-value
cbs cbs-value pir pir-value pbs pbs-value
command configures a two-rate three-
color policing strategy in global mode

two-rate-policer 1 cir 16 cbs 160 pir 160 pbs 320
no two-rate-policer 1

The no two-rate-policer policer-id
command deletes the two-rate three-color
policing strategy

Parameter Description

Parameter	Description	Value range
policer-id	Two-rate three-color policing strategy ID	0-255
cir-value	Committed Information Rate (in kbps), should be a multiple of 16	16-1000000
cbs-value	Committed Burst Size (in bytes)	1-12800
pir-value	Peak Information Rate (in kbps), should be a multiple of 16	16-1000000
pbs-value	Peak Burst Size (in bytes)	1-12800

45.3 traffic-redirect

Command function	Command format
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The traffic-redirect [ip-acl ip-num] | [mac-
acl mac-num] | [hybrid-acl hyb-num]
[subitem sub-num] [interface [eth-trunk
trunk-id | ethernet port-id] | cpu] command
configures packet redirection

traffic-redirect ip-acl 1 interface ethernet 0/0/1
no traffic-redirect ip-acl 1 subitem 2 mac-acl 1000 subitem 1

The no traffic-redirect [ip-acl ip-num] |
[mac-acl mac-num] | [hybrid-acl hyb-num]
[subitem sub-num] command deletes
packet redirection

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
sub-num	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127
trunk-id	Link aggregation port number	1-31
port-id	Port number	Depends on the physical port of the switch, e.g., for a 28-port switch: 0/0/1-0/1/4

45.4 traffic-copy-to-cpu

Command function	Command format
The traffic-copy-to-cpu [ip-acl ip-num] [mac-acl mac-num] [hybrid-acl hyb-num] string [subitem sub-num] command configures packet copying to the CPU The no traffic-copy-to-cpu [ip-acl ip-num] [mac-acl mac-num] [hybrid-acl hyb-num] string [subitem sub-num] command deletes packet copying to the CPU	traffic-copy-to-cpu ip-acl 1 no traffic-copy-to-cpu ip-acl 1

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
string	Standard or extended access control list name	1-32 characters (excluding ?)

sub-num	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127
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45.5 traffic-priority

Command function	Command format
The traffic-priority { [ip-acl ip-num [subitem subitem]] [mac-acl mac-num [subitem subitem]] [hybrid-acl hyb-num [subitem subitem]] } { [dscp dscp-value] [cos cos-value precedence pre-value] } [local-precedence local-value] } command configures priority marking The no traffic-priority { [ip-acl ip-num [subitem subitem]] [mac-acl mac-num [subitem subitem]] [hybrid-acl hyb-num [subitem subitem]] } command deletes priority marking	traffic-priority mac-acl 1000 local-precedence 2 precedence 2 no traffic-priority ip-acl 1 subitem 21

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
subitem	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127
dscp-value	Match specific DSCP value	0-63
cos-value	Match packets with a specific 802.1p priority value	0-7
pre-value	Match packets with a specific IP precedence value	0-7

igmp-type	IGMP message type	Valid when protocol is IGMP
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45.6 traffic-statistic

Command function	Command format
The traffic-statistic { [ip-acl ip-num [subitem subitem]] [mac-acl mac-num [subitem subitem]] [hybrid-acl hyb-num [subitem subitem]] } in command configures traffic statistics The no traffic-statistic { [ip-acl ip-num [subitem subitem]] [mac-acl mac-num [subitem subitem]] [hybrid-acl hyb-num [subitem subitem]] } in command deletes traffic statistics	traffic-statistic hybrid-acl 2000 in no traffic-statistic hybrid-acl 2000 in

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
subitem	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127

45.7 clear traffic-statistic

Command function	Command format
The clear traffic-statistic {all [ip-acl ip-num [subitem subitem]] { [mac-acl mac-num] [subitem subitem] } } { [hybrid-acl hyb-num] [subitem subitem] } } in command is used to reset traffic statistics	clear traffic-statistic hybrid-acl 2000 in

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 access control list number	1-999
mac-num	Layer 2 access control list number	1000-1999
hyb-num	Hybrid access control list number	2000-2999
subitem	Sub-item number of Layer 3, Layer 2, or hybrid ACL list	0-127

45.8 mirrored-to

Command function	Command format
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The mirrored-to { [ip-acl ip-num [subitem subitem]] | [mac-acl mac-num [subitem subitem]] } { [hybrid-acl hyb-num [subitem subitem]] } [interface port-id] Command to configure flow mirroring

mirrored-to ip-acl 1 subitem 2 interface ethernet 0/0/1
no mirrored-to ip-acl 1 subitem 2

The no mirrored-to { [ip-acl ip-num [subitem subitem]] | [mac-acl mac-num [subitem subitem]] } { [hybrid-acl hyb-num [subitem subitem]] } command
Delete flow mirror

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 Access Control List number	1-999
mac-num	Layer 2 Access Control List number	1000-1999
hyb-num	Hybrid Access Control List number	2000-2999
subitem	Sub-item number for ACL list	0-127

ip-num Layer 3 Access Control List number Depends on the physical port of the switch, e.g., for a 28-port

switch: 0/0/1-0/1/4

45.9 traffic-rewrite-vlan

Command function	Command format
traffic-rewrite-vlan { [ip-acl ip-num [subitem subitem]] { [mac-acl mac-num] [subitem subitem] } } { [hybrid-acl hyb-num] [subitem subitem] } } vlan-id command to configure packet VLAN rewriting no traffic-rewrite-vlan { [ip-acl ip-num [subitem subitem]] { [mac-acl mac-num] [subitem subitem] } } { [hybrid-acl hyb-num] [subitem subitem] } } command to delete packet VLAN rewriting	traffic-rewrite-vlan ip-acl 1 subitem 2 2 no traffic-rewrite-vlan ip-acl 1 subitem 2

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 Access Control List number	1-999
mac-num	Layer 2 Access Control List number	1000-1999
hyb-num	Hybrid Access Control List number	2000-2999
subitem	Sub-item number for ACL list	0-127
vlan-id	VLAN ID to insert	1-4094

45.10 traffic-insert-vlan

Command function	Command format
traffic-insert-vlan { [ip-acl ip-num [subitem subitem]] { [mac-acl mac-num] [subitem subitem] } } { [hybrid-acl hyb-num] [subitem subitem] } } vlan-id command to configure message VLAN insertion	traffic-insert-vlan ip-acl 1 subitem 2 2 no traffic-insert-vlan ip-acl 1 subitem 2

```
no traffic-insert-vlan { [ ip-acl ip-
num[ subitem subitem ] ] | { [ mac-acl mac-
num] [ subitem subitem ] ] } | { [hybrid-acl
hyb-num] [ subitem subitem ] ] } command
to delete message VLAN insertion
```

Parameter Description

Parameter	Description	Value range
ip-num	Layer 3 Access Control List number	1-999
mac-num	Layer 2 Access Control List number	1000-1999
hyb-num	Hybrid Access Control List number	2000-2999
subitem	Sub-item number for ACL list	0-127
vlan-id	VLAN ID to insert	1-4094

45.11 show two-rate-policer

Command function	Command format
The show two-rate-policer command displays the configuration information of the two-rate three-color policer	show two-rate-policer

Parameter Description

None

45.12 show qos-info all

Command function	Command format
The show qos-info all command displays all QoS parameter settings	show qos-info all

Parameter Description

None

45.13 show qos-info statistic

Command function	Command format
The show qos-info statistic command displays all QoS statistical information	show qos-info statistic

Parameter Description

None

45.14 show qos-info traffic-copy-to-cpu

Command function	Command format
The show qos-info traffic-copy-to-cpu command displays the parameter settings for copying traffic to the CPU	show qos-info traffic-copy-to-cpu

Parameter Description

None

45.15 show qos-info mirrored-to

Command function	Command format
The show qos-info mirrored-to command displays the parameter settings for traffic mirroring	show qos-info mirrored-to

Parameter Description

None

45.16 show qos-info traffic-priority

Command function	Command format
The show qos-info traffic-priority command displays the parameter settings for traffic priority marking	show qos-info traffic-priority

Parameter Description

None

45.17 show qos-info traffic-redirect

Command function	Command format
The show qos-info traffic-redirect command displays the parameter settings for traffic redirection	show qos-info traffic-redirect

Parameter Description

None

45.18 show qos-info traffic-statistic

Command function	Command format
The show qos-info traffic-statistic command displays traffic statistical information	show qos-info traffic-statistic

Parameter Description

None

45.19 show qos-info traffic-insert-vlan

Command function	Command format
The show qos-info traffic-insert-vlan command displays the parameter settings for VLAN insertion	show qos-info traffic-insert-vlan

Parameter Description

None

Chapter 46 ARP Anti-Spoofing Configuration Commands

46.1 arp anti-spoofing

Command function	Command format
Enables the arp anti-spoofing feature	arp anti-spoofing no arp anti-spoofing

Parameter Description

None

46.2 arp anti-spoofing action

Command function	Command format
Specifies the action for handling unknown ARP packets	arp anti-spoofing action <discard flood>

Parameter Description

Parameter	Description	Value range
discard	Discard the packets	/
flood	Flood the packets	/

46.3 arp anti-spoofing bind

Command function	Command format
Configures host protection	arp anti-spoofing bind ip <ip> interface [ethernet <port-list>] no arp anti-spoofing bind ip <ip> interface [ethernet <port-list>]

Parameter Description

Parameter	Description	Value range
ip	IP address	/
port-list	List of ports	/

46.4 arp anti-spoofing gateway-disguiser

Command function	Command format
Configures the device for gateway anti-spoofing	arp anti-spoofing gateway-disguiser no arp anti-spoofing gateway-disguiser

Parameter Description

None

46.5 arp anti-spoofing source-mac-check

Command function	Command format
Performs consistency checks on the source MAC address in ARP packets	arp anti-spoofing source-mac-check no arp anti-spoofing source-mac-check

Parameter Description

None

46.6 arp anti-attack trust

Command function	Command format
Configures the physical interface as a trusted port under the anti-attack feature	arp anti-attack trust no arp anti-attack trust

Parameter Description

None

46.7 show arp anti-spoofing

Command function	Command format
Displays the anti-spoofing configuration	show arp anti-spoofing

Parameter Description

None

46.8 show arp anti-spoofing bind

Command function	Command format
Displays the protected hosts	show arp anti-spoofing bind

Parameter Description

None

46.9 show arp anti-attack

Command function	Command format
Displays trusted ports	show arp anti-attack [interface ethernet port-id]

Parameter Description

Parameter	Description	Value range
port-id	Port ID number	/

Chapter 47 ARP Flood Protection Configuration Commands

47.1 arp anti-flood

Command function	Command format
Enables the ARP anti-flood feature	arp anti-flood

Parameter Description

None

47.2 arp anti-flood action

Command function	Command format
Configures actions for handling ARP attack packets	arp anti-flood action <deny-all deny-arp>

Parameter Description

Parameter	Description	Value range
deny-all	Drops all packets	/
deny-arp	Drops only ARP packets	/

47.3 arp anti-flood rate-limit

Command function	Command format
Configures the ARP rate threshold globally or on a physical interface	arp anti-flood rate-limit <num> no arp anti-flood rate-limit

Parameter Description

Parameter	Description	Value range
num	ARP rate in packets per second (pps)	1-100 pps (default: 16 pps)

47.4 arp anti-flood recover-time

Command function	Command format
Configures automatic recovery time for blocked users	arp anti-flood recover-time <time> no arp anti-flood recover-time

Parameter Description

Parameter	Description	Value range
time	Recovery time in minutes	0-1440 minutes

47.5 arp anti-flood recover

Command function	Command format
Manually unblocks users	arp anti-flood recover <all mac>

Parameter Description

Parameter	Description	Value range
all	Unblocks all users	/
mac	Unblocks a user by MAC address	/

47.6 arp anti-flood bind blackhole

Command function	Command format
Binds dynamic blackhole MAC addresses created by flood attacks as static blackhole MAC addresses	arp anti-flood bind blackhole <all mac>

Parameter Description

Parameter	Description	Value range
all	Binds all dynamic blackhole addresses	/
mac	Binds a specific MAC address	/

47.7 show arp anti-flood

Command function	Command format
Displays ARP anti-flood configurations	show arp anti-flood

Parameter Description

None

47.8 show arp anti-flood rate-limit

Command function	Command format
Displays ARP rate limit configurations on ports	show arp anti-flood rate-limit

Parameter Description

None

Chapter 48 DoS Attack Protection Configuration Commands

48.1 anti-dos ip ttl

Command function	Command format
Enables anti-TTL attack mode	anti-dos ip ttl no anti-dos ip ttl

Parameter Description

None

48.2 anti-dos ip fragment

Command function	Command format
Enables protection against IP fragmentation attacks	anti-dos ip fragment <num> no anti-dos ip fragment

Parameter Description

Parameter	Description	Value range
num	Maximum number of fragments	0-800

48.3 anti-dos packets class

Command function	Command format
Enables protection against specific packet types.	anti-dos packets class < type0 type1 type2 type3 type4 <icmpv4-len> type5< icmpv6-len > type6 type7 type8 type9 <tpye9-len> type9 type11 type12 type13 type14 <tcp-len>> no anti-dos packets class < type0 type1 type2 type3 type4 type5 type6 type7 type8 type9 type9 type11 type12 type13 type14>

Parameter Description

Parameter	Description	Value range
type0	Packets with matching source and	/

destination MAC addresses		
type1	Packets with matching source and destination IP addresses	/
type2	Packets with matching source and destination UDP ports	/
type3	Packets with matching source and destination TCP ports	/
type4	ICMPv4 packets exceeding a specified length	/
icmpv4-len	Length of ICMPv4 packets to filter	0-16384
type5	ICMPv6 packets exceeding a specified length	/
icmpv6-len	Length of ICMPv6 packets to filter	0-16384
type6	TCP packets with control flags and sequence number 0	/
type7	TCP SYN=1 packets with source port <924 and not fragmented	/
type8	First IP fragment packets requiring higher-layer protocol inspection	/
type9	IPv6 fragments below a specified length	/
type9-len	Fragment size threshold	0-65535
type11	TCP fragments with offset value of 1 (*8)	/
type12	TCP packets with both SYN and FIN set to 1	/
type13	TCP packets with FIN, URG, and PSH flags set, and sequence = 0	/
type14	First TCP packets with header length below a threshold	/

tcp-len	TCP header length	0-31
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48.4 show anti-dos

Command function	Command format
Displays DoS protection configurations	show anti-dos

Parameter Description

None

Chapter 49 Shutdown-Control Configuration Commands

49.1 shutdown-control

Command function	Command format
Enables and configures shutdown rate in physical interface mode.	shutdown-control <broadcast multicast unicast> <rate> no shutdown-control <broadcast multicast unicast>

Parameter Description

Parameter	Description	Value range
broadcast	Broadcast packets	/
multicast	Multicast packets	/
unicast	Unicast packets	/
rate	Rate in pps	1-32000000 pps

49.2 shutdown-control-recover mode

Command function	Command format
Configures recovery mode globally	shutdown-control-recover mode <automatic manual > no shutdown-control-recover mode

Parameter Description

Parameter	Description	Value range
automatic	Automatic recovery	/
manual	Manual recovery	/

49.3 shutdown-control-recover automatic-open-time

Command function	Command format
Configures automatic recovery time globally.	shutdown-control-recover automatic-open-time <seconds> no shutdown-control-recover automatic-open-time

Parameter Description

Parameter	Description	Value range
seconds	Recovery time in seconds	5-3600 s

49.4 show shutdown-control interface

Command function	Command format
Displays shutdown-control configuration.	show shutdown-control interface [ethernet <port-list>]

Parameter Description

Parameter	Description	Value range
port-list	Port list	/

Chapter 50 BPDU-Car Configuration Commands

50.1 port-car

Command function	Command format
Enables or disables the BPDU-Car function globally or on specific ports	port-car no port-car

Parameter Description

None

50.2 port-car-rate

Command function	Command format
Configures the rate at which BPDU packets are sent to the CPU globally or on specific ports.	port-car-rate <rate> no port-car-rate

Parameter Description

Parameter	Description	Value range
rate	Rate of BPDU packets	1-128 pps (port mode) 1-3000 pps (global mode)

50.3 show port-car

Command function	Command format
Displays BPDU-Car configuration information.	show port-car

Parameter Description

None

Chapter 51 CPU-Car Configuration Commands

51.1 cpu-car

Command function	Command format
Configures the rate at which packets are sent to the CPU globally.	cpu-car <rate> no cpu-car

Parameter Description

Parameter	Description	Value range
rate	Rate of packets sent to CPU	1-1000 pps (default: 800 pps)

51.2 show cpu-car

Command function	Command format
Displays CPU-Car configuration information.	show cpu-car

Parameter Description

None

51.3 show cpu-statistics

Command function	Command format
Displays statistics for packets sent to the CPU.	show cpu-statistics [ethernet <port-list>]

Parameter Description

Parameter	Description	Value range
port-list	List of ports	/

51.4 clear cpu-statistics

Command function	Command format
------------------	----------------

Clears CPU packet statistics.

clear cpu-statistics

Parameter Description

None

51.5 show cpu-classification

Command function	Command format
Displays categorized statistics of packets sent to the CPU.	show cpu-classification [interface ethernet <port-num>]

Parameter Description

Parameter	Description	Value range
port-num	Port number	/

51.6 clear cpu-classification

Command function	Command format
Clears categorized CPU packet statistics.	clear cpu-classification [interface ethernet <port-num>]

Parameter Description

Parameter	Description	Value range
port-num	Port number	/

51.7 show cpu-utilization

Command function	Command format
Displays CPU utilization rate	show cpu-utilization

Parameter Description

None

Chapter 52 Discard-BPDU Configuration Commands

52.1 discard-bpdu

Command function	Command format
Configures the system to discard BPDU packets globally or on specific ports	discard-bpdu no discard-bpdu

Parameter Description

None

52.2 show discard-bpdu

Command function	Command format
Displays discard-BPDU configuration and operational information	show discard-bpdu

Parameter Description

None

Chapter 53 DHCP Anti-Attack Configuration Commands

53.1 dhcp anti-attack

Command function	Command format
Enables or disables DHCP anti-attack functionality	dhcp anti-attack no dhcp anti-attack

Parameter Description

None

53.2 dhcp anti-attack action

Command function	Command format
Configures the action to be taken upon detecting a DHCP attack	dhcp anti-attack action <deny-all deny-dhcp >

Parameter Description

Parameter	Description	Value range
deny-all	Deny all DHCP requests	/
deny-dhcp	Deny only DHCP requests	/

53.3 dhcp anti-attack bind blackhole

Command function	Command format
Binds a blackhole MAC address to block DHCP attack sources	dhcp anti-attack bind blackhole <all mac >

Parameter Description

Parameter	Description	Value range
all	Bind all blackhole MACs	/
mac	Bind specific MAC address	/

53.4 dhcp anti-attack threshold

Command function	Command format
Configures the global or port-level rate threshold for DHCP anti-attack	dhcp anti-attack threshold <rate > no dhcp anti-attack threshold

Parameter Description

Parameter	Description	Value range
rate	Rate of packets	1-100 pps

53.5 dhcp anti-attack recover-time

Command function	Command format
Configures the automatic recovery time for blocked DHCP requests	dhcp anti-attack recover-time <time > no dhcp anti-attack recover-time

Parameter Description

Parameter	Description	Value range
time	Recovery time in minutes	0-1440 min

53.6 dhcp anti-attack recover

Command function	Command format
Manually recovers blocked DHCP requests	dhcp anti-attack recover <all mac >

Parameter Description

Parameter	Description	Value range
all	Recover all blocked requests	/
mac	Recover a specific MAC address	/

53.7 dhcp anti-attack trust

Command function	Command format
Configures the port as a trusted port for DHCP requests	dhcp anti-attack trust no dhcp anti-attack trust

Parameter Description

None

53.8 show dhcp anti-attack

Command function	Command format
Displays the status and configuration of DHCP anti-attack	show dhcp anti-attack

Parameter Description

None

53.9 show dhcp anti-attack interface

Command function	Command format
Displays the status of DHCP anti-attack on specific interfaces	show dhcp anti-attack interface [ethernet <port-num>]

Parameter Description

Parameter	Description	Value range
port-num	Port number	/

Chapter 54 Management IP Restriction Configuration Commands

54.1 login-access-list

Command function	Command format
Configures the network addresses allowed for access by specific protocols	login-access-list <snmp ssh telnet web> <net> <wildcard> no login-access-list <all snmp ssh telnet web> <net> <wildcard>

Parameter Description

Parameter	Description	Value range
net	Network address allowed for access	/
wildcard	Network wildcard mask	/

54.2 login-access-list privilege-limit

Command function	Command format
Configures the number of users allowed to access at different privilege levels	login-access-list privilege-limit <num> no login-access-list privilege-limit

Parameter Description

Parameter	Description	Value range
num	Maximum number of users allowed	0-5

54.3 show login-access-list

Command function	Command format
Displays the current login access restrictions	show login-access-list

Parameter Description

None

Chapter 55 Session Timeout Configuration Commands

55.1 timeout

Command function	Command format
Configures the session timeout in privilege mode	timeout <num> no timeout

Parameter Description

Parameter	Description	Value range
num	Timeout duration in minutes	1-480 min

Chapter 56 SSH Configuration

56.1 ssh

Command function	Command format
Command-line switch	Ssh no ssh

Parameter Description

None

56.2 ssh limit

Command function	Command format
Configure the limit on the number of ssh users	ssh limit <num> no ssh limit

Parameter Description

Parameter	Description	Value range
num	/	0-5

56.3 stop vty

Command function	Command format
Force user offline in privileged mode	stop vty <vty-list all>

Parameter Description

Parameter	Description	Value range
all	All users	/
vty-list	vty list user	

56.4 crypto key zeroize rsa

Command function	Command format
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Delete key in privileged mode

crypto key zeroize rsa**Parameter Description**

None

56.5 crypto key refresh

Command function	Command format
------------------	----------------

Refresh key in privileged mode

crypto key refresh**Parameter Description**

None

56.6 crypto key generate rsa

Command function	Command format
------------------	----------------

Configure the default key in privileged
mode**crypto key generate rsa****Parameter Description**

None

56.7 load keyfile

Command function	Command format
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Import key in privileged mode

load keyfile <private|public> <ftp|tftp> <inet|inet6>
<address> <filename> <ftp-username> <ftp-pass>**Parameter Description**

Parameter	Description	Value range
private	Private Key	/
public	Public Key	/
inet	ipv4 server address	/
inet6	ipv6 server address	/

address	address	/
filename	filename	/
ftp-username	user name when using ftp	/
ftp-pass	password when using ftp	/

56.8 upload keyfile

Command function	Command format
Export key in privileged mode	upload keyfile <private public> <ftp tftp> <inet inet6> <address> <filename> <ftp-username> <ftp-pass>

Parameter Description

Parameter	Description	Value range
private	Private Key	/
public	Public Key	/
inet	ipv4 server address	/
inet6	ipv6 server address	/
address	address	/
filename	filename	/
ftp-username	user name when using ftp	/
ftp-pass	password when using ftp	/

56.9 show keyfile

Command function	Command format
Show keyfile	show keyfile <private public>

Parameter Description

Parameter	Description	Value range
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private	Private Key	/
public	Public Key	/

Chapter 57 Telnet-Client Configuration Commands

57.1 telnet <ip>

Command function	Command format
Accesses other devices as a client in privilege mode	telnet <ip> [tcp-port]

Parameter Description

Parameter	Description	Value range
ip	IP address of the device	/
tcp-port	TCP port number	/

Chapter 58 Telnet-Server/Telnetv6-Server Configuration Commands

58.1 telnet enable

Command function	Command format
Enables Telnet service	telnet enable

Parameter Description

None

58.2 telnet disable

Command function	Command format
Disables Telnet service	telnet disable

Parameter Description

None

58.3 telnet limit

Command function	Command format
Configures the limit on the number of Telnet users allowed	telnet limit <num> no telnet limit

Parameter Description

Parameter	Description	Value range
num	Maximum number of users allowed	0-5

58.4 telnet port

Command function	Command format
Configures the Telnet server port number	telnet port <num> no telnet port

Parameter Description

Parameter	Description	Value range
num	Port number for Telnet service	1024-65535

58.5 stop telnet client

Command function	Command format
Forcefully logs out a user from Telnet in privilege mode	stop telnet client <id all>

Parameter Description

Parameter	Description	Value range
all	Logs out all users	/
id	Logs out specific user	/

58.6 show telnet client

Command function	Command format
Displays the list of currently logged-in Telnet clients	show telnet client

Parameter Description

None

58.7 show telnet

Command function	Command format
Displays the operational status of the Telnet service	show telnet client

Parameter Description

None

Chapter 59 Web Management Configuration Commands

59.1 http enable

Command function	Command format
Enables the HTTP service	http enable[prot <num>][ssl]

Parameter Description

Parameter	Description	Value range
num	Port number for HTTP service	3-65535

59.2 http disable

Command function	Command format
Disables the HTTP service	http disable

Parameter Description

None

59.3 http timeout

Command function	Command format
Configures the HTTP session timeout duration	http timeoutvalue

Parameter Description

Parameter	Description	Value range
value	Timeout value in seconds	60-36000 (default 180)

59.4 show http

Command function	Command format
Displays the operational status of the HTTP service	show http

Parameter Description

None

Chapter 60 SNMP Management Configuration Commands

60.1 snmp-server enable

Command function	Command format
Enables SNMP functionality	snmp enable

Parameter Description

None

60.2 snmp-server disable

Command function	Command format
Disables SNMP functionality	snmp disable

Parameter Description

None

60.3 snmp-server contact

Command function	Command format
Configures the system contact	snmp-server contact <text> no snmp-server contact

Parameter Description

Parameter	Description	Value range
text	/	STRING<1-255>

60.4 snmp-server location

Command function	Command format
Configures the system location	snmp-server location <text> no snmp-server location

Parameter Description

Parameter	Description	Value range
text	/	STRING<1-255>

60.5 snmp-server name

Command function	Command format
Configures the system name	snmp-server name <text> no snmp-server name

Parameter Description

Parameter	Description	Value range
text	/	STRING<1-255>

60.6 snmp-server max-packet-length

Command function	Command format
Configures the maximum SNMP packet length	snmp-server max-packet-length <len> no snmp-server max-packet-length

Parameter Description

Parameter	Description	Value range
len	/	484-8000 (default: 1000)

60.7 snmp-server trap-source

Command function	Command format
Configures the source interface for sending trap messages	snmp-server trap-source <vlan-interface <id> supervlan-interface <su-id> no snmp-server trap-source

Parameter Description

Parameter	Description	Value range
id	VLAN ID	1-4094

su-id	Super VLAN ID	1-128
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60.8 snmp-server engineid

Command function	Command format
Configures the SNMP engine ID	snmp-server engineid <local remote> <text> no snmp-server engineid <local remote>

Parameter Description

Parameter	Description	Value range
text	/	STRING<1-24>

60.9 snmp-server view

Command function	Command format
Configures the SNMP view	snmp-server view <view-name> <oid> <exclude include> no snmp-server view

Parameter Description

Parameter	Description	Value range
view-name	Name of the SNMP view	STRING<1-32>
oid	MIB tree OID	STRING<1-64>
exclude	Exclude the specified OID	/
include	Include the specified OID	/

60.10 snmp-server community encrypt

Command function	Command format
Specifies whether the community name is displayed in encrypted format	snmp-server community encrypt <enable disable>

Parameter Description

Parameter	Description	Value range
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enable	Encrypted format	/
disable	Plaintext format	/

60.11 snmp-server community

Command function	Command format
Configures the SNMP community name	snmp-server community <text><rw ro> <deny permit> [view <view-name>] no snmp-server community <index>

Parameter Description

Parameter	Description	Value range
text	Community name (plaintext or encrypted)	STRING<1-20>
rw	Read-write access	/
view-name	SNMP view name	/
index	Community index	1-8

60.12 snmp-server group

Command function	Command format
Configures an SNMPv3 group	snmp-server group <group-name> 3 [auth noauthpriv priv] [context < context-text>] [read <read-view>][write <write-view>][notify <notify-view>] no snmp-server group <group-name> 3 [auth noauthpriv priv] [context < context-text>]

Parameter Description

Parameter	Description	Value range
group-name	Name of the group	STRING<1-32>
auth	Authentication enabled	/
noauthpriv	No authentication, no encryption	/
priv	Authentication and encryption	/

context-text	Configured context	/
read-view	Read view	/
write-view	Write view	/
notify-view	Notification view	/

60.13 snmp-server user

Command function	Command format
Configures an SNMPv3 user	<pre>snmp-server user <username> <groupname> [remote <ip-address> [udp-port <port-num>]] [auth [md5 sha] [auth-password <authpassword> auth-key <authkey>] [priv des priv-key [auth-key <privkey> auth-password <privpassword>]]] no snmp-server user <username></pre>

Parameter Description

Parameter	Description	Value range
group-name	Name of the group	STRING<1-32>
username	SNMP user name	/
ip-address	Remote address	/
port-num	UDP port number	/
auth	Authentication method	/
md5	MD5 encryption	/
sha	Sha encryption	/

60.14 snmp-server enable <traps|informs>

Command function	Command format
Enables SNMP traps or informs	<pre>snmp-server enable <traps informs> [bridge] [gbn] [gbnsavecfg] [interfaces] [rmon] [snmp] no snmp-server enable <traps/informs> [bridge] [gbn] [gbnsavecfg] [interfaces] [rmon] [snmp]</pre>

Parameter Description

Parameter	Description	Value range
traps	Trap messages	/
informs	Inform messages	/
bridge	Bridge-related messages	/
gbn	GBN-related messages	/
gbnsavecfg	gbnsavecfg related messages	/
interfaces	Interface-related messages	/
rmon	RMON messages	/
snmp	SNMP-related messages	/

60.15 snmp-server host

Command function	Command format
Configures notifications for a target host	snmp-server host <ipaddress> [version [1 2c 3 [auth noauthpriv priv]] <security-name> [udp-port <port-number>] [notify-type [bridge gbn gbnsavecfg interfaces rmon snmp]] no snmp-server host <ipaddress> <security-name> <1 2c 3>

Parameter Description

Parameter	Description	Value range
ipaddress	Target host IP address	/
security-name	Security name	/
bridge	Bridge-related messages	/
gbn	GBN-related messages	/
gbnsavecfg	Gbnsavecfg related messages	/
interfaces	Interface-related messages	/

rmon	RMON messages	/
snmp	SNMP-related messages	/

60.16 show snmp-server community

Command function	Command format
Displays community information	show snmp-server community

Parameter Description

None

60.17 show snmp-server contact

Command function	Command format
Displays system contact information	show snmp-server contact

Parameter Description

None

60.18 show snmp-server engineid

Command function	Command format
Displays the SNMP engine ID	show snmp-server engineid <local remote> <text>

Parameter Description

Parameter	Description	Value range
text	/	STRING<1-24>

60.19 show snmp-server group

Command function	Command format
Displays group information	show snmp-server group <groupname>

Parameter Description

Parameter	Description	Value range
groupname	/	STRING<1-32>

60.20 show snmp-server host

Command function	Command format
Displays notification hosts	show snmp-server host

Parameter Description

None

60.21 show snmp-server location

Command function	Command format
Displays system location information	show snmp-server location

Parameter Description

None

60.22 show snmp-server max-packet-length

Command function	Command format
Displays the maximum packet length	show snmp-server max-packet-length

Parameter Description

None

60.23 show snmp-server mib

Command function	Command format
Displays MIB information	show snmp-server mib<module>< >

Parameter Description

None

60.24 show snmp-server name

Command function	Command format
Displays the SNMP server name	show snmp-server name

Parameter Description

None

60.25 show snmp-server notify

Command function	Command format
Displays notification settings	show snmp-server notify

Parameter Description

None

60.26 show snmp-server user

Command function	Command format
Displays SNMPv3 user information	show show snmp-server user <user-name>-server notify

Parameter Description

None

60.27 show snmp-server view

Command function	Command format
Displays the OIDs corresponding to a view	show snmp-server view

Parameter Description

None

Chapter 61 User Management Configuration Commands

61.1 username <>

Command function	Command format
Creates a user	username <name> privilege<pri> password <0 7> <pass> no username <name>

Parameter Description

Parameter	Description	Value range
name	Username	STRING<1-32>
privilege	User privilege level	0-15
pass	/	STRING<1-32>

61.2 username change-password

Command function	Command format
Changes a user password	username change-password

Parameter Description

None

61.3 username online-max

Command function	Command format
Specifies the maximum number of concurrent logins for a user	username online-max <name> <num> no username failmax <name>

Parameter Description

Parameter	Description	Value range
name	Username	STRING<1-32>
num	Maximum online logins	1-100

61.4 username failmax

Command function	Command format
Specifies the maximum number of login failures for a user	username failmax [name]<times> no username failmax <name> <times>

Parameter Description

Parameter	Description	Value range
name	Username	STRING<1-32>
times	Maximum login failures	1-100

61.5 username silent-time

Command function	Command format
Configures a silent time period during which a user cannot attempt to log in after failed attempts	username silent-time <min>

Parameter Description

Parameter	Description	Value range
min	/	2-1440 minutes

61.6 stop <>

Command function	Command format
Forcefully logs out a user in privilege mode	stop <name>

Parameter Description

Parameter	Description	Value range
name	Username	STRING<1-32>

61.7 show users

Command function	Command format
------------------	----------------

Displays online users

show users**Parameter Description**

None

61.8 show username silent

Command function	Command format
------------------	----------------

Displays silent users

show username silent**Parameter Description**

None

61.9 show username

Command function	Command format
------------------	----------------

Displays user information

show username <name>**Parameter Description**

Parameter	Description	Value range
-----------	-------------	-------------

name

Username

STRING<1-32>

Chapter 62 Auto-Reboot Configuration Commands

62.1 auto-reboot

Command function	Command format
Configures automatic reboot	auto-reboot [in hours <hour> minutes <min> at <hh:mm:ss> [YYYY/MM/DD daily fri mon sat sun thu tue wed]] no auto-reboot

Parameter Description

Parameter	Description	Value range
hour	Number of hours	/
min	Number of minutes	/
hh:mm:ss	Time in hours, minutes, and seconds	/
YYYY/MM/DD	Specific date	/
daily	Reboot daily	/

Chapter 63 System Debugging Commands

63.1 ping

Command function	Command format
Checks IPv4 host connectivity	ping [-i ttl][-l len][-n count][-s sourceip][-t timeout] <host-ip>

Parameter Description

Parameter	Description	Value range
ttl	Time to live (hops)	1-255
len	Packet length	0-4064 bytes
count	Number of packets sent	1-2147483647
sourceip	Source IP address	/
timeout	Timeout	1-60 seconds
host-ip	Destination IPv4 address	/

63.2 ping6

Command function	Command format
Checks IPv6 host connectivity	Ping ipv6 [-h hop][-s len][-c count][-a sourceip][-w timeout] [-t]<host-ipv6>

Parameter Description

Parameter	Description	Value range
hop	Time to live (hops)	1-255
len	Packet length	20-8100 bytes
count	Number of packets sent	1-2147483647
sourceip	Source IPv6 address	/
timeout	Timeout	1-60 seconds

host-ipv6	Destination IPv6 address	/
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63.3 tracert

Command function	Command format
Traces the path to the destination host	tracert [-c][-f ttl] [-u] [- h max-hops] [-w timeout][-s sourceip] <host-ip>

Parameter Description

Parameter	Description	Value range
ttl	Time to live (hops)	1-255
-c	ICMP mode	/
-u	UDP mode	/
max-hops	Maximum hops	1-255
timeout	Timeout	1-60 seconds
-s	Source IP address	/
host-ip	Destination IPv4 address	/

63.4 tracert6

Command function	Command format
Traces the path to the destination IPv6 host	Tracert ipv6 [-c][-h hop] [-w timeout] <host-ipv6>

Parameter Description

Parameter	Description	Value range
hop	Time to live (hops)	1-255
timeout	Timeout	1-60 seconds
host-ipv6	Destination IPv6 address	/

Chapter 64 System Information Configuration and Display Commands

64.1 show version

Command function	Command format
Displays version information	show version

Parameter Description

None

64.2 show system

Command function	Command format
Displays running system information	show system

Parameter Description

None

64.3 show memory

Command function	Command format
Displays memory usage information	show memory

Parameter Description

None

64.4 show clock

Command function	Command format
Displays the current system time	show clock

Parameter Description

None

64.5 hostname

Command function	Command format
Configures the hostname of the system	hostname <name>

Parameter Description

None

Chapter 65 Bootrom Configuration Commands

65.1 Ctrl-B

Command function	Command format
Press Ctrl-B during reboot to enter the Bootrom mode	Press Ctrl-B to enter Boot Menu... 3 Main Menu 1. Running OS image from Flash 2. Running secondary OS image file 3. Advanced menu 4. Download via serial 5. Display the boot configuration 6. Download via network interface(FTP) 7. Set the factory-default license 8. Set the factory-default MAC address 9. Set the product serial number a. Set the hardware initialization information b. Get the BootRom Compiled time c. Initialize POE Status Please enter your choice :
Parameter Description	
None	

Chapter 66 Telnetv6-Client Configuration Commands

66.1 telnet6 <ipv6>

Command function	Command format
Accesses other devices as a Telnetv6 client in privilege mode	telnet6 <ipv6> [tcp-port]

Parameter Description

Parameter	Description	Value range
ipv6	IPv6 address	/
tcp-port	TCP port number	/

Chapter 67 LLDP Configuration Commands

67.1 lldp

Command function	Command format
The [no] lldp command enables or disables the Link Layer Discovery Protocol (LLDP)	no lldp lldp

Parameter Description

None

67.2 lldp rx | tx | rxtx

Command function	Command format
The lldp [rxtx tx rx] command configures the LLDP operation mode	lldp rxtx

Parameter Description

Parameter	Description	Value range
rxtx	Sends and receives LLDP packets (default).	/
tx	Sends but does not receive LLDP packets.	/
rx	Receives but does not send LLDP packets.	/

67.3 lldp hello-time

Command function	Command format
The [no] lldp hello-time value command configures (or removes) the HELLO interval	lldp hello-time 5 no lldp hello-time

Parameter Description

Parameter	Description	Value range
value	Hello interval in seconds	5-32768

67.4 lldp hold-times

Command function	Command format
The [no] lldp hold-times value command configures (or removes) the LLDP hold time multiplier	lldp hold-times 5 no lldp hold-times

Parameter Description

Parameter	Description	Value range
value	Hold time in seconds	2-10

67.5 lldp management-address

Command function	Command format
The [no] lldp management-address command configures (or removes) the LLDP management address on a port	lldp management-address supervlan-interface 1 no lldp management-address

Parameter Description

Parameter	Description	Value range
value1	Super VLAN ID	1-128
value2	VLAN Interface ID	1-4094

67.6 show lldp interface

Command function	Command format
The show lldp interface [ethernet port-id] command displays LLDP configuration information	show lldp interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Physical port ID	Example: 0/0/1 to 0/1/4

Chapter 68 UDLD Configuration Commands

68.1 udd

Command function	Command format
The [no] udd command enables or disables Unidirectional Link Detection (UDLD)	no udd udd

Parameter Description

None

68.2 udd error-down

Command function	Command format
The [no] udd error-down [recover recover-time times] command configures (or removes) the handling of error-down states	udd error-down recover-time 30 no udd error-down recover-time

Parameter Description

Parameter	Description	Value range
recover	Enables recovery from UDLD error state	/
recover-time	Configures recovery time in seconds	30-86400

68.3 udd message-interval

Command function	Command format
The udd message-interval command configures the UDLD HELLO message interval	udd message-interval

Parameter Description

Parameter	Description	Value range
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time

Message interval in seconds

7-90 (default: 15)

68.4 udd reset

Command function	Command format
The udd reset command resets the UDLD in global or port mode	udd reset

Parameter Description

None

68.5 udd port shutdown

Command function	Command format
The [no] udd port shutdown command configures (or removes) port shutdown when a unidirectional link is detected	udd port shutdown no udd port shutdown

Parameter Description

None

68.6 udd unidirectional-shutdown

Command function	Command format
The udd unidirectional-shutdown [auto manual] command configures the port shutdown mode for unidirectional link detection. The default is automatic shutdown	udd unidirectional-shutdown auto

Parameter Description

Parameter	Description	Value range
auto	Automatically shuts down the port	/

manual	Requires manual shutdown	/
--------	--------------------------	---

68.7 udd work-mode

Command function	Command format
------------------	----------------

The udd work-mode [aggressive | normal]

command configures the UDLD operating mode. The default is normal mode

udd unidirectional-shutdown auto

Parameter Description

Parameter	Description	Value range
auto	Automatically shuts down the port	/
manual	Requires manual shutdown	/

68.8 show udd interface

Command function	Command format
------------------	----------------

The show udd interface [ethernet port-id]

command displays UDLD configuration information

show udd interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

Chapter 69 Port Mirroring Configuration Commands

69.1 mirror source

Command function	Command format
The mirror source [ethernet port-id cpu] [ingress egress both] command configures the source of mirroring.	mirror source ethernet 0/0/1 both

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

69.2 mirror monitor ethernet

Command function	Command format
The mirror monitor ethernet port-id command configures the destination port for mirroring	mirror monitor ethernet 0/0/2

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

69.3 no mirror

Command function	Command format
The no mirror [all monitor ethernet port-id source [cpu ethernet port-id]] command deletes the mirroring group	no mirror source ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

69.4 show mirror

Command function	Command format
The show mirror command displays the configuration of mirroring groups	show mirror

Parameter Description

None

Chapter 70 Remote Mirroring Configuration Commands

70.1 mirror source

Command function	Command format
The mirror source [ethernet port-id cpu] [ingress egress both] command configures the source of mirroring	mirror source ethernet 0/0/1 both

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

70.2 mirror monitor ethernet

Command function	Command format
The mirror monitor ethernet port-id command configures the destination port for mirroring	mirror monitor ethernet 0/0/2

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

70.3 remote_mirror rspan local vlan

Command function	Command format
The remote_mirror rspan local vlan vlan-id command configures the remote mirroring VLAN at the local mirror	remote_mirror rspan local vlan 33

destination port

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

70.4 no remote_mirror rspan local vlan

Command function	Command format
------------------	----------------

The no remote_mirror rspan local vlan vlan-id command deletes the remote mirroring VLAN at the local mirror destination port

no remote_mirror rspan local vlan 33

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

70.5 remote_mirror rspan middle vlan

Command function	Command format
------------------	----------------

The remote_mirror rspan middle vlan vlan-id command configures the remote mirroring VLAN for intermediate devices

remote_mirror rspan middle vlan 12

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

70.6 no remote_mirror rspan middle vlan

Command function	Command format
------------------	----------------

The no remote_mirror rspan middle

no remote_mirror rspan middle vlan 12

vlan vlan-id command deletes the remote
mirroring VLAN for intermediate devices

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

70.7 remote_mirror rspan target vlan

Command function	Command format
The remote_mirror rspan target vlan vlan-id command configures the remote mirroring VLAN for the target device	remote_mirror rspan target vlan 12

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

70.8 no remote_mirror rspan target vlan

Command function	Command format
The no remote_mirror rspan target vlan vlan-id command deletes the remote mirroring VLAN for the target device	no remote_mirror rspan target vlan 12

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

70.9 show remote_mirror

Command function	Command format
------------------	----------------

The `show remote_mirror` command displays
the configuration of remote mirroring
groups

`show remote_mirror`

Parameter	Description
-----------	-------------

None	
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Chapter 71 Flow Mirroring Configuration Commands

71.1 mirrored-to

Command function	Command format
The mirrored-to [hybrid-acl <2000-2999> ip-acl<1-999> mac-acl<1000-1999>] [subitem <0-127> interface ethernet port-id] command configures flow mirroring	mirrored-to mac-acl 1000 subitem 2 interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

71.2 no mirrored-to

Command function	Command format
The no mirrored-to [hybrid-acl <2000-2999> ip-acl <1-999> mac-acl <1000-1999>] [subitem <0-127>] command deletes flow mirroring	no mirrored-to mac-acl 1000 subitem 2

Parameter Description

None

71.3 show qos-info mirrored-to

Command function	Command format
The show qos-info mirrored-to command displays flow mirroring configuration	show qos-info mirrored-to

Parameter Description

None

Chapter 72 RMON Configuration Commands

72.1 rmon statistics

Command function	Command format
The rmon statistics index [owner string] command creates a statistics group in port mode	rmon statistics 1 owner 1

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535
string	Description string	1-127 characters

72.2 no rmon statistics

Command function	Command format
The no rmon statistics [index] command deletes a statistics group in port mode	no rmon statistics 1

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535

72.3 rmon history

Command function	Command format
The rmon history index bucket bucket-num interval value [owner string] command creates a history group in port mode	rmon history 1 buckets 1 interval 1 owner string

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535
bucket-num	Number of records	1-65535
value	Sampling interval (s)	1-3600
string	Description string	1-127 characters

72.4 no rmon history

Command function	Command format
The no rmon history [index] command deletes a history group in port mode	no rmon history 1

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535

72.5 show rmon statistics interface

Command function	Command format
The show rmon statistics interface [ethernet port-id] command displays statistics group information	show rmon statistics interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

72.6 show rmon history interface

Command function	Command format
------------------	----------------

The show rmon history interface [ethernet port-id] command displays history group information

show rmon history interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on physical switch ports, e.g., 0/0/1-0/1/4

72.7 rmon event

Command function	Command format
The rmon event index [description string] [log log-trap trap none] [owner string] command creates an event table entry in global mode	rmon event 1 description 2 log owner string

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535
string	Description string	1-127 characters

72.8 no rmon event

Command function	Command format
The no rmon event [index] command deletes an event table entry in global mode	no rmon event 1

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535

72.9 show rmon event

Command function	Command format
The show rmon event [event eventlog] [index] command displays event group information	show rmon eventlog 1

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535

72.10 rmon alarm

Command function	Command format
The rmon alarm index mib-oid value [absolute delta] rising threshold-value index falling threshold-value index [owner string] command creates an alarm group in global mode	rmon alarm 1 1.3.6.1.2.1.16.1.1.1.5 1 absolute rising 3 2 falling 2 2 owner string

Parameter Description

Parameter	Description	Value range
index	Table index	1-65535
mib-oid	MIB object identifier (e.g., 1.3.6.1.2.1.16.1.1.1.5.1)	1-127 characters
value	Sampling interval value (seconds)	1-3600
threshold-value	Threshold value for sampling statistics	1-2147483647
string	Description string	1-127 characters

72.11 no rmon alarm

Command function	Command format
------------------	----------------

The no rmon alarm [index] command
deletes an alarm group in global mode

no rmon alarm 1

Parameter Description

Parameter	Description	Value range
-----------	-------------	-------------

index

Table index

1-65535

72.12 show rmon alarm

Command function	Command format
------------------	----------------

The show rmon alarm [index]
command displays alarm group
information

show rmon alarm 1

Parameter Description

Parameter	Description	Value range
-----------	-------------	-------------

index

Table index

1-65535

Chapter 73 SNTP-Client Configuration Commands

73.1 sntp client

Command function	Command format
Enables or disables the SNTP client	sntp client no sntp client

Parameter Description

None

73.2 sntp client mode

Command function	Command format
Configures the SNTP client mode	sntp client mode [anycast broadcast multicast unicast] no sntp client mode

Parameter Description

Parameter	Description	Value range
anycast	/	Anycast mode
broadcast	/	Broadcast mode
multicast	/	Multicast mode
unicast	/	Unicast mode

73.3 sntp client authenticate

Command function	Command format
Enables or disables SNTP client authentication	sntp client authenticate no sntp client authenticate

Parameter Description

None

73.4 sntp client authentication-key encrypt

Command function	Command format
Configures whether the SNTP client password is encrypted for display	sntp client authentication-key encrypt [enable disable no sntp client

Parameter Description

Parameter	Description	Value range
enable	/	Encrypt the display of the password
disable	/	Do not encrypt the password display

73.5 sntp client authentication-key

Command function	Command format
Configures the SNTP client authentication key	sntp client authentication-key [id] [encrypt-key <key> md5 <md5-key>] no sntp client

Parameter Description

Parameter	Description	Value range
id	/	Key sequence number
encrypt-key	/	Encryption key
md5-key	/	MD5 encryption key

73.6 sntp client broadcastdelay

Command function	Command format
Configures the SNTP client broadcast delay	sntp client broadcastdelay [seconds] no sntp client broadcastdelay

Parameter Description

Parameter	Description	Value range
seconds	/	1-9999 seconds

73.7 sntp client poll-interval

Command function	Command format
Configures the SNTP client polling interval	sntp client poll-interval [seconds] no sntp client poll-interval

Parameter Description

Parameter	Description	Value range
seconds	/	30-99999 (default 1000)

73.8 sntp client retransmit

Command function	Command format
Configures the retransmission count for the SNTP client	sntp client retransmit [times] no sntp client retransmit

Parameter Description

Parameter	Description	Value range
times	/	1-10

73.9 sntp client retransmit-interval

Command function	Command format
Configures the retransmission interval for the SNTP client	sntp client retransmit-interval [seconds] no sntp client retransmit-interval

Parameter Description

Parameter	Description	Value range
seconds	/	3-30 seconds

73.10 sntp client summer-time daily

Command function	Command format
Configures summer time on a daily basis	sntp client summer-time daily <start-month start-day start-time end-month end-day end-time > no sntp client summer-time

Parameter Description

Parameter	Description	Value range
start-month	Start month	/
start-day	Start day	/
start-time	Start time	/
end-month	End month	/
end-day	End day	/
end-time	End time	/

73.11 sntp client summer-time weekly

Command function	Command format
Configures summer time on a weekly basis	sntp client summer-time weekly <start-month start-week [Fri mon sat sun thu tue wed] start-time end-month end-week [Fri mon sat sun thu tue wed] end-time > no sntp client summer-time

Parameter Description

Parameter	Description	Value range
start-month	Start month	/
start-week	Start week	/
start-time	Start time	/
end-month	End month	/

end-week	End week	/
end-time	End time	/

73.12 sntp client valid-server

Command function	Command format
Configures the valid SNTP server	sntp client valid-server <ip> < wmask> no sntp client valid-server [all ip wmask]

Parameter Description

Parameter	Description	Value range
ip	Server IP address	/
wmask	Wildcard mask	/

73.13 sntp trusted-key

Command function	Command format
Configures the trusted key ID	sntp trusted-key < id> no sntp trusted-key < id>

Parameter Description

Parameter	Description	Value range
id	Key ID	<1-4294967295>

73.14 sntp server key

Command function	Command format
Configures the server key ID	sntp server key < id> no sntp server key < id>

Parameter Description

Parameter	Description	Value range
id	Key ID	<1-4294967295>

73.15 sntp client mode anycast key

Command function	Command format
Configures the trusted key ID for anycast mode	sntp client mode anycast key <id> no sntp client mode anycast key < id>

Parameter Description

Parameter	Description	Value range
id	Key ID	<1-4294967295>

73.16 sntp server backup

Command function	Command format
Configures the backup SNTP server IP	sntp server backup < ip> no sntp server backup

Parameter Description

Parameter	Description	Value range
ip	Server IP address	/

73.17 sntp server

Command function	Command format
Configures the primary SNTP server IP	sntp server < ip> no sntp server

Parameter Description

Parameter	Description	Value range
ip	Server IP address	/

73.18 show sntp client

Command function	Command format
Displays client operation information	show sntp client

Parameter Description

None

73.19 show sntp client summer-time

Command function	Command format
Displays summer time configuration	show sntp client summer-time

Parameter Description

None

Chapter 74 System Time Configuration Commands

74.1 clock set

Command function	Command format
Configures the system time in privileged mode	clock set <HH:MM:SS YYYY/MM/DD>

Parameter Description

Parameter	Description	Value range
HH:MM:SS	Hour, minute, second	/
YYYY/MM/DD	Year, month, day	/

74.2 clock timezone

Command function	Command format
Configures the time zone	clock timezone <zone-name hours-offset minutes-offset > no clock timezone

Parameter Description

Parameter	Description	Value range
zone-name	Time zone name	STRING<1-16>
hours-offset	Hour offset	/
minutes-offset	Minute offset	/

74.3 clock summer-time daily

Command function	Command format
Configures daylight saving time	clock summer-time daily <start-time start-date end-time end-date > no clock summer-time

Parameter Description

Parameter	Description	Value range
start-date	Start date	/
start-time	Start time	/
end-date	End date	/
end-time	End time	/

74.4 clock summer-time weekly

Command function	Command format
Configures system time daylight saving time	clock summer-time weekly <start-time start-month start-week [Fri mon sat sun thu tue wed] end-time end-month end-week [Fri mon sat sun thu tue wed] > no clock summer-time

Parameter Description

Parameter	Description	Value range
start-month	Start month	/
start-week	Start week day	/
start-time	Start time	/
end-month	End month	/
end-week	End week day	/
end-time	End time	/

74.5 show clock

Command function	Command format
Displays the current system time and time zone information	show clock

Parameter Description

None

Chapter 75 L2Protocol-Tunnel Configuration Commands

75.1 l2protocol-tunnel

Command function	Command format
Configures protocol pass-through on ports	l2protocol-tunnel [cdp lacp pagp stp udld vtp dtp gvrp lldp pvst user-protocol] l2protocol-tunnel user-protocol 1700 protocol-mac 01:00:02:02 :02:02 encap-type ethernet2 protocol-type 8100 tunnel-mac 01:cc:cc:cc:cc:cc

Parameter Description

Parameter	Description	Value range
cdp	CDP protocol frames	/
lacp	LACP protocol frames	/
pagp	PAgP protocol frames	/
stp	STP protocol frames	/
udld	UDLD protocol frames	/
dtp	DTP protocol frames	/
gvrp	GVRP protocol frames	/
vtp	VTP protocol frames	/
lldp	LLDP protocol frames	/
pvst	PVST protocol frames	/
user-protocol	User-defined protocol name	1-16 characters

75.2 l2protocol-tunnel drop-threshold

Command function	Command format
Limits the rate of protocol pass-through globally or on ports	l2protocol-tunnel [cdp lacp pagp stp udld vtp] drop-threshold <value>

Parameter Description

Parameter	Description	Value range
cdp	CDP protocol frames	/
lacp	LACP protocol frames	/
pagp	PAgP protocol frames	/
stp	STP protocol frames	/
udld	UDLD protocol frames	/
dtp	DTP protocol frames	/
gvrp	GVRP protocol frames	/
vtp	VTP protocol frames	/
value	Rate limit value	/
cdp	CDP protocol frames	/
lacp	LACP protocol frames	1-200 pps

75.3 show l2protocol-tunne interface

Command function	Command format
Displays protocol pass-through status on interfaces	show l2protocol-tunne interface

Parameter Description

None

75.4 show l2protocol-tunnel drop-threshold

Command function	Command format
Displays rate limits for various protocols	show l2protocol-tunnel drop-threshold

Parameter Description

None

Chapter 76 File Download Configuration Commands

76.1 load application xmodem

Command function	Command format
------------------	----------------

The load application xmodem command
uses xmodem to download the host
program

load application xmodem

Parameter Description

None

76.2 load application tftp

Command function	Command format
------------------	----------------

Load application tftp inet[6] server-ip
xxx.arj command uses tftp to load the host

load application tftp inet 1.1.1.1 host.arj
load application tftp inet6 2001::1 host.arj

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

76.3 load application ftp

Command function	Command format
------------------	----------------

Load application ftp inet[6] server-ip
xxx.arj username password command uses
ftp to download the host program

load application ftp inet 1.1.1.1 host.arj admin admin
load application ftp inet6 2001::1 host.arj admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit

		binary (X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

76.4 load whole-bootrom xmodem

Command function	Command format
The load whole-bootrom xmodem command downloads the bootrom program using the xmodem method	load whole-bootrom xmodem

Parameter Description

None

76.5 load whole-bootrom tftp

Command function	Command format
The load whole-bootrom tftp inet[6] server-ip xxx.bin command downloads the bootrom program using the tftp method	load whole-bootrom tftp inet 1.1.1.1 bootrom.bin load whole-bootrom tftp inet6 2001::1 bootrom.bin

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X)

76.6 load whole-bootrom ftp

Command function	Command format
The load whole-bootrom ftp inet[6] server-ip xxx.bin username password command downloads the bootrom program using the ftp method	load whole-bootrom ftp inet 1.1.1.1 bootrom.bin admin admin load whole-bootrom ftp inet6 2001::1 bootrom.bin admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

76.7 load configuration xmodem

Command function	Command format
The load configuration xmodem command downloads the configuration file using the xmodem method	load configuration xmodem

Parameter Description

None

76.8 load configuration tftp

Command function	Command format
The load configuration tftp inet[6] server-ip xxx command downloads the configuration file using the tftp method	load configuration tftp inet 1.1.1.1 config load configuration tftp inet6 2001::1 config

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

76.9 load configuration ftp

Command function	Command format
------------------	----------------

The load configuration ftp inet[6] server-ip

xxx username password command

downloads the configuration file using the

ftp method

load configuration ftp inet 1.1.1.1 config admin admin

load configuration ftp inet6 2001::1 config admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

76.10 load keyfile private tftp

Command function	Command format
The load keyfile private tftp inet[6] server-ip private.txt command downloads a private key using the tftp method	load keyfile private tftp inet 1.1.1.1 private.txt load keyfile private tftp inet6 2001::1 private.txt

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X)

76.11 load keyfile private ftp

Command function	Command format
The load keyfile private ftp inet[6] server-ip private.txt username password command downloads a private key using the ftp method	load keyfile private ftp inet 1.1.1.1 private.txt admin admin load keyfile private ftp inet6 2001::1 private.txt admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

76.12 load keyfile public tftp

Command function	Command format
The load keyfile public tftp inet[6] server-ip public.txt command downloads a public key using the tftp method	load keyfile public tftp inet 1.1.1.1 public.txt load keyfile public tftp inet6 2001::1 public.txt

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

76.13 load keyfile public ftp

Command function	Command format
The load keyfile public ftp inet[6] server-ip public.txt username password command downloads a public key using the ftp method	load keyfile public ftp inet 1.1.1.1 public.txt admin admin load keyfile public ftp inet6 2001::1 public.txt admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

Chapter 77 File Upload Configuration Commands

77.1 upload application ftp

Command function	Command format
The upload application ftp inet[6] server-ip xxx.arj username password command uploads the host program using FTP	upload application ftp inet 1.1.1.1 host.arj admin admin upload application ftp inet6 2001::1 host.arj admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

77.2 upload application tftp

Command function	Command format
The upload application tftp inet[6] server-ip xxx.arj command uploads the host program using TFTP	upload application tftp inet 1.1.1.1 host.arj upload application tftp inet6 2001::1 host.arj

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

77.3 upload logging ftp

Command function	Command format
------------------	----------------

The upload logging ftp inet[6] server-ip
log.txt username password command
uploads log files using FTP

upload logging ftp inet 1.1.1.1 log.txt admin admin
upload logging ftp inet6 2001::1 log.txt admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

77.4 upload logging tftp

Command function	Command format
The upload logging tftp inet[6] server-ip log.txt command uploads log files using TFTP	upload logging tftp inet 1.1.1.1 log.txt upload logging tftp inet6 2001::1 log.txt

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X)

77.5 copy running-config startup-config

Command function	Command format
The copy running-config startup-config command saves the current configuration to flash	copy running-config startup-config

Parameter Description

None

77.6 upload configuration ftp

Command function	Command format
The upload configuration ftp inet[6] server-ip config.txt username password command uploads the configuration file using FTP	upload configuration ftp inet 1.1.1.1 config.txt admin admin upload configuration ftp inet6 2001::1 config.txt admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

77.7 upload configuration tftp

Command function	Command format
The upload configuration tftp inet[6] server-ip config.txt command uploads configuration files using TFTP	upload configuration tftp inet 1.1.1.1 config.txt upload configuration tftp inet6 2001::1 config.txt

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X)

77.8 upload automatically configuration ftp

Command function	Command format
The upload automatically configuration ftp inet[6] server-ip config.txt username	upload automatically configuration ftp inet 1.1.1.1 config.txt admin admin per hours 1 minutes 5 upload automatically configuration ftp inet6 2001::1

password per hours hours-num minutes
 minutes-num command automatically
 uploads configuration files using FTP

config.txt admin admin per hours 1 minutes 5

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit (X.X.X.X) / 128-bit (X:X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>
hours-num	Interval in hours	0-23
minutes-num	Interval in minutes	5-59

77.9 upload automatically configuration tftp

Command function	Command format
The upload automatically configuration tftp inet[6] server-ip config.txt per hours hours-num minutes minutes-num command automatically uploads configuration files using TFTP	upload automatically configuration tftp inet 1.1.1.1 config.txt per hours 1 minutes 5 upload automatically configuration tftp inet6 2001::1 config.txt per hours 1 minutes 5

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit (X.X.X.X) / 128-bit (X:X:X:X:X:X:X:X)
hours-num	Interval in hours	0-23
minutes-num	Interval in minutes	5-59

77.10 upload keyfile private tftp

Command function	Command format
The upload keyfile private tftp inet[6] server-ip private.txt command uploads private keys using TFTP	<pre>upload keyfile private tftp inet 1.1.1.1 private.txt upload keyfile private tftp inet6 2001::1 private.txt</pre>

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

77.11 upload keyfile private ftp

Command function	Command format
The upload keyfile private ftp inet[6] server-ip private.txt username password command uploads private keys using FTP	<pre>upload keyfile private ftp inet 1.1.1.1 private.txt admin admin upload keyfile private ftp inet6 2001::1 private.txt admin admin</pre>

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

77.12 upload keyfile public tftp

Command function	Command format
The upload keyfile public tftp inet[6] server-ip public.txt command uploads public keys using TFTP	<pre>upload keyfile public tftp inet 1.1.1.1 public.txt upload keyfile public tftp inet6 2001::1 public.txt</pre>

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)

77.13 upload keyfile public ftp

Command function	Command format
The upload keyfile public ftp inet[6] server-ip public.txt username password command uploads public keys using FTP	upload keyfile public ftp inet 1.1.1.1 public.txt admin admin upload keyfile public ftp inet6 2001::1 public.txt admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit binary (X.X.X.X) / 128-bit binary (X:X:X:X:X:X:X:X)
username	FTP server username	STRING<1-64>
password	FTP server password	STRING<1-32>

Chapter 78 Configuration Management Commands

78.1 show running-config

Command function	Command format
The show running-config [module interface ethernet port-id perlines lines] command displays the current configuration and decompiles it	<pre>show running-config if show running-config interface ethernet 0/0/1 show running-config perlines 3</pre>

Parameter Description

Parameter	Description	Value range
module	Various business module types	Defined by the switch module
port-id	Port number	Based on switch physical ports (e.g., 0/0/1-0/1/4 for a 28-port switch)
lines	Number of lines displayed per output	0-4096

78.2 show startup-config

Command function	Command format
The show startup-config [module perlines lines] command displays the startup configuration	<pre>show startup-config if show startup-config perlines 3</pre>

Parameter Description

Parameter	Description	Value range
module	Various business module types	Defined by the switch module
lines	Number of lines displayed per output	0-4096

78.3 copy startup-config running-config

Command function	Command format
The copy startup-config running-config command loads the startup configuration in privileged mode	copy startup-config running-config

Parameter Description

None

78.4 clear startup-config

Command function	Command format
The clear startup-config command clears the startup configuration	clear startup-config

Parameter Description

None

Chapter 79 Primary and Secondary File System Configuration Commands

79.1 load secondary application tftp

Command function	Command format
The load secondary application tftp inet[6] server-ip xxx.arj command downloads the backup host program using TFTP	load secondary application tftp inet 1.1.1.1 host.arj load secondary application tftp inet6 2001::1 host.arj

Parameter Description

Parameter	Description	Value range
server-ip	TFTP server IP/IPv6 address	32-bit (X.X.X.X) / 128-bit (X:X:X:X:X:X:X:X)

79.2 load secondary application ftp

Command function	Command format
The load secondary application ftp inet[6] server-ip xxx.arj username password command downloads the backup host program using FTP	load secondary application ftp inet 1.1.1.1 host.arj admin admin load secondary application ftp inet6 2001::1 host.arj admin admin

Parameter Description

Parameter	Description	Value range
server-ip	FTP server IP/IPv6 address	32-bit (X.X.X.X) / 128-bit (X:X:X:X:X:X:X:X)
username	FTP server username	Any valid string
password	FTP server user password	Any valid string

79.3 startup secondary application

Command function	Command format
The startup secondary application command enables the backup host program The no startup secondary application command restores the primary host program	startup secondary application no startup secondary application

Parameter Description

None

Chapter 80 CPU Alarm Configuration Commands

80.1 alarm cpu

Command function	Command format
The (no) alarm cpu command enables or disables the CPU alarm	alarm cpu

Parameter Description

None

80.2 alarm cpu threshold

Command function	Command format
The (no) alarm cpu threshold busy value unbusy value command configures or deletes the threshold values for CPU alarms	alarm cpu threshold busy 21 unbusy 2 no alarm cpu threshold

Parameter Description

Parameter	Description	Value range
value	Threshold percentage	0-100

80.3 show alarm cpu

Command function	Command format
The show alarm cpu command displays the CPU alarm information	show alarm cpu

Parameter Description

None

Chapter 81 Port-Alarm Configuration Commands

81.1 alarm all-packets

Command function	Command format
The (no) alarm all-packets command globally enables or disables port alarm functionality. It also enables or disables port-specific alarms for the current port	alarm all-packets

Parameter Description

None

81.2 show alarm all-packets

Command function	Command format
The show alarm all-packets [interface [ethernet port-id]] command displays the alarm information	show alarm all-packets show alarm all-packets interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port number	Based on switch physical ports (e.g., 0/0/1-0/1/4 for a 28-port switch)

Chapter 82 Syslog Configuration Commands

82.1 logging

Command function	Command format
The (no) logging command enables or disables logging functionality	logging

Parameter Description

None

82.2 show logging

Command function	Command format
The show logging command displays the logging configuration information	Show logging

Parameter Description

None

82.3 logging sequence-numbers

Command function	Command format
The (no) logging sequence-numbers command enables or disables logging sequence numbers	logging sequence-numbers

Parameter Description

None

82.4 logging timestamps

Command function	Command format
The (no) logging timestamps [notime uptime datetime rfc5424] command	logging timestamps notime no logging timestamps

configures or restores the timestamp types
for logging

Parameter Description

Parameter	Description	Value range
notime	No timestamp	/
uptime	Displays timestamp as uptime	/
datetime	Displays timestamp as absolute time	/
rfc5424	Displays timestamp in RFC5424 format	/

82.5 logging monitor all | monitor-num

Command function	Command format
The (no) logging monitor [all monitor-num] command enables or disables logging to the terminal	no logging monitor all

Parameter Description

Parameter	Description	Value range
monitor-num	Terminal number	0-5

82.6 logging monitor all | monitor-num level-value | none | level-list

Command function	Command format
The logging monitor all monitor-num level-value none level-list [start-level to end-level] level-value] [module module-name] command configures log filtering rules	logging monitor 3 level-lis 2 module igmp

Parameter Description

Parameter	Description	Value range
monitor-num	Terminal number	0-5
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Based on switch features

82.7 show logging filter monitor

Command function	Command format
The show logging filter monitor monitor-num command displays the filter rules for logging	show logging filter monitor 5

Parameter Description

Parameter	Description	Value range
monitor-num	Terminal number	0-5

82.8 no logging monitor all | monitor-num filter

Command function	Command format
The no logging monitor [all monitor-num] filter command deletes the filter rule	no logging monitor 5 filter

Parameter Description

Parameter	Description	Value range
monitor-num	Terminal number	0-5

82.9 logging buffered

Command function	Command format
------------------	----------------

The (no) logging buffered command
enables or disables logging to the buffer

logging buffered
no logging buffered

Parameter Description

None

82.10 logging buffered level-value | none | level-list

Command function	Command format
The logging buffered level-value none level-list [start-level to end-level level-value] [module module-name] command configures the log filter rules	logging buffered level-list 2 3 module rip

Parameter Description

Parameter	Description	Value range
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Based on switch features

82.11 show logging filter buffered

Command function	Command format
The show logging filter buffered command displays the filter rules for buffered logs	show logging filter buffered

Parameter Description

None

82.12 no logging buffered filter

Command function	Command format
------------------	----------------

The no logging buffered filter command
deletes the filter rule for buffered logs

no logging buffered filter

Parameter Description

None

82.13 show logging buffered

Command function	Command format
The show logging buffered [level-value count level-list [start-level to end-level value]] [module module-name] command displays the buffered logs	show logging buffered 3 module rip

Parameter Description

Parameter	Description	Value range
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Based on switch features

82.14 logging flash

Command function	Command format
The (no) logging flash command enables or disables logging to flash storage	logging flash no logging flash

Parameter Description

None

82.15 logging flash level-value | none | level-list

Command function	Command format
------------------	----------------

The logging flash level-value | none |
level-list [start-level to end-level | level-
value] [module module-name] command
configures the log filter rules for flash
storage

logging flash level-list 2 3 module rip

Parameter Description

Parameter	Description	Value range
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Based on switch features

82.16 show logging filter flash

Command function	Command format
The show logging filter flash command displays the filter rules for flash logs	show logging filter flash

Parameter Description

None

82.17 no logging flash filter

Command function	Command format
The no logging flash filter command deletes the filter rule for flash logs	no logging flash filter

Parameter Description

None

82.18 logging flash interval

Command function	Command format
The [no] logging flash interval value command configures or deletes the flash log saving interval	logging flash interval 30 no logging flash interval

Parameter Description

Parameter	Description	Value range
value	Interval in minutes	30-180

82.19 logging flash msg-number

Command function	Command format
The [no] logging flash msg-number value command configures or deletes the number of log entries saved to flash	logging flash msg-number 100 no logging flash msg-number

Parameter Description

Parameter	Description	Value range
value	Number of log messages written	100-500

82.20 show logging flash

Command function	Command format
The show logging flash [level-value count level-list [start-level to end-level value]] [module module-name] command displays the logs stored in flash	show logging flash 3 module rip

Parameter Description

Parameter	Description	Value range
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Based on switch features

82.21 logging ip-address

Command function	Command format
The (no) logging ip-address [port-num] command configures or deletes the syslog server IP address	logging 1.1.1.1 25 no logging 1.1.1.1 25

Parameter Description

Parameter	Description	Value range
ip-address	Syslog server IP address	32-bit binary number in X.X.X.X format
port-num	Port number (default 514)	1-65535

82.22 logging host all | ip-address

Command function	Command format
The (no) logging host all ip-address command enables or disables logging to the syslog server	logging host 1.1.1.1 no logging host 1.1.1.1

Parameter Description

Parameter	Description	Value range
ip-address	Syslog server IP address	32-bit binary number in X.X.X.X

format

82.23 logging host all | ip-address level-value | none | level-list

Command function	Command format
The logging host all ip-address level-value none level-list [start-level to end-level level-value] [module module-name] command configures the filter rules for logging to the syslog server	logging host 1.1.1.1 3 module vlan

Parameter Description

Parameter	Description	Value range
ip-address	Syslog server IP address	32-bit binary number in X.X.X.X format
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Switch feature modules

82.24 no logging host all | ip-address filter

Command function	Command format
The no logging host [all ip-address] filter command restores the default filter rules for logging to the syslog server	no logging host all filter

Parameter Description

Parameter	Description	Value range
ip-address	Syslog server IP address	32-bit binary number in X.X.X.X format

82.25 logging facility

Command function	Command format
The (no) logging facility [clock1 clock2 ftp kernel lineprinter localuse0 localuse1 localuse2 localuse3 localuse4 localuse5 localuse6 localuse7 logalert logaudit mail networkknews ntp security1 security2 syslogd system userlevel uucp] command configures or deletes the log facility name	no logging facility

Parameter Description

None

82.26 logging source

Command function	Command format
The (no) logging source ip-address command configures or deletes the source IP address for log messages	no logging source

Parameter Description

Parameter	Description	Value range
ip-address	Valid source IP address	32-bit binary number in X.X.X.X format

82.27 logging snmp-agent

Command function	Command format
The logging snmp-agent command enables or disables logging to the SNMP agent	no logging snmp-agent

Parameter Description

None

82.28 logging snmp-agent level-value | none | level-list

Command function	Command format
The logging snmp-agent level-value none level-list [start-level to end-level level-value] [module module-name] command configures the filter rules for logging to the SNMP agent	no logging snmp-agent

Parameter Description

Parameter	Description	Value range
level-value	Log severity level	0-7
start-level	Starting severity level	0-7
end-level	Ending severity level	0-7
module-name	Module name	Based on switch features

82.29 show logging filter snmp-agent

Command function	Command format
The show logging filter snmp-agent command displays the filter rules for logging to the SNMP agent	show logging filter snmp-agent

Parameter Description

None

82.30 no logging snmp-agent filter

Command function	Command format
The no logging snmp-agent filter command restores the default filter rules	no logging snmp-agent filter

for logging to the SNMP agent

Parameter Description

None

82.31 debug

Command function	Command format
The (no) debug all module-name command enables or disables debugging for a module	debug all

Parameter Description

Parameter	Description	Value range
module-name	Module name	Switch feature modules

82.32 show debug

Command function	Command format
The show debug command displays the configuration information for debugging	show debug

Parameter Description

None

Chapter 83 STP/RSTP Configuration Commands

83.1 stp

Command function	Command format
Enable STP globally or on a physical interface	stp no stp

Parameter Description

None

83.2 stp mode

Command function	Command format
Modify the STP mode	stp mode <stp rstp mstp> no stp mode

Parameter Description

None

83.3 stp hello-time

Command function	Command format
Configure the BPDU transmission interval	stp hello-time <seconds> no stp hello-time

Parameter Description

Parameter	Description	Value range
seconds	/	1-10, default 2s

83.4 stp forward-time

Command function	Command format
Configure the forward-delay time	stp forward-time <seconds> no stp forward-time

Parameter Description

Parameter	Description	Value range
seconds	/	4-30, default 15s

83.5 stp max-age

Command function	Command format
Set the maximum aging time for STP protocol packets	stp max-age < num > no stp max-age

Parameter Description

Parameter	Description	Value range
num	/	6-40, default 20s

83.6 stp pathcost-standard

Command function	Command format
Modify the STP cost calculation method	stp pathcost-standard < dot1d-1998 dot1t > no stp pathcost-standard

Parameter Description

Parameter	Description	Value range
dot1d-1998	Older calculation method	/
dot1t	/	/

83.7 stp priority

Command function	Command format
Modify the STP priority	stp priority <num> no stp priority

Parameter Description

Parameter	Description	Value range
num	Priority value	0-61440 (in multiples of 4096), default 32768

83.8 stp root-guard action

Command function	Command format
Set the action for STP root-guard	stp root-guard action <block-port drop-packets>

Parameter Description

Parameter	Description	Value range
drop-packets	Discard packets	/
block-port	Block the port	default value

83.9 stp tc-protection

Command function	Command format
Enable TC protection	stp tc-protection no stp tc-protection

Parameter Description

None

83.10 stp tc-protection interval

Command function	Command format
Set the TC protection interval	stp tc-protection interval <seconds> no stp tc-protection interval

Parameter Description

Parameter	Description	Value range
seconds	/	1-255, default 10s

83.11 stp tc-protection threshold

Command function	Command format
Set the maximum number of TC packets processed within the protection interval	stp tc-protection threshold <num> no stp tc-protection threshold

Parameter Description

Parameter	Description	Value range
num	/	1-255, default 6

83.12 stp time-factor

Command function	Command format
Configure the timeout factor	stp time-factor <num> no stp time-factor

Parameter Description

Parameter	Description	Value range
num	/	1-10, default 3

83.13 stp bpdu-guard

Command function	Command format
Enable BPDU guard on a physical interface	stp bpdu-guard no stp bpdu-guard

Parameter Description

None

83.14 stp bpdu-filter

Command function	Command format
Globally or on a physical interface, filter BPDU packets	stp bpdu-filter no stp bpdu-filter

Parameter Description

None

83.15 stp cost

Command function	Command format
Configure the cost for a physical interface	stp cost <value> no stp cost

Parameter Description

Parameter	Description	Value range
value	/	1-200000000

83.16 stp portfast

Command function	Command format
The stp portfast autoedge edgeport disable command configures the physical interface as an automatic edge port, edge port, or non-edge port	stp portfast edgeport no stp portfast

Parameter Description

None

83.17 stp link-type

Command function	Command format
Configure the link type of a physical interface	stp link-type <auto point-to-point shared > no stp link-type

Parameter Description

Parameter	Description	Value range
auto	Automatic detection	/

point-to-point	Point-to-point link	/
shared	Non-point-to-point link	/

83.18 stp loop-guard

Command function	Command format
Enable the loop-guard function on a physical interface	stp loop-guard no stp loop-guard

Parameter Description

None

83.19 stp mcheck

Command function	Command format
Perform the mcheck function	stp mcheck

Parameter Description

None

83.20 stp port-priority

Command function	Command format
Modify the STP priority of a physical interface	stp port-priority <value> no stp port-priority

Parameter Description

Parameter	Description	Value range
value	Port priority	0-240 (multiples of 16), default 128

83.21 stp root-guard

Command function	Command format
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Enable root-guard on a physical interface

stp root-guard
no stp root-guard

Parameter Description

None

83.22 stp tcn-restricted

Command function	Command format
Configure TCN propagation restriction on a physical interface	stp tcn-restricted no stp tcn-restricted

Parameter Description

None

83.23 stp transmit-limit

Command function	Command format
Configure the maximum number of BPDU packets processed by a physical interface	stp transmit-limit num no stp transmit-limit

Parameter Description

Parameter	Description	Value range
num	/	1-255, default 3

83.24 show stp interface

Command function	Command format
Display STP information for an interface	show stp interface [brief] ethernet <interface-list>

Parameter Description

Parameter	Description	Value range
brief	Summary information	/

interface-list	List of ports	/
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Chapter 84 MSTP Configuration Commands

84.1 Stp

Command function	Command format
Enable STP globally or on physical interfaces	stp no stp

Parameter Description

None

84.2 stp mode

Command function	Command format
Modify STP mode	stp mode <stp rstp mstp> no stp mode

Parameter Description

None

84.3 mstp hello-time

Command function	Command format
Configure the interval for sending BPDU messages	mstp hello-time <seconds> no mstp hello-time

Parameter Description

Parameter	Description	Value range
seconds	/	1-10 s, default 2s

84.4 mstp forward-time

Command function	Command format
Configure the forward-delay time	mstp forward-time <seconds> no mstp forward-time

Parameter Description

Parameter	Description	Value range
seconds	/	4-30 s, default 15s

84.5 mstp max-age

Command function	Command format
Configure the maximum aging time interval for STP protocol messages between domains	mstp max-age < num > no mstp max-age

Parameter Description

Parameter	Description	Value range
num	/	6-40 s, default 20s

84.6 mstp max-hops

Command function	Command format
Configure the maximum hop count for STP within a domain	mstp max-hops < num > no mstp max-hops

Parameter Description

Parameter	Description	Value range
num	/	1-255, default 20

84.7 mstp instance <id> priority

Command function	Command format
Modify the priority of an instance	mstp instance <id> priority <num2> no mstp instance 0 priority

Parameter Description

Parameter	Description	Value range
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id	Instance number	0-15
num2	Priority	0-61440 and multiples of 4096, default 32768

84.8 mstp root-guard action

Command function	Command format
Specify the action for MSTP root-guard	mstp root-guard action <block-port drop-packets>

Parameter Description

Parameter	Description	Value range
drop-packets	Drop the packet	/
block-port	Block the port	Default value

84.9 stp tc-protection

Command function	Command format
Enable TC protection	mstp tc-protection no mstp tc-protection

Parameter Description

None

84.10 mstp tc-protection interval

Command function	Command format
Enable TC protection interval	mstp tc-protection interval <seconds> no mstp tc-protection interval

Parameter Description

Parameter	Description	Value range
seconds	/	1-255, default 10s

84.11 mstp tc-protection threshold

Command function	Command format
Set the maximum number of TC messages handled during the protection period	mstp tc-protection threshold <num> no mstp tc-protection threshold

Parameter Description

Parameter	Description	Value range
num	/	1-255, default 6

84.12 mstp time-factor

Command function	Command format
Configure the timeout factor	mstp time-factor <num> no mstp time-factor

Parameter Description

Parameter	Description	Value range
num	/	1-10, default 3

84.13 mstp bpdu-guard

Command function	Command format
Enable BPDU guard globally or on physical interfaces	mstp bpdu-guard no mstp bpdu-guard

Parameter Description

None

84.14 mstp bpdu-guard recovery

Command function	Command format
Configure the BPDU-guard recovery time	mstp bpdu-guard recovery second no mstp bpdu-guard recovery

globally

Parameter Description

Parameter	Description	Value range
seconds	Recovery time	30-86400, default no recovery

84.15 mstp bpdu-filter

Command function	Command format
Filter BPDU messages globally or on physical interfaces	mstp bpdu-filter no mstp bpdu-filter

Parameter Description

None

84.16 mstp instance <id> vlan

Command function	Command format
Configure the mapping between an instance and a VLAN	mstp instance <id> vlan <vlan-list> no mstp instance <id> vlan <vlan-list>

Parameter Description

Parameter	Description	Value range
id	Instance ID	0-15
vlan-list	VLAN list	/

84.17 mstp region-name

Command function	Command format
Configure the region name	mstp region-name <name> no mstp region-name

Parameter Description

Parameter	Description	Value range
name	/	STRING<1-32>

84.18 mstp enable instance

Command function	Command format
Enable an instance	mstp enable instance <id>

Parameter Description

Parameter	Description	Value range
id	/	1-15

84.19 mstp disable instance

Command function	Command format
Enable an instance	mstp enable instance <id>

Parameter Description

Parameter	Description	Value range
id	/	1-15

84.20 mstp revision

Command function	Command format
Configure the revision level	mstp revision <level> no mstp revision

Parameter Description

Parameter	Description	Value range
level	/	0-65535

84.21 mstp flap-guard

Command function	Command format
Configure flap-guard settings	mstp flap-guard <enable max-flaps <num> recovery-time <seconds>> no mstp flap-guard enable max-flaps recovery-time

Parameter Description

Parameter	Description	Value range
enable	Enable flap-guard functionality	/
num	Max flapping count	1-100, default 5
seconds	Recovery time	30-1000, default 30s

84.22 mstp external cost

Command function	Command format
Configure external cost for MSTP between domains	mstp external cost <num> no mstp external cost

Parameter Description

Parameter	Description	Value range
num	External cost value	1-200000000

84.23 mstp instance <id> cost

Command function	Command format
Configure internal cost for MSTP on a physical interface	mstp instance <id> cost <num> no mstp instance <id> cost

Parameter Description

Parameter	Description	Value range
num	Internal cost value	1-200000000

id	Instance ID	/
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84.24 mstp portfast

Command function	Command format
Configure a physical interface to be an automatic edge port edge port non-edge port	mstp portfast edgeport no mstp portfast

Parameter Description

None

84.25 mstp link-type

Command function	Command format
Configure the link type for a physical interface	mstp link-type <auto point-to-point shared > no mstp link-type

Parameter Description

Parameter	Description	Value range
auto	Automatic detection	/
point-to-point	Point-to-point link	/
shared	Non-point-to-point link	/

84.26 mstp loop-guard

Command function	Command format
Configure the loop-guard feature on a physical interface	mstp loop-guard no mstp loop-guard

Parameter Description

None

84.27 mstp mcheck

Command function	Command format
Execute the mcheck function	mstp mcheck

Parameter Description

None

84.28 mstp instance <id> port-priority

Command function	Command format
Modify the port priority for MSTP instance	mstp instance <id> port-priority <num> no mstp instance <id> port-priority

Parameter Description

Parameter	Description	Value range
num	Port priority value	0-240 and multiples of 16, default 128
id	Instance ID	0-15

84.29 mstp config-digest-snooping

Command function	Command format
Compatibility with Cisco	mstp config-digest-snooping no mstp config-digest-snooping

Parameter Description

None

84.30 show mstp instance brief

Command function	Command format
View MSTP instance information	show mstp instance brief

Parameter Description

None

84.31 show mstp disabled-instance

Command function	Command format
View disabled instances	show mstp disabled-instance

Parameter Description

None

84.32 show mstp config-id

Command function	Command format
View the MSTP domain configuration	show mstp config-id

Parameter Description

None

84.33 stp pathcost-standard

Command function	Command format
Modify the STP cost calculation method	stp pathcost-standard < dot1d-1998 dot1t> no stp pathcost-standard

Parameter Description

Parameter	Description	Value range
dot1d-1998	Old calculation method	/
dot1t	/	/

Chapter 85 EAPS Configuration Commands

85.1 eaps

Command function	Command format
Enable EAPS globally	eaps no eaps

Parameter Description

None

85.2 eaps domain

Command function	Command format
Create and enter an EAPS domain	eaps domain <id> no eaps domain <id>

Parameter Description

Parameter	Description	Value range
id	Domain ID	0-15

85.3 control-vlan

Command function	Command format
Configure the control VLAN under the EAPS domain	control-vlan <vlan-id> no control-vlan

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4093

85.4 fail-timer

Command function	Command format
Configure the fail timer under the EAPS	fail-timer <seconds> no fail-timer

domain

Parameter Description

Parameter	Description	Value range
seconds	/	3-30s, default: 6s

85.5 hello-timer

Command function	Command format
Configure the hello message timer under the EAPS domain	hello-timer < seconds> no hello-timer

Parameter Description

Parameter	Description	Value range
seconds	/	1-10s, default: 1s

85.6 preup-timer

Command function	Command format
Configure the pre-up delay timer under the EAPS domain	preup-timer < seconds> no preup-timer

Parameter Description

Parameter	Description	Value range
seconds	/	0-30s, default: 0

85.7 ring

Command function	Command format
Configure ring and port roles under the EAPS domain	ring <id> role < assistant-edge edge >edge-port <eth-trunk ethernet > <interface> ring <id> role <master transmit > primary-port <interface> secondary-port <interface> level <num> no ring <id>

Parameter Description

Parameter	Description	Value range
id	Ring ID	0-15
master	Master node	
assistant-edge	Assistant edge node	
edge	Edge node	
transmit	Transmit node	
interface	Interface	
num	Ring level	0-1

85.8 topo-collect

Command function	Command format
Enable topology discovery under the EAPS domain	topo-collect no topo-collect

Parameter Description

None

85.9 work-mode

Command function	Command format
Configure the working mode under the EAPS domain	work-mode [rrpp standard eips-subring]

Parameter Description

Parameter	Description	Value range
rrpp	Huawei compatibility	/
eips-subring	Maipu compatibility	/
standard	Standard mode	/

85.10 show eaps

Command function	Command format
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Display EAPS ring information

show eaps**Parameter Description**

None

85.11 show eaps control-vlan

Command function	Command format
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Display EAPS control VLAN and ring port
information**show eaps control-vlan [vlan-id]****Parameter Description**

Parameter	Description	Value range
vlan-id	VLAN ID	/

85.12 show eaps domain

Command function	Command format
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Display EAPS ring information based on
domain**show eaps [domain <domain-id> ring <ring-id>]****Parameter Description**

Parameter	Description	Value range
domain-id	Domain ID	0-15
ring-id	Ring ID	0-15

85.13 show eaps statistics

Command function	Command format
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Display EAPS message counts

show eaps statistics [domain <domain-id>]

Parameter Description

Parameter	Description	Value range
domain-id	Domain ID	0-15

85.14 show eaps topology

Command function	Command format
Display EAPS topology	show eaps topology [brief]domain <domain-id>

Parameter Description

Parameter	Description	Value range
domain-id	Domain ID	0-15
brief	Brief	0-15

85.15 clear eaps

Command function	Command format
Clear EAPS message statistics	clear eaps [domain <domain-id >[ring <ring-id >]]

Parameter Description

Parameter	Description	Value range
domain-id	Domain ID	/
ring-id	Ring ID	/

Chapter 86 ERPS Configuration Commands

86.1 erps

Command function	Command format
Enable ERPS globally	erps no erps

Parameter Description

None

86.2 erps instance

Command function	Command format
Create and enter an ERPS instance	erps instance <id> no erps instance <id>

Parameter Description

Parameter	Description	Value range
id	Instance ID	0-15

86.3 control-vlan

Command function	Command format
Configure control VLAN under the ERPS instance	control-vlan <vlan-id> no control-vlan

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

86.4 guard-timer

Command function	Command format
Configure the guard timer under the	guard-timer <seconds> no guard-timer

ERPS instance

Parameter Description

Parameter	Description	Value range
seconds	/	100-2000 ms, default: 500 ms

86.5 wtr-timer

Command function	Command format
Configure the waiting-time-recovery timeout timer under the ERPS instance	wtr-timer < seconds> no wtr-timer

Parameter Description

Parameter	Description	Value range
seconds	/	1-12 minutes, default: 5 minutes

86.6 mel

Command function	Command format
Associate CFM level under the ERPS instance	mel < level> no mel

Parameter Description

Parameter	Description	Value range
level	/	0-7, default: 0

86.7 protected-instance

Command function	Command format
Configure the protected MSTP instance list under the ERPS instance	protected-instance <id-list>

Parameter Description

Parameter	Description	Value range
id-list	/	STRING<1-64>

86.8 port0 ethernet

Command function	Command format
Configure port0 under the ERPS instance	port0 ethernet <port-number> [owner next-neighbour neighbour]

Parameter Description

Parameter	Description	Value range
neighbour	RPL neighbour	/
owner	RPL owner	/
next-neighbour	Next neighbour	/
port-number	Port number	/

86.9 port1 ethernet

Command function	Command format
Configure port1 under the ERPS instance.	port1 ethernet <port-number> [owner next-neighbour neighbour]

Parameter Description

Parameter	Description	Value range
neighbour	RPL neighbour	/
owner	RPL owner	/
next-neighbour	Next neighbour	/
port-number	Port number	/

86.10 ring

Command function	Command format
Configure the ring settings under the ERPS instance	ring <id enable disable level <level>]

Parameter Description

Parameter	Description	Value range
id	Ring ID	1-239
enable	Enable ring	/
disable	Disable ring	/
level	Ring level	0-1

86.11 show erps

Command function	Command format
Display ERPS ring information	show erps

Parameter Description

None

86.12 show erps control-vlan

Command function	Command format
Display ERPS control VLAN and ring port information	show erps control-vlan [vlan-id]

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

86.13 show erps instance

Command function	Command format
Display ERPS ring information based on the instance	show erps instance <instance-id>

Parameter Description

Parameter	Description	Value range
instance-id	Instance ID	0-15

86.14 show erps instance <id> statistics

Command function	Command format
Display message counts based on the instance	show erps instance < instance-id > statistics

Parameter Description

Parameter	Description	Value range
instance-id	Instance ID	0-15

86.15 show eaps statistics

Command function	Command format
Display ERPS message counts	show erps statistics

Parameter Description

None

Chapter 87 PVST/Rapid-PVST Configuration Commands

87.1 stp

Command function	Command format
Enable STP globally or on physical interfaces	stp no stp

Parameter Description

None

87.2 stp mode

Command function	Command format
Change the PVST mode	stp mode <pvst rapid-pvst> no stp mode

Parameter Description

None

87.3 pvst hello-time

Command function	Command format
Configure the interval for sending BPDU messages	pvst hello-time <seconds> no pvst hello-time

Parameter Description

Parameter	Description	Value range
seconds	/	1-10 s

87.4 pvst forward-time

Command function	Command format
Configure the forward-delay time	pvst forward-time <seconds> no pvst forward-time

Parameter Description

Parameter	Description	Value range
seconds	Forward delay	4-30 s, default 15 s

87.5 pvst max-age

Command function	Command format
Configure the maximum aging time interval for inter-domain PVST protocol messages	pvst max-age < num > no pvst max-age

Parameter Description

Parameter	Description	Value range
num	Max age time	6-40 s, default 20 s

87.6 pvst instance <id> vlan

Command function	Command format
Configure the mapping between instance and VLAN, conflicts with MSTP	pvst instance <id> vlan <vlan-list> no pvst instance <id> vlan <vlan-list>

Parameter Description

Parameter	Description	Value range
id	Instance ID	0-15
vlan-list	VLAN list	2-4094

87.7 pvst instance <id> priority

Command function	Command format
Change the priority of the instance	pvst instance <id> priority <num2> no pvst instance <id> priority

Parameter Description

Parameter	Description	Value range
id	Instance ID	0-15
num2	Priority	0-61440, must be a multiple of 4096, default 32768

87.8 pvst bpdu-guard

Command function	Command format
Enable BPDU guard on physical interfaces	pvst bpdu-guard no pvst bpdu-guard
Parameter Description	
None	

87.9 pvst bpdu-filter

Command function	Command format
Filter BPDU messages on physical interfaces	pvst bpdu-filter no pvst bpdu-filter
Parameter Description	
None	

87.10 pvst loop-guard

Command function	Command format
Enable loop-guard on physical interfaces	pvst loop-guard no pvst loop-guard
Parameter Description	
None	

87.11 pvst edge-port

Command function	Command format
Configure a physical interface as an edge port.	pvst edge-port no pvst edge-port
Parameter Description	

None

87.12 pvst instance <id> cost

Command function	Command format
Configure the cost for a physical interface in the PVST instance	pvst instance <id> cost <num> no pvst instance <id> cost

Parameter Description

Parameter	Description	Value range
num	/	1-200000000
id	Instance ID	/

87.13 pvst instance <id> port-priority

Command function	Command format
Modify the port priority in the PVST instance	pvst instance <id> port-priority <num> no pvst instance <id> port-priority

Parameter Description

Parameter	Description	Value range
num	Priority	0-240, must be a multiple of 16, default 128
id	Instance ID	0-15

87.14 show pvst instance brief

Command function	Command format
Display PVST instance information	show pvst instance brief [instance-list]

Parameter Description

Parameter	Description	Value range
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`instance-list`

Instance list

STRING<1-128>

Chapter 88 Eth-Trunk Configuration Commands

88.1 interface eth-trunk

Command function	Command format
Add and enter or enter the aggregation group	interface eth-trunk <id> no interface eth-trunk <id>

Parameter Description

Parameter	Description	Value range
id	Aggregation group number	1-8

88.2 link-aggregation load-balance

Command function	Command format
Configure the load balancing strategy	link-aggregation load-balance <dst-ip dst-mac src-dst-ip src-dst-mac src-ip src-mac> no link-aggregation load-balance

Parameter Description

Parameter	Description	Value range
dst-ip	Destination IP	/
dst-mac	Destination MAC	/
src-dst-ip	Source and destination IP	/
src-dst-mac	Source and destination MAC	/
src-ip	Source IP	/
src-mac	Source MAC (default)	default

88.3 link-aggregation mode

Command function	Command format
Configure the aggregation mode	link-aggregation mode <dynamic static >

no link-aggregation mode**Parameter Description**

Parameter	Description	Value range
dynamic	Dynamic	/
static	Static	/

88.4 link-aggregation members interface

Command function	Command format
Add member ports to the aggregation group	link-aggregation members interface <interface-list> no link-aggregation members interface

Parameter Description

Parameter	Description	Value range
interface-list	Port list	/

88.5 link-aggregation eth-trunk

Command function	Command format
Configure a physical interface to join an aggregation group	link-aggregation eth-trunk <num> no link-aggregation eth-trunk

Parameter Description

Parameter	Description	Value range
num	Aggregation group number	1-8

88.6 lacp mode

Command function	Command format
Configure the interface mode under a physical interface	lacp mode <active passive> no lacp mode

Parameter Description

Parameter	Description	Value range
passive	Passive	/
active	Active	/

88.7 lacp period

Command function	Command format
Configure the timeout method for the interface under a physical interface	lacp period <long short >

Parameter Description

Parameter	Description	Value range
short	Short timeout	/
long	Long timeout	/

88.8 lacp port-priority

Command function	Command format
Configure the interface priority under a physical interface	lacp port-priority <num > no lacp port-priority

Parameter Description

Parameter	Description	Value range
num	Priority	1-65535

88.9 lacp system-priority

Command function	Command format
Configure the priority globally	lacp system-priority <num > no lacp system-priority

Parameter Description

Parameter	Description	Value range
num	Priority	1-65535

88.10 show lacp local

Command function	Command format
Display the status of the local aggregation group	show lacp local [eth-trunk <num>]

Parameter Description

Parameter	Description	Value range
num	Aggregation group number	1-8

88.11 show lacp sys-id

Command function	Command format
Display the system ID of the aggregation group	show lacp sys-id

Parameter Description

None

88.12 show lacp neighbor

Command function	Command format
Display the neighbors of the aggregation group	show lacp neighbor [eth-trunk <num>]

Parameter Description

Parameter	Description	Value range
num	Aggregation group number	1-8

Chapter 89 FlexLink Configuration Commands

89.1 flex-link group

Command function	Command format
Add and enter or enter a FlexLink group	flex-link group <id> no flex-link group <id>

Parameter Description

Parameter	Description	Value range
id	Aggregation group ID	0-15

89.2 master-port

Command function	Command format
Configure the master port	master-port <eth-trunk <eth-trunk-num> ethernet <ethernet-num>> no master-port <eth-trunk <eth-trunk-num> ethernet <ethernet-num>>

Parameter Description

Parameter	Description	Value range
eth-trunk-num	Aggregation group ID	1-8
ethernet-num	Physical port number	/

89.3 slave-port

Command function	Command format
Configure the slave port	slave-port <eth-trunk <eth-trunk-num> ethernet <ethernet-num>> no slave-port <eth-trunk <eth-trunk-num> ethernet <ethernet-num>>

Parameter Description

Parameter	Description	Value range
eth-trunk-num	Aggregation group ID	1-8
ethernet-num	Physical port number	/

89.4 preemption mode

Command function	Command format
Configure the preemption mode	preemption mode < bandwidth off role> no preemption mode

Parameter Description

Parameter	Description	Value range
bandwidth	Bandwidth-based preemption	/
off	No preemption	/
role	Role-based preemption	/

89.5 preemption delay

Command function	Command format
Configure the preemption delay	preemption delay < seconds> no preemption delay

Parameter Description

Parameter	Description	Value range
seconds	/	1-60s

89.6 flex-link flush send

Command function	Command format
Enable MAC table flush send functionality	flex-link flush send no flex-link flush send

Parameter Description

None

89.7 flex-link flush receive

Command function	Command format
Enable MAC table flush receive functionality	flex-link flush receive no flex-link flush receive

Parameter Description

None

89.8 show flex-link group

Command function	Command format
Display FlexLink group information	show flex-link group [<id>]

Parameter Description

Parameter	Description	Value range
id	Aggregation group ID	0-15

89.9 show flex-link flush

Command function	Command format
Display statistics and configuration information for flush send and receive	show flex-link flush

Parameter Description

None

Chapter 90 MonitorLink Configuration Commands

90.1 monitor-link-group

Command function	Command format
Add and enter or enter a monitor-link-group	monitor-link-group <id> no monitor-link-group <id>

Parameter Description

Parameter	Description	Value range
id	Aggregation group ID	0-4

90.2 uplink interface

Command function	Command format
Configure uplink interface	uplink interface <eth-trunk <eth-trunk-num> ethernet <ethernet-num>>
	no uplink interface <eth-trunk <eth-trunk-num> ethernet <ethernet-num>>

Parameter Description

Parameter	Description	Value range
eth-trunk-num	Aggregation group ID	1-8
ethernet-num	Physical port number	/

90.3 downlink interface

Command function	Command format
Configure downlink interface	downlink interface <eth-trunk <eth-trunk-num> ethernet <ethernet-num>>
	no downlink interface <eth-trunk <eth-trunk-num> ethernet <ethernet-num>>

Parameter Description

Parameter	Description	Value range
eth-trunk-num	Aggregation group ID	1-8
ethernet-num	Physical port number	/

90.4 show monitor-link-group

Command function	Command format
Display monitor-link-group information	show monitor-link-group [id]

Parameter Description

Parameter	Description	Value range
id	Aggregation group ID	0-4

Chapter 91 Bandwidth-Control Configuration Commands

91.1 bandwidth

Command function	Command format
The (no) bandwidth [ingress [percentage] egress [percentage]] rate configures or removes the bandwidth limit for ingress or egress directions in port mode	bandwidth egress 64 bandwidth egress percentage 12 no bandwidth egress

Parameter Description

Parameter	Description	Value range
value	Percentage of port usage	(1-99)%
rate	Specific bandwidth limit	64-10240000

91.2 show bandwidth-control

Command function	Command format
The show bandwidth-control [ethernet] command displays the bandwidth limit information for ports	show bandwidth-control ethernet 0/0/2 show bandwidth-control

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4 for a 28-port switch.

Chapter 92 MAC Address Management Configuration Commands

92.1 mac-address-table age-time

Command function	Command format
The mac-address-table age-time [second disable] command configures or disables the MAC address aging time	mac-address-table age-time 10 mac-address-table age-time disable
The no mac-address-table age-time command restores the default MAC address aging time	no mac-address-table age-time

Parameter Description

Parameter	Description	Value range
second	MAC address aging time (s), default: 300s	10-1000000

92.2 mac-address-table

Command function	Command format
The mac-address-table [static permanent dynamic] mac-add interface ethernet port-id vlan command manually adds a MAC address entry	mac-address-table static 2:2:2:2:2:2 interface ethernet 0/0/1 vlan 2
The no mac-address-table [static permanent dynamic] mac-add interface ethernet port-id manually deletes a MAC address entry	no mac-address-table static 2:2:2:2:2:2 interface ethernet 0/0/1 vlan 2

Parameter Description

Parameter	Description	Value range
mac-add	MAC address	48-bit binary, formatted as

		X:X:X:X:X
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4
vlan-id	VLAN ID	1-4094

92.3 mac-address-table blackhole

Command function	Command format
The mac-address-table blackhole mac-add vlan vlan-id command manually adds a blackhole MAC address entry The no mac-address-table blackhole mac-add vlan vlan-id manually deletes a blackhole MAC address entry	mac-address-table blackhole 2:2:2:2:2:2 vlan 1 no mac-address-table blackhole 2:2:2:2:2:2 vlan 1

Parameter Description

Parameter	Description	Value range
mac-add	MAC address	48-bit binary, formatted as X:X:X:X:X:X
vlan-id	VLAN ID	1-4094

92.4 mac-address-table learning

Command function	Command format
The (no) mac-address-table learning command enables or disables MAC address learning globally or on a port	mac-address-table learning no mac-address-table learning

Parameter Description

None

92.5 mac-address-table max-mac-count

Command function	Command format
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The mac-address-table max-mac-count command limits the number of MAC addresses learned per port

mac-address-table max-mac-count 1

Parameter Description

Parameter	Description	Value range
count	Number of entries	1-8191

92.6 no mac-address-table max-mac-count

Command function	Command format
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The no mac-address-table max-mac-count command removes the per-port MAC address learning limit

no mac-address-table max-mac-count

Parameter Description

None

92.7 show mac-address max-mac-count

Command function	Command format
------------------	----------------

The show mac-address max-mac-count [interface [ethernet port-id | vlan vlan-id] command displays the maximum number of MAC addresses that can be learned for a port or VLAN

Show mac-address-table max-mac-count vlan 1
Show mac-address-table max-mac-count interface ethernet 0/0/2

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port,

e.g., 0/0/1-0/1/4

vlan-id	VLAN ID	1-4094
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92.8 show mac-address-table age-time

Command function	Command format
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The show mac-address-table age-time command displays the MAC address aging time

show mac-address-table age-time

Parameter Description

None

92.9 show mac-address-table

Command function	Command format
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The show mac-address-table [static | permanent | dynamic | blackhole | vlan] mac-add interface [ethernet | eth-trunk] port-id vlan vlan-id command displays the MAC address table

show mac-address-table static interface ethernet 0/0/1 vlan 1

Parameter Description

Parameter	Description	Value range
mac-add	MAC address	48-bit binary, formatted as X:X:X:X:X:X
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4
vlan-id	VLAN ID	1-4094

92.10 show mac-address learning

Command function	Command format
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The show mac-address learning interface
[ethernet port-id] command displays the
MAC address learning status

show mac-address learning interface
show mac-address learning interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4

92.11 show mac-address cpu

Command function	Command format
The show mac-address cpu command displays the CPU MAC address	show mac-address cpu

Parameter Description

None

Chapter 93 DLF-Control Configuration Commands

93.1 unknown-discard unicast

Command function	Command format
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The (no) unknown-discard unicast command enables or disables the unknown unicast forwarding function in port mode

unknown-discard unicast
no unknown-discard unicast

Parameter Description

None

93.2 unknown-discard multicast vlan

Command function	Command format
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The (no)unknown-discard multicast vlan vlan-id command enables or disables unknown multicast forwarding based on VLAN in global mode

unknown-discard multicast vlan 1
no unknown-discard multicast vlan 1

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094

93.3 unknown-discard multicast

Command function	Command format
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The (no) unknown-discard multicast command enables or disables the unknown multicast forwarding function in port mode.

unknown-discard multicast
no unknown-discard multicast

Parameter Description

None

93.4 show unknown-discard

Command function	Command format
The show unknown-discard [ethernet vlan vlan-id] command displays unknown unicast and multicast configurations	show unknown-discard ethernet 0/0/1 show unknown-discard vlan 1

Parameter Description

Parameter	Description	Value range
vlan-id	VLAN ID	1-4094
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4

Chapter 94 Local-Switch Configuration Commands

94.1 local-switch

Command function	Command format
The (no) local-switch command enables or disables Local-switch in port mode	local-switch no local-switch

Parameter Description

None

94.2 show local-switch

Command function	Command format
The show local-switch [interface ethernet port-id] command displays Local-switch configurations	show local-switch show local-switch interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4

Chapter 95 SLF-Control Configuration Commands

95.1 unknown-discard src-mac

Command function	Command format
The (no) unknown-discard src-mac command enables or disables the configuration of unknown source MAC forwarding functionality in port mode	unknown-discard src-mac no unknown-discard src-mac

Parameter Description

None

95.2 show unknown-discard src-mac

Command function	Command format
The show unknown-discard src-mac [ethernet] command displays the configuration of unknown source MAC forwarding functionality	show unknown-discard src-mac show unknown-discard src-mac ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4

Chapter 96 Flow-Control Configuration Commands

96.1 flow-control

Command function	Command format
The (no) flow-control command enables or disables the flow control function in port mode	flow-control no flow-control

Parameter Description

None

96.2 show flow-control interface

Command function	Command format
The show flow-control interface [ethernet port-id] command displays the flow control configuration of the port	Show flow-control interface Show flow-control interface ethernet 0/0/1

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4

Chapter 97 Error Packet Statistics

97.1 show statistics interface ethernet

Command function	Command format
The show statistics interface ethernet port-id command is used to view error packet statistics for all or a single port	show statistics interface ethernet 0/0/1 show statistics interface show statistics interface brief

Parameter Description

Parameter	Description	Value range
port-id	Port ID	Determined by the physical port, e.g., 0/0/1-0/1/4