



RG-S2600E/P

RGOS 10.4(2)

©2010



RGOS®



锐捷®

RGOS[®] 10.4(2)

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1.

Courier New

5

2.

Arial

[] []

{ x | y | ... }

[x | y | ...]

//

3.



&



1.

2.

3.

1 CLI

1.1

1.1.1 alias

alias no

alias *mode command-alias original-command*

no alias *mode [original-command]*

<i>mode</i>	
<i>command-alias</i>	
<i>original-command</i>	

EXEC

EXEC h p s u un help ping show
undebug undebug
no alias exec

✕ i

Ruijie# **s?**

*s=show show start-chat start-terminal-service

EXEC

"sv"

"show version"

Ruijie# **s?**

*s=show *sv="show version" show start-chat
start-terminal-service

Ruijie# **s?**

show start-chat start-terminal-service

"ia"

"ip address"

Ruijie(config-if)# **ia ?**

A.B.C.D IP address

dhcp IP Address via DHCP

Ruijie(config-if)# **ip address**

"ip address"

show aliases

"def-route"

"ip route"

0.0.0.0 0.0.0.0 192.168.1.1"

Ruijie# **configure terminal**

Ruijie(config)# **alias config** def-route ip route 0.0.0.0 0.0.0.0
192.168.1.1

Ruijie(config)# **def-route?**

*def-route="ip route 0.0.0.0 0.0.0.0 192.168.1.1"

Ruijie(config)# **def-route?**

% Unrecognized command.

Ruijie(config)# **end**

Ruijie# **show aliases config**

globe configure mode alias:

def-route ip route 0.0.0.0 0.0.0.0 192.168.1.1

show aliases	

-

privilege

ommand-string
mand-string

CLI
0-15

CLI
privilege ?

0.0.2 294.68 -139.2 -19.1Hp

```
Ruijie(config)# enable secret level 1 0 test
Ruijie(config)# privilege exec level 1 reload
          1      CLI          reload
Ruijie> reload ?
<cr>
          reload          1          all
Ruijie(config)# privilege exec all level 1 reload
          1      CLI          reload
Ruijie> reload ?
at                reload at a specific time/date
cancel            cancel pending reload scheme
in                reload after a time interval
<cr>
```

enable secret	CLI
---------------	-----

EXEC

Ruijie# **show aliases exec**

exec mode alias:

h	help
p	ping
s	show
u	undebug
un	undebug

2

2.1

2.1.1 disable

disable

disable [*privilege-level*]

	<i>privilege-level</i>	
	&	disable
	Ruijie# disable 10	
	enable	
	-	-

2.1.2 enable

enable

	-	-



	-	-
--	---	---

1

	-	-
--	---	---

2.1.3 enable password

enable password	no
-----------------	----

enable password	no
-----------------	----

```
enable password [level level] {password | [0 | 7] encrypted-password}no enable
password
```

<i>Password</i>	EXEC
<i>Level</i>	
0 7	0 7
<i>encrypted-password</i>	

EXEC

```
Ruijie(config)# enable password pw10
```

enable secret	

-	-

no

no enable secret

<i>Secret</i>	EXEC
<i>Level</i>	
0 5	0 5
<i>encrypted-password</i>	

no enable service

enable service ssh-sesrver, SSH Server
Ruijie(Config # **enable service ssh-sesrver**



Telnet
configure terminal
line tty 1 16

	enable	
	Web	no ip http authentication
	Web	local
	Ruijie(config)# ip http authentication local	
	enable service	

-	-

2.1.9 ip telnet source-interface

IP

Telnet

ip

telnet source-interface

ip telnet source-interface interface-name

interface-name	IP Telnet

IP

Telnet

telnet

Telnet

no ip telnet source-interface

Loopback 1

IP

Telnet

Ruijie(config)# ip telnet source-interface Loopback 1

telnet	Telnet
--------	--------

10.4(2)	

2.1.10 lock

		EXEC	lock
lock			
		-	-
	^ ^ ^	lock	" Locked "
	line	line	lockable
	Ruijie(config-line)# lockable Ruijie(config-line)# end Ruijie# lock Password: <password> Again: <password> Locked Password: <password>		
	lockable		
		-	-

2.1.11 lockable

	lock	no	line	lockable
lockable				
no lockable				
	-			-
line				
lock				EXEC
Ruijie(config)# line console 0				
Ruijie(config-line)# lockable				
Ruijie(config-line)# end				
Ruijie# lock				
Password: <password>				
Again: <password>				
Locked				
Password: <password>				
lock				

login

no login

	-	-

line

AAA

VTY console

VTY

Ruijie(config)# **no aaa new-model**
Ruijie(config)# **line vty 0**
Ruijie(config-line)# **password 0 normatest**
Ruijie(config-line)# **login**

password		line

line

	username	
	VTY	
	Ruijie(config)# no aaa new-model	
	Ruijie(config)# username test password 0 test	
	Ruijie(config)# line vty 0	
	Ruijie(config-line)# login local	
	username	
	-	-

2.1.15 privilege mode

	CLI	
	-	-
	CLI	
	CLI	
	CLI	
	-	-

service password-encryption

--	--

interface <i>interface-name</i>	Telnet
!vrf <i>vrf-name</i>	VRF

telnet	
 /ipv6	IPV6

```

1          telnet          IPV4          192.168.1.1
          vlan 1          VRF          vpn1
Ruijie# telnet 192.168.1.1 /source interface vlan 1 /vrf vpn1
2          telnet          IPV6          2AAA:BBBB::CCCC
Ruijie# telnet 2AAA:BBBB::CCCC

```

ip telnet source-interface	IP Telnet
show session	TTY
exit	

-	-

2.1.19 username

	<i>password</i>	
	0 7	0 7
	<i>encrypted-password</i>	
	<i>privilege-level</i>	

	<i>message</i>	
	Ruijie(config) Ruijie(config)# banner login \$ enter your password \$	
	-	-
	-	-

2.2.2 banner motd

		no banner motd	banner motd
		banner motd c message c	
		c	
		<i>message</i>	

```

Ruijie#show boot system
system boot file: flash:/rgos.bin

Ruijie#dir
Directory of flash:/
  11015744 2008-01-01 08:00:46  rgos.bin
  12019754 2008-02-01 08:00:46  s5750_10_4.bin
    399 2006-01-01 08:01:37  config.text
33,030,144 bytes total. (10,590,592 bytes free)

Ruijie(config)# boot system s5750_10_4.bin
Ruijie(config)# show boot system
system boot file: flash:/ s5750_10_4.bin
                        s5750_10_4.bin

```

show boot system	

-

-	-

2.2.4 clock set

clock set

clock set *hh:mm:ss month day year*

<i>hh:mm:ss</i>	24 : :
<i>day</i>	1-31
<i>month</i>	1-12
<i>year</i>	1993-2035

```

2003  3  17      10  20  30
Ruijie# clock set 10:20:30 3 17 2003
Ruijie# show clock
clock: 2003-3-17 10:20:32

```

```
Ruijie# clock set 10:20:30 3 17 2003
Ruijie# show clock
clock: 2003-3-17 10:20:32
```

```
Ruijie# show clock
clock: 2003-3-17 10:20:32
```

```
clock: 2003-3-17 10:20:32
```

	show clock	

[illegible]

2.2.5 clock update-calendar

clock update-calendar	
-	-

	-	-
--	---	---

	-	-
--	---	---

calendar

```
Ruijie# clock update-calendar
```





```
Router will reload in 600 seconds.
```

-	-

A blank coordinate plane with a horizontal x-axis and a vertical y-axis intersecting at the origin. There are no tick marks or labels on the axes.

2.2.11 speed

speed *speed*

no speed

speed *speed*

57600 bps

```
Ruijie(config)# line console 0
```

```
Ruijie(config-line)# speed 57600
```

1

	-	-

2.2.12 write

running-config

write [memory | network | terminal]

memory	NVRAM running-config startup-config	copy
network	TFTP running-config tftp	copy
terminal		show running-config

[Failed]
The device [usb1] does not exist, write to the default config file [/config.text]? [no] **yes**
Write to the default config file: [/config.text]
[OK]

boot config	
copy	
show running-config	

-	-

2.3

2.3.1 show clock

show clock

-	-

detail

show clock

Ruijie# show c lock

clock: 2003-3-17 10:27:21

	clock set	
	-	-

2.3.2 show line

show line

show line [console line-num | aux line-num | vty line-num | line-num]

	console	
	aux	aux
	vty	vty
	line-num	line


```

                                console
Ruijie# show line console 0
CON      Type      speed  Overruns
* 0      CON       9600   45927
Line 0, Location: "", Type: "vt100"
Length: 24 lines, Width: 79 columns
Special Chars: Escape Disconnect Activation
                ^^x      none      ^M
Timeouts:      Idle EXEC   Idle Session
                never      never
History is enabled, history size is 10.

```

2.3.3 show reload

show reload

show reload

[illegible]

2.3.4 show running-config

```
show running-config
```

show running-config

	-	-
--	---	---





	-	-
--	---	---

[illegible]

L

By Ruijie Network
System start time: 1970-6-14 11:49:53
System uptime: 3:17:1:17
System hardware version: 2.0
System software version: RGOS 10.3.00(4), Release(34679)
System boot version: 10.2.34077
System CTRL version: 10.2.24136
System serial number: 1234942570001

-	-

-	-

3 LINE

3.1 LINE

3.1.1 access-class

```
Line      ACL      access-class acl-no { in | out }
Line
LINE      ACL
[no] access-class access-list-number {in | out}
```

LINE	
-	-

3.1.2 line

LINE	
line [aux console tty vty] first-line [last-line]	
aux	
console	
tty	
vty	telnet/ssh
First-line	first-line
Last-line	last-line
LINE	
LINE VTY 1 3 LINE Ruijie(config)# line vty 1 3	
-	-
-	-

3.1.3 line vty

[illegible]

3.1.4 transport input

Line	transport input	Line
default transport input	LINE	
transport input {all ssh telnet none}		
default transport input		
all	Line	
ssh	Line	SSH

telnet	Line	Telnet
none	Line	

VTY	TTY	NONE
default transport input		

Line

Line	VTY	VTY	show
running	Line		
& input default transport input no transport			
transport input none			

```
line vty 0 4 telnet
Ruijie# configure terminal
Ruijie(config)# line vty 0 4
Ruijie(config-line)# transport input telnet
```

show running

RGOS10.1

-	-
---	---

4

4.1

4.1.1 ping

ping [**vrf** *vrf-name*] [**ip**] [*ip-address* [**length** *length*]] [**ntimes** *times*] [**timeout** *seconds*] [**data** *data*] [**source** *source*] [**df-bit**] [**validate**]

--	--	--

DNS

```
1      ping
Ruijie# ping 192.168.5.1
Sending 5, 100-byte ICMP Echoes to 192.168.5.1, timeout is 2 seconds:
 < press Ctrl+C to break >
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/10
ms

2      ping
Ruijie# ping 192.168.5.197 length 1500 ntimes 100 timeout 3 data ffff
source 192.168.4.10
Sending 100, 1000-byte ICMP Echoes to 192.168.5.197, timeout is 3
seconds:
 < press Ctrl+C to break >
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Success rate is 100 percent (100/100), round-trip min/avg/max = 2/2/3
ms
```

-	-

-	-

4.1.2 ping ipv6

ping [ipv6] [ip-address [length length] [ntimes times] [timeout seconds] [data data] [source source]]

ip-address	IPv6

<i>length</i>	
<i>times</i>	
<i>seconds</i>	
<i>data</i>	
<i>source</i>	IPv6 ::1

2	5	100Byte	IP
---	---	---------	----

Ping ipv6
ping ipv6
ping ipv6
2 5 100Byte IP
'!'
'C'
ping
ping ipv6

ping ipv6

	-	-
	ipv6	
	-	-

4.1.3 traceroute

traceroute

traceroute [**vrf**] [*vrf-name*] [**ip** *ip-address*][*ip-address* [**probe** *number*] [**source** *source*]
[**timeout** *seconds*] [**ttl** *minimum maximum*]]

<i>vrf-name</i>	VRF
<i>ip-address</i>	IPv4
<i>number</i>	
<i>source</i>	IPv4 127.0.0.1
<i>seconds</i>	
<i>minimum maximum</i>	

```

2      192.168.9.2      4 msec  4 msec  4 msec
3      192.168.9.1      8 msec  8 msec  4 msec
4      192.168.0.10     4 msec  28 msec 12 msec
5      202.101.143.130  4 msec  16 msec  8 msec
6      202.101.143.154 12 msec  8 msec  24 msec
7      61.154.22.36    12 msec  8 msec  22 msec
                                     IP      61.154.22.36
1 6

```

```

2                                     traceroute
Ruijie# traceroute 202.108.37.42
< press Ctrl+C to break >
Tracing the route to 202.108.37.42
1      192.168.12.1     0 msec  0 msec  0 msec
2      192.168.9.2      0 msec  4 msec  4 msec
3      192.168.110.1    16 msec 12 msec 16 msec
4      * * *
5      61.154.8.129     12 msec 28 msec 12 msec
6      61.154.8.17      8 msec 12 msec 16 msec
7      61.154.8.250     12 msec 12 msec 12 msec
8      218.85.157.222   12 msec 12 msec 12 msec
9      218.85.157.130   16 msec 16 msec 16 msec
10     218.85.157.77    16 msec 48 msec 16 msec
11     202.97.40.65     76 msec 24 msec 24 msec
12     202.97.37.65     32 msec 24 msec 24 msec
13     202.97.38.162    52 msec 52 msec 224 msec
14     202.96.12.38     84 msec 52 msec 52 msec
15     202.106.192.226  88 msec 52 msec 52 msec
16     202.106.192.174  52 msec 52 msec 88 msec
17     210.74.176.158   100 msec 52 msec 84 msec
18     202.108.37.42    48 msec 48 msec 52 msec
                                     IP      202.108.37.42
1 17 4

```

```

Ruijie# traceroute www.ietf.org
Translating " www.ietf.org "...[OK]
< press Ctrl+C to break >
Tracing the route to 64.170.98.32
1      192.168.217.1    0 msec  0 msec  0 msec
2      10.10.25.1       0 msec  0 msec  0 msec

```

```

3      10.10.24.1      0 msec  0 msec  0 msec
4      10.10.30.1      10 msec  0 msec  0 msec
5      218.5.3.254     0 msec  0 msec  0 msec
6      61.154.8.49     10 msec  0 msec  0 msec
7      202.109.204.210 0 msec  0 msec  0 msec
8      202.97.41.69    20 msec 10 msec 20 msec
9      202.97.34.65    40 msec 40 msec 50 msec
10     202.97.57.222    50 msec 40 msec 40 msec
11     219.141.130.122  40 msec 50 msec 40 msec
12     219.142.11.10   40 msec 50 msec 30 msec
13     211.157.37.14   50 msec 40 msec 50 msec
14     222.35.65.1     40 msec 50 msec 40 msec
15     222.35.65.18    40 msec 40 msec 40 msec
16     222.35.15.109   50 msec 50 msec 50 msec
17     *      *      *
18     64.170.98.32    40 msec 40 msec 40 msec

```

-	-

-

-	-

4.1.4 traceroute ipv6

traceroute ipv6

traceroute [**ipv6** *ip-address*][[**probe** *number*] [**timeout** *seconds*] [**tll** *minimum maximum*]]

<i>ip-address</i>	IPv6
<i>number</i>	
<i>seconds</i>	
<i>minimum maximum</i>	TTL

Traceroute ipv6

DNS

traceroute ipv6

```
1          traceroute ipv6
Ruijie# traceroute ipv6 3004::1
< press Ctrl+C to break >
Tracing the route to 3004::1
 1    3000::1      0 msec  0 msec  0 msec
 2    3001::1      4 msec  4 msec  4 msec
 3    3002::1      8 msec  8 msec  4 msec
 4    3004::1      4 msec  28 msec 12 msec
                                     IP    3004::1
                                     1  4
```

```
2          traceroute ipv6
Ruijie# traceroute ipv6 3004::1
< press Ctrl+C to break >
Tracing the route to 3004::1
 1    3000::1      0 msec  0 msec  0 msec
 2    3001::1      4 msec  4 msec  4 msec
 3    3002::1      8 msec  8 msec  4 msec
 4    * * *
 5    3004::1      4 msec  28 msec 12 msec
                                     IP    3004::1
                                     1  5          4
```

-	-

--	--	--	--

-

-

5.1

5.1.1 carrier-delay

carrier-delay	no
---------------	----

carrier-delay [*seconds*]

no carrier-delay

<i>seconds</i>	1 60

2

DCD

DCD

DCD

DCD Down Up

 $\dot{O}$

1

 $\dot{O}_v$ $\dot{\omega}$

	-	-
--	---	---

5.1.2 clear counters

clear counters *[interface-id]*

	<i>interface-id</i>	

		show interfaces	clear
	counters		

Ruijie# **clear counters gigabitethernet 1/1**

	show interfaces	

	-	-

5.1.3 clear interface

clear interface *interface-id*

	<i>interface-id</i>	

	Switch Port,L2 Aggregate port	,Routed port,L3 Aggregate port
		shutdown no shutdown
	Ruijie# clear interface gigabitethernet 1/1	
	shutdown	
	-	-

5.1.4 description

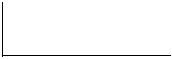
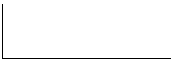
		no
	description <i>string</i>	
	no description	
	<i>string</i>	
	show interfaces	
	Ruijie(config)# interface gigabitethernet 1/1 Ruijie(config-if)# description GBIC-1	
	show interfaces	

no

flowcontrol {auto | off | on}

no flowcontrol

auto	
off	
on	



show interfaces



1/1
Ruijie(config)# **interface gigabitethernet 1/1**
Ruijie(config-if)# **flowcontrol on**

show interfaces	



-	-

5.1.7 interface aggregateport

no

interface aggregateport *port-number*

<i>port-number</i>	Aggregate port



start cable-diagnoses,please wait...

cable-daignoses end!this is result:

4 pairs

pair state length(meters)

A Ok 1

pair state length(meters)

B Ok 2

pair state length(meters)

C Short 1

pair state length(meters)

D Short 1

pairs	
state	OK Short Open A B OK C D Short A B C D OK
length	state OK Short Open length

-	-

86/96

M8600_48GT_4SFP_POE_II

M8600_48GT_4SFP_E

M8600_48GT_4SFP_E_II

M9600_48GT_4SFP_POE_II

M9600_48GT_4SFP_E

M9600_48GT_4SFP_E_II

5.1.12 medium-type

no

medium-type { fiber | copper }

no medium-type

	fiber	
	copper	

Ap SVI

Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# medium-type copper

	show interfaces	

24SFP/12GT 12 SFP 12 10/100/1000M BASE-T
 SFP 10/100/1000M BASE-T

	-	-

5.1.13 mtu

mtu

Mtu num

	num	64 9216(65536)

1500

	mtu	
	Ruijie(config)# interface gigabitethernet 1/1	
	Ruijie(config-if)# mtu 9216	
	show interfaces	
	-	-

5.1.14 shutdown

	no	
	shutdown	
	no shutdown	
	-	-
	Ap SVI	
	show interfaces	
	&	no shutdown
	1 Ap 1	
	Ruijie(config)# interface aggregateport 1	
	Ruijie(config-if)# shutdown	
	2 Ap 1	
	Ruijie(config)# interface aggregateport 1	

Ruijie(config-if)# **no shutdown**

clear interface	
show interfaces	

	Ruijie(config-if)# snmp trap link-status	link trap
	Ruijie(config-if)# no snmp trap link-status	link trap

	-	-
--	---	---

5.1.16 speed

no

10	10Mbps
100	100Mbps
1000	1000Mbps
10G	10Gbps
auto	

Ap

Ap

É

Ap

```
show interfaces
SFP
```


switchport trunk {allowed vlan {all | [add | remove | except] *vlan-list* }} native vlan *vlan-id*}

no switchport trunk {allowed vlan | native vlan}

	Trunk VLAN <i>vlan-list</i> VLAN VLAN VLAN ID VLAN ID - 10-20 , 1-10,20-25,30,33 allowed vlan <i>vlan-list</i> all VLAN VLAN add VLAN VLAN remove VLAN VLAN except VLAN VLAN VLAN
native vlan <i>vlan-id</i>	Native VLAN

VLAN	all	Native VLAN	VLAN 1

Access vlan is 1, Native vlan is 1
Protected is disabled
Vlan lists is
1, 3-4094

show interfaces	
switchport access	accessport statics VLAN

-	-

5.2

5.2.1 show interfaces

show interfaces [*interface-id*] [**counters** | **description** | **status** | **switchport** | **trunk** | **transceiver** [**alarm** | **diagnosis**]]

<i>interface-id</i>	loopback aggregateport SVI
counters	
description	link
status	
switchport	
trunk	trunking port Aggregate port
transceiver	
alarm	" None "

	diagnosis	
--	-----------	--

```
Ruijie# show interfacesgigabitEthernet
```


6 Aggregate Port

6.1

6.1.1 aggregateport load-balance

AP no

aggregateport load-balance {dst-mac | src-mac | src-dst-mac | dst-ip | src-ip | src-dst-ip }

no aggregateport load-balance

dst-mac	MAC AP MAC MAC
src-mac	MAC AP MAC MAC
src-dst-ip	IP IP IP IP IP IP IP
dst-ip	IP AP IP IP
src-ip	IP AP IP IP
src-dst-mac	MAC MAC MAC MAC MAC MAC
	MAC

show aggregateport load-balance

Ruijie(config)# **aggregateport load-balance dst-mac**

show aggregateport load-balance	aggregateport

-	-

6.1.2 port-group

Aggregate Port no

Aggregate Port

port-group *port-group-number*

no port-group

<i>port-group-number</i>	Aggregate Port Aggregate Port

Aggregate Port

AP VLAN trunk port native
VLAN AP

1/3 AP 3
Ruijie(config)# **interface gigabitethernet 1/3**
Ruijie(config-if)# **port-group 3**

-	-

```

|
|

```

```

|
|

```

-	-

6.2

6.2.1 show aggregateport

```
aggregateport
```

```

|
|
|
|

```

<i>aggregate-port-number</i>	Aggregate Port
load-balance	aggregaye port
summary	aggregate port

```

|
|

```

```

|
|

```

```

|
|

```

```
aggregate port
```

```
aggregate port
```

```

|
|
|
|

```

```
Ruijie# show aggregateport 1 summary
```

```

AggregatePort  MaxPorts      SwitchPort Mode   Ports
-----
Ag1             8             Enabled   ACCESS

```

```

|
|

```

aggregateport load-balance	AP

```

|
|

```

```

|
|

```

-	-

7 VLAN

7.1

7.1.1 name

VLAN no
name *vlan-name*
no name

	<i>vlan-name</i>	VLAN

	VLAN	VLAN	VLAN ID	VLAN 2	"VLAN0002"
--	------	------	---------	--------	------------

	VLAN
--	------

	show vlan	vlan
--	-----------	------

Ruijie(config)# **vlan 10**
Ruijie(config-vlan)# **name vlan10**

	show vlan	VLAN

--	--

	-	-

7.1.2 switchport access

no access port VLAN
VLAN

switchport access vlan *vlan-id*

no switchport access vlan

access	switch port	access port
trunk	switch port	trunk port
hybrid	switch port	hybrid port

no switchport trunk {allowed vlan | native vlan }

	Trunk VLAN vlan-list
	VLAN VLAN
	VLAN ID VLAN ID -
	10-20 ,
	1-10,20-25,30,33
allowed vlan <i>vlan-list</i>	all VLAN VLAN
	add VLAN VLAN
	remove VLAN VLAN
	except VLAN VLAN
	VLAN
native vlan <i>vlan-id</i>	Native VLAN

VLAN all Native VLAN VLAN 1

Native VLAN

Trunk native VLAN native VLAN

UNTAG VLAN VLAN ID

IEEE 802.1Q PVID native VLAN VLAN ID Trunk

native VLAN UNTAG

VLAN

Trunk VLAN 1 4094

Trunk VLAN VLAN Trunk

show interfaces switchport

VLAN 2 1/15

```
Ruijie(config)# interface fastethernet 1/15
Ruijie(config-if)# switchport trunk allowed vlan remove 2
Ruijie(config-if)# end
Ruijie# show interfaces fastethernet1/15 switchport
Interface  Switchport Mode  Access Native Protected VLAN lists
-----
FigabitEthernet 1/15  enabled  TRUNK  1  1  Disabled  1,3-4094
```

--	--	--

	-	-
--	---	---

7.2

7.2.1 show vlan

VLAN

show vlan [id vlan-id]

	<i>vlan-id</i>	VLAN ID

--	--

--	--

--	--

end**Ctrl+C****exit**

Ruijie# **show vlan id 1**

VLAN Name

Status

Ports

1 VLAN0001

STATIC

Fa0/1, Fa0/2

name	VLAN
switchport access	Vlan

--	--

-	-

8 Private VLAN

8.1

8.1.1 private-vlan association

secondary VLAN primary VLAN

private-vlan association {*svlist* | **add** *svlist* | **remove** *svlist*}

no private-vlan association

private-vlan mapping {*svlist* | **add** *svlist* | **remove** *svlist*}

no private-vlan mapping

<i>svlist</i>	secondary VLAN list
no	

Primary VLAN

```
Ruijie(config)# interface vlan 22
Ruijie(config-if)# private-vlan mapping add 24-26
```

show vlan private-vlan	-

RGOS10.1

-	-

8.1.3 private-vlan type

VLAN VLAN

private-vlan {*community* | *isolated* | *primary*}

no private-vlan {*community* | *isolated* | *primary*}

<i>community</i>	community VLAN
<i>isolated</i>	isolated VLAN
<i>primary</i>	primary VLAN
<i>no</i>	VLAN

VLAN

VLAN

Ruijie(config)# **vlan 22**

Ruijie(config-vlan)# **private-vlan primary**



	show vlan private-vlan	-
	RGOS10.1	
	-	-

8.1.5 switchport private-vlan host-association

private VLAN primary VLAN secondary VLAN

switchport private-vlan host-association *p_vid s_vid*

no switchport private-vlan host-association

	<i>p_vid</i>	primary VID
	<i>s_vid</i>	secondary VID
	no	VLAN

Ruijie(config)# interface gigabitEthernet 0/1

Ruijie(config-if)# switchport mode private-vlan host

Ruijie(config-if)# switchport private-vlan host-association 22 23

OS 1 1.006 T		TO 1.994.02 0 0 10.02 439.32 12541#60 1 Tf1198 -0.

-

-

show vlan private-vlan [community | primary | isolated]

primary	primary VLAN
community	community VLAN
isolated	isolated VLAN

private VLAN

Ruijie# **show vlan private-vlan**

-	-

RGOS10.1

-	-

8.3 Hybrid

8.3.1 switchport hybrid allowed vlan

switchport hybrid allowed vlan[[add][tagged | untagged] | remove] vlist

no switchport hybrid allowed vlan

hybrid

no	hybrid

[illegible]

	-	-

8.3.3 switchport mode hybrid

switchport mode hybrid

no switchport mode

hybrid

	no	hybrid

Ruijie(config-if)# switchport mode hybrid

--	--

QinQ

9

QinQ

9.1

	-	-
--	---	---

9.1.2 dot1q relay-vid vid translate local-vid v-list

access trunk hybrid uplink

vid

dot1q relay-vid *vid* **translate local-vid** *v-list*

no dot1q relay-vid *vid* **translate local-vid** *v-list*

<i>v_list</i>		vid
<i>vid</i>	tag	vid
no		

```

tag    vid    10-20          vid    100
ruijie(config)# interface gigabitEthernet 0/1
ruijie(config-if)# switchport mode access
ruijie(config-if)#

```

dot1q relay-vid *vid* **translate inner-vid** *v-list*

no dot1q relay-vid *vid* **translate inner-vid** *v-list*

<i>v_list</i>	vid
<i>vid</i>	tag vid
no	

```
|
```

```
|
```

```
|
```

```
|
```

```

tag                tag
ruijie# configure
ruijie(config)# interface gigabitEthernet 0/2
ruijie(config-if)# dot1q-Tunnel cos 3 remark-cos 5
ruijie(config-if)# end

```

```
|
```

show interface intf-name remark	-

```
|
```

```
|
```

-	-

9.1.5 frame-tag tpid tpid

tpid

frame-tag tpid <tpid>

no frame-tag tpid

```
|
```

no	tpid

```
|
```

```
|
```

(5760)

```
|
```

```
|
```

```

tpid 0x9100
ruijie(config)# interface g 0/3

```

```
ruijie(config-if)# frame-tag tpid 0x9100
```

```
ruijie(config-if)# end
```

```
ruijie# show frame-tag tpid
```

```
Ports   tpid
```

```
-----
```

```
Gi0/3   0x9100
```

	Q,
--	----

	show inner-priority-trust	-
	RGOS10.1	
	-	-

9.1.7 mac-address-mapping x source-vlan src-vlan-list

destination-vlan dst-vlan-id

vlan mac vlan

mac-address-mapping x destination-vlan dst-vlan-id source-vlan src-vlan-list

no mac-address-mapping x destination-vlan dst-vlan-id source-vlan src-vlan-list

	no	vlan vlan

tag tag

ruijie#configure

--	--	--

	no	uplink
	uplink	
	uplink	
	ruijie(config)# interface gigabitEthernet 0/1 ruijie(config-if)# switchport mode uplink ruijie(config)# end	
	show vlan	-
	RGOS10.1	
	-	-

9.1.10 switchport dot1q-tunnel allowed vlan

dot1q-tunnel vlan

switchport dot1q-tunnel allowed vlan [add] {tagged|untagged} *v_list*

switchport dot1q-tunnel allowed vlan remove *v_list*

no switchport dot1q-tunnel allowed vlan

	tagged	tag
	untagged	tag
	<i>v_list</i>	vlan id
	no	
	vlan 1 untagged	

```
dot1q-tunnel    vlan 3-6    vlan    tag
ruijie(config)#interface gigabitEthernet 0/1
ruijie(config-if)#switchport dot1q-tunnel allowed vlan tagged 3-6
ruijie(config)#end
```

show interface dot1q-tunnel	-

RGOS10.3

-	-

9.1.11 switchport dot1q-tunnel native vlan

```
dot1q-tunnel    vlan id
switchport dot1q-tunnel native vlan vid
no switchport dot1q-tunnel native vlan
```

vid	vlan id
no	vlan 1

vlan 1

```
dot1q-tunnel    vid 8
ruijie(config)# interface gigabitEthernet 0/1
ruijie(config-if)# switchport dot1q-tunnel native vlan 8
```

```
ruijie(config)#end
```

show interface dot1q-tunnel	-

RGOS10.3

-	-

9.1.12 traffic-redirect access-group acl outer-vlan

access,trunk,hybrid, uplink

vid

traffic-redirect access-group *acl* outer-vlan *vid* in**no traffic-redirect access-group *acl* outer-vlan**

<i>acl</i>	acl
------------	-----

<i>vd</i>	vid
-----------	-----

no	vid
-----------	-----

```
ruijie#configure
```

```
ruijie(config)#ip access-list standard 2
```

```
ruijie(config-acl-std)#permit host 1.1.1.1
```

```
ruijie(config-acl-std)#exit
```

```
ruijie(config)# interface gigabitEthernet 0/1
```

```
ruijie(config-if)# switchport mode trunk
```

```
ruijie(config-if)# traffic-redirect access-group 2 outer-vlan 3 in
```

```
ruijie(config-if)# end
```

1.1.1.1

vid

3

	show traffic-redirect	-
	RGOS10.3	
	-	-

9.1.13 traffic-redirect access-group acl nested-vlan

dot1q-tunnel

vid

traffic-redirect access-group *acl* nested-vlan *vid* in

no traffic-redirect access-group *acl* nested -vlan

	<i>acl</i>	acl
	<i>vid</i>	vid
	no	vid

1.1.1.3

vid 9

```

ruijie# configure
ruijie(config)# ip access-list standard 20
ruijie(config-acl-std)# permit host 1.1.1.3
ruijie(config-acl-std)# exit
ruijie(config)# interface gigabitEthernet 0/1
ruijie(config-if)# switchport mode dot1q-tunnel
ruijie(config-if)# traffic-redirect access-group 20 nested-vlan 10
in
ruijie(config-if)# end

```

--	--	--

	show traffic-redirect	-
	RGOS10.1	
	-	-

9.1.14 l2protocol-tunnel

dot1q-tunnel

l2protocol-tunnel {stp|gvrp}

no l2protocol-tunnel {stp|gvrp}

	stp	stp
	gvrp	gvrp
	no	

	gvrp stp
	ruijie# configure
	ruijie(config)# l2protocol-tunnel stp
	ruijie(config)# l2protocol-tunnel gvrp
	ruijie(config)# end

	show l2protocol-tunnel {gvrp stp}	-

--	--	--

	-	-
--	---	---

9.1.15 l2protocol-tunnel *proto-type* enable

l2protocol-tunnel { stp|gvrp } enable

no l2protocol-tunnel { stp|gvrp } enable

	stp	stp
	gvrp	gvrp
	no	

--

--

--

--

```
ruijie# configure
ruijie(config)# interface fa 0/1
ruijie(config-if)# l2protocol-tunnel gvrp enable
ruijie(config-if)# end
```

	show l2protocol-tunnel { gvrp stp }	-

--

RGOS10.3

	-	-

9.1.16 l2protocol-tunnel *proto-type* tunnel-dmac *mac-address*


```
rujie# show dot1q-tunnel
Ports   Dot1q-tunnel
-----
Gi0/1   Enable
```

-	-

RGOS10.3

-	-

9.2.2 show frame-tag tpid

tpid

show frame-tag tpid [interface *intf-id*]

<i>intf-id</i>	

tpid

```
rujie# show frame-tag tpid
```


dot1q-tunnel

show interface *[intf-id]* **dot1q-tunnel**



```
Ruijie# show interface intf-name remark
```

```
Ports          Type          From value  To value
```

```
-----
```

```
Gi0/1          Cos-To-Cos  3          5
```

-	-

RGOS10.1

-	-

9.2.6 show interface mac-address-mapping x

MAC

show mac-address-mapping x

-	-

```
ruijie# show mac-address-mapping 1
```

```
Ports          Destination-VID  Source-VID-list
```

```
-----
```

```
Gi0/1          5              1-3
```

-	-

<i>intf-id</i>	

```
ruijie# show traffic-redirect
```

Ports	Type	VID	Match-filter
-----	-----	-----	-----
Gi0/3	Mod-outer	23	11
Gi0/3	Mod-outer	3	4
Gi0/3	Mod-outer	6	5
Gi0/3	Mod-inner	8	inner-to-8
Gi0/6	Mod-inner	9	100
Gi0/7	Nested-vid	13	nest-13

-	-

RGOS10.3

-	-

9.2.9 show translation-table

access,trunk,hybrid vid

show translation-table [**interface** *intf-id*]

<i>intf-id</i>	



Destination mac : 01d0f8000006
L2protocol-tunnel : gvrp Disable



-	-



RGOS10.3



-	-

10 Share VLAN

10.1

10.1.1 share

	share vlan	
	-	-
	vlan	
	share vlan no share	
	end	Ctrl+C
	exit	
	Ruijie(config)#vlan 2	
	Ruijie(config-vlan)#share	
	-	-
	-	-

10.2

10.2.1 show mac-address-table share

11 MAC

11.1

11.1.1 address-bind

ip mac

address-bind *ip-address mac-address*

no address-bind *ip-address*

<i>ip-address</i>	IP
<i>mac-address</i>	mac

IP	MAC	IP	IP
MAC	IP	MAC	

ip 3.3.3.3 mac 00d0.f811.1112
Ruijie(config)# **address-bind** 3.3.3.3 00d0.f811.1112

--	--

/

address-bind install

no address-bind install

	-	-

fa 0/1
Ruijie(config)# **address-bind uplink** fa0/1
Ruijie(config)# **address-bind install**

	show address-bind uplink	

RGOS10.1

	-	-

11.1.3 address-bind ip-address

ip mac .

address-bind ip-address mac-address

no address-bind ip-address

	ip-address	IP
	mac-address	mac

The diagram shows a sequence of fields in a packet structure: IP, MAC, IP, MAC, IP, IP.

```

ip      3.3.3.3   mac      00d0.f811.1112
Ruijie(config)# address-bind 3.3.3.3 00d0.f811.1112

```

show address-bind	

1

	-	-
--	---	---

	-	-
	-	-

1

1

MAC

IP MAC IP IP
MAC IP MAC
(address-bind install)

fa 0/1
Ruijie(config)#**address-bind uplink** fa0/1

show address-bind uplink	

RGOS10.1

-	-

11.1.6 clear mac-address-table dynamic

clear mac-address-table dynamic[address *mac-addr*] [**interface** *interface-id*] [**vlan** *vlan-id*]

dynamic	
address <i>mac-addr</i>	
interface <i>interface-id</i>	
vlan <i>vlan-id</i>	VLAN

show mac-address-table dynamic

```
Ruijie# clear mac-address-table dynamic
```

```
show mac-address-table dynamic
```

11.1.7 clear mac-address-table filtering

clear mac-address-table filtering [**address** *mac-addr*][**vlan** *vlan-id*]

```
filtering
```

```
address mac-addr
```

```
vlan vlan-id
```

```
VLAN
```

```
show mac-address-table filtering
```

```
00d0.f800.0c0c
```

```
Ruijie# clear mac-address-table filtering address 00d0.f800.0c0c
```

```
mac-address-table filtering
```

```
show mac-address-table filtering
```

--	--	--

no mac-address-table aging-time



```
show mac-address-table filtering
```

```
Ruijie(config)# mac-address-table filtering 00d0f8000000 vlan 1
```

clear mac-address-table filtering	
show mac-address-table filtering	

-	-

11.1.11 mac-address-table notification

MAC

no

mac-address-table notification [interval *value* | history-size *value*]

no mac-address-table notification [interval | history-size]

interval <i>value</i>	MAC Trap 1
history-size <i>value</i>	MAC 50

1

50

MAC

Trap

snmp-server enable traps mac-notification

MAC Trap

```
Ruijie(config)# mac-address-table notification
```

```
Ruijie(config)# mac-address-table notification interval 40
```

```
Ruijie(config)# mac-address-table notification history-size 100
```

--	--

--	--

tp,yA5pWChX-1Ag0Sb6hQp6h0P18Tt06fj0BpSG%GSñ...g4rS6AqMA5r0

clearJT14(-)-2(a)5(ddre-ad)6(()-6(static) 0 1(stt)-3(Tf0 Tc 0 Tw 21.952 0.006 Td[<1C122F0E4D2D

	-	
	-	

Diagram illustrating the configuration of MAC address learning on a switch interface.

The diagram shows a switch configuration for interface `Ruijie1/0/24`. The configuration includes:

```
mac-address-learning
1
Ruijie(config-if)# no mac-address-learning
```

The diagram also shows a table representing the MAC address table, which is currently empty.

MAC	Port
-----	------

11.2.1 show address-bind

show address-bind

virtual address	physical address
0	0
0	4

```
Ruijie# show address-bind
```

IP Address	Binding MAC Addr
-----	-----
3.3.3.3	00d0.f811.1112
3.3.3.4	00d0.f811.1117

address-bind	

-	-

11.2.2 show address-bind uplink

```
show address-bind uplink
```


```
Ruijie# show address-bind uplink
```

Ports	State
-----	-----
Fa0/1	Disabled
Fa0/2	Disabled

MAC

.....

address-bind uplink	

-	-

11.2.3 show mac-address-table address

MAC

show mac-address-table [**address** *mac-addr*] [**interface** *interface-id*] [**vlan** *vlan-id*]

address <i>mac-addr</i>	MAC
interface <i>interface-id</i>	
vlan <i>vlan-id</i>	VLAN

Ruijie#

	show mac-address-table interface	
	show mac-address-table vlan	VLAN
	show mac-address-table count	
	show mac-address-table static	
	show mac-address-table filtering	

	-	-
--	---	---

11.2.5 show mac-address-table count

show mac-address-table count

	-	-

--

--

--

```
Ruijie# show mac-address-table count
Dynamic Address Count : 51
Static Address Count : 0
Filter Address Count : 0
Total Mac Addresses : 51
Total Mac Address Space Available: 8139
```

	show mac-address-table static	
	show mac-address-table filtering	
	show mac-address-table dynamic	
	show mac-address-table address	
	show mac-address-table interface	
	show mac-address-table vlan	VLAN

--

	-	-

11.2.6 show mac-address-table dynamic

show mac-address-table dynamic [**address** *mac-addr*] [**interface** *interface-id*] [**vlan** *vlan-id*]

<i>mac-addr</i>	MAC
<i>vlan-id</i>	VLAN
<i>interface-id</i>	(AggregatePort)

Ruijie# **show mac-address-table dynamic**

Vlan	MAC Address	Type	Interface
----	-----	-----	-----
1	0000.0000.0001	DYNAMIC	gigabitethernet 1/1
1	0001.960c.a740	DYNAMIC	gigabitethernet 1/1
1	0007.95c7.dff9	DYNAMIC	gigabitethernet 1/1
1	0007.95cf.eee0	DYNAMIC	gigabitethernet 1/1
1	0007.95cf.f41f	DYNAMIC	gigabitethernet 1/1
1	0009.b715.d400	DYNAMIC	gigabitethernet 1/1
1	0050.bade.63c4	DYNAMIC	gigabitethernet 1/1

clear mac-address-table dynamic

-	-

interface <i>interface-id</i>	MAC
<i>history</i>	MAC

MAC

Ruijie# **show mac-address-table notification interface**

Interface	MAC Added Trap	MAC Removed Trap
-----------	----------------	------------------

-----	-----	-----
-------	-------	-------

GigabitEthernet1/14	Disabled	Disabled
---------------------	----------	----------

Ruijie# **show mac-address-table notification**

MAC Notification Feature : Disabled

Interval between Notification Traps : 1 secs

Maximum Number of entries configured in History Table :1

Current History Table Length : 0

Ruijie# **show mac-address-table notification history**

History Index : 0

MAC Changed Message :

Operation:ADD Vlan : 1 MAC Addr: 00f8.d012.3456 GigabitEthernet 3/1

mac-address-table notification	MAC
snmp trap mac-notification	MAC

-	-

11.2.10 show mac-address-table static

show mac-address-table static [**addr** *mac-addr*] [**interface** *interface-id*] [**vlan** *vlan-id*]

<i>mac-addr</i>	MAC
<i>vlan-id</i>	VLAN
<i>interface-id</i>	(AggregatePort)

Ruijie# **show mac-address-table static**

Vlan	MAC Address	Type	Interface
-----	-----	-----	-----
1	00d0.f800.1001	STATIC	gigabitethernet 1/1
1	00d0.f800.1002	STATIC	gigabitethernet 1/1
1	00d0.f800.1003	STATIC	gigabitethernet 1/1

mac-address-table static	
clear mac-address-table static	

-	-

11.2.11 show mac-address-table vlan

VLAN

show mac-address-table vlan [*vlan-id*]

<i>vlan-id</i>	VLAN ID

```
Ruijie# show mac-address-table vlan 1
```

Vlan	MAC Address	Type	Interface
1	00d0.f800.1001	STATIC	gigabitethernet 1/1
1	00d0.f800.1002	STATIC	gigabitethernet 1/1
1	00d0.f800.1003	STATIC	gigabitethernet 1/1

show mac-address-table static	
show mac-address-table filtering	
show mac-address-table dynamic	
show mac-address-table address	
show mac-address-table interface	
show mac-address-table count	

|

1

12 DHCP Snooping

12.1 DHCP snooping

12.1.1 ip dhcp snooping

DHCP Snooping no
DHCP Snooping

[no] ip dhcp snooping

-	-

DHCP Snooping show ip dhcp snooping DHCP
snooping



DHCP Snooping Private VLAN

DHCP snooping

Ruijie# **configure terminal**

Ruijie(config)# **ip dhcp snooping**

Ruijie(config)# **end**

Ruijie# **show ip dhcp snooping**

Switch DHCP snooping status ENABLE

Verification of hwaddr field status DISABLE

DHCP snooping database write-delay time: 0 seconds

DHCP snooping option 82 status: ENABLE

DHCP snooping Support Bootp bind status: ENABLE

Interface Trusted Rate limit (pps)

--	--

	show ip dhcp snooping	DHCP snooping
	-	-

12.1.2 ip dhcp snooping bootp-bind

DHCP Snooping Bootp
no DHCP snooping Bootp

[no] ip dhcp snooping bootp-bind

	-	-

	DHCP Snooping	Bootp	DHCP
Snooping	Bootp	Bootp	DHCP
Snooping	Bootp		

```

DHCP Snooping      Bootp
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping bootp-bind
Ruijie(config)# end
Ruijie# show ip dhcp snooping
Switch DHCP snooping status    ENABLE
Verification of hwaddr field status    DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                      Trusted                      Rate limit (pps)
-----

```


	-	-
--	---	---

12.1.5 ip dhcp snooping information option

DHCP option82
no

[no] ip dhcp snooping information option

	-	-

	DHCP	option82	DHCP	option82
--	------	----------	------	----------

```

DHCP                      option82
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping information option
Ruijie(config)# end
Ruijie# show ip dhcp snooping
Switch DHCP snooping status    ENABLE
Verification of hwaddr field status    DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                      Trusted      Rate limit (pps)
-----

```

show ip dhcp snooping	DHCP snooping	

--	--	--

DHCP

no

[no] ip dhcp snooping limit rate *rate-value*

<i>rate-value</i>	PPS[Packet Per Second]

DHCP Snooping VLAN

CPP[CPU Protect Protocol]

CPP

DHCP

CPP

DHCP Snooping

CPP

show ip dhcp snooping

1 100pps

Ruijie# **configure terminal**Ruijie(config)# **interface fastEthernet 0/1**Ruijie(config-if)# **ip dhcp snooping limit rate 100**Ruijie(config-if)# **end**Ruijie# **show ip dhcp snooping**

Switch DHCP snooping status ENABLE

Verification of hwaddr field status DISABLE

DHCP snooping database write-delay time: 0 seconds

DHCP snooping option 82 status: ENABLE

DHCP snooping Support Bootp bind status: ENABLE

Interface	Trusted	Rate limit (pps)
-----------	---------	------------------

-----	-----	-----
-------	-------	-------

FastEthernet0/1	NO	100
-----------------	----	-----

show ip dhcp snooping	DHCP snooping

DHCP snooping TRUST
no UNTRUST

[no] ip dhcp snooping trust

-	-

UNTRUST

DHCP DHCP TRUST TRUST
 UNTRUST DHCP

fastEthernet 0/1 TRUST

Ruijie# **configure terminal**

Ruijie(config)# **interface fastEthernet 0/1**

Ruijie(config-if)# **ip dhcp snooping trust**

Ruijie(config-if)# **end**

Ruijie# **show ip dhcp snooping**

Switch DHCP snooping status ENABLE

Verification of hwaddr field status DISABLE

DHCP snooping database write-delay time: 0 seconds

DHCP snooping option 82 status: ENABLE

DHCP snooping Support Bootp bind status: ENABLE

Interface	Trusted	Rate limit (pps)
-----------	---------	------------------

-----	-----	-----
-------	-------	-------

FastEthernet0/1	YES	unlimited
-----------------	-----	-----------

12.3 DHCP snooping

12.3.1 show ip dhcp snooping

|

|

-	-

12.3.2 show ip dhcp snooping binding

DHCP Snooping

show ip dhcp snooping binding

|

-	-

|

|

|

DHCP Snooping

|

Ruijie# **show ip dhcp snooping binding**

Total number of bindings: 1

MacAddress	IpAddress	Lease(sec)	Type	VLAN	Interface
0000.0000.0001	1.1.1.1	78128	dhcp-snooping	1	FastEthernet 0/1

|

ip dhcp snooping binding	DHCP snooping
clear ip dhcp snooping binding	DHCP snooping

|

|

--	--

DHCP Snooping

debug ip dhcp snooping {

13 IGMP Snooping

13.1

13.1.1 deny

	profile	profile	deny
deny			
	deny	profile	
	profile	deny	
	profile		
	profile	range	profile
	profile	"H k	Ŷ N

profile profile permit profile

permit

permit		profile

profile deny

profile

profile range profile
profile

224.2.2.2 profile
Ruijie(config)# ip igmp profile 1
Ruijie(config-profile)# range 224.2.2.2
Ruijie(config-profile)# permit

ip igmp profile	profile
range	

-	-

13.1.3 range

profile profile range
no

range low-ip-address [high-ip-address]
no range low-ip-address [high-ip-address]

low-ip-address	

<i>high-ip-address</i>	
------------------------	--

profile

profile	profile	profile	deny
---------	---------	---------	------

224.2.2.2~224.2.2.244	profile
Ruijie(config)# ip igmp profile 1	
Ruijie(config-profile)# range 224.2.2.2 224.2.2.244	

ip igmp profile	profile
deny	profile deny
permit	profile permit

-	-

13.1.4 ip igmp profile

IGMP	profile	profile	
profile		profile-number	igmp profile

ip igmp profile *profile-number*

no ip igmp profile *profile-number*

<i>profile-number</i>	profile 1-65535

IGMP Profiles “ SVGL ” “
” “ IGMP Filtering ” profile
profile

1 profile profile
Ruijie(config)# ip igmp profile 1
Ruijie(config-profile)#

range	profile
permit	profile permit
deny	profile deny

-	-

13.1.5 ip igmp snooping ivgl

igmp snooping ivgl ip igmp snooping ivgl
no igmp snooping

ip igmp snooping ivgl
no ip igmp snooping

-	-

disable

VLAN VLAN VLAN
VLAN

		pim snooping	igmp snooping	IVGL	IVGL-SVGL
		no ip igmp snooping	igmp snooping		
		pim snooping	pim snooping		

Ruijie(config)# ip igmp snooping ivgl

ip igmp snooping svgl	igmp snooping	svgl
ip igmp snooping ivgl-svgl	igmp snooping	

-	-

13.1.6 ip igmp snooping vlan

vlan igmp snooping ivgl ip igmp
snooping vlan no igmp snooping
ip igmp snooping vlan vid
no ip igmp snooping vlan vid

vid	vlan id

disable

		vlan	IGMP Snooping
		vlan	igmp snooping
		no ip igmp snooping vlan	igmp snooping
		pim snooping VLAN	pim snooping

	-	-

13.1.8 ip igmp snooping svgl profile

profile SVGL “

77 ID806 Td()TjC Td(8.796 1 Tf-E3>]TjT<350E2CD516JTT1 1 Tf0 Tr 4.01jC)5fb1G4jw 14018 Tc 5.2390	
0017...0000U6	

NJ Ä Ö a 5

no ip igmp snooping dyn-mr-aging-time

		time	, <1-3600>

300s

Hello IGMP PIM

100s
Ruijie(config)# ip igmp snooping dyn-mr-aging-time 100

IP IGMP

IP IGMP

igmp snooping fast-leave

Ruijie(config)# **ip igmp snooping fast-leave enable**

C

100s

Ruijie(config)# **ip igmp snooping query-max-response-time 100**

	ip igmp snooping limit-ipmc	ip

no

IP

IP

address

server *saddress*

vid address

server

<i>vid</i>	ip	vlan id
	(	)

IP

ip

Ruijie(config)# **ip snooping limit-ipmc** vlan 1

224.0.0.1

server 192.168.4.243

		IP IP

	-	-

13.1.14 ip igmp snooping source-check port

igmp snooping

ip igmp snooping source-check portno

13.1.15 ip igmp snooping suppression enable

igmp snooping Report		ip igmp snooping
suppression enable	no	igmp snooping suppression
ip igmp snooping suppression enable		
no ip igmp snooping suppression enable		



vid

vlan id

VLAN

no

VLAN

igmp snooping

vlan 1

Ruijie(config)# ip igmp snooping vlan 1 mrouter learn pim-dvmrp

ip igmp snooping mrouter learn pim-dvmrp	



	-	-
--	---	---

13.2

13.2.1 show ip igmp snooping

igmp snooping

Show ip igmp snooping [gda-table | interfaces | mrouter] statistics [vlan *vlan-id*]

		igmp snooping
gda-table		
interfaces		igmp snooping filtering
mrouter		
statistics [vlan <i>vlan-id</i>]		snooping
vlan	vlan	snooping

--

EXEC

--

--

	-	-

--

	-	-

13.2.2 show ip igmp profile [profile-number]

		IGMP Snooping
	event	IGMP Snooping
	packet	IGMP Snooping
	msf	IGMP Snooping
	warning	IGMP Snooping

14 DHCPV6 Snooping

14.1

14.1.1 ipv6 dhcp snooping

dhcpv6 snooping

snooping

no

dhcpv6

ipv6 dhcp snooping

no ipv6 dhcp snooping

	-	-

dhcpv6 snooping

show ipv6 dhcp

snooping

dhcpv6 snooping

1

dhcpv6 snooping

Ruijie(config)#

ipv6 dhcp snooping

show ipv6 dhcp snooping		dhcpv6 snooping

no ipv6 dhcp snooping binding-delay

[illegible]

```
Ruijie(config)# ipv6 dhcp snooping binding-delay 10
```

no ipv6 dhcp snooping database write delay

[illegible]

3

Item	Value
1. The first part of the document is a title page.	1.00
2. The second part of the document is a table of contents.	1.00
3. The third part of the document is a list of references.	1.00
4. The fourth part of the document is a list of figures.	1.00
5. The fifth part of the document is a list of tables.	1.00
6. The sixth part of the document is a list of appendices.	1.00
7. The seventh part of the document is a list of footnotes.	1.00
8. The eighth part of the document is a list of endnotes.	1.00
9. The ninth part of the document is a list of glossary.	1.00
10. The tenth part of the document is a list of index.	1.00

[illegible]

	dhcipv6	no
ipv6 dhcp snooping filter-dhcp-pkt		
no ipv6 dhcp snooping filter-dhcp-pkt		
	dhcipv6	dhcipv6
	dhcipv6	
1	fastethernet 0/1	dhcipv6
	Ruijie(config)# interface fastethernet 0/1	
	Ruijie(config-if)# ipv6 dhcp snooping filter-dhcp-pkt	
	-	-
	10.4	

“ ” no DHCPv6

ipv6 dhcp snooping ignore dest-not-found

no ipv6 dhcp snooping ignore dest-not-found

DHCPv6	MAC	MAC	DHCPv6	
	MAC			MAC
“ DHCPV6_SNOOPING-5-DEST_NOT_FOUND: Could not find destination port. Destination MAC [mac-address] ”				
		MAC	DHCPv6	
		MAC		VLAN

1
Ruijie(config)# **ipv6 dhcp snooping ignore dest-not-found**

show ipv6 dhcp snooping	dhcpv6 snooping

10.4	

14.1.7 ipv6 dhcp snooping link-detection

LINK DOWN no

ipv6 dhcp snooping link-detection

no ipv6 dhcp snooping link-detection

	LINK DOWN	
	LINK DOWN	
	1 LINK DOWN	
	Ruijie(config)# ipv6 dhcp snooping link-detection	
	show ipv6 dhcp snooping	dhcpv6 snooping
	10.4	

14.1.8 ipv6 dhcp snooping trust

	dhcpv6 snooping	trust	no
	untrust		
	ipv6 dhcp snooping trust		
	no ipv6 dhcp snooping trust		
	dhcpv6	trust	trust
	untrust	dhcpv6 Server	dhcpv6 Server

```

1          fastethernet 0/1   trust
Ruijie(config)# interface fastethernet 0/1
Ruijie(config-if)# ipv6 dhcp snooping trust

```

show ipv6 dhcp snooping	dhcpv6 snooping

10.4	

14.1.9 Ipv6 dhcp snooping vlan

```

vlan          dhcpv6 snooping
vlan          dhcpv6 snooping

```

ipv6 dhcp snooping {*vlan-list* | {*vlan-min* [*vlan-max*]}}

no ipv6 dhcp snooping {*vlan-list* | {*vlan-min* [*vlan-max*]}}

<i>vlan-list</i>	vlan 1,3-5,7,9-11
<i>vlan-min</i>	vlan id
<i>vlan-max</i>	vlan id

```

dhcpv6 snooping

```

```

dhcpv6 snooping
vlan          dhcpv6 snooping

```

```

1          vlan 1          dhcpv6 snooping
Ruijie(config)# no ipv6 dhcp snooping vlan 1

```

--	--

	-	-
	10.4	

14.1.10 ipv6 source binding

no

ipv6 source binding mac-address vlan vlan-id ipv6-address interface interface-name

no ipv6 source binding mac-address vlan vlan-id ipv6-address interface interface-name

mac-address		MAC
vlan-id		VLAN
ipv6-address		IPV6
interface-name		
	IPV6	DHCPV6
		IPV6
1		
Ruijie(config)#	ipv6 source binding	00d0.f866.4777 vlan 10
	2001:2002::2003	interface fastethernet 0/10

	10.4	
--	------	--

14.1.11 ipv6 verify source

no

ipv6 verify source [port-security]

no ipv6 verify source

port-security	MAC	+ IPV6	MAC
		IPV6	
		IPV6	IPV6

--

--

	IPV6	DHCPV6	IPV6
--	------	--------	------

1	fastethernet 0/1	MAC+IPV6
Ruijie(config)# interface fastethernet 0/1		
Ruijie(config-if)# ipv6 verify source port-security		

--

10.4		

14.2

14.2.1 show ipv6 dhcp snooping

dhcpv6 snooping

show ipv6 dhcp snooping

	-	-

dhcpv6 snooping

1 dhcpv6 snooping

Ruijie# show ipv6 dhcp snooping

Switch DHCPv6 snooping status ENABLE

DHCPv6 snooping vlan: 1-4094

DHCPv6 snooping database write-delay time: 0 seconds

DHCPv6 ignore dest-not-found :DISABLE

DHCPv6 snooping link detection :DISABLE

Interface	Trusted	Filter DHCP
-----	-----	-----
FastEthernet0/10	yes	DISABLE

10.4		

14.2.2 show ipv6 dhcp snooping binding

dhcpv6 snooping

show ipv6 dhcp snooping binding [*ipv6-address*] [*mac-address*] [**vlan** *vlan_id*]
[**interface** *interface_name*]

	vlan <i>vlan_id</i>	VLAN
	interface <i>interface_name</i>	

dhcpv6 snooping

dhcpv6 snooping

show ipv6 source binding [*ipv6-address*] [*mac-address*] [**vlan** *vlan_id*]
[**interface** *interface_name*] [**dhcp-snooping** | **static**]

]

14.3.1 clear ipv6 dhcp snooping binding

dhcpv6 snooping

clear ipv6 dhcp snooping binding [*ipv6-address*] [*mac-address*] [**vlan** *vlan_id*]
[**interface** *interface_name*]

<i>ipv6-address</i>	ipv6
<i>mac-address</i>	mac
vlan <i>vlan_id</i>	VLAN
interface <i>interface_name</i>	

dhcpv6 snooping

1 dhcpv6 snooping

Ruijie# **clear ipv6 dhcp snooping binding**

10.4	

14.3.2 clear ipv6 dhcp snooping prefix

dhcpv6 snooping

clear ipv6 dhcp snooping prefix [*ipv6-prefix*] [*mac-address*] [**vlan** *vlan_id*]
[**interface** *interface_name*]

--	--

<i>ipv6-prefix</i>	ipv6
<i>mac-address</i>	mac
vlan <i>vlan_id</i>	VLAN
interface <i>interface_name</i>	

└──

└──

└──

dhcpv6 snooping

└──

1 dhcpv6 snooping
Ruijie# **clear ipv6 dhcp snooping prefix**

└──

└──

└──

10.4	

14.3.3 clear ipv6 dhcp snooping statistics

dhcpv6 snooping dhcpv6

clear ipv6 dhcp snooping statistics

└──

-	-

└──

└──

└──

dhcpv6 snooping dhcpv6

15 ND Snooping

15.1

15.1.1 ipv6 nd snooping

IPv6 ND snooping

no

IPv6 ND

Snooping

ipv6 nd snooping

no ipv6 nd snooping

ipv6 nd snooping

IPv6 ND snooping

Ruijie# **configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

Ruijie(config)# **ipv6 nd snooping**

show ipv6 nd snooping	ipv6 nd snooping

--	--

10.4(2)

15.1.2 ipv6 nd snooping vlan

VLAN IPv6 ND snooping no VLAN
IPv6 ND Snooping

ipv6 nd snooping vlan {*vlan-rng* | {*vlan-min* [*vlan-max*]}}

no ipv6 nd snooping vlan {*vlan-rng* | {*vlan-min* [*vlan-max*]}}

<i>vlan-rng</i>	vlan
<i>vlan-min</i>	vlan
<i>vlan-max</i>	vlan

vlan ipv6 nd snooping

1 VLAN 100 IPv6 ND Snooping

Ruijie# **configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

Ruijie(config)# **no ipv6 nd snooping vlan 100**

2 VLAN 4 5-7 15 IPv6 ND Snooping

Ruijie# **configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

Ruijie(config)# **no ipv6 nd snooping vlan 4,5-7,15**

show ipv6 nd snooping	ipv6 nd snooping

15.1.5 ipv6 nd snooping detect gateway

no

ipv6 nd snooping detect gateway ra
no ipv6 nd snooping detect gateway ra

VLAN

Ruijie#

<i>vlan-rng</i>	vlan
<i>vlan-min</i>	vlan
<i>vlan-max</i>	vlan

VALN

Ruijie# **configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

Ruijie(config)# **ipv6 nd snooping detect gateway vlan 8**

show ipv6 nd snooping	nd snooping

10.4(2)	

15.1.7 ipv6 nd snooping key-node

ND

no

ipv6 nd snooping key-node [link-local vid]ipv6_address/prefix_len

no ipv6 nd snooping key-node [link-local vid] ipv6_address/prefix_len

<i>vid</i>	link-local VID

<i>ipv6_address/prefix_len</i>	IPv6

Ruijie# **configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

Ruijie(config)#**ipv6 nd snooping key-node 2003::1/128**

show ipv6 nd snooping key-node	nd snooping
---------------------------------------	-------------

10.4(2)	
---------	--

15.1.8 ipv6 nd snooping monitor stateless-user

no

ipv6 nd snooping monitor stateless-user

no ipv6 nd snooping monitor stateless-user

ND

Ruijie# **configure terminal**
Enter configuration commands, one per line. End with CNTL/Z.
Ruijie(config)#**no ipv6 nd snooping monitor stateless-user**

show ipv6 nd snooping stateless-user	

10.4(2)	

15.1.9 ipv6 nd snooping stateless-user combine-security

no

ipv6 nd snooping stateless-user combine-security
no ipv6 nd snooping stateless-user combine-security

--	--

```
Ruijie# configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Ruijie(config)# ipv6 nd snooping stateless-user combine-security
```

show ipv6 nd snooping	ipv6 nd snooping

10.4(2)	

15.1.10 ipv6 nd snooping stateless-user address-bind

IPv6

no

```
ipv6 nd snooping stateless-user address-bind [strict] [ip-mac]
```

```
no ipv6 nd snooping stateless-user address-bind
```

strict	link-local link-local link-local
ip-mac	IP+MAC IP

```
Ruijie# configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Ruijie(config)# ipv6 nd snooping stateless-user address-bind
```

```
2
```

```
IP+MAC
```

```
Ruijie# configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Ruijie(config)#ipv6 nd snooping stateless-user address-bind strict  
ip-mac
```

```
show ipv6 nd snooping
```

```
ipv6 nd snooping
```

Enter configuration commands, one per line. End with CNTL/Z.
Ruijie(config)# **ipv6 nd snooping stateless-user station-move**



show ipv6 nd snooping	ipv6 nd snooping
------------------------------	------------------

10.4(2)	
---------	--

15.1.13 ipv6 nd snooping stateless-user per-vlan prefix-limit

VLAN IPv6

ipv6 nd snooping stateless-user per-vlan prefix-limit *num*

no ipv6 nd snooping stateless-user per-vlan prefix-limit

<i>num</i>	VLAN IPv6
------------	-----------

2	
---	--

VLAN 4 IPv6

Ruijie# **configure terminal**

Enter configuration commands, one per line. End with CNTL/Z.

Ruijie(config)#**ipv6 nd snooping stateless-user per-vlan prefix-limit 4**

show ipv6 nd snooping	ipv6 nd snooping
------------------------------	------------------

10.4(2)	
---------	--

15.1.14 clear ipv6 nd snooping key-node

clear ipv6 nd snooping key-node [vlan *vid*]

<i>vid</i>	VLAN

Ruijie# **clear ipv6 nd snooping key-node**

10.4(2)	

15.1.15 clear ipv6 nd snooping stateless-user

clear ipv6 nd snooping stateless-user [vlan *vid*]

<i>vid</i>	VLAN

```
Ruijie# clear ipv6 nd snooping stateless-user
```


10.4(2)	

15.1.16 clear ipv6 nd snooping prefix

VLAN

```
clear ipv6 nd snooping prefix [vid vlan]
```

<i>vlan</i>	VLAN

IPv6

```
Ruijie# clear ipv6 nd snooping prefix
```

--	--

15.2.1 show ipv6 nd snooping

[illegible][illegible]

15.2.2 show ipv6 nd snooping key-node

show ipv6 nd snooping key-node

Ruijie# show ipv6 nd snooping key-node

10.4(2)	

15.2.3 show ipv6 nd snooping stateless-user

ipv6

show ipv6 nd snooping stateless-user

ipv6

Ruijie# show ipv6 nd snooping stateless-user

10.4(2)	

\$1-CtNQ-rQ,

ND Snooping

16 MSTP

16.1

16.1.1 bpdu src-mac-check

bpdu mac no bpdu mac

bpdu src-mac-check H.H.H

no bpdu src-mac-check

H.H.H	mac	bpdu
no	bpdu	

Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# bpdu src-mac-check 00d0.f800.1e2f

-	-

0.08 20.64 re1 1 4e14.1 m7.36 259.82 209.22 19.56 reT/ 1 Tfg62.1

RSTP BPDU BPDU

clear spanning-tree detected-protocols [*interface interface-id*]

	<i>interface-id</i>	

Ruijie# **clear spanning-tree detected-protocols**

	show spanning-tree interface	STP

	-	-

16.1.3 spanning-tree

MSTP MSTP MSTP
 no spanning-tree no
 spanning tree

spanning-tree [**forward-time** *seconds* | **hello-time** *seconds* | **max-age** *seconds*]**no spanning-tree** [forwa Td[(no spannin)5(g)-10.001 Tc 0.0032 Tw 5.251 0 Td<01C4>T]TT1 1 Tf-0.000

forward-time hello-time max-age

$2 * (\text{Hello Time} + 1.0\text{snd}) \leq \text{Max-Age Time} \leq 2 * (\text{Forward-Delay} - 1.0\text{snd})$

```

1      spanning-tree
Ruijie(config)# spanning-tree
2      BridgeForwardDelay
Ruijie(config)# spanning-tree forward-time 10
```

show spanning-tree	STP
spanning-tree mst cost	STP PathCost
spanning-tree tx-hold-count STP	TxHoldCount

-	-

16.1.4 spanning-tree autoedge

Autoedge

disabled

Autoedge

spanning-tree autoedge [disabled]

disabled	Autoedge

	-	-
--	---	---

16.1.6 spanning-tree bpduguard

	BPDU Guard	enabled	disabled
	BPDU Guard		
	spanning-tree bpduguard	enabled	disabled
		EA 7	
	enabled		
	disabled		BPDU Guard

Bây giờ ta sẽ thử cấu hình BPDU Guard cho cổng Fa0/24 của switch S1. Đầu tiên ta sẽ cấu hình BPDU Guard cho cổng Fa0/24 của switch S1. Sau đó ta sẽ kiểm tra xem BPDU Guard có đang hoạt động hay không.

root guard

```
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# spanning-tree link-type point-to-point
```

show spanning-tree interface	STP

-	-

16.1.12 spanning-tree loopguard default

loop guard

no

loop guard

loop guard

bpdu

spanning-tree loopguard default

no spanning-tree loopguard default

-	-

loop guard

```
Ruijie(config)# spanning-tree loopguard default
```

-	-



16.1.14 spanning-tree mode

STP no

spanning-tree mode [stp | rstp | mstp]

no spanning-tree mode

	stp	Spanning tree protocol(IEEE 802.1d)
	rstp	Rapid spanning tree protocol(IEEE 802.1w)
	mstp	Multiple spanning tree protocol(IEEE 802.1s)

MSTP

.

Ruijie(config)# spanning-tree mode stp

	show spanning-tree	

	-	-


```
VLAN 3   Instance 1           MST
Ruijie(config-mst)# no instance 1 vlan 3
        Instance 1
Ruijie(config-mst)# no instance 1
        MST           show
```

--	--

MSTP

MSTP

Region

```
mst 20 GigabitEthernet 1/1 10
Ruijie(config)# interface gigabitEthernet 1/1
Ruijie(config-if)# spanning-tree mst 20 port-priority 0
show spanning-tree mst instance interface interface-id
```

```
Instance 20                               8192
Ruijie(config-if)# spanning-tree mst 20 priority 8192
show spanning-tree mst instance interface interface-id
```

	show spanning-tree interface	STP
	-	-

16.1.20 spanning-tree portfast

	Portfast	disabled	Portfast
	spanning-tree portfast [disabled]		
	disabled	Portfast	
	-		
	Ruijie(config)# interface gigabitethernet 1/1 Ruijie(config-if)# spanning-tree portfast		
	show spanning-tree interface	STP	
	-	-	

16.1.21 spanning-tree portfast bpdupfilter default

	BPDU filter	no	BPDU filter
	spanning-tree portfast bpdupfilter default		

no spanning-tree portfast bpdupfilter default

	-	-

BPDU filter

BPDU Filter

BPDU

show spanning-tree

Ruijie(config)# **spanning-tree portfast bpdupfilter default**

	show spanning-tree interface	STP

	-	-

16.1.22 spanning-tree portfast bpduguard default

BPDU guard

no

BPDU guard

spanning-tree portfast bpduguard default

no spanning-tree portfast bpduguard default

	-	-

BPDU Guard.

Ruijie(config)# spanning-tree portfast bpduguard default

show spanning-tree interface	STP

-	-

16.1.23 spanning-tree portfast default

Portfast no Portfast

spanning-tree portfast default

no spanning-tree portfast default

-	-

Portfast

16.1.24 spanning-tree reset

spanning-tree

no

spanning-tree reset

	-	-

Ruijie(config)# **spanning-tree reset**

show spanning-tree	STP	
show spanning-tree interface	STP	

	-	-

16.1.25 spanning-tree tc-guard

tc- guard

no

tc- guard

tc-guard

tc

spanning-tree tc-guard**no spanning-tree tc-guard**

	-	-

tc- guard

|

|

|

Ruijie(config-if)# **spanning-tree tc-guard**

|

-	-

|

|

-	-

16.1.26 spanning-tree tc-protection

tc- protection

no

tc- protection

spanning-tree tc- protection

no spanning-tree tc- protection

|

-	-

|

tc- protection

	-	-

16.1.27 spanning-tree tc-protection tc-guard

tc- guard no tc- guard tc-guard
tc

spanning-tree tc-protection tc-guard
no spanning-tree tc-protection tc-guard

	-	-

	tc- guard
--	-----------

--	--

--	--

	Ruijie(config)# spanning-tree tc-protection tc-guard
--	--

	-	-

--	--

	-	-

16.1.28 spanning-tree tx-hold-count

STP TxHoldCount

<i>tx-hold-count</i>	TxHoldCount	1 10

3

Ruijie(config)# **spanning-tree tx-hold-count 5**

--	--

show spanning-tree

	tx-hold-count	TxHoldCount
	pathcost method	

Ruijie# **show spanning-tree hello-time**



	link-type	linktype
--	-----------	----------

--

--

--

Ruijie# show spanning-tree interface gigabitethernet 1/5

	spanning-tree bpdufilter	BPDU filter
	spanning-tree portfast	portfast
	spanning-tree bpduguard	BPDU guard
	spanning-tree link-type	“ ”

--

	-	-

16.2.3 show spanning-tree mst

MST Instance

show spanning-tree mst { **configuration** | *instance-id* [**interface** *interface-id*] }

configuration	mst
<i>instance-id</i>	<i>Instance</i>
<i>interface-id</i>	

Instance

.

Ruijie# **show spanning-tree mst configuration**

17 SPAN

17.1

17.1.1 monitor session

SPAN . no

monitor session *session_number* {**source interface** *interface-id* [**both** | **rx** | **tx**] |
destination interface *interface-id* **switch** | [**acl**

SPAN

```
show monitor SPAN 1
Ruijie# show monitor session 1
sess-num: 1
src-intf:
GigabitEthernet 3/1 frame-type Both
dest-intf:
GigabitEthernet 3/8
```

monitor session	SPAN

-	-

18

```

1/2 //
Ruijie(config)# monitor session 2 destination remote vlan 7
interface gigabitEthernet 1/3 switch //
Ruijie(config)# monitor session 2 destination remote vlan 7
reflector-port interface gigabitEthernet 1/1 switch
2
Ruijie(config)# monitor session 2 remote-destination
Ruijie(config)# monitor session 2 destination remote vlan 7
interface gigabitEthernet 1/1 switch

```

show monitor	

reflector-port

-

-

18.1.2 remote-span

RSPAN VLAN

[no] remote-span

-

-

VLAN

end

Ctrl+C

exit

```

Ruijie(config)# vlan 5
Ruijie(config)# remote-span

```


19 IP

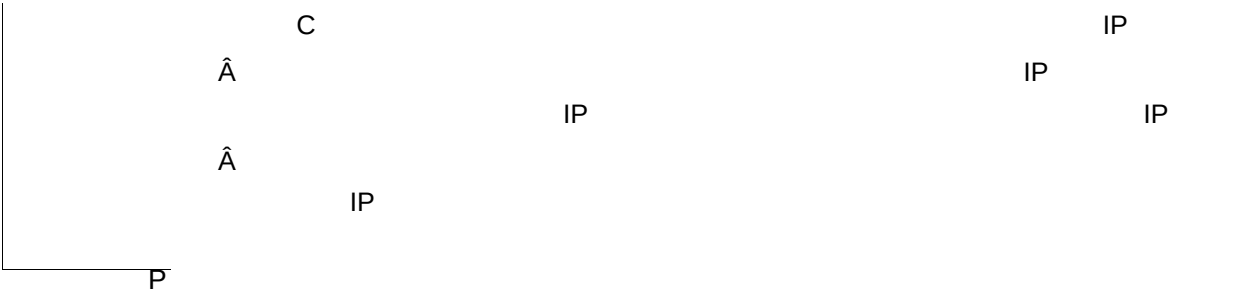
19.1

19.1.1 ip address

IP

no

IP



IP 10.10.10.1 255.255.255.0
ip address 10.10.10.1 255.255.255.0

show interface	

Â

Â

SLIP HDLC PPP LAPB Frame-relay

X.25

Â

ping
SNMP

IP

Â

IP

ARP

RGOS

ARP

32

IP

48

MAC

ARP

ARP

clear

```
1 SVI 1 ARP
Ruijie(config)# interface vlan 1
Ruijie(config-if)# arp gratuitous-send interval 1
2 SVI 1 ARP
Ruijie(config)# interface vlan 1
Ruijie(config-if)# no arp gratuitous-send
```

lig)# 2g)#

P

"H

†

R

IP

	Arp retry times <i>number</i>	ARP
--	--------------------------------------	-----

--

IP		
	-	-

19.2.5 arp timeout

ARP ARP no

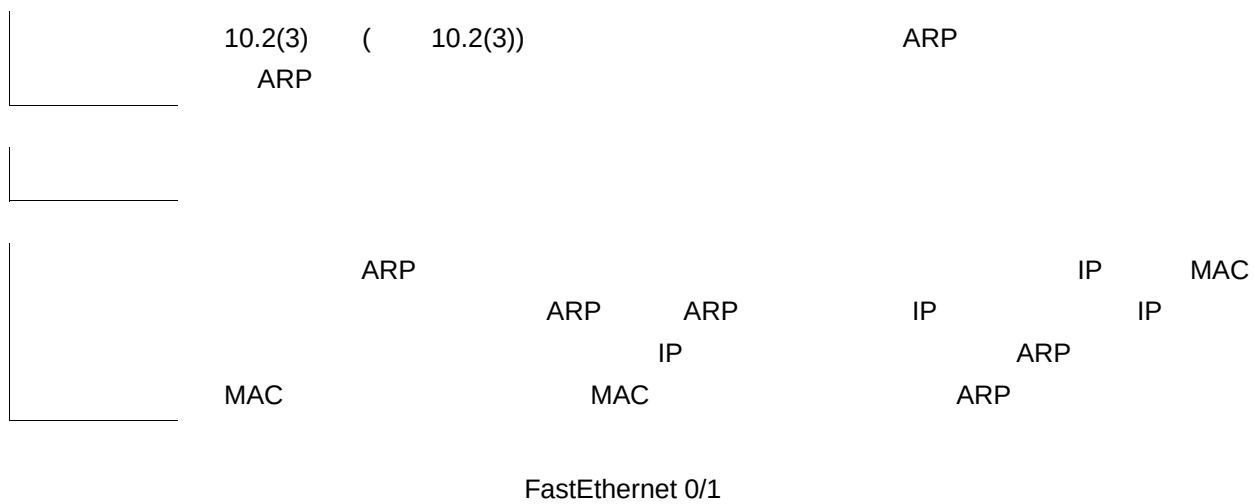
arp timeout *seconds*

no arp timeout

	ARP	no
8192		
arp unresolved number		
no arp unresolved		
	number	ARP < 1-8192 > 8192
	ARP	8192
	ARP	
		500
	arp unresolved 500	
	-	-
	-	-

19.2.7 ip proxy-arp

	ARP	ip proxy-arp	no
ARP			
ip proxy-arp			
no ip proxy-arp			



IP

mask

ARP

mask

vrf <i>vrf_name</i>	VRF	VRF	ARP
trusted	ARP	ARP	VRF
<i>ip</i>	IP	IP	ARP
	trusted	ARP	ARP
<i>mask</i>	IP	ARP ;	trusted
	ARP	ARP	
static		arp	
ARP <i>ARP-address /b</i>			

Age (min)	ARP
Hardware	IP
Type	ARPA
Interface	IP

2 show arp 192.168.195.68

Ruijie# **show arp 192.168.195.68**

Protocol	Address	Age(min)	Hardware	Type	Interface
Internet	192.168.195.68	1	0013.20a5.7a5f	arpa	VLAN 1

3 show arp 192.168.195.0 255.255.255.0

Ruijie# **show arp 192.168.195.0 255.255.255.0**

Protocol	Address	Age(min)	Hardware	Type	Interface
Internet	192.168.195.64	0	0018.8b7b.9106	arpa	VLAN 1
Internet	192.168.195.2	1	00d0.f8ff.f00e	arpa	VLAN 1
Internet	192.168.195.5	--	00d0.f822.33b1	arpa	VLAN 1
Internet	192.168.195.1	0	00d0.f8a6.5af7	arpa	VLAN 1
Internet	192.168.195.51	1	0018.8b82.8691	arpa	VLAN 1

4 show arp 001a.a0b5.378d

Ruijie# **show arp 001a.a0b5.378d**

Protocol	Address	Age(min)	Hardware	Type	Interface
Internet	192.168.195.67	4	001a.a0b5.378d	arpa	VLAN 1

-	-

-	-

19.3.3 show arp counter

ARP

arp

show arp counter

--	--

	-	-
	show arp counter Ruijie# show arp counter The Arp Entry counter:0 The Unresolve Arp Entry:0	
	-	-
	-	-

19.3.4 show arp detail

ARP

show arp detail [*interface-type interface-number*| *ip [mask]* | *mac-address* | **static** | **complete** | **incomplete**]

<i>interface-type interface-number</i>	ARP		
<i>ip</i>	ip	ip	ARP
<i>ip mask</i>	ip mask		ARP

ARP

ARP

show arp detailRuijie# **show arp detail**

IP Address	MAC Address	Type	Age(min)	Interface	Port
20.1.1.1	000f.e200.0001	Static	-- --	--	
20.1.1.1	000f.e200.0001	Static	-- VI3	--	
20.1.1.1	000f.e200.0001	Static	-- VI3	Gi2/0/1	
193.1.1.70	00e0.fe50.6503	Dynamic	1 VI3	Gi2/0/1	
192.168.0.1	0012.a990.2241	Dynamic	10 Gi2/0/3	Gi2/0/3	
192.168.0.1	0012.a990.2241	Dynamic	20 Ag1	Ag1	
192.168.0.1	0012.a990.2241	Dynamic	30 VI2	Ag2	
192.168.0.39	0012.a990.2241	Local	-- VI3	--	
192.168.0.39	0012.a990.2241	Local	-- Gi2/0/3	--	
192.168.0.1	0012.a990.2241	Local	-- VI3	--	
192.168.0.1	0012.a990.2241	Local	-- Gi2/3/2	--	

ARP

IP Address	IP
MAC Address	IP
Type	ARP
Age	ARP
Interface	IP
Port	ARP

	-	-

19.3.6 show ip arp

ARP

show ip arp

-	-

show ip arp

Ruijie# **show ip arp**

```

Protocol Address      Age(min)Hardware      Type
Interface
Internet 192.168.7.233  23  0007.e9d9.0488  ARPA FastEthernet 0/0
Internet 192.168.7.112  10  0050.eb08.6617  ARPA FastEthernet 0/0
Internet 192.168.7.79   12  00d0.f808.3d5c  ARPA FastEthernet 0/0
Internet 192.168.7.1    50  00d0.f84e.1c7f  ARPA FastEthernet 0/0
Internet 192.168.7.215  36  00d0.f80d.1090  ARPA FastEthernet 0/0
Internet 192.168.7.127  0   0060.97bd.ebee  ARPA FastEthernet 0/0
Internet 192.168.7.195  57  0060.97bd.ef2d  ARPA FastEthernet 0/0
Internet 192.168.7.183  --  00d0.f8fb.108b  ARPA FastEthernet 0/0

```

ARP

Protocol	Internet
Address	IP
Age (min)	ARP “_”
Hardware	IP
Type	ARPA
Interface	IP

IP

show ip interface [*interface-type interface-number*]

<i>Interface-type</i>	
<i>Interface-number</i>	

RGOS

RGOS

RGOS

“ UP ”

“ UP ”

Forward direct-boardcast is: ON

ICMP mask reply is: ON

Send ICMP redirect is: ON

Send ICMP unreachableled is: ON

DHCP relay is: OFF

Fast switch is: ON

Route horizontal-split is: ON

Help address is: 0.0.0.0

Proxy ARP is: ON

Outgoing access list is not set.

Inbound access list is not set.

IP interface state is:	"UP"
IP interface type is:	
IP interface MTU is:	MTU
IP address is:	IP
IP address negotiate is:	IP
Forward direct-boardcast is:	
ICMP mask reply is:	ICMP
Send ICMP redirect is:	ICMP
Send ICMP unreachableled is:	ICMP
DHCP relay is:	DHCP
Fast switch is:	IP
Route horizontal-split is:	
Help address is:	helper IP
Proxy ARP is:	ARP
Outgoing access list is	
Inbound access list is	

|

|

-	-

19.4

19.4.1 ip default-gateway

ip default-gateway no

ip default-gateway

no ip default-gateway

|

-	-

|

|

|

show ip redirects

|

192.168.1.1
ip default-gateway 192.168.1.1



ACL ACL ACE

```
dhcp option dot1x acl
Ruijie# configure terminal
Ruijie(config)# ip access-list extended
DenyAccessEachOtherOfUnauthrize
Ruijie(config-ext-nacl)# permit ip any host 192.168.3.1
//
Ruijie(config-ext-nacl)# permit ip any host 192.168.4.1
Ruijie(config-ext-nacl)# permit ip any host 192.168.5.1
Ruijie(config-ext-nacl)# permit ip host 192.168.3.1 any
// IP
Ruijie(config-ext-nacl)# permit ip host 192.168.4.1 any
Ruijie(config-ext-nacl)# permit ip host 192.168.5.1 any
Ruijie(config-ext-nacl)# deny ip 192.168.3.0 0.0.0.255 192.168.3.0
0.0.0.255
//
Ruijie(config-ext-nacl)# deny ip 192.168.3.0 0.0.0.255
192.168.4.0 0.0.0.255
Ruijie(config-ext-nacl)# deny ip 192.168.3.0 0.0.0.255
192.168.5.0 0.0.0.255
Ruijie(config-ext-nacl)# deny ip 192.168.4.0 0.0.0.255
192.168.4.0 0.0.0.255
Ruijie(config-ext-nacl)# deny ip 192.168.4.0 0.0.0.255
192.168.5.0 0.0.0.255
Ruijie(config-ext-nacl)# deny ip 192.168.5.0 0.0.0.255
192.168.5.0 0.0.0.255
Ruijie(config-ext-nacl)# deny ip 192.168.5.0 0.0.0.255
192.168.3.0 0.0.0.255
Ruijie(config-ext-nacl)# deny ip 192.168.5.0 0.0.0.255
192.168.4.0 0.0.0.255
Ruijie(config-ext-nacl)# exit
Ruijie(config)# ip dhcp relay information option dot1x access-group
DenyAccessEachOtherOfUnauthrize
```

service dhcp	DHCP

	ip dhcp relay information option dot1x	DHCP option dot1x
	-	-

20.1.4 ip dhcp relay information option82

DHCP Relay option82 no

[no] ip dhcp relay information option82

	-	-

option dot1x

DHCP option82

Ruijie# **configure terminal**

Ruijie(config)# **Ip dhcp relay information option82**

	Service dhcp	DHCP
	ip dhcp relay information option dot1x	DHCP option dot1x

	-	-

20.1.5 ip dhcp relay information option vpn

DHCP Relay

DHCP Relay Aware VRF

no

--	--

1		192.168.1.1
2	vrf	dep1

	-	-

21 DNS

21.1

21.1.1 ip domain-lookup

	DNS	no	DNS
	ip domain-lookup		
	no ip domain-lookup		
	-		-
	DNS		
	DNS		DNS
	DNS		
	Ruijie(config)# ip domain-lookup		
	show hosts		DNS
	-		-

21.1.2 ip name-server

no IP/IPv6

	<i>ip-address</i>	IP
	no ip host host-name ip-address	
	Ruijie(config)# ip host switch 192.168.5.243	
	show hosts	DNS
	-	-

21.1.4 ipv6 host

	IPV6	no
	ipv6 host host-name ipv6-address	
	no ipv6 host host-name ipv6-address	
	<i>host-name</i>	
	<i>ipv6-address</i>	IPV6
	no ipv6 host host-name ipv6-address	
	Ruijie(config)# ipv6 host ruijie 2001:0DB8:700:20:1::12	

21.2.2 show hosts

DNS

show hosts [*hostname*]

	-	-

DNS

Ruijie# **show hosts**

Name servers are:

static

host	type	address
switch	static	192.168.5.243
www.ruijie.com	dynamic	192.168.5.123

ip host	IP
ipv6 host	IPV6
ip name-server	DNS

-	-



show sntp SNTP

Ruijie(config)# sntp server 192.168.4.12

show sntp

SNTP

SNTP sync interval : 60

Time zone : +8

sntp enable	SNTP
show sntp	SNTP

RGOS10.0

-	-

23 NTP

23.1 NTP

23.1.1 no ntp

ntp

no ntp

[illegible]

NTP

NTP

NTP

NTP

```
no ntp
```

[illegible][illegible]

23.1.2 ntp access-group

no

ntp access-group { peer | serve | serve-only | query-only }access-list-number | access-list-name
no ntp access-group{peer | serve | serve-only | query-only}access-list-number | access-list-name

peer	NTP
serve	NTP
serve-only	NTP
query-only	NTP
access-list-number	IP1 99 1300 1999
access-list-name	IP

NTP

NTP
NTP
NTP

peer serve serve-only query-only



1
2

Ruijie(config)# **ntp access-group peer 1**
Ruijie(config)# **ntp access-group serve-only 2**

ip access-list	IP

	-	-

23.1.3 ntp authenticate

NTP NTP

ntp authenticate

no ntp authenticate

	-	-

NTP

ntp authentication-key ntp trusted-key

ntp authentication-key 6 md5 woooooop
ntp trusted-key 6
ntp authenticate

ntp authentication-key		
ntp trusted-key		

	-	-

23.1.4 ntp authentication-key

NTP

NTP

ntp authentication-key *key-id md5 key-string [enc-type]***no ntp authentication-key** *key-id md5 key-string [enc-type]*

<i>key-id</i>	ID
<i>key-string</i>	
<i>enc-type</i>	0

NTP

	-	-
--	---	---

<187915561C4]T1 1 Tf-2.9940 Td()TET60.84 7404.5 0.24 20.43 ref66.84 7404.5 063.2 0 24



20

prefer

NTP
NTP

IP



NTP server

IPv4 Ruijie(config)# **ntp server 192.168.210.222**
IPv6 Ruijie(config)# **ntp server 10::2**



no ntp	NTP



-	-

23.1.8 ntp synchronize

NTP

ntp synchronize
no ntp synchronize



-	-



NTP



NTP

Ntp synchronize



ntp server	NTP



-	-

23.1.9 ntp trusted-key

ID

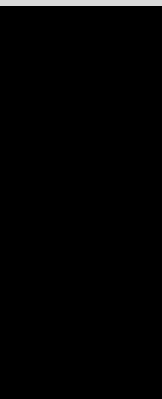
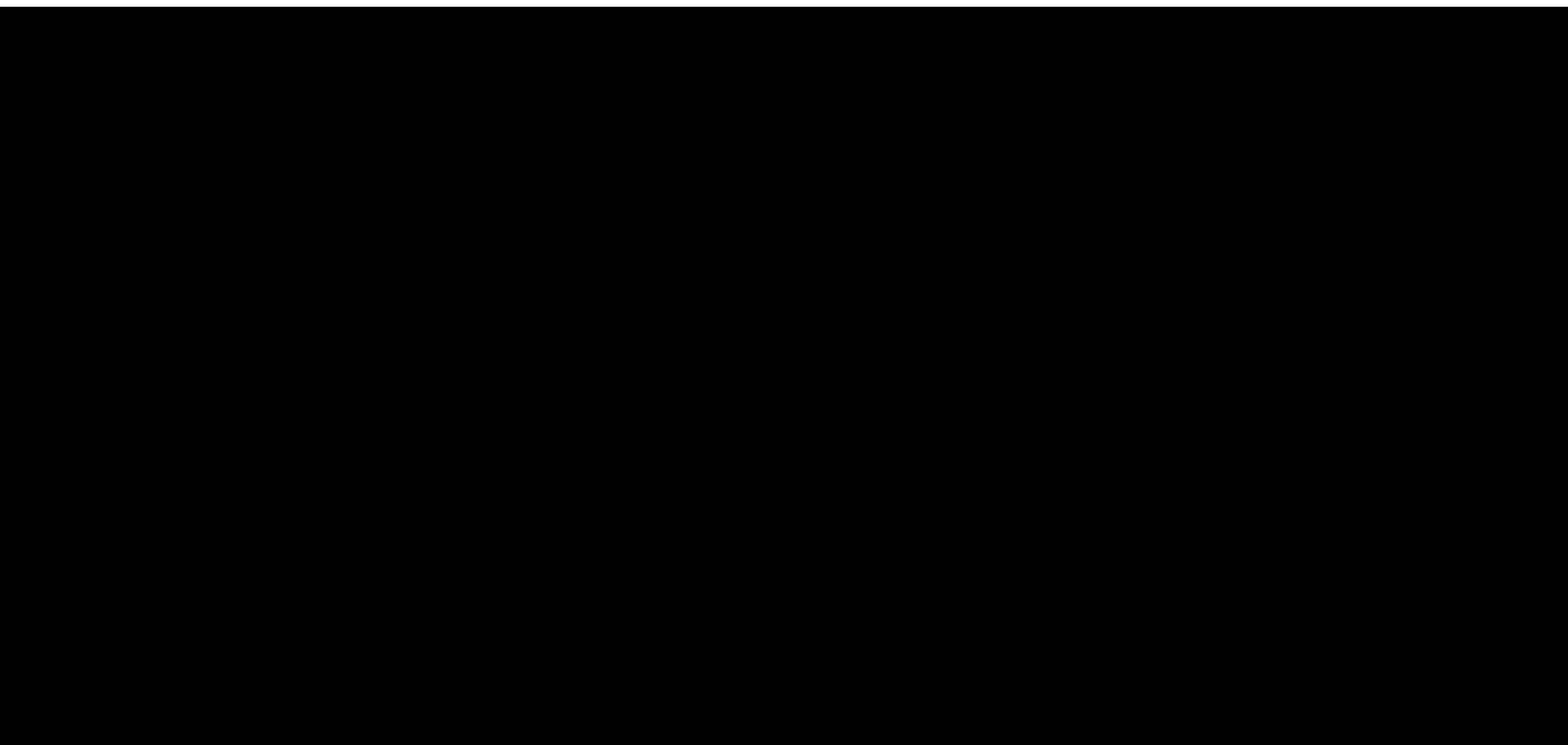
ntp trusted-key *key-id*

no ntp trusted-key *key-id*



<i>key-id</i>	ID





24 FTP Server

24.1

24.1.1 debug ftpserver

FTP

no

debug ftpserver

no debug ftpserver



FTP no FTP

FTP

no ftp-server enable

	-	-
--	---	---

	FTP	FTP	
		ftp-server topdir	FTP
	FTP		
1	FTP		syslog

24.1.4 ftp-server topdir

FTP no
FTP

ftp-server topdir *directory*
no ftp-server topdir

<i>directory</i>	FTP

FTP

FTP

Â

Â

IP Port

Â

IP Port

Â

Â

Â

Â

FTP

Ruijie# **show ftp-server**

ftp-server information

=====

enable : Y

topdir : /

timeout: 20min

username config : Y

password config : Y

type: BINARY

control connect : Y

ftp-server: ip=192.167.201.245 port=21

ftp-client: ip=192.167.201.82 port=4978

port data connect : Y

ftp-server: ip=192.167.201.245 port=22

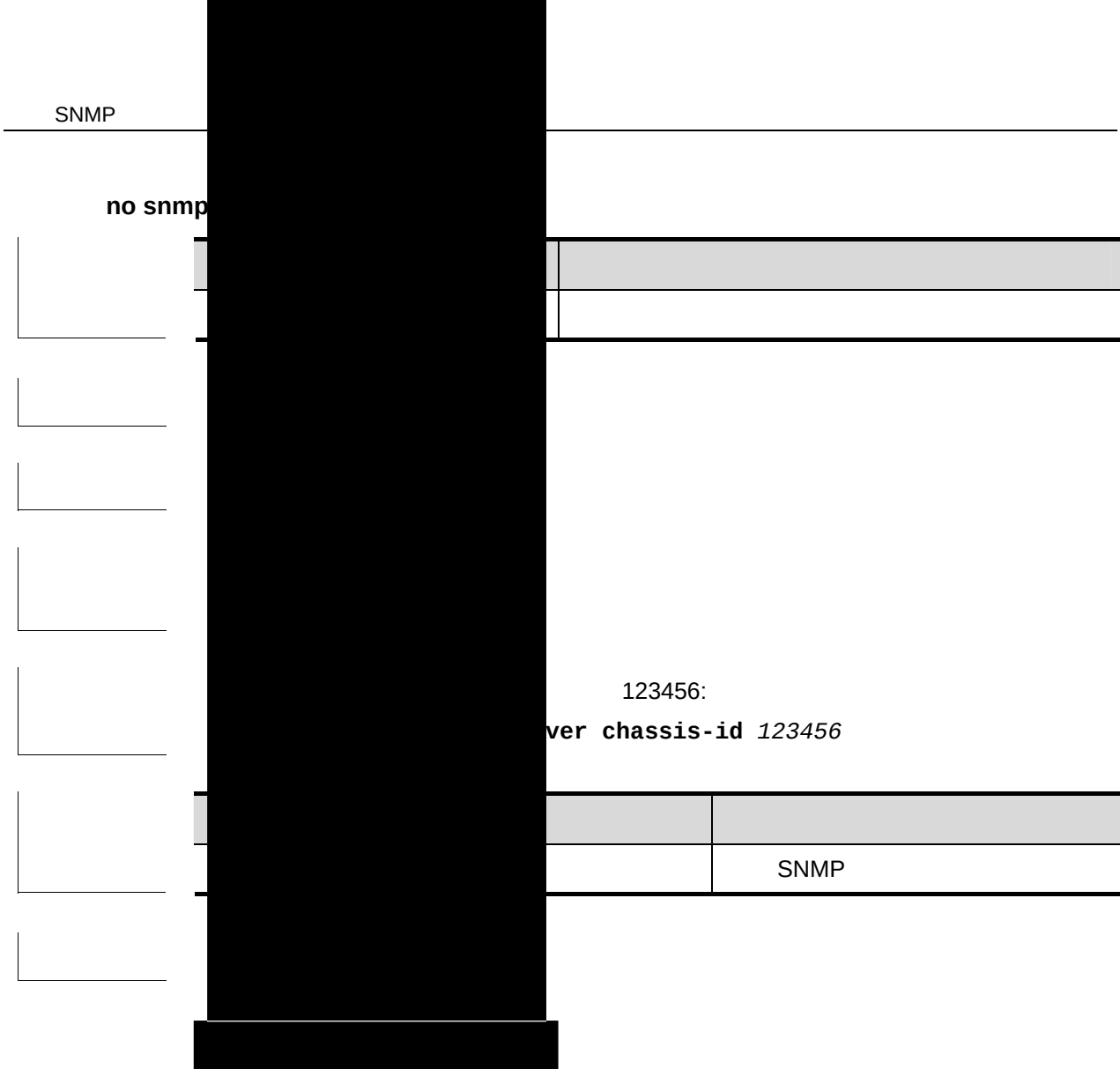
ftp-client: ip=192.167.201.82 port=4982

passive data connect : N

-

-

SNMP



<i>acInumber</i>	1-99
	MIB ipv4 NMS
<i>acIname</i>	MIB ipv4 NMS
<i>ipv6_acIname</i>	ipv6
	MIB ipv6 NMipv6IWPD@

	<i>text</i>	

SNMPi-net800@i-net.com.cn

Ruijie(config)# **snmp-server contact**

	<i>ipv6_aclname</i>	ipv6 MIB ipv6 NMS
--	---------------------	-------------------------

<i>port-num</i>	snmp
<i>notification-type</i>	snmp

SNMP

--

snmp-server enable traps	NMS
SNMP	
vrf	[vrf]

SNMP	SNMP
Ruijie(config)# snmp-server host 192.168.12.219 public snmp	

snmp-server enable traps	

--

-	-

25.1.8 snmp-server location

SNMP	snmp-server location	no
SNMP		

snmp-server location *text*

no snmp-server location

<i>text</i>	

--

|

|

|

Ruijie(config)# **snmp-server location** start-technology-city 4F of A Buliding

|

snmp-sever contact	SNMP

|

|

-	-

25.1.9 snmp-server packetsiz

SNMP
no

snmp-sever packetsize

snmp-server packetsize *byte-count*

no snmp-server packetsize

|

<i>byte-count</i>	484 17876

|

1500

|

|

|

SNMP 1492
Ruijie(config)# **snmp-server packetsize** 1492

|

--	--

	snmp-server queue-length	SNMP

SNMP

no

SNMP

snmp-server system-shutdown**snmp-server system-shutdown****no snmp-server system-shutdown**

	-	-

SNMP

SNMP

RGOS

reload/reboot

NMS

SNMP

Ruijie(config)# **snmp-server system-shutdown**

	-	-

	-	-

25.1.12 snmp-server trap-source

SNMP

snmp-server trap-source

no

snmp-server trap-source *interface***no snmp-server trap-source**

<i>interface</i>		SNMP

SNMP

IP

SNMP IP IP SNMP

0 IP SNMP

Ruijie(config)# snmp-server trap-source fastethernet 0

snmp-server enable traps	
snmp-server enable host	NMS

↓

-	-

25.1.13 snmp-server trap-timeout

snmp-server trap-timeout

no

snmp-server trap-timeout seconds

no snmp-server trap-timeout

seconds	1 – 1000

30

60

Ruijie(config)# snmp-server trap-timeout 60

	snmp-server queue-length	
	snmp-server enable host	NMS

	-	-

25.1.14 snmp-server user

SNMP

snmp-server user

no

snmp-server user *username groupname* {**v1** | **v2** | **v3** [**encrypted**] [**auth** {**md5** | **sha**} *auth-password*] [**priv** **des56** *priv-password*]}[**access** {[**ipv6** *ipv6_aclname*] [**aclnum** | *aclname*]}]

no snmp-server user *username groupname* {**v1** | **v2c** | **v3** }

<i>username</i>				
<i>groupname</i>				
v1 v2 v3	SNMP		v3	
				16
encrypted			MD5	
	16	SHA		20
auth				

SHA

|

default

MIB

|

|

|

MIB-2 oid 1.3.6.1

Ruijie(config)# **snmp-server view mib2 1.3.6.1 include**

|

show snmp view	SNMP

|

|

-	-

25.1.16 snmp trap link-status

25.2

25.2.1 show snmp

SNMP

show snmp

show snmp [mib | user | view | group] host]

|

-	-

|

|

|

show snmp

SNMP

```
show snmp mib          snmp mib
show snmp user         snmp
show snmp view         snmp
show snmp group        snmp
show snmp host
```

```
SNMP
Ruijie# show snmp
Chassis: 60FF60
0 SNMP packets input
0 Bad SNMP version errors
0 Unknown community name
0 Illegal operation for community name supplied
0 Encoding errors
0 Number of requested variables
0 Number of altered variables
0 Get-request PDUs
0 Get-next PDUs
0 Set-request PDUs
0 SNMP packets output
0 Too big errors (Maximum packet size 1500)
0 No such name errors
0 Bad values errors
0 General errors
0 Response PDUs
0 Trap PDUs
SNMP global trap: disabled
SNMP logging: disabled
SNMP agent: enabled
```

snmp-server <i>chassis-id</i>	SNMP

-	-

26 RMON

26.1

26.1.1 rmon alarm

MIB no

rmon alarm *number variable interval {absolute | delta } rising-threshold value*
[event-number] falling-threshold value [event-number] [owner ownername]

no rmon alarm *number*

-	-

RGOS variable
 absolute/delta owner interval rising-threadhold/falling-threadhold event

MIB ifInNUcastPkts.6
 Ruijie(config)# **rmon alarm** 10 1.3.6.1.2.1.2.2.1.12.6 30 **delta**
rising-threshold 20 1 **falling-threshold** 10 1 **owner** zhangsan

rmon event <i>number [log] [trap community]</i> <i>[description-string]</i>	

-	-

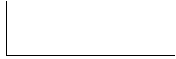
26.1.2 rmon collection history

no

rmon collection history *index* [**owner** *ownername*] [**buckets** *bucket-number*] [**interval** *seconds*]

no rmon collection history *index*





trap

Ruijie(config)# **rmon event**

Event type : log-and-trap
Community : public
Last time sent : 0d:0h:0m:0s
Owner : zhangsan
Log : 1
Log time : 0d:0h:37m:47s

```
Ruijie# show rmon event
Alarm : 1
Interval : 1
Variable : 1.3.6.1.2.1.4.2.0
Sample type : absolute
Last value : 64
Startup alarm : 3
Rising threshold : 10
Falling threshold : 22
Rising event : 0
Falling event : 0
Owner : zhangsan
```

rmon event *number* [log] [

```

Ruijie# show rmon history
Entry : 1
Data source : Gi1/1
Buckets requested : 65535
Buckets granted : 10
Interval : 1
Owner : zhangsan
Sample : 198
Interval start : 0d:0h:15m:0s
DropEvents : 0
Octets : 67988
Pkts : 726
BroadcastPkts : 502
MulticastPkts : 189
CRCAlignErrors : 0
UndersizePkts : 0
OversizePkts : 0
Fragments : 0
Jabbers : 0
Collisions : 0
Utilization : 0
    
```

rmon collection history <i>index</i> [owner ownername] [buckets bucket-number] [interval seconds]	

--	--



-	-

Ruijie# **show rmon statistics**

Statistics : 1

Data source : Gi1/1

DropEvents : 0

Octets : 1884085

Pkts : 3096

BroadcastPkts : 161

MulticastPkts : 97

CRCAAlignErrors : 0

UndersizePkts : 0

OversizePkts : 1200

Fragments : 0

Jabbers : 0

Collisions : 0

Pkts64Octets : 128

Pkts65to127Octets : 336

Pkts128to255Octets : 229

Pkts256to511Octets : 3

Pkts512to1023Octets : 0

Pkts1024to1518Octets : 1200

Owner : zhangsan

rmon collection stats <i>index</i> [owner owner-string]	

[illegible]

27 IPv6

27.1

27.1.1 ping ipv6

IPV6

ping ipv6 [ipv6-address]

ipv6-addres	s

Ruijie# ping ipv6 fec0::1

ping

!	
.	
U	
R	
F	
A	
D	Down IPV6 ()
?	

-	-



-	-

27.1.2 ipv6 address

IPV6 , no

ipv6 address *ipv6-address/prefix-length*

ipv6 address *ipv6-prefix/prefix-length eui-64*

ipv6 address *prefix-name sub-bits/prefix-length [eui-64]*

no ipv6 address

no ipv6 address *ipv6-address/prefix-length*

no ipv6 address *ipv6-prefix/prefix-length eui-64*

no ipv6 address *prefix-name sub-bits/prefix-length [eui-64]*

<i>ipv6-address</i>	IPV6	RFC4291 16
<i>prefix</i>	IPV6	RFC4291 16
<i>prefix-length</i>	IPV6	IPV6
<i>prefix-name</i>		
<i>sub-bits</i>		RFC4291

IPV6

UP IPV6 @ ㄣ

--	--	--

default

2	IPv6	ipv6 enable	,
	IPv6		
	IPv6	IPv6	
	no ipv6 enable	IPV6	

Ruijie(config-if)# **ipv6 enable**

show ipv6 interface	

-	-

27.1.5 ipv6 general-prefix

IPv6

ipv6 general-prefix

ipv6 general-prefix *prefix-name ipv6-prefix/prefix-length*

no ipv6 general-prefix *prefix-name ipv6-prefix/prefix-length*

<i>prefix-name</i>	
<i>ipv6-prefix</i>	RFC4291
<i>prefix-length</i>	

IPv6

my-prefix

Ruijie(config)# **ipv6 general-prefix** my-prefix 2001:1111:2222::/48

ipv6 address prefix-name sub-bits/prefix-length	
show ipv6 general-prefix	

RGOS10.4	RGOS10.4

27.1.6 ipv6 hop-limit

ipv6 hop-limit value

no ipv6 hop-limit

-	-

64

Ruijie(config)# **ipv6 hop-limit** 100

--	--

IPv6		
	-	-
	-	-

27.1.7 ipv6 nd dad attempts

	IPV6	(NS)
	no	
ipv6 nd dad attempts	value	
no ipv6 nd dad attempts		

IPv6

no

ipv6 neighbor *ipv6-address interface-id hardware-address***no ipv6 neighbor** *ipv6-address interface-id*

<i>ipv6-address</i>	IPV6 RFC4291
<i>interface-id</i>	SVI Routed Port,L3 AP
<i>hardware-address</i>	XXXX.XXXX.XXXX 48 MAC 'X'

ARP

IPV6

NDP

Reachble

IPV6

IPV6

mac

inactive

show ipv6 neighbor static

clear ipv6 neighbors

(NDP)

show ipv6 neighborsRuijie(config)# **ipv6 neighbor** *2001::1 vlan 1 00d0.f811.1111*

show ipv6 neighbors	
clear ipv6 neighbors	

-	-

27.1.10 ipv6 ns-linklocal-src

“ no ipv6

IPv6

ns-linklocal-src

RFC3484

ipv6 ns-linklocal-src

no ipv6 ns-linklocal-src

	-	-

Ruijie(config)# no ipv6 ns-linklocal-src

	-	-

	-	-

27.1.11 ipv6 route

IPV6

no

ipv6 route *ipv6-prefix/prefix-length* {*ipv6-address* | *interface-id* [*ipv6-address*]}

no ipv6 route *ipv6-prefix/prefix-length* {*ipv6-address* | *interface-id* [*ipv6-address*]}

<i>ipv6-prefix</i>	IPV6	RFC4291
<i>prefix-length</i>	IPV6	'/'

	<i>ipv6-address</i>	RFC4291
	<i>interface-id</i>	

Ruijie(config)# **ipv6 route 2001::/64 vlan 1 2005::1**

	show ipv6 route	IPv6

	-	-

27.1.12 **ipv6 source-route**

IPv6

IPv6

no

ipv6 source-route

no ipv6 source-route

	-	-

		IPv6
--	--	------

--	--	--

	0			
		IPv6		0
	IPv6			

	Ruijie(conifg)# no ipv6 source-route
--	---

	-	-

27.2

27.2.1 clear ipv6 neighbors

clear ipv6 neighbors

	-	-

Ruijie# **clear ipv6 neighbors**

	ipv6 neighbor	
	show ipv6 neighbors	

	-	-

27.2.2 show ipv6 general-prefix

show ipv6 general-prefix

show ipv6 general-prefix

	-	-



```

Ruijie# show ipv6 interface vlan 1
Interface vlan 1 is Up, ifindex: 2001
address(es):
Mac Address: 00:00:00:00:00:01
INET6: fe80::200:ff:fe00:1 , subnet is fe80::/64
INET6: 2001::1 , subnet is 2001::/64 [TENTATIVE]
Joined group address(es):
ff01:1::1
ff02:1::1
ff02:1::2
ff02:1::1:ff00:1
MTU is 1500 bytes
ICMP error messages limited to one every 10 milliseconds
ICMP redirects are enabled
ND DAD is enabled, number of DAD attempts: 1
ND reachable time is 30000 milliseconds
ND advertised reachable time is 0 milliseconds
ND retransmit interval is 1000 milliseconds
ND advertised retransmit interval is 0 milliseconds
ND router advertisements are sent every 200 seconds<240--160>
ND router advertisements live for 1800 seconds

```

INET6: 2001::1 , subnet is 2001::/64

[TENTATIVE]

INET6

[]

ANYCAST	
TENTATIVE	(DAD)
DUPLICATED	
DEPRECATED	
NODAD	
AUTOIFID	EUI-64
PRE	
GEN	

```
Ruijie# show ipv6 interface vlan 1 ra-info
```


total	
fec0:1:1:1::/64	
Def	
Auto CFG	Auto IPV6 , CFG
!Adv	
vltime	()
pltime	()
L !L	L on-link !L
A !A	A

1 SVI 1

Ruijie# **show ipv6 neighbors vlan 1**

IPv6 Address Linklayer Addr Interface

fa::1 00d0.0000.0002 vlan 1

fe80::200:ff:fe00:2 00d0.0000.0002 vlan 1

2

Ruijie# **show ipv6 neighbors verbose**

IPv6 Address Linklayer Addr Interface

2001::1 00d0.f800.0001 vlan 1

 State: Reach/H Age: - asked: 0

fe80::200:ff:fe00:1 00d0.f800.0001 vlan 1

 State: Reach/H Age: - asked: 0

IPv6 Address	IPV6
Linklayer Addr	Mac incomplete
Interface	

state/H(R)

STATE

INCMP(Incomplete)—

(NS)

(NA)

REACH(Reachable) —

STALE —

NUD

(Neighbor Unreachability Detection)

DELAY— STALE

STALE DELAY

State DELAY_FIRST_PROBE_TIME seconds(5)

DELAY PROBE

(NS) NUD

PROBE— NUD

RetransTimer milliseconds

(NS)

MAX_UNICAST_SOLICIT(3)

?—

/R—

Interface

G Q ,Á/ P Yb Q V@ldr Q)b Sc“hG / Q`Ab •a-a đÀ R T

show ipv6 router

IPv6

Ruijie# **show ipv6 router**

Router FE80::2D0:F8FF:FEC1:C6E1 on VLAN 2, last update 62 sec
Hops 64, Lifetime 1800 sec, ManagedFlag=0, OtherFlag=0, MTU=1500
Preference=MEDIUM
Reachable time 0 msec, Retransmit time 0 msec
Prefix 6001:3::/64 onlink autoconfig
Valid lifetime 2592000 sec, preferred lifetime 604800 sec
Prefix 6001:2::/64 onlink autoconfig
Valid lifetime 2592000 sec, preferred lifetime 604800 sec

-	-

28 MLD Snooping

28.1

28.1.1 ipv6 mld profile

MLD profile profile profile-number mld
profile

	10.4	

28.1.3 deny

	profile	profile	deny
	deny		
	profile	deny	
	profile		
	profile	range	
	FF77::100	profile	:
	Ruijie(config)# ipv6 mld profile 1		
	Ruijie(config-profile)# range FF77::100		
	Ruijie(config-profile)# deny		
	ipv6 mld profile	profile	
	range		
	permit	profile	permit
	10.4		

28.1.4 permit

	profile	profile	permit
	permit		

28.1.6 ipv6 mld snooping svgl profile

```

switch(config)# mld snooping
switch(config)# mld snooping vlan 1
switch(config)# mld snooping profile 1
  
```

profile-number	profile	1-1024

ipv6 mld snooping query-max-response-time <i>time</i>	MLD
no ipv6 mld snooping query-max-response-time	

<i>time</i>	MLD 1-65535
-------------	----------------

The diagram consists of two identical horizontal sequences of text. The first sequence starts with 'MLD', followed by 'mld snooping', and then 'MLD'. A '0' is positioned above the second 'mld snooping'. The second sequence is identical, also starting with 'MLD', followed by 'mld snooping', and then 'MLD', with a '0' positioned above the second 'mld snooping'.

```
Ruijie(config)# ipv6 mld snooping query-max-response-time 15
```

10.4

28.1.9 ipv6 mld snooping vlan

ipv6 mld snooping vlan vid vlan mld snooping **no ipv6**
mld snooping vlan vid vlan mld snooping

ipv6 mld snooping vlan vid

no ipv6 mld snooping vlan vid

<i>vid</i>	vlan	id	1-4094

mld snooping

vlan

mld snooping

mld snooping

vlan

mld snooping

vlan mld snooping

VLAN 1 mld snooping

Ruijie(config)# **no ipv6 mld snooping vlan 1**

10.4

28.1.10 ipv6 mld snooping vlan mrouter learn

MLD query PIM

ipv6 mld snooping vlan mrouter learn

no

ipv6 mld snooping vlan vid mrouter learn

no ipv6 mld snooping vlan vid mrouter learn

MLD Snooping

└───

10.4	

28.1.15 ipv6 mld source-check port

mld snooping
ipv6 mld snooping source-check port

no

ipv6 mld snooping source-check port
no ipv6 mld snooping source-check port

└───

└───

mld snooping	MLD	mld snooping
	mld snooping	

└───

mld snooping
Ruijie(config)# ipv6 mld snooping source-check port

,	,

└───

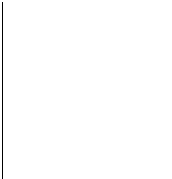
	10.4	

28.1.16 ipv6 mld snooping filter

profile no profile

ipv6 mld snooping filter *profile-number*
no ipv6 mld snooping filter *profile-number*

<i>profile-num</i>		profile



0/1 profile 1

Ruijie(config)# **interface fastEthernet 0/1**
Ruijie(config-if)# **ipv6 mld snooping filter 1**

ipv6 mld profile		profile

ipv6 mld

snooping max-groups no

ipv6 mld snooping max-groups number

no ipv6 mld snooping max-groups

Number	0 – 1024

1024

MLD Report

0/1 100

Ruijie(config)# interface fastEthernet 0/1

Ruijie(config-if)# ipv6 mld snooping max-group 100

ipv6 mld snooping filter	

10.4	

28.1.18 clear ipv6 mld snooping gda-table

clear ipv6 mld snooping

gda-table

clear ipv6 mld snooping gda-table

|

|

|

Ruijie# clear ipv6 mld snooping gda-table

|

|

|

10.4	

28.1.19 debug mld-snp

mld , debug mld-snp

10.4

28.2

28.2.1 show ipv6 mld snooping

mld snooping

Show ipv6 mld snooping [gda-table | interfaces | mrouter| statistics [vlan *vlan-id*]]

	mld snooping
gda-table	
interfaces	mld snooping Filtering
mrouter	
statistics [vlan <i>vlan-id</i>]	snooping

mld snooping

```

1      show ipv6 mld snooping          mld snooping
Ruijie# show ipv6 mld snooping
MLD-snooping mode      : IVGL
SVGL vlan-id           : 1
SVGL profile number    : 0
Source check port      : Disabled
Query max response time : 10(Seconds)
2      show ipv6 mld snooping statistics  mld snooping

Ruijie# show ipv6 mld snooping statistics
GROUP    Interface    Last report    Last leave    Last
              time        time        reporter

```

```

-----
FF88::1 VL1:Gi4/2 0d:0h:0m:7s ---- 2003::1111
Report pkts: 1 Leave pkts: 0
3 show ipv6 mld snooping mrouter mld snooping

```

Ruijie# **show ipv6 mld snooping mrouter**

Vlan	Interface	State	MLD profile number
------	-----------	-------	--------------------

```

-----

```

1	GigabitEthernet 0/7	static	1
---	---------------------	--------	---

1	GigabitEthernet 0/12	dynamic	0
---	----------------------	---------	---

4 **show ipv6 mld snooping gda-table** GDA

Ruijie# **show ipv6 mld snooping gda-table**

Abbr: M - mrouter

D - dynamic

S - static

VLAN	Address	Member ports
------	---------	--------------

```

-----

```

1	FF88::1	GigabitEthernet 0/7(S)
---	---------	------------------------

5 **show ipv6 mld snooping interface** mld snooping Filtering

Ruijie# **show ipv6 mld snooping interface GigabitEthernet 0/7**

Interface	Filter Profile number	max-groups
-----------	-----------------------	------------

```

-----

```

GigabitEthernet 0/7	1	4294967294
---------------------	---	------------

10.4	

28.2.2 show ipv6 mld profile

MLD profile

show ipv6 mld profile [*profile-number*]

	profile
<i>profile-number</i>	profile

mld profile

```
1      show ipv6 mld profile      MLD profile
Ruijie# show ipv6 mld profile 1
MLD Profile 1
permit
range FF77::1 FF77::100
range FF88::123
```

29

29.1

29.1.1 strom-control

no

storm-control {**broadcast** | **multicast** | **unicast**} [{**level** *percent* | **pps** *packets* | *rate-bps*}]

no storm-control {**broadcast** | **multicast** | **unicast**} [{**level** *percent* | **pps** *packets* | *rate-bps*}]

broadcast	
multicast	
unicast	
<i>percent</i>	20 20%
<i>packets</i>	pps packets per second
<i>Rate-bps</i>	
<i>64k-2M</i>	64k
<i>2-100M</i>	1M
<i>100M</i>	8M

show storm-control

GigabitEthernet 1/1

4M

Ruijie# **configure terminal**

Ruijie(config)# **interface GigabitEthernet 1/1**

Ruijie(config-if)# **storm-control multicast 4096**

Ruijie(config-if)# **end**

show storm-control	

86 **pps**

-	-

29.1.2 switchport protected

no

switchport protected

no switchport protected

-	-

3

show interfaces

Ruijie(config)# **interface gigabitethernet 1/1**

Ruijie(config-if)# **switchport protected**

show interfaces	

└───

-

└───

-	-

29.1.3 switchport port-security

no

switchport port-security [violation {protect | restrict | shutdown}]

no switchport port-security [violation]

└───

port-security	
violation protect	
violation restrict	trap
violation shutdown	Trap

└───

└───

└───

) (MAC IP()
1
M

└───

Gigabitethernet 1/1
shutdown
Ruijie(config)# **interface gigabitethernet 1/1**
Ruijie(config-if)# **switchport port-security**
Ruijie(config-if)# **switchport port-security violation shutdown**

└───

--	--

show port-security

switchport port-security	
switchport port-security binding interface	
Switchport port-security mac-address	
switchport port-security aging	
show port-security	

-	-

29.1.6 switchport port-security binding interface

IP+ MAC IP

no

[no] switchport port-security binding interface *interface-id* *mac-address* **vlan** *vlan_id*
ipv4-address | *ipv6-address*

[no] switchport port-security binding interface *interface-id* *ipv4-address* | *ipv6-address*

<i>interface-id</i>	ID
<i>mac-address</i>	MAC
<i>Vlan_id</i>	MAC VID
<i>Ipv4-address</i>	Ipv4 Ip
<i>Ipv6-address</i>	Ipv6 Ip

```

1      192.168.1.100      10
Ruijie(config)# switchport port-security binding interface g0/10
192.168.1.100
2      192.168.1.100 MAC      00d0.f800.5555, VID= 1      10
Ruijie(config)# switchport port-security binding interface g0/10 00d0.f800.5555
vlan 1 192.168.1.100

```

	switchport port-security	
	switchport port-security binding	
	Switchport port-security mac-address	
	switchport port-security aging	
	show port-security	



1	TRUNK	10
---	-------	----

```
1      TRUNK      10      00d0.f800.5555 VID=2
Ruijie(config)#  switchport  port-security  interface  g0/10
mac-address 00d0.f800.5555 vlan 2
```



	switchport port-security
	switchport port-security aging
	switchport port-security mac-address
	-
	-

30 802.1X

30.1 dot1x

30.1.1 dot1x auto-req

802.1X

dot1x auto-req

no

[no] dot1x auto-req

	-	-

30.1.3 dot1x auto-req req-interval

no

dot1x auto-req req-interval *interval*

no dot1x auto-req req-interval

	<i>interval</i>	s

30

show dot1x auto-req

802.1x 60s

30.1.4 dot1x auto-req user-detect

no

dot1x auto-req user-detect
no dot1x auto-req user-detect

	-	-

show dot1x auto-req

Ruijie# **configure terminal**
Ruijie(config)# **dot1x auto-req user-detect**
Ruijie(config)# **end**
Ruijie# **show dot1x auto-req**
Auto-Req: Enabled
User-Detect : Enabled
Packet-Num : 0
Req-Interval: 60 Second

	show dot1x auto-req	

	-	-

30.2 dot1x

30.2.1 dot1x timeout quiet-period

no

dot1x timeout quiet-period *seconds*

no dot1x timeout quiet-period

<i>seconds</i>	0 65535 s

10

show dot1x

1000s

Ruijie# **configure terminal**

Ruijie(config)# **dot1x timeout quiet-period 1000**

Ruijie(config)# **end**

Ruijie# **show dot1x**

802.1X Status: Enabled

Authentication Mode: EAP-MD5

Authenticated User Number: 0

Re-authen Enabled: Disabled

Re-authen Period: 3600 sec

Quiet Timer Period: 1000 sec

Tx Timer Period: 3 sec

Supplicant Timeout: 3 sec

Server Timeout: 5 sec

Re-authen Max: 3 times

Maximum Request: 3 times

Filter Non-RG Supp: Disabled

Client Oline Probe: Disabled
Eapol Tag Enable: Disabled
Authorization Mode: Group Server

show dot1x	802.1x

	-

period

seconds

Re-authen Period:	1000 sec
Quiet Timer Period:	1000 sec
Tx Timer Period:	3 sec
Supplicant Timeout:	3 sec
Server Timeout:	5 sec
Re-authen Max:	3 times
Maximum 2Request:	3 times
Filter Non-RG Supp:	Disabled
Client Oline Probe:	Disabled
Eapol Tag Enable:	Disabled
Authorization Mode:	Group Server

	-	-
--	---	---

30.2.5 dot1x timeout tx-period

no

dot1x timeout tx-period *seconds*

no dot1x timeout tx-period

<i>seconds</i>	0	65535

3

show dot1x 802.1x

10s

Ruijie# **configure terminal**

Ruijie(config)# **dot1x timeout tx-period 10**

Ruijie(config)# **end**

Ruijie# **show dot1x**

802.1X Status: Enabled

Authentication Mode: EAP-MD5

Authed User Number: 0

Re-authen Enabled: Disabled

Re-authen Period: 1000 sec

Quiet Timer Period: 1000 sec

Tx Timer Period: 10 sec

Supplicant Timeout: 10 sec

Server Timeout: 10 sec

Re-authen Max: 3 times

Maximum Request: 3 times

Filter Non-RG Supp: Disabled

Client Oline Probe: Disabled

Eapol Tag Enable: Disabled

Authorization Mode: Group Server

show dot1x

802.1x

```

Re-authen Period:    1000 sec
Quiet Timer Period:  1000 sec
Tx Timer Period:     10 sec
Supplicant Timeout:  10 sec
Server Timeout:      10 sec
Re-authen Max:       3 times
Maximum Request:     3 times
Filter Non-RG Supp:  Disabled
Client Oline Probe:  Disabled
Eapol Tag Enable:    Disabled
Authorization Mode:   Group Server

```

show dot1x	802.1x

-	-

30.3.2 dot1x reauth-max

no

dot1x reauth-max *count*

no dot1x reauth-max

<i>count</i>	

3

show dot1x

802.1x

```

Ruijie# configure terminal
Ruijie(config)# dot1x reauth-max 5
Ruijie(config)# end
Ruijie# show dot1x
802.1X Status:      Enabled
Authentication Mode: EAP-MD5
Authed User Number: 0
Re-authen Enabled:  Enabled
Re-authen Period:   1000 sec
Quiet Timer Period: 1000 sec
Tx Timer Period:    10 sec
Supplicant Timeout: 10 sec
Server Timeout:     10 sec
Re-authen Max:      5 times
Maximum Request:    3 times
Filter Non-RG Supp: Disabled
Client Oline Probe: Disabled
Eapol Tag Enable:   Disabled
Authorization Mode:  Group Server

```

show dot1x	802.1x

-	-

30.4 dot1x

30.4.1 dot1x probe-timer

```

dot1x probe-timer{interval | alive}interval
no dot1x probe-timer

```

no	
<i>interval</i>	hello
alive	
interval	

Hello 20
 250

show dot1x 802.1x

 hello 30 , 120
Ruijie# **configure terminal**
Ruijie(config)# **dot1x probe-timer interval 30**
Ruijie(config)# **dot1x probe-timer alive 120**
Ruijie(config)# **end**
Ruijie# **show dot1x probe-timer**
Hello Interval: 30 Seconds
Hello Alive: 120 Seconds

Show dot1x probe-timer	



	-	-
--	---	---

--

--

--

```
Ruijie# configure terminal
Ruijie(config)# dot1x client-probe enable
Ruijie(config)# end
Ruijie# show dot1x
802.1X Status:      Enabled
Authentication Mode: EAP-MD5
Authed User Number: 0
Re-authen Enabled:  Enabled
Re-authen Period:   1000 sec
Quiet Timer Period:  1000 sec
Tx Timer Period:     10 sec
Supplicant Timeout:  10 sec
Server Timeout:      10 sec
```

30.5 dot1x

30.5.1 dot1x authentication

AAA

AAA

no

dot1x authentication {default | list-name}**no dot1x authentication {default | list-name}**

default	
<i>list-name</i>	

AAA	AAA
-----	-----

AAA	dot1x
-----	-------

group radius

```

Ruijie# configure terminal
Ruijie(config)# aaa new-model
Ruijie(config)# aaa authentication dot1x default group radius
Ruijie(config)# interface fastEthernet0/1
Ruijie(config-if)# dot1x authentication default
Ruijie(config-if)# end

```

aaa new-model	AAA
aaa authentication dot1x	

-	-

30.5.2 dot1x auth-address-table

802.1X no

dot1x auth-address-table address mac-addr interface interface
no dot1x auth-address-table address mac-addr interface interface

mac-addr	
Interface	

S*ü table

802.1X show dot1x auth-address

dot1x auth-mode {eap-md5 | chap | pap}

no dot1x auth-mode

eap-md5	802.1x	EAP-MD5
chap	802.1x	CHAP
pap	802.1x	PAP

EAP-MD5

show dot1x 802.1x

802.1x

```
Ruijie# configure terminal
Ruijie(config)# dot1x auth-mode chap
Ruijie(config)# end
Ruijie#
```

show dot1x	802.1x

show dot1x 802.1x

802.1x

Ruijie# **configure terminal**

Ruijie(config)# **dot1x default**

Ruijie(config)# **end**

Ruijie# **end**

--	--

show dot1x

802.1x

```
Ruijie(config)# dot1x dynamic-vlan enable
Ruijie(config)# end
Ruijie#
```

show dot1x	802.1x

-	-

guest vlan

no

dot1x dynamic-vlan <1 - 4094>

no dot1x guest-vlan

vid	<1 - 4094>

```

      guest vlan
      guest vlan
      guest vlan
      vlan
      show running-config
      802.1x
      802.1x guest vlan
      Ruijie# configure terminal
      Ruijie(config)# dot1x guest-vlan 10
      Ruijie(config)# end
      Ruijie#

```

	show running-config	802.1x

	-	-

30.5.7 dot1x eapol-tag

	EAPOL	TAG
	dot1x eapol-tag	
	no dot1x eapol-tag	
	-	-
	show dot1x	802.1x
	802.1X tag	
	Ruijie# configure terminal	
	Ruijie(config)# dot1x eapol-tag	
	Ruijie(config)# end	
	Ruijie#	
	show dot1x	802.1x
	-	-

30.5.8 dot1x max-req

DOT1X	DOT1X
DOT1X	
no	
dot1x max-req count	
no dot1x max-req	



show dot1x private-suppliant-only

802.1x

Ruijie# **configure t**

Ruijie(config)# **dot1x private-suppliant-only**

Ruijie(config)# **end**

Ruijie#

show dot1x private-suppliant-only

30.5.10 dot1x port-control auto

no

dot1x port-control auto

no dot1x port-control



Ruijie#

show dot1x

802.1x

-

-

30.5.11 dot1x port-control-mode

802.1x

MAC

dot1x port-control-mode {mac-based | {port-based [single-host]} }

no dot1x port-control-mode

mac-based

mac 802.1X

port-based

802.1X

single-host

802.1x

mac-based

show dot1x port-control

802.1x

single-host

802.1x

show dot1x port-control

port-based

show running-config

dot1x port-control-mode

port-based single-host

single-host

default-user-limit

single-host

single-host

default-user-limit

single-host

```
1          802.1x
Ruijie(config)# interface g 0/1
Ruijie(config-if)# dot1x port-control auto
Ruijie(config-if)# dot1x port-control-mode port-based
Ruijie(config-if)# end
Ruijie#

2          802.1x
Ruijie(config)# interface g 0/1
Ruijie(config-if)# dot1x port-control auto
Ruijie(config-if)# dot1x port-control-mode port-based single-host
Ruijie(config-if)# end
Ruijie#
```

show dot1x port-control	802.1x
Show running-config	

-	-

30.5.12 dot1x stationarity enable

802.1x
802.1X

dot1x stationarity enable
no dot1x stationarity enable

-	-



1 ruijie.net/web

Ruijie(config)# **dot1x redirect url** http://ruijie.net/web

	dot1x redirect url	
	dot1x redirect time-out	
	dot1x redirect num for special source-ip	
	show dot1x	dot1x

--

	-	-

30.5.15 dot1x redirect time-out

(), 3 1-10 no

dot1x redirect time-out port *time-out-interval*

no dot1x redirect time-out port

	<i>time-out-interval</i>	

3

--

--

	1	5
	Ruijie(config)# dot1x redirect time-out 5	
	dot1x redirect url	web ip ip

	dot1x redirect for special tcp-destination port	
	dot1x redirect num for special source-ip	
	show dot1x	dot1x

--	--

	-	-

30.5.16 dot1x redirect num for special source-ip

1 1-10 no

dot1x redirect num for special source-ip *num*

no dot1x redirect num for special source-ip

	<i>num</i>	

	1
--	---

--	--

--	--

	1 3
	Ruijie(config)# dot1x redirect num for special source-ip 3

	dot1x redirect url	
	dot1x redirect for special tcp-destination port	f K

	show dot1x	dot1x
	-	-

30.6 dot1x

30.6.1 show dot1x

802.1x

show dot1x

	-	-
--	---	---

Ruijie# **show dot1x**

```

802.1X Status:      Enabled
Authentication Mode: EAP-MD5
Authed User Number: 0
Re-authen Enabled:  Disabled
Re-authen Period:   3600 sec
Quiet Timer Period:  10 sec
Tx Timer Period:     3 sec
Supplicant Timeout:  3 sec
Server Timeout:      5 sec
Re-authen Max:        3 times
Maximum Request:      3 times

```

```

Filter Non-RG Supp:  Disabled
Client Oline Probe:  Disabled
Eapol Tag Enable:    Disabled
Authorization Mode:   Group Server
Ruijie#

```

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

-	-

802.1X

show dot1x auth-address-table*[address mac-addr][interface interface]*

<i>mac-addr</i>	
<i>interface</i>	

```
Ruijie# show dot1x auth-address-table
```

```
interface:g3/1
```

```
-----
```

```
mac addr: 00D0.F800.0001
```

```
Ruijie#
```

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

-	-

30.6.3 show dot1x auto-req

802.1x

show dot1x auto-req

-	-

Ruijie# show dot1x auto-req

Auto-Req: Disabled

User-Detect : Enabled

Packet-Num : 0

Req-Interval: 30 Seconds

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

|

|

-	-

30.6.4 show dot1x private-supPLICant-only

show dot1x private-supPLICant-only

|

-	-

|

|

|

|

```
Ruijie# show dot1x private-supPLICant-only
private-supPLICant-only:: disabled
Ruijie#
```


30.6.5 show dot1x max-req

show dot1x max-req

-	-

```
Ruijie# show dot1x max-req
max-req: 2 times
Ruijie#
```

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

	-	-

30.6.6 show dot1x port-control

show dot1x port-control [*interface interface*]

<i>interface</i>		

Ruijie# **show dot1x port-control**

interface dyn-user static-user max-user qos

ctrl-mode status

Gi0/1 0 1 6000 dscp: 0 mac-base Authed

Ruijie#

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	

	dot1x timeout server-timeout	
	dot1x timeout supp-timeout	
	dot1x timeout tx-period	

30.6.8 show

show

-	-

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

-	-

30.6.9 show dot1x reauth-max

show dot1x reauth-max

-	-

```
Ruijie# show dot1x reauth-max
reauth-max: 2 times
Ruijie#
```

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

-	-

30.6.10 show dot1x summary

802.1X

show dot1x summary

-	-

```
Ruijie# show dot1x summary
```

```
ID      MAC      Interface VLAN Auth-State
```

```
Backend-State Port-Status Type
```

```
-----
```

```
1 00d0f8000000 Gi0/1      1 Authenticated Idle
```

```
Authed      Static
```

```
Ruijie#
```

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	
dot1x timeout quiet-period	
dot1x timeout re-authperiod	
dot1x timeout server-timeout	
dot1x timeout supp-timeout	
dot1x timeout tx-period	

-	-

30.6.11 show dot1x user id

802.1X

show dot1x user id <id>

<i>id</i>	show summary id

```
Ruijie# show dot1x user id 1
```

```
User name: caikov
```

```
id: 1
```

```
Type: static
```

```
Mac address is 0013.2049.8272
```

```
Vlan id is 217
```

```
Access from port Gi0/13
```

```
User ip address is 192.168.217.64
```

```
Max user number on this port is 6000
```

```
COS on this port is 5
```

```
Up-bandwidth is 1024 kbps
```

```
Down-bandwidth is 1024 kbps
```

```
Authorization vlan is dep7
```

```
Authorization session time is 1000000 seconds
```

```
Authorization ip address is 192.168.217.64
```

```
Start accounting
```

```
Permit proxy user
```

```
Permit dial user
```

```
IP privilege is 2
```

dot1x auth-mode	802.1x

	dot1x max-req	
	dot1x port-control auto	

Ruijie# **show dot1x timeout quiet-period**

quiet-period: 60 sec

Ruijie#

dot1x auth-mode	802.1x
dot1x max-req	
dot1x port-control auto	
dot1x reauth-max	
dot1x re-authentication	

dot1x timeo/Tpf-0.0024 Tw 1.198 <4-0.0024 Tw 1.] 0.47A48 20.1 33.36 394.9840.1 F909E20804

31 AAA

31.1

31.1.1 aaa authentication dot1x

AAA AAA

aaa new-model	AAA
dot1x authentication	802.1X
username	

-	-

31.1.2 aaa authentication enable

AAA Enable **aaa authentication enable** Enable
no

aaa authentication enable default *method1* [*method2...*]

no aaa authentication enable default

default	Enable Enable
<i>method</i>	“ local none group ” 4
local	
none	
group	TACACS+ RADIUS

AAA Enable AAA Enable
aaa authentication enable

AAA Enable

RADIUS

RADIUS

```
Ruijie(config)# aaa authentication enable default group radius local
```

aaa new-model	AAA
enable	
username	

-	-

31.1.3 aaa authentication login

AAA

Login

aaa authentication login

Login

no

```
aaa authentication login {default | list-name} method1 [method2...]
```

```
no aaa authentication login {default | list-name}
```

default	Login
<i>list-name</i>	Login
<i>method</i>	“ local none group ” 4
local	
none	
group	TACACS+ RADIUS

AAA

aaa authentication login

AAA Login

Login

Login

list-1 AAA Login

RADIUS

RADIUS

Ruijie(config)# **aaa authentication login list-1 group radius local**

aaa new-model	AAA
username	
login authentication	Login

-	-

31.1.4 aaa authentication ppp

AAA PPP

aaa authentication ppp PPP

local	
none	
group	TACACS+ RADIUS

AAA PPP AAA PPP
aaa authentication ppp PPP

rds_ppp AAA PPP
RADIUS RADIUS
Ruijie(config)# **aaa authentication ppp rds_ppp group radius local**

aaa new-model	AAA
ppp authentication	PPP
username	

-	-

31.1.5 login authentication

authentication Login **login**
Login no

login authentication {default | list-name}

no login authentication

--	--

default	Login
<i>list-name</i>	Login

Login
Login
Login
Login

```
list-1 AAA Login
VTY 0 - 4
Ruijie(config)# aaa authentication login list-1 local
Ruijie(config)# line vty 0 4
Ruijie(config-line)# login authentication list-1
```



no aaa authorization commands *level* {**default** | *list-name*}

<i>level</i>		0~15
default		']

Ä


```
__getattribute__(self, name):
    """Return the attribute named name. If name is not a valid attribute
    name, raise AttributeError. If name is a valid attribute name, but
    the attribute does not exist, raise AttributeError. If name is a valid
    attribute name, and the attribute exists, return the attribute value.
    """
    if name in self.__dict__:
        return self.__dict__[name]
    else:
        raise AttributeError("Attribute %s not found" % name)
```

```
no aaa authorization exec [default | list name]
```

[illegible]

AAA

	default	Network
	<i>method</i>	"

authorization

commands no**authorization commands** *level* {**default** | *list-name*}**no authorization commands** *level*

<i>level</i>	0~15
default	
<i>list-name</i>	

AAA

cmd 15 TACACS+
none VTY 0 – 4

Ruijie(config)# **aaa authorization commands 15 cmd group tacacs+ none**Ruijie(config)# **line vty 0 4**Ruijie(config-line)# **authorization commands 15 cmd**

aaa new-model	AAA
aaa authorization commands	AAA

authorization exec

Exec

Exec

VTY 0 - 4

NAS

aaa accounting commands no

aaa accounting commands *level* {**default** | *list-name*} **start-stop** *method1* [*method2...*]

no aaa accounting commands *level* {**default** | *list-name*}

<i>level</i>	0~15
default	
<i>list-name</i>	
<i>method</i>	" none group " 4

	-	-

31.3.2 aaa accounting exec

accounting exec no NAS Exec aaa

aaa accounting exec {default | *list-name*} start-stop *method1* [*method2*...]

no aaa accounting exec {default | *list-name*}

default	Exec
<i>list-name</i>	Exec
<i>method</i>	“ none group ” 4
none	

aaa new-model	AAA
aaa authentication	AAA
accounting commands	Exec

-	-

31.3.3 aaa accounting network

aaa accounting network **no**

aaa accounting network {**default** | *list-name*} **start-stop** *method1* [*method2...*]

no aaa accounting network {**default** | *list-name*}

default	Network
	i

Ruijie(config)# **aaa accounting network default start-stop group radius**

aaa new-model	AAA
aaa authorization network	AAA
aaa authentication	AAA
username	

-	-

31.3.4 aaa accounting update

aaa accounting update

no

aaa accounting update

no aaa accounting update

-	-

AAA

AAA

Ruijie(config)# **aaa new-model**
Ruijie(config)#

--	--

	aaa new-model	AAA
	aaa accounting network	



	-	-

31.3.6 accounting commands

accounting commands

no

accounting commands *level* {**default** | *list-name*}

no accounting commands *level*

<i>level</i>		0~15
default		

	-	-

31.3.7 accounting exec

Exec

accounting exec

no

Exec

accounting exec {default | *list-name*}

no accounting exec

default		Exec
<i>list-name</i>		Exec

Exec

Exec

Exec

Exec

exec-1 Exec

RADIUS

none

VTY 0 – 4

Ruijie(config)# **aaa accounting exec exec-1 group radius none**

Ruijie(config)# **line vty 0 4**

Ruijie(config-line)# **accounting exec exec-1**

aaa new-model		AAA
aaa accounting commands		AAA Exec

--	--	--

31.4.1 aaa domain

no aaa domain {default | *domain-name*}

default	
<i>domain-name</i>	

AAA default
 domain-name

aaa new-model	AAA
aaa domain enable	AAA

31.4.2 aaa domain enable

	AAA	
	AAA	no
	aaa domain enable	
	no aaa domain enable	
	-	-
	AAA	
	AAA	
	AAA	
	Ruijie(config)# aaa domain enable	
	aaa new-model	AAA
	show aaa domain	
	-	-

31.4.3 access-limit

<i>num</i>	IEEE802.1x

IEEE802.1x

IEEE802.1x

```
Ruijie(config)# aaa domain ruijie.com  
Ruijie(config-aaa-domain)# authentication dot1x default
```

aaa new-model	AAA
aaa domain enable	AAA
show aaa domain	

-	-

31.4.6 authorization network

```
Network no  
authorization network {default | list-name}  
no authorization network
```

default	
<i>list-name</i>	

default

```
Ruijie(config)# aaa domain ruijie.com
```

Ruijie(config-aaa-domain)# **authorization network default**

aaa new-model	AAA
aaa domain enable	AAA
show aaa domain	

-	-

31.4.7 state

no

state {block | active}

no state

block	
active	

Ruijie(config)# **aaa domain ruijie.com**
Ruijie(config-aaa-domain)# **state block**

|--|--|

	aaa new-model	AAA
	aaa domain enable	AAA
	show aaa domain	

AAA

aaa new-model

AAA

	-	-

31.5 AAA

31.5.1 aaa group server

AAA

no

aaa group server {radius | tacacs+} *name*

no aaa group server {radius | tacacs+} *name*

<i>name</i>	" tacacs+ "	" radius " RADIUS TACACS+

AAA

RADIUS

TACACS+

Ruijie(config)# **aaa group server radius ss**

Ruijie(config-gs-radius)# **end**

Ruijie# show aaa group

Group Name: ss

Group Type: radius

Referred: 1

Server List:

show aaa group	aaa

	-	-

31.5.2 ip vrf forwarding

AAA vrf no

ip vrf forwarding *vrf_name*

no ip vrf forwarding

	<i>vrf_name</i>	vrf

vrf

```
Ruijie(config)# aaa group server radius ss
Ruijie(config-gs-radius)# server 192.168.4.12
Ruijie(config-gs-radius)# server 192.168.4.13
Ruijie(config-gs-radius)# ip vrf forwarding vrf_name
Ruijie(config-gs-radius)# end
```

	aaa group server	aaa
	show aaa group	aaa

AAA

no

server *ip-addr* [**authen-port** *port1*] [**acct-port** *port2*]

no server

AAA

	-	-
--	---	---

31.5.4 show aaa group

AAA

show aaa group



31.6.1 aaa local authentication attempts

login

aaa local authentication attempts *max-attempts*

	<i>max-attempts</i>	1~2147483647

3

Login

D

login

```
Ruijie# configure terminal
Ruijie(config)# aaa local authentication lockout-time 5
```

Show running-config	
Show aaa lockout	login

-	-

31.6.3 aaa new-model

RGOS AAA aaa new-model AAA
no AAA

aaa new-model
no aaa new-model

-	-

AAA

AAA AAA aaa new-model
AAA AAA AAA

```
AAA
Ruijie(config)# aaa new-model
```

	aaa authentication	
	aaa authorization	
	aaa accounting	

--	--

	-	-

31.6.4 clear aaa local user logout

clear aaa local user logout {all | user-name <word>}

	<word>	ID

--	--

--	--

31.6.5 debug aaa

AAA

no

debug aaa event

no debug aaa event

	EXEC		

31.6.6 show aaa method-list

AAA	
show aaa method-list	

AAA

AAA

Ruijie# **show aaa method-list**

Authentication method-list

aaa authentication login default group radius

aaa authentication ppp default group radius

aaa authentication dot1x default group radius

aaa authentication dot1x san-f local group angel group rain none

aaa authentication enable default group radius

Accounting method-list

aaa accounting network default start-stop group radius

Authorization method-list

aaa authorizing network default group radius

Ruijie# show aaa user logout all

show running-config	
show aaa logout	login

-	-

32.1.2 radius attribute

radius ttribute{<id> | down-rate-limit | dscp | mac-limit | up-rate-limit} vendor-type
<type>

no radius attribute {<id>|down-rate-limit | dscp | mac-limit | up-rate-limit} vendor-type

<i>id</i>	id <1-255>
<i>type</i>	type

id		type
1	max down-rate	1
2	qos	2
3	user ip	3
4	vlan id	4
5	version to client	5
6	net ip	6
7	user name	7
8	password	8
9	file-diractory	9
10	file-count	10
11	file-name-0	11
12	file-name-1	12
13	file-name-2	13
14	file-name-3	14
15	file-name-4	15
16	max up-rate	16
17	version to server	17
18	flux-max-high32	18
19	flux-max-low32	19
20	proxy-avoid	20
21	dailup-avoid	21
22	ip privilege	22

23	login privilege	42
----	-----------------	----

	radius-server key	RADIUS
	radius-server retransmit	RADIUS



RADIUS

radius-server timeout no

radius-server timeout seconds

no radius-server timeout

seconds	1-1000

5

10
Ruijie(config)# radius-server timeout 10

radius-server host	RADIUS
radius-server retransmit	RADIUS
radius-server key	RADIUS

-	-

32.1.8 radius set qos cos

radius qos cos

radius set qos cos

no radius set qos cos

-	-

qos

dscp

qos

[illegible]

RADIUS

no debug radius [event | detail]

[illegible]

	EXEC
--	------

	-	-

RADIUS

show radius parameter

	-	-

radius

Ruijie# **show radius parameter**

Server Timeout: 5 Seconds

Server Deadtime: 5 Minutes

Server Retries: 3

Server Key: *****

radius-server host	RADIUS
radius-server retransmit	RADIUS
radius-server key	RADIUS
radius-server timeout	RADIUS

-	-

radius

Ruijie# **show radius server**

server ip : 192.168.4.12

acct port: 23

authen port: 77

server state: ready

server ip : 192.168.4.13

acct port: 45

authen port: 74

server state: ready

radius-server host	RADIUS
radius-server retransmit	RADIUS
radius-server key	RADIUS
radius-server timeout	RADIUS

-	-

32.2.4 show radius vendor-specific

RADIUS

show radius vendor-specific

-	-

radius

Ruijie# **show radius vendor-specific**

id	vendor-specific	type-value
----	-----------------	------------

1	max down-rate	76
---	---------------	----

2	qos	77
---	-----	----

3	user ip	3
---	---------	---

4	vlan id	4
---	---------	---

5	version to client	5
---	-------------------	---

6	net ip	6
---	--------	---

7	user name	7
---	-----------	---

8	password	8
---	----------	---

[illegible]

33 TACACS+

33.1 TACACS+

33.1.1 aaa group server tacacs+

	TACACS+	TACACS+
	aaa group server tacacs+ group-name	
	no aaa group server tacacs+ group-name	
	group-name	TACACS+
	TACACS+	
	TACACS+	
	tac1 TACACS+	1.1.1.1
	TACACS+	
	Ruijie(config)# aaa group server tacacs+ tac1	
	Ruijie(config-gs-tacacs)# server 1.1.1.1	
	server	TACACS+ server
	ip vrf forwarding	TACACS+ VRF
	-	-

33.1.2 ip tacacs source-interface

TACACS+

ip tacacs source-interface *interface*

no ip tacacs source-interface

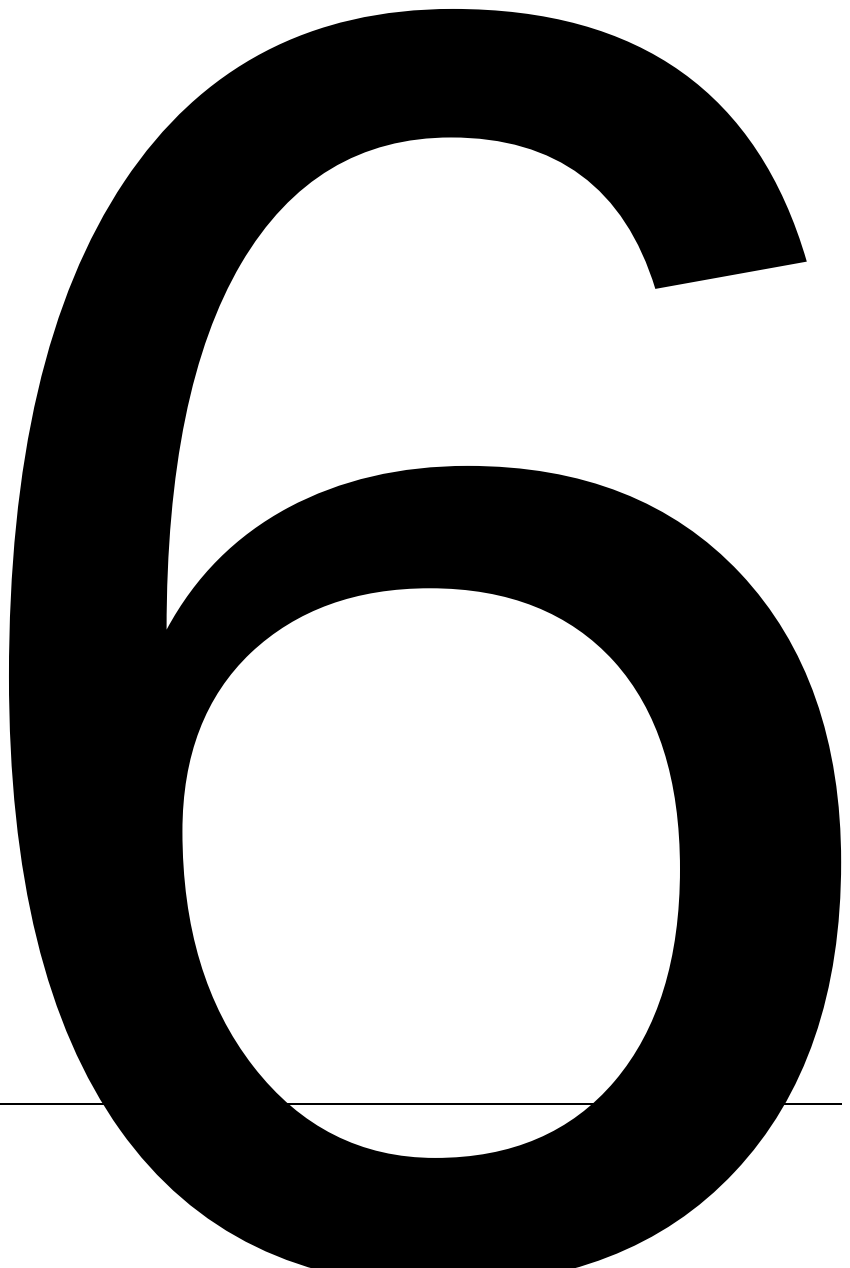
|

--	--

	<i>vrf-name</i>	vrf

```
aaa group server tacacs+ TACACS+
tacacs-server
TACACS+
host
TACACS+
```

```
tac1 TACACS+ 1.1.1.1
TACACS+
Ruijie(config)# aaa group server tacacs+ tac1
Ruijie(config-gs-tacacs)# server 1.1.1.1
```



TACACS+ AAA TACACS+
tacacs-server TACACS+

TACACS+
Ruijie(config)# **tacacs-server host 192.168.12.1**
Ruijie(config)# **tacacs-server host 2001::1**

aaa authentication	AAA
tacacs-server key	TACACS+
tacacs-server timeout	TACACS+

		key	host	key
		TACACS+	aaa	
		Ruijie(config)# tacacs-server key aaa		
		tacacs-server host	TACACS+	
		tacacs-server timeout	TACACS+	
		-	-	

33.1.7 tacacs-server timeout

		TACACS+
		tacacs-server timeout <i>seconds</i>
		no tacacs-server timeout
		<i>seconds</i>

33.2.1 debug tacacs+

33.2.2 show tacacs

TACACS+

show tacacs

	-	-

TACACS+

Ruijie# show tacacs
Tacacs+ Server : 172.19.192.80/49
Socket Opens: 0
Socket Closes: 0
Total Packets Sent: 0
Total Packets Recv: 0
Reference Count: 0

	tacacs-server host	TACACS+

	-	-

34 SSH

34.1 SSH

34.1.1 crypto key generate

crypto key generate {rsa | dsa}

rsa	RSA
dsa	DSA

SSH Server

SSH Server	SSH			
enable service ssh-server	SSH Server	SSH 1	RSA	SSH
2 RSA DSA	RSA	SSH1	SSH2	
DSA	SSH2			



no crypto key generate

crypto key zeroize

Ruijie# **configure terminal**

Ruijie(config)# **crypto key generate rsa**

show ip ssh	SSH Server
crypto key zeroize {rsa dsa}	DSA RSA SSH Server

RGOS10.1

SSH

	-	-
--	---	---

34.1.2 crypto key zeroize

SSH

crypto key zeroize {rsa | dsa}

	rsa	RSA
	dsa	DSA

--

--

	SSH Server	SSH Server	DISABLE
		no enable service ssh-server	

Ruijie# **configure terminal**
Ruijie(config)# **crypto key zeroize rsa**

	show ip ssh	SSH Server
	crypto key generate {rsa dsa}	DSA RSA

	RGOS10.1
--	----------

	-	-

34.1.3 ip ssh authentication-retries

SSH Server

no

ip ssh authentication-retries *retry times*

no ip ssh authentication-retries

	<i>retry times</i>	

	3	no ip ssh
	authentication-retries	

	SSH Server	SSH Server
	show ip ssh	SSH Server

	2	
	Ruijie# configure terminal	
	Ruijie(config)# ip ssh ssh authentication-retries 2	

	show ip ssh	SSH Server

	RGOS10.1	
--	----------	--

	-	-

34.1.4 ip ssh time-out

	SSH Server	no
--	------------	----

ip ssh time-out *time*
no ip ssh time-out

	<i>time</i>	

	120s	no ip ssh time-out
--	------	--------------------

SSH



SSH Server
120s

2

Ruijie# **configure terminal**Ruijie(config)# **ip ssh version 2**

show ip ssh	SSH Server

RGOS10.1

	Clear line vty <i>line_number</i>	VTY
	RGOS10.1	
	-	-

34.2.2 show crypto key mypubkey

SSH Server

show crypto key mypubkey {rsa|dsa}

	rsa	RSA
	dsa	DSA

SSH Server

Ruijie# **show crypto key mypubkey rsa**

	crypto key generate {rsa dsa}	DSA RSA

RGOS10.1

	-	-

34.2.3 show ip ssh

SSH Server

show ip ssh

	-	-

SSH Server	SSH Server
SSH	
SSH	

Ruijie# show ip ssh

ip ssh version {1 2}	SSH Server
ip ssh time-out time	SSH Server
ip ssh authentication-retries retry times	SSH Server

RGOS10.1

-	-

34.2.4 show ssh

SSH

show ssh

-	-

|

|

SSH

VTY

SSH

|

Ruijie# **show ssh**

|

-	-

|

RGOS10.1

|

--	--

35 CPU

35.1

35.1.1 `cpu-protect type packet-type pps pps_value`

CPU

`cpu-protect type { arp | bpdu | dhcp | ipv6mc | igmp | rip | ospf | vrrp | pim | ttl1 |
unknown-ipmc | dvmrp | ... } pps pps_value`

CPU

CPU

S9610 CPU

Ruijie# **show cpu-protect mboard**

ype	Pps	Total	Drop
arp	500	19	0
bpdu	200	24	0
dhcp	0	0	0
gvrp	0	0	0
ipv6-mc	0	0	0
dvmrp	0	0	0
igmp	0	0	0
ospf	0	0	0
pim	0	0	0
rip	0	0	0
vrrp	0	0	0
unknow-ipmc	0	0	0
tll1	0	0	0
...			

show cpu-protect slot <i>slot-num</i>	CPU

-

-

35.2.2 show cpu-protect slot

CPP

show cpu-protect slot *slot_num*

slot_num	1-16
----------	------

--

--

CPP

2 CPU
Ruijie(config)# show cpu-protect slot 2
Type Pps Total Drop

arp 200 200 15
bpdu 200 8 0
dhcp 200 0 0
gvrp 200 0 0
ipv6-mc 200 0 0
dvmrp 200 0 0
igmp 200 0 0
ospf 200 0 0
pim 200 0 0
rip 200 0 0
vrrp 200 0 0
unknow-ipmc 200 0 0
ttl1 20 3 0

show cpu-protect mboard	CPU

--

-	-

35.2.3 show cpu-protect type

show cpu-protect type { arp | bpdu | dhcp | ipv6mc | igmp | rip | ospf | vrrp | pim | ttl1 | unknown-ipmc | dvmrp | ...} *dvmrp*

slot_num	1-16

show cpu-protect type bpdu					BPDU
Ruijie(config)# show cpu-protect type arp					
Slot	Type	Pps	Total	Drop	

MainBoard	bpdu	100	30	0	
Slot-2	bpdu	100	30	0	

show cpu-protect type <i>packet-type</i>	CPU

-

-	-

	CPP	"..."	CPP
---	-----	-------	-----

36

DoS

36.1

36.1.1 ip deny invalid-l4port

no

ip deny invalid-l4port

no ip deny invalid-l4port

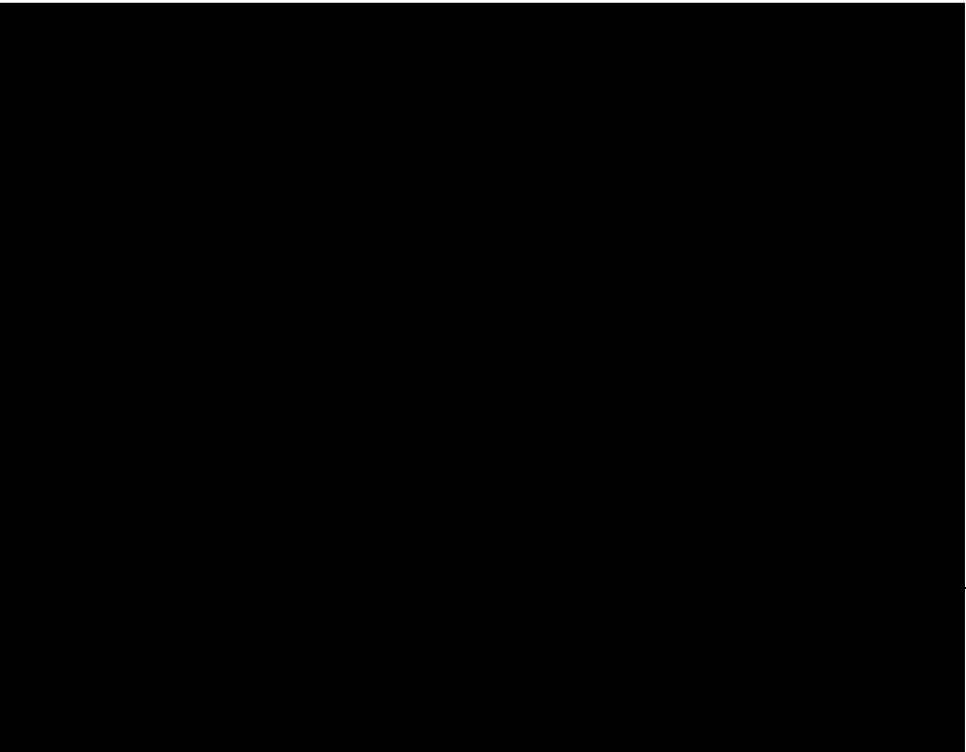
	-	-

1

Ruijie(config)# ip deny invalid-l4port

2

Ruijie(config)# no ip deny invalid-l4port



no ip deny invalid-tcp



```

1          Land
Ruijie(config)# ip deny land
2          Land
Ruijie(config)# no ip deny land

```

show ip deny land	Land
-	-

36.2

36.2.1 show ip deny invalid-l4port

show ip deny invalid-l4port

-	-

```

Ruijie# show ip deny invalid-l4port
DoS Protection Mode          State
-----
protect against invalid l4port attack Off

```

-	-

	-	-

36.2.2 show ip deny invalid-tcp

TCP

show ip deny invalid-tcp

	-	-
--	---	---

--

--

--

Ruijie# show ip deny land	
DoS Protection Mode	State
-----	-----
protect against land attack	On

(no) ip deny land		Land

--

-		-

37 GSN

37.1

37.1.1 security address-bind enable

security address-bind enable
no security address-bind enable

	-	-
		AP AP
		GSN
	Ruijie(config-if)# security address-bind enable	
	security gsn enable	GSN
	RGOS10.1	
	-	-

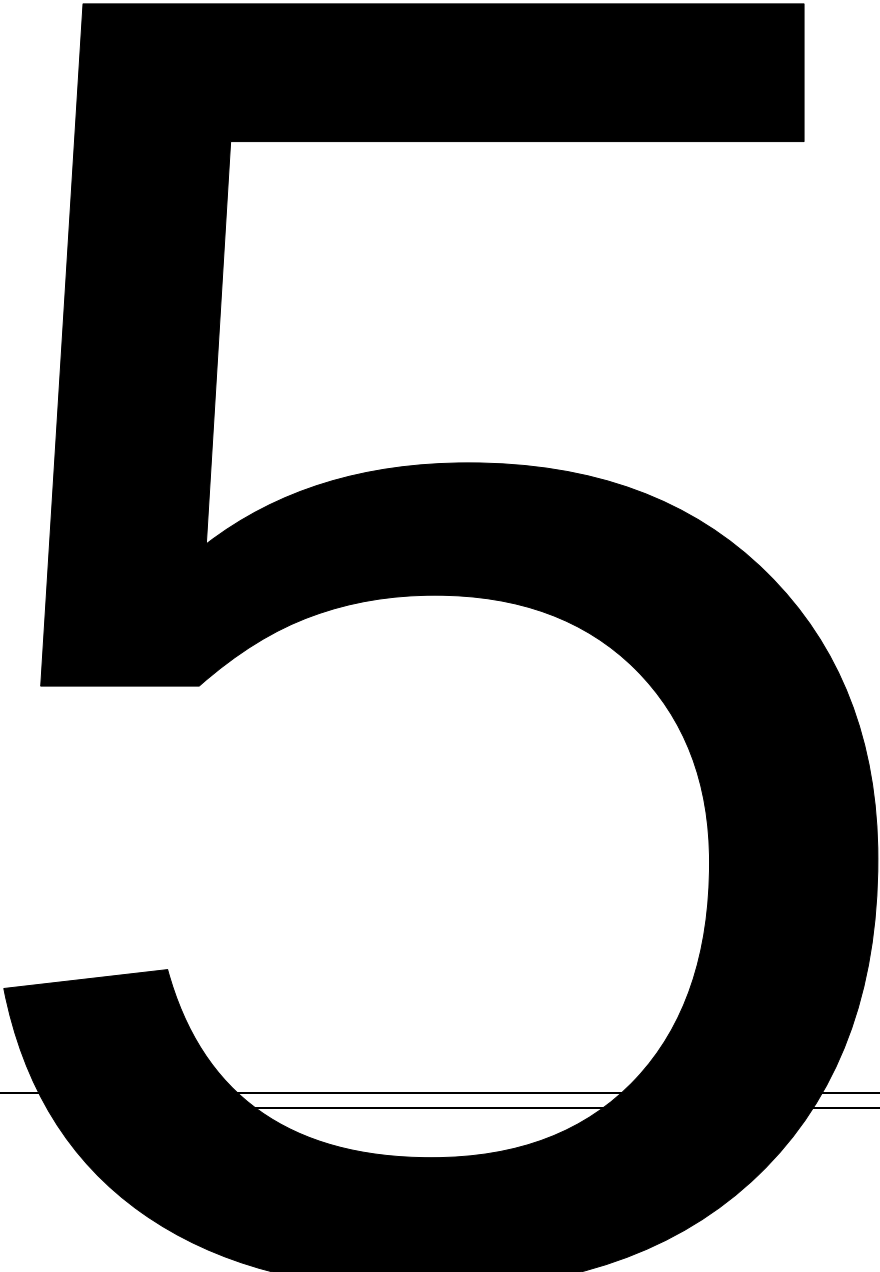
37.1.2 security community

smp

security { [v1 | v2] **community** *community* | v3 **user** *username* }

no security { [v1 | v2] **community** *community* | v3 **user** *username* }

<i>community</i>	<i>community</i>
<i>username</i>	v3



	-	-
	RGOS10.1	
	-	-

37.1.5 smp-server host

smp-server ip

smp-server host *ip-address*

no smp-server host

<i>ip-address</i>	smp server	ip

smp server

show smp-server

Ruijie(config)#**smp-server host** 192.168.4.243

show smp-server	smp server	

RGOS10.1

-	-	

37.2

37.2.1 show security evnet interval

	-	-

Ruijie# **show security event interval**
Event sending interval(Seconds):5

	security event interval <i>interval</i>	

RGOS10.1

	-	-

37.2.2 show smp-server

smp server IP

	-	-

smp server IP

Ruijie# **show smp-server**

	SMP-Server IP 192.168.20.30	
	smp-server host	smp server ip
	RGOS10.1	
	-	-

38 DAI

38.1 VLAN DAI

38.1.1 ip arp inspection vlan

vlan-id VLAN DAI *vlan-id* no VLAN DAI

ip arp inspection vlan *vlan-id*

no ip arp inspection vlan [*vlan-id*]

<i>vlan-id</i>	vlan

38.2

38.2.1 ip arp inspection trust

ip arp inspection trust no

ip arp inspection trust
no ip arp inspection trust

	-	-

	ARP	DAI
		ARP
	NFPP(	NFPP
&	DAI	show ip arp inspection interface

gigabitEthernet 0/19
Ruijie(config)# interface gigabitEthernet 0/19
Ruijie(config-if)# ip arp inspection trust

show ip arp inspection interface	DAI

--

-	-

38.3 DHCP Snooping

\$

.

t

39

arp

arp

show anti-arp-spoofing

Ruijie#show anti-arp-spoofing	
port	ip
-----	-----
Fa0/1	192.168.1.1

anti-arp-spoofing ip	arp

-	-

40 IP Source Guard

40.1 IP Source Guard

40.1.1 ip source binding

IP no

[no] **ip source binding** *mac-address* **vlan** *vlan-id* *ip-address* **interface** *interface-id*

<i>mac-address</i>	MAC
<i>vlan-id</i>	vlan id
<i>ip-address</i>	IP
<i>interface-id</i>	

IP Source Guard

DHCP

1

Ruijie# **configure terminal**

Ruijie(config)# **ip source binding** 0000.0000.0001 **vlan** 1 1.1.1.1
interface FastEthernet 0/1

Ruijie(config)# **end**

Ruijie# **show ip source binding**

MacAddress	IpAddress	Lease(sec)	Type	VLAN	Interface
0000.0000.0001	1.1.1.1	infinite	static	1	FastEthernet 0/1

Total number of bindings: 1

```
show ip source binding
```

IP

-

-

40.2 IP Source Guard

40.2.1 ip verify source

IP Source Guard **no**

[no] ip verify source [port-security]

```
port-security
```

IP Source Guard

IP+MAC

IP Source Guard

IP

IP+MAC

IP Source Guard

DHCP Snooping

Trust

DHCP Snooping

IP Source Guard

IP Source Guard

1 IP Source Guard

```
Ruijie# configure terminal
```

```
Ruijie(config)# interface fastEthernet 0/1
```

```
Ruijie(config-if)# ip verify source
```

```
Ruijie(config-if)# end
```

	-	-

40.3 IP Source Guard

40.3.1 show ip source binding

IP

show ip source binding [ip-address] [mac-address] [dhcp-snooping] [static] [vlan
vlan-id] [interface interface-id]

ip-address	ip
mac-address	mac
dhcp-snooping	
static	
vlan-id	vlan
interface-id	

Ruijie# show ip source binding static					
MacAddress	IpAddress	Lease(sec)	Type	VLAN	Interface
-----	-----	-----	----	----	-----
0000.0000.0001	1.0.0.1	infinite	static	1	FastEthernet 0/1
Total number of bindings: 1					

	-	-
--	---	---

-	-

cpu-protect sub-interface {manage|protocol|route} percent percent_vaule

<i>percent_vaule</i>	1	100

(Manage)	30
(Route)	25
(Protocol)	45

Ruijie(config)# **cpu-protect sub-interface manage percent 60**

cpu-protect sub-interface { <i>manage</i> <i>protocol</i> <i>route</i> } pps	

41.3 ARP

41.3.1 arp-guard attack-threshold

arp-guard attack-threshold {per-src-ip | per-src-mac | per-port} pps

per-src-ip	IP
per-src-mac	MAC
per-port	
<i>pps</i>	[1,9999]

IP MAC 8
200

NFPP

Ruijie(config)#

41.3.2 arp-guard enable

ARP

arp-guard enable

	-	-

ARP

NFPP

Ruijie(config)# **nfpp**Ruijie(config-nfpp)# **arp-guard enable**

	nfpp arp-guard enable	ARP
	show nfpp arp-guard summary	

	-	-

41.3.3 arp-guard isolate-period

arp-guard isolate-period {seconds | permanent} , Q A

NFPP

Ruijie(config)# **nfpp**

Ruijie(config-nfpp)# **arp-guard isolate-period 180**

nfpp arp-guard isolate-period	
show nfpp arp-guard summary	

-	-

41.3.4 arp-guard monitor-period

arp-guard monitor-period *seconds*

<i>seconds</i>	[180, 86400]

600

NFPP

Â

0

0

Â

Ruijie(config)# **nfpp**

Ruijie(config-nfpp)# **arp-guard monitor-period 180**



show nfpp arp-guard summary

	-	-

41.3.7 arp-guard scan-threshold

arp-guard scan-threshold *pkt-cnt*

	<i>pkt-cnt</i>	[1,9999]

	15	10
--	----	----

	NFPP
--	------

10	15	ARP	MAC	IP
	MAC	IP	IP	

Ruijie(config)# nfpp
Ruijie(config-nfpp)# arp-guard scan-threshold 20

nfpp arp-guard scan-threshold		
show nfpp arp-guard summary		

clear nfpp arp-guard hosts [vlan *vid*] [interface *interface-id*] [*ip-address* | *mac-address*]

<i>vid</i>	
<i>interface-id</i>	
<i>ip-address</i>	IP
<i>mac-address</i>	MAC

VLAN 1 g 0/1

Ruijie# **clear nfpp arp-guard hosts vlan 1 interface g0/1**

arp-guard attack-threshold	
nfpp arp-guard policy	
show nfpp arp-guard hosts	

-	-

41.3.9 clear nfpp arp-guard scan

ARP

clear nfpp arp-guard scan

-	-

```
Ruijie# clear nfpp arp-guard scan
```

arp-guard scan-threshold	
nfpp arp-guard scan-threshold	
show nfpp arp-guard scan	ARP

-	-

41.3.10 nfpp arp-guard enable

ARP

nfpp arp-guard enable

-	-

ARP

ARP

ARP

```
Ruijie(config)# interface G0/1
```

```
Ruijie(config-if)# nfpp arp-guard enable
```

arp-guard enable	ARP
show nfpp arp-guard summary	


```

|
|

```

10.4	

41.3.11 nfpp arp-guard isolate-period

nfpp arp-guard isolate-period {*seconds* | **permanent**}

<i>seconds</i>	0 [30, 86400]
permanent	

```

|
|

```

```

|
|

```

```

|
|

```

```

Ruijie(config)# interface G 0/1
Ruijie(config-if)# nfpp arp-guard isolate-period 180

```

**nfpp arp-guard policy {per-src-ip | per-src-mac | per-port} rate-limit-pps
attack-threshold-pps**

per-src-ip	IP
per-src-mac	MAC
per-port	
<i>rate-limit-pps</i>	1 9999
<i>attack-threshold-pps</i>	1 9999

Ruijie(config)# **interface G 0/1**

Ruijie(config-if)# **nfpp arp-guard policy per-src-ip 2 10**

Ruijie(config-if)# **nfpp arp-guard policy per-src-mac 3 10**

Ruijie(config-if)# **nfpp arp-guard policy per-port 50 100**

arp-guard attack-threshold	
arp-guard rate-limit	
show nfpp arp-guard summary	
show nfpp arp-guard hosts	
clear nfpp arp-guard hosts	

10.4	

41.3.13 nfpp arp-guard scan-threshold

nfpp arp-guard scan-threshold *pkt-cnt*

<i>pkt-cnt</i>	[1,9999]

ARP

ARP

Ruijie(config)# **interface** *G 0/1*Ruijie(config-if)# **nfpp arp-guard scan-threshold** 20

arp-guard scan-threshold	
show nfpp arp-guard summary	
show nfpp arp-guard scan	ARP
clear nfpp arp-guard scan	ARP

10.4

41.4 DHCP

41.4.1 dhcp-guard attack-threshold

dhcp-guard attack-threshold { per-src-mac | per-port } *pps*

per-src-mac	MAC
per-port	

	<i>pps</i>	[1,9999]
	MAC	10 300
	NFPP	
	Ruijie(config)# nfpp Ruijie(config-nfpp)# dhcp-guard attack-threshold per-src-mac 15 Ruijie(config-nfpp)# dhcp-guard attack-threshold per-port 200	
	nfpp dhcp-guard policy	
	show nfpp dhcp-guard summary	
	show nfpp dhcp-guard hosts	
	clear nfpp dhcp-guard hosts	
	-	-

41.4.2 dhcp-guard enable

DHCP

dhcp-guard enable

	-	-
	DHCP	
	NFPP	

```
Ruijie(config)# nfpp
Ruijie(config-nfpp)# dhcp-guard enable
```

nfpp dhcp-guard enable	DHCP
show nfpp dhcp-guard summary	

-	-

41.4.3 dhcp-guard isolate-period

dhcp-guard isolate-period {seconds | permanent}

<i>seconds</i>	0 [30, 86400]
permanent	

0

NFPP

```
Ruijie(config)# nfpp
Ruijie(config-nfpp)# dhcp-guard isolate timeout 180
```

nfpp dhcp-guard isolate-period	

show nfpp dhcp-guard summary	
-------------------------------------	--

-	-

41.4.4 dhcp-guard monitor-period

dhcp-guard monitor- period seconds

seconds	[180, 86400]

600

NFPP

Â 0

0

Â

Ruijie(config)# **nfpp**

Ruijie(config-nfpp)# **dhcp-guard monitor-period 180**

show nfpp dhcp-guard summary	
show nfpp dhcp-guard hosts	
clear nfpp dhcp-guard hosts	

ó

NFPP

dhcp-guard rate-limit { per-src-mac | per-port} pps

per-src-mac	MAC	
per-port		
<i>pps</i>	[1,9999]	

	MAC	5	150
--	-----	---	-----

NFPP

```
Ruijie(config)# nfpp
Ruijie(config-nfpp)# dhcp-guard rate-limit per-src-mac 8
Ruijie(config-nfpp)# dhcp-guard rate-limit per-port 100
```




41.4.10 nfpp dhcp-guard policy

nfpp dhcp-guard policy { per-src-mac | per-port} rate-limit-pps attack-threshold-pps

per-src-mac	MAC
per-port	
<i>rate-limit-pps</i>	1 9999
<i>attack-threshold-pps</i>	1 9999

Ruijie(config)# **interface G 0/1**

Ruijie(config-if)# **nfpp dhcp-guard policy per-src-mac 3 10**

Ruijie(config-if)# **nfpp dhcp-guard policy per-port 50 100**

dhcp-guard attack-threshold	
dhcp-guard rate-limit	
show nfpp dhcp-guard summary	
show nfpp dhcp-guard hosts	
clear nfpp dhcp-guard hosts	

10.4	

41.5 DHCPv6

41.5.1 dhcpv6-guard attack-threshold

dhcpv6-guard attack-threshold { per-src-mac | per-port} *pps*

	per-src-mac	MAC
	per-port	

	-	-

DHCPv6

NFPP

Ruijie(config)# **nfpp**Ruijie(config-nfpp)# **dhcpv6-guard enable**

nfpp dhcpv6-guard enable		DHCPv6
show nfpp dhcpv6-guard summary		

10.4		

41.5.3 dhcpv6-guard isolate-period

dhcpv6-guard isolate-period {*seconds* | **permanent**}

<i>seconds</i>	0	[30, 86400]
permanent		

42.32 380.18 18.02 0220C04194C6 0.4.2B4 168.8 1.5 ref296.7 199.58 00062.6404 Tm()Tj52531 33j/C2_



<i>number</i>	1
	4294967295
	1000
NFPP	
	1000
1000	“ %ERROR The value that you configured is smaller than current monitored hosts 1000 please clear a part of monitored hosts. ”
	“ % NFPP_DHCP_GUARD-4-SESSION_LIMIT: Attempt to exceed limit of 1000 monitored hosts. ”
Ruijie(config)# nfpp	
Ruijie(config-nfpp)# dhcp-guard monitored-host-limit 200	
show nfpp dhcpv6-guard summary	

10.4	

41.5.6 dhcpv6-guard rate-limit

dhcpv6-guard rate-limit { per-src-mac | per-port} pps

per-src-mac	MAC
per-port	
<i>pps</i>	[1,9999]

MAC

5

150

NFPP

```
Ruijie(config)# nfpp
```

```
Ruijie(config-nfpp)# dhcpv6-guard rate-limit per-src-mac 8
```

```
Ruijie(config-nfpp)# dhcpv6-guard rate-limit per-port 100
```

--	--

```
nfpp dhcpv6-guard policy
```


clear nfpp dhcpv6-guard hosts [*vlan vid*] [**interface** *interface-id*] [*mac-address*]



DHCPv6

DHCP

Ruijie(config)# **interface G0/1**
Ruijie(config-if)# **nfpp dhcpv6-guard enable**

dhcpv6-guard enable		DHCPv6
show nfpp dhcpv6-guard summary		
	10.4	

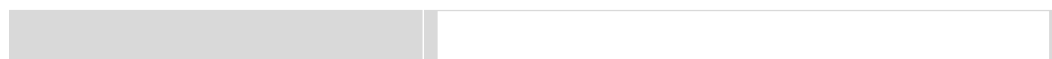
41.5.9 nfpp dhcpv6-guard isolate-period

nfpp dhcpv6-guard isolate-period {seconds | permanent}

--	--	--

seconds c<17EA35D9>1 Tf 0.0001 Tc 7.1412 T- 2 3198 -0.0 ()Tj ET [30, 86400]0 1 Tf 0 Tc 0 Tw 25.

	dhcpv6-guard isolate-period	
	show nfpp dhcpv6-guard summary	



10.4

41.6 ICMP

41.6.1 icmp-guard attack-threshold

icmp-guard attack-threshold { per-src-ip | per-port} pps

per-src-ip	IP
per-port	
<i>pps</i>	[1,9999]

IP

1200

1500

NFPP

```
Ruijie(config)# nfpp
```

```
Ruijie(config-nfpp)# icmp-guard attack-threshold per-src-ip 600
```

```
Ruijie(config-nfpp)# icmp-guard attack-threshold per-port 1200
```

nfpp icmp-guard policy	
show nfpp icmp-guard summary	
show nfpp icmp-guard hosts	
clear nfpp icmp-guard hosts	

	-	-

41.6.2 icmp-guard enable

ICMP

icmp-guard enable

	-	-

ICMP

NFPP

Ruijie(config)# **nfpp**

Ruijie(config-nfpp)# **icmp-guard enable**

nfpp icmp-guard enable		ICMP
show nfpp icmp-guard summary		

	-	-

41.6.3 icmp-guard isolate-period

icmp-guard isolate-period {seconds | permanent}

--	--	--

<i>seconds</i>	0 [30, 86400]
permanent	

0

NFPP

Ruijie(config)# **nfpp**
 Ruijie(config-nfpp)# **icmp-guard isolate-period 180**

nfpp icmp-guard isolate-period	
show nfpp icmp-guard summary	

-	-

41.6.4 icmp-guard monitor-period

icmp-guard monitor-period *seconds*

<i>seconds</i>	[180, 86400]

600

NFPP

Â 0

exceed limit of 1000

monitored hosts. ”

41.6.8 clear nfpp icmp-guard hosts

clear nfpp icmp-guard hosts [*vlan vid*] [*interface interface-id*] [*ip-address*]

<i>vid</i>		
<i>interface-id</i>		
<i>ip-address</i>	IP	

VLAN 1 g 0/1
 Ruijie# **clear nfpp icmp-guard hosts vlan 1 interface g 0/1**

icmp-guard attack-threshold		
nfpp icmp-guard policy		
show nfpp icmp-guard hosts		

-	-	

41.6.9 nfpp icmp-guard enable

ICMP

nfpp icmp-guard enable

ICMP

ICMP

ICMP

```
Ruijie(config)# interface G0/1
Ruijie(config-if)# nfpp icmp-guard enable
```

icmp-guard enable	ICMP
show nfpp icmp-guard summary	

10.4	

41.6.10 nfpp icmp-guard isolate-period

nfpp icmp-guard isolate-period {seconds | permanent}

seconds	0 [30, 86400]
permanent	

```
Ruijie(config)# interface G 0/1
Ruijie(config-if)# nfpp
```

--	--	--

icmp-guard isolate-period

clear nfpp icmp-guard hosts	
-----------------------------	--

10.4	
------	--

41.7 ND

41.7.1 nd-guard attack-threshold

nd-guard attack-threshold per-port {ns-na | rs | ra-redirect} pps

ns-na	
rs	
ra-redirect	
pps	[1,9999]

30	/	30	/	30
----	---	----	---	----

NFPP

```
Ruijie(config)# nfpp
Ruijie(config-nfpp)# nd-guard attack-threshold per-port ns-na 20
Ruijie(config-nfpp)# nd-guard attack-threshold per-port rs 10
Ruijie(config-nfpp)# nd-guard attack-threshold per-port ra-redirect 10
```

nfpp nd-guard policy	
----------------------	--

	10.4	

41.7.2 nd-guard enable

ND

nd-guard enable

	-	-

ND

NFPP

Ruijie(config)# **nfpp**
Ruijie(config-nfpp)# **nd-guard enable**

	nfpp nd-guard enable	ND
	show nfpp nd-guard summary	

	10.4	

41.7.3 nd-guard rate-limit

nd-guard rate-limit per-port { }

ND

Ruijie(config)# **interface G0/1**Ruijie(config-if)# **nfpp nd-guard enable**

nd-guard enable	ND
show nfpp nd-guard summary	

10.4	

41.7.5 nfpp nd-guard policy

**nfpp nd-guard policy per-port {ns-na | rs | ra-redirect} rate-limit-pps attack-thresh
old-pps**

ns-na	
rs	
ra-redirect	
<i>rate-limit-pps</i>	1 9999
<i>attack-threshold-pps</i>	1 9999

ND snooping

ND snooping

ND snooping

ND guard

800

900

ND guard

ND snooping

ND snooping

```
Ruijie(config)# interface G 0/1
```

```
Ruijie(config-if)# nfpp nd-guard policy per-port ns-na 50 100
```

```
Ruijie(config-if)# nfpp nd-guard policy per-port rs 10 20
```

```
Ruijie(config-if)# nfpp nd-guard policy per-port ra-redirect 10 20
```

LE0Ee...CN6pL#C-AQ4PDK

```
Ruijie# clear nfpp log
```

```
32 log-buffer entries were cleared.
```

show nfpp log	NFPP

10.4	

41.8.2 log-buffer entries

NFPP

log-buffer entries *number*

<i>number</i>	[0,1024]

256

NFPP

NFPP 50

```
Ruijie(config)# nfpp
```

```
Ruijie(config-nfpp)# log-buffer entries 50
```

log-buffer logs number_of_message interval length_in_seconds	NFPP
show nfpp log	NFPP

10.4	

41.8.3 log-buffer logs

NFPP

log-buffer logs *number_of_message* **interval** *length_in_seconds*

<i>number_of_message</i>	0-1024 0
	0-86400 1 0
<i>length_in_seconds</i>	<i>number_of_message</i> <i>length_in_seconds</i> 0 <i>number_of_message</i> / <i>length_in_second</i>

10.4	

41.8.4 logging

NFPP VLAN

logging vlan *vlan-range*

logging interface *interface-id*

<i>vlan-range</i>	VLAN “ 1-3,5 ”
<i>interface-id</i>	

NFPP

VLAN

VLAN 1 VLAN 2 VLAN 3 VLAN 5

Ruijie(config)# **nfpp**

Ruijie(config-nfpp)# **logging vlan 1-3,5**

G 0/1

Ruijie(config)# **nfpp**

Ruijie(config-nfpp)# **logging interface G 0/1**

show nfpp log summary	NFPP

10.4	



10.4

41.9 ARP

41.9.1 show nfpp arp-guard hosts

show nfpp arp-guard hosts [**statistics** | [[*vlan vid*] [**interface** *interface-id*] [*ip-address* | *mac-address*]]]

statistics	
<i>vid</i>	
<i>interface-id</i>	
<i>ip-address</i>	IP
<i>mac-address</i>	MAC

```

1
Ruijie# show nfpp arp-guard hosts statistics
success    fail    total
-----
100         20      120
          120          100          20

```

```

2                                " remain-time(seconds) "
Ruijie# show nfpp arp-guard hosts
If column 1 shows '*', it means "hardware do not isolate user" .
VLAN  interface IP address  MAC address    remain-time(s)
----  -
1     Gi0/1      1.1.1.1       -              110
2     Gi0/2      1.1.2.1       -              61
*3    Gi0/3      -              0000.0000.1111 110

```

```
4      Gi0/4      -      0000.0000.2222      61
```

```
Total 4 hosts
```

```
clear nfpp arp-guard hosts
```

41.9.2 show nfpp arp-guard scan

ARP

show nfpp arp-guard scan [**statistics** | [[**vlan** *vid*] [**interface** *interface-id*] [**ip-address** *s*] [**mac-address**]]]

statistics	ARP
<i>vid</i>	
<i>interface-id</i>	
<i>ip-address</i>	IP
<i>mac-address</i>	MAC

```
Ruijie# show nfpp arp-guard scan statistics
```

```
ARP scan table has 4 record(s).
```

```
      " ARP              4              "
```

```
Ruijie# show nfpp arp-guard scan
```

```
VLAN      interface      IP address      MAC address      timestamp
```



```

-----
1      Gi0/1      N/A      0000.0000.0001  2008-01-23
16:23:10
2      Gi0/2      1.1.1.1  0000.0000.0002  2008-01-23
16:24:10
3      Gi0/3      N/A      0000.0000.0003  2008-01-23
16:25:10
4      Gi0/4      N/A      0000.0000.0004  2008-01-23
16:26:10
Total  4 record(s)

" timestamp "          ARP          " 2008-01-23 16:23:10 "
  2008   1   23   16   23   10          ARP

```

```

Ruijie# show nfpp arp-guard scan vlan 1 interface G 0/1
0000.0000.0001
VLAN    interface    IP address    MAC address    timestamp
-----
1      Gi0/1      N/A      0000.0000.0001  2008-01-23
16:23:10
Total  1 record(s)

```

arp-guard scan-threshold	
nfpp arp-guard scan-threshold	
clear nfpp arp-guard scan	ARP

-	-

41.9.3 show nfpp arp-guard summary

show nfpp arp-guard summary

-	-

Ruijie# show nfpp arp-guard summary

Format of column Rate-limit and Attack-threshold is per-src-ip /per-src-mac/per-port.

Interface	Status	Isolate-period	Rate-limit	Attack-threshold	Scan-threshold
Global	Enable	300	4/5/60	8/10/100	15
Gi 0/1	Enable	180	5/-/-	8/-/-	-
Gi 0/2	Disable	200	4/5/60	8/10/100	20

Maximum count of monitored hosts: 1000

Monitor period 300s

1	Interface	Global
2	Status	
3	Rate-limit	IP / MAC
/	Attack-threshold	" _ "

arp-guard attack-threshold	
arp-guard enable	ARP
arp-guard isolate-period	
arp-guard monitor-period	
arp-guard monitored-host-limit	
arp-guard rate-limit	
arp-guard scan-threshold	
nfpp arp-guard enable	ARP
nfpp arp-guard isolate-period	

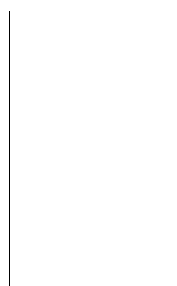


-	-

41.10 DHCP

41.10.1 show nfpp dhcp-guard hosts

show nfpp dhcp-guard hosts [**statistics** | [[**vlan** *vid*] [**interface** *interface-id*] [*mac-address*]]]



statistics	
<i>vid</i>	
<i>interface-id</i>	
<i>mac-address</i>	MAC



Ruijie# **show nfpp dhcp-guard hosts statistics**

success fail total

----- ---- -----

100 20 120

 120 100 20

“ remain-time(seconds) ”

Ruijie# **show nfpp dhcp-guard hosts**

If column 1 shows '*', it means "hardware failed to isolate host".

VLAN interface MAC address remain-time(seconds)

```

-----
1      gi0/2      0000.0000.0001  10
*2     gi0/1      0000.0000.0002  20
Total  2 host(s)

```

```

clear nfpp dhcp-guard hosts

```

```

10.4

```

41.10.2 show nfpp dhcp-guard summary

```
show nfpp dhcp-guard summary
```

```

-

```

```

-

```

```
Ruijie# show nfpp dhcp-guard summary
```

```

Format of column Rate-limit and Attack-threshold is per-src-ip
/per-src-mac/per-port.

```

Interface	Status	Isolate-period	Rate-limit	Attack-threshold
Global	Enable	300	-/5/150	-/10/300
Gi 0/1	Enable	180	-/6/-	-/8/-
Gi 0/2	Disable	200	-/5/30	-/10/50

```
Maximum count of monitored hosts: 1000
```

```
Monitor period 300s
```

```

1      Interface  Global
2      Status
3      Rate-limit      IP      /      MAC
/      Attack-threshold      " _ "

```

dhcp-guard attack-threshold	
dhcp-guard enable	DHCP
dhcp-guard isolate-period	
dhcp-guard monitor-period	
dhcp-guard monitored-host-limit	
dhcp-guard rate-limit	
nfpp dhcp-guard enable	DHCP
nfpp dhcp-guard isolate-period	
nfpp dhcp-guard policy	

10.4	

41.11 DHCPv6

41.11.1 show nfpp dhcpv6-guard hosts

show nfpp dhcpv6-guard hosts [statistics | [[vlan *vid*] [interface *interface-id*

<i>mac-address</i>	MAC

Ruijie# **show nfpp dhcpv6-guard hosts statistics**

success	fail	total
-----	----	-----
100	20	120
	120	100
		20

“ remain-time(seconds) ”

Ruijie# **show nfpp dhcpv6-guard hosts**

If column 1 shows '*', it means "hardware failed to isolate host".

VLAN	interface	MAC address	remain-time(seconds)
----	-----	-----	-----
1	gi0/2	0000.0000.0001	10
*2	gi0/1	0000.0000.0002	20
Total	2 host(s)		

-	-

Ruijie# **show nfpp dhcpv6-guard summary**

Format of column Rate-limit and Attack-threshold is per-src-ip /per-src-mac/per-port.

Interface	Status	Isolate-period	Rate-limit	Attack-threshold
Global	Enable	300	-/5/150	-/10/300
Gi 0/1	Enable	180	-/6/-	-/8/-
Gi 0/2	Disable	200	-/5/30	-/10/50

Maximum count of monitored hosts: 1000

Monitor period 300s

1	Interface	Global		
2	Status			
3	Rate-limit	IP	/	MAC
	/	Attack-threshold		" - "



10.4	

41.12 ICMP

41.12.1 show nfpp icmp-guard hosts

T


```
2      Gi0/2      1.1.2.1      61
```

```
Total 2 host(s)
```

```
clear nfpp icmp-guard hosts
```

```
10.4
```

41.12.2 show nfpp icmp-guard summary

```
show nfpp icmp-guard summary
```

```
-
```

```
Ruijie# show nfpp icmp-guard summary
```

```
Format of column Rate-limit and Attack-threshold is per-src-ip
/per-src-mac/per-port.
```

Interface	Status	Isolate-period	Rate-limit	Attack-threshold
Global	Enable	300	4/-/60	8/-/100
Gi 0/1	Enable	180	5/-/-	8/-/-
Gi 0/2	Disable	200	4/-/60	8/-/100

```
Maximum count of monitored hosts: 1000
```

```
Monitor period 300s
```

```
1      Interface  Global
```

```

2      Status
3      Rate-limit      IP      /      MAC      /
                        Attack-threshold      " _ "

```

icmp-guard attack-threshold	
icmp-guard enable	ICMP
icmp-guard isolate-period	
icmp-guard monitor-period	
icmp-guard monitored-host-limit	
icmp-guard rate-limit	
nfpp icmp-guard enable	ICMP
nfpp icmp-guard isolate-period	
nfpp icmp-guard policy	

10.4	

41.12.3 show nfpp icmp-guard trusted-host

show nfpp icmp-guard trusted-host

-	-

Ruijie# **show nfpp icmp-guard trusted-host**

IP address	mask
-----	-----
1.1.1.0	255.255.255.0

```

Gi 0/1      Enable 15/15/15 30/30/30
Gi 0/2      Disable -/5/30  -/10/50

```

```

1      Interface  Global
2      Status
3      Rate-limit          /          /
      /          /          Attack-threshold
      " _ "
      " -/5/30 "          G 0/2          /
      5          /          30

```

nd-guard attack-threshold	
nd-guard enable	ND
nd-guard rate-limit	
nfpp nd-guard enable	ND
nfpp nd-guard policy	

--	--

42 ACL

id	IP ACL 1-99 1300-1999 IP ACL 100-199 2000-2699 MAC ACL 700-799 ACL 2700-2899
name	ACL
sn	ACL ()
start-sn	
inc-sn	
deny	
permit	
prot	IPv6 ipv6 icmp tcp udp 0-255 IPv4 eigrp gre ipinip igmp nos ospf icmp udp

precedence precedence	0-7
range	
time-range tm-rng-name	tm-rng-name
tos tos	0-15
cos cos	cos (0-7)
cos inner cos	tag cos
icmp-type	ICMP 0-255
icmp-code	ICMP 0-255
icmp-message	ICMP
	Operator lt- eq- gt- neq-
operator port[port]	range- port

B	MAC	6	P		35
C		12	Q	IP	36
D	VLAN tag	14	R	ip	38
E	DSAP()	18	S	ip	42
F	SSAP()	19	T	TCP	46
G	Ctrl	20	U	TCP	48
H	Org Code	21	V		50
I					

4) Expert

2700 - 2899

access-list *id* {deny | permit} [protocol | [ethernet-type][cos [out][inner in]]] [VID [out][inner in]] {source source-wildcard | host source | any} {host source-mac-address | any} {destination destination-wildcard | host destination | any} {host destination-mac-address | any} [[precedence precedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name]

Â

Ethernet-type cos

access-list *id* {deny | permit} {ethernet-type| cos [out][inner in]] [VID [out][inner in]] {source source-wildcard | host source | any} {host source-mac-address | any } {destination destination-wildcard | host destination | any} {host destination-mac-address | any} [time-range time-range-name]

Â

Protocol

access-list *id* {deny | permit} protocol [VID [out][inner in]] {source source-wildcard | host source | any} {host source-mac-address | any } {destination destination-wildcard | host destination | any} {host destination-mac-address | any} [precedence precedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name]

Â

Expert

Internet Control Message Protocol (ICMP)

access-list *id* {deny | permit} icmp [VID [out][inner in]] {source source-wildcard | host source | any} {host source-mac-address | any } {destination destination-wildcard | host destination | any} {host destination-mac-address | any} [icmp-type] [[icmp-type [icmp-code]] | [icmp-message]] [precedence precedence] [tos tos] [fragments] [time-range time-range-name]

Transmission Control Protocol (TCP)

access-list *id* {deny | permit} tcp [VID [out][inner in]] {source source-wildcard | host Source | any} {host source-mac-address | any } [operator port [port]] {destination destination-wildcard | host destination | any} {host destination-mac-address | any} [operator port [port]] [precedence precedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name] [match-all tcp-flag]

User Datagram Protocol (UDP)

access-list *id* {deny | permit} udp[VID [out][inner in]] {source source -wildcard | host source | any} {host source-mac-address | any } [operator port [port]] {destination destination-wildcard | host destination | any}{host destination-mac-address | any} [operator port [port]] [precedence precedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name]

5)

access-list *list-remark text*

<i>Id</i>	1-99 100-199 1300-1999 2000-2699 2700 – 2899 700 - 799
Deny	
Permit	
<i>Source</i>	
<i>source-wildcard</i>	0.255.0.32
<i>protocol</i>	IP EIGRP GRE IPINIP IGMP NOS OSPF ICMP UDP TCP IP IP 0-255 ICMP/TCP/UDP
<i>Destination</i>	
<i>destination-wildcard</i>	0.255.0.32
fragments	

precedence 0.0 Tc 0.98<01C3D9.4SPF XE\$

	match-all	<i>tcp flag</i>
	<i>tcp-flag</i>	tcp flag

ACL

access-list

R R Ò B

^ dod-host-prohibited
^ dod-net-prohibited
^ echo
^ echo-reply
^ fragment-time-exceeded
^ general-parameter-problem
^ host-isolated
^ host-precedence-unreachable
^ host-redirect
^ host-tos-redirect
^ host-tos-unreachable
^ host-unknown
^ host-unreachable
^ information-reply
^ information-request
^ mask-reply
^ mask-request
^ mobile-redirect
^ net-redirect
^ net-tos-redirect
^ net-tos-unreachable
^ net-unreachable
^ network-unknown
^ no-room-for-option
^ option-missing
^ packet-too-big
^ parameter-problem
^ port-unreachable
^ precedence-unreachable
^ protocol-unreachable
^ redirect
^ router-advertisement
^ router-solicitation
^ source-quench
^ source-route-failed
^ time-exceeded
^ timestamp-reply
^ timestamp-request

^	ttl-exceeded		
^	unreachable		
	TCP	TCP	
^	bgp		
^	chargen		
^	cmd		
^	daytime		
^	discard		
^	domain		
^	echo		
^	exec		
^	finger		
^	ftp		
^	ftp-data		
^	gopher		
^	hostname		
^	ident		
^	irc		
^	klogin		
^	kshell		
^	login		
^	nntp		
^	pim-auto-rp		
^	pop2		
^	pop3		
^	smtp		
^	sunrpc		
^	syslog		
^	tacacs		
^	talk		
^	telnet		
^	time		
^	uucp		
^	whois		
^	www		
	UDP	UDP	
^	biff		
^	bootpc		

^ bootps
^ discard
^ dnsix
^ domain
^ echo
^ isakmp
^ mobile-ip
^ nameserver
^ netbios-dgm
^ netbios-ns
^ netbios-ss
^ ntp
^ pim-auto-rp
^ rip
^ snmp
^ snmptrap
^ sunrpc
^ syslog
^ tacacs
^ talk
^ tftp
^ time
^ who
^ xdmcp

Ethernet-type

^ aarp
^ arp
^ appletalk
^ decnet-iv
^ diagnostic
^ etype-6000
^ etype-8042
^ lat
^ lavc-sca
^ mop-console
^ mop-dump
^ mumps
^ netbios

Â vines-echo

Â xns-idp

1 IP

IP

192.168.1.64 - 192.168.1.127

Ruijie(config)# **access-list 1 permit 192.168.1.64 0.0.0.63**

2 IP

IP

DNS

ICMP

Ruijie(config)# **access-list 102 permit tcp any any eq domain**

Ruijie(config)# **access-list 102 permit udp any any eq domain**

Ruijie(config)# **access-list 102 permit icmp any any echo**

Ruijie(config)# **access-list 102 permit icmp any any echo-reply**

3 MAC

MAC

00d0f8000c0c

100

1 IP

[sn] d{ } [(s)-86(3)-80(Du(C2))5-010001 T 300000 Td (1,057102811P)-4/02_637.4860Tj341p60e3.246

destination-wildcard | **host** *destination* | **any** {**host** *destination-mac-address* | **any**}
[**time-range** *time-range-name*]

b) protocol

[*sn*] **deny protocol** [[**VID** [*out*][*inner in*]]] {*source source-wildcard* | **host** *source* | **any**}
{**host** *source-mac-address* | **any**} {*destination destination-wildcard* | **host** *destination* | **any**}
{**host** *destination-mac-address* | **any**} [**precedence** *precedence*] [**tos** *tos*] [**fragments**]
[**range** *lower upper*] [**time-range** *name*]

c) expert

Â **Internet Control Message Protocol (ICMP)**

[*sn*] **deny icmp** [[**VID** [*out*][*inner in*]]] {*source source-wildcard* | **host** *source* | **any**} {**host**
source-mac-address | **any**} {*destination destination-wildcard* | **host** *destination* | **any**} {**host**
destination-mac-address | **any**} [*icmp-type*] [[*icmp-type* [*icmp-code*]] | [*icmp-message*]]
[**precedence**] [**tos** *tos*] [**frag-6()**] 931 Tf0(upper)c 0 Tw 2.571 0 Td[(icmp-)-65 Tf2BE3C02D6>T]TT0 1 Tf

[[*icmp-type icmp-code*]] | [*icmp-message*] [**dscp** *dscp*] [**flow-label** *flow-label*] [**fragments**]
[**time-range** *time-range-name*]

Â Transmission Control Protocol (TCP)

[*sn*] **deny tcp** {*source-ipv6-prefix / prefix-length* | **host** *source-ipv6-address* | **any**} [*operator*
port [*port*]] {*destination-ipv6-prefix / prefix-length* | **host** *destination-ipv6-address* | **any**}
[*operator port* [*port*]] [**dscp** *dscp*] [**flow-label** *flow-label*] [**fragments**] [**range** *lower upper*]
[**time-range** *time-range-name*] [**match-all** *tcp-flag*]

Â User Datagram Protocol (UDP)

[*sn*] **deny udp** {*source-ipv6-prefix/prefix-length* | **host** *source-ipv6-address* | **any**} [*operator*
port [*port*]] {*destination-ipv6-prefix / prefix-length* | **host** *destination-ipv6-address* |
any} [*operator port* [*port*]] [**dscp** *dscp*] [**flow-label** *flow-label*] [**fragments**] [**range** *lower*
upper] [**time-range** *time-range-name*]

<i>Sn</i>	ACL
<i>source-ipv6-prefix</i>	IPv6
<i>destination-ipv6-prefix</i>	IPv6
<i>prefix-length</i>	
<i>source-ipv6-address</i>	IPv6
<i>destination-ipv6-address</i>	IPv6
dscp	
<i>dscp</i>	0-63.
flow-label	
<i>flow-label</i>	0-1048575
<i>protocol</i>	IPV6 IPV6 icmp tcp udp <0-255>

1

```

Ruijie(config)# ipv6 access-list extended v6-acl
Ruijie(config-ipv6-nacl)# 11 deny ipv6 host 192.168.4.12 any
Ruijie(config-ipv6-nacl)# show access-lists
ipv6 access-list extended v6-acl
11 deny ipv6 host 192.168.4.12 any
Ruijie(config-ipv6-nacl)# exit
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# ipv6 traffic-filter v6-acl in

```

show access-lists	
ipv6 traffic-filter	IPV6
ip access-group	IP ACL
mac access-group	MAC ACL
ip access-list	IP ACL
mac access-list	MAC ACL
expert access-list	ACL
ipv6 access-list	IPV6 ACL
permit	

V10.0	V10.0 arp V10.2(3)

42.1.3 expert access-group

EXPERT ACL

no

expert access-group {*id* | *name*} {in | out}

no expert access-group {*id* | *name*} {in | out}

<i>id</i>	Expert 2700-2899
<i>name</i>	Expert

ACL

show expert access-lists

```
1          ACL
Ruijie(config)# expert access-list extended exp-acl
Ruijie(config-exp-nacl)# show expert access-lists
expert access-list extended exp-acl
Ruijie(config-exp-nacl)#

2          ACL
Ruijie(config)# expert access-list extended 2704
Ruijie(config-exp-nacl)# show expert access-lists
expert access-list extended 2704
Ruijie(config-exp-nacl)#
```

show expert access-lists	

V10.0	V10.0

42.1.5 ip access-group

ip access-group no

```
ip access-group {id | name} {in | out}
no ip access-group { id | name} {in | out}
```

id	IP 1-199 1300-2699
name	IP
in	
out	

ip access-group

fastEthernet0/0 120

Ruijie(config)# **interface fastEthernet 0/0**

Ruijie(config-if)#**ip access-group 120 in**

access-list	
show access-lists	
show ip access-list	IP 1-199 1300 – 2699 3000 3199

```

1          ACL
Ruijie(config)# ip access-list standard std-acl
Ruijie(config-std-nacl)# show ip access-lists
ip access-list standard std-acl
Ruijie(config-std-nacl)#

2          ACL
Ruijie(config)# ip access-list extended 123
Ruijie(config-ext-nacl)# show ip access-lists
ip access-list extended 123

```

show ip access-lists	IP

V10.0	V10.0

42.1.7 ip access-list resequence

```

ip          ACL          IPV6      ACL
no

```

ip access-list resequence {*id* | *name*} start-sn inc-sn

no ip access-list resequence {*id* | *name*}

<i>id</i>	ACL
<i>name</i>	ACL
<i>start-sn</i>	
<i>inc-sn</i>	

```

start-sn 10
inc-sn 10

```

show access-lists

ACL

Ruijie#

ACL
traffic-filter

show ipv6

```

access-list v6-acl      Gigabit    1
Ruijie(config)# interface GigaEthernet 0/1
Ruijie(config-if)# ipv6 traffic-filter v6-acl in

```

show access-group	ACL

V10.0	V10.0

42.1.9 ipv6 access-list

IPV6 ACL

no

ACL

ipv6 access-list *name*

no ipv6 access-list *name*

<i>name</i>	ACL

show access-lists

```

IPV6      ACL
Ruijie(config)# ipv6 access-list v6-acl
Ruijie(config-ipv6-nacl)# show access-lists
ipv6 access-list extended v6-acl
Ruijie(config-ipv6-nacl)#

```



V10.0	V10.0

42.1.11 MAC access-group

MAC ACL

no

mac access-group {*id* | *name*}{*in* | *out*}

no mac access-group {*id* | *name*} {*in* | *out*}

<i>id</i>	MAC 700-799
<i>name</i>	MAC
in	
out	

ACL

show running-config

```

access-list accept_00d0f8xxxxxx_only Gigabit 1
Ruijie(config)# interface GigaEthernet 1/1
Ruijie(config-if)# mac access-group accept_00d0f8xxxxxx_only in

```

show access-group	ACL

MAC ACL

no

ACL

mac access-list extended {*id* | *name*}**no mac access-list extended** {*id* | *name*}

<i>Id</i>	MAC 700-799
<i>name</i>	MAC

MAC ACL

show mac access-lists

1 MAC ACL

Ruijie(config)# **mac access-list extended** *mac-acl*Ruijie(config-mac-nacl)# **show mac access-lists**

mac access-list extended mac-acl

2 MAC ACL

Ruijie(config)# **mac access-list extended** 704Ruijie(config-mac-nacl)# **show mac access-lists**

mac access-list extended 704

show mac access-lists	mac

V10.0	V10.0

42.1.13 no sn

ACL

no *sn*

|--|--|

1) IP

[sn] **permit** {*source source-wildcard* | **host** *source* | **any**}

2) IP

[sn] **permit protocol** *source source-wildcard destination destination-wildcard* [**precedence** *precedence*] [**tos** *tos*] [**fragments**] [**range** *lower upper*] [**time-range** *time-range-name*]

IP

Â Internet Control Message Protocol (ICMP)

[sn] **permit icmp** {*source source-wildcard* | **host** *source* | **any**} {*destination destination-wildcard* | **host** *destination* | **any**} [*icmp-type*] [[*icmp-type* [*icmp-code*]]] | [*icmp-message*] [**precedence** *precedence*] [**tos** *tos*] [**fragments**] [**time-range** *time-range-name*]

Â Transmission Control Protocol (TCP)

[sn] **permit tcp** {*source source-wildcard* | **host** *source* | **any**} {*destination destination-wildcard* | **host** *destination* | **any**} [**precedence** *precedence*] [**tos** *tos*] [**fragments**] [**time-range** *time-range-name*]

[sn] **permit protocol** [VID [out][inner in]] {source source-wildcard | **host** Source | **any**} {**host** source-mac-address | **any** } {destination destination-wildcard | **host** destination | **any**} {**host** destination-mac-address | **any**} [precedence precedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name]

Expert

Â **Internet Control Message Protocol (ICMP)**

[sn] **permit icmp** [VID [out][inner in]] {source source-wildcard | **host** source | **any**} {**host** source-mac-address | **any** } {destination destination-wildcard | **host** destination | **any**} {**host** destination-mac-address | **any**} [icmp-type] [[icmp-type [icmp-code]] | [icmp-message]] [precedence precedence] [tos tos] [fragments] [time-range time-range-name]

Â **Transmission Control Protocol (TCP)**

[sn] **permit tcp** [VID [out][inner in]] {source source-wildcard | **host** Source | **any**} {**host** source-mac-address | **any** } [operator **port** [port]] {destination destination-wildcard | **host** destination | **any**} {**host** destination-mac-address | **any**} [operator **port** [port]] [precedence precedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name] [match-all tcp-flag]

Â **User Datagram Protocol (UDP)**

[sn] **permit udp** [VID [out][inner in]] {source source-wildcard | **host** source | **any**} {**host** source-mac-address | **any** } [operator **port** [port]] {destination destination-wildcard | **host** destination | **any**} {**host** destination-mac-address | **any**} [operator **port** [port]] [precedenceprecedence] [tos tos] [fragments] [range lower upper] [time-range time-range-name]

Â **Address Resolution Protocol (ARP)**

[sn] **permit arp** {vid vlan-id} [host source-mac-address | **any**] [host destination-mac-address | **any**] {sender-ip sender-ip-wildcard | **host** sender-ip | **any**} {sender-mac sender-mac-wildcard | **host** sender-mac | **any**} {target-ip target-ip-wildcard | **host** target-ip | **any**}

5) **IPV6**

[sn] **permit protocol** {source-ipv6-prefix / prefix-length | **any** | **host** source-ipv6-address} {destination-ipv6-prefix / prefix-length | **any**| hostdestination-ipv6-address} [**dscp** dscp] [**flow-label** flow-label] [fragments] [range lower upper] [time-range time-range-name]

IPV6

Â **Internet Control Message Protocol (ICMP)**

[sn] **permit icmp** {source-ipv6-prefix / prefix-length | **any** source-ipv6-address | **host**} {destination-ipv6-prefix / prefix-length| **host** destination-ipv6-address | **any**} [icmp-type] [[icmp-type [icmp-code]] | [icmp-message]] [**dscp** dscp] [**flow-label** flow-label][fragments] [time-range time-range-name]

Â Transmission Control Protocol (TCP)

[sn] **permit tcp** {*source-ipv6-prefix / prefix-length* | **host** *source-ipv6-address* | **any**}
[*operator port [port]*] {*destination-ipv6-prefix / prefix-length* | **host** *destination-ipv6-address*
| **any**} [*operator port [port]*] [**dscp** *dscp*] [**flow-label** *flow-label*] [**fragments**] [**range** *lower*
upper] [**time-range** *time-range-name*] [**match-all tcp-flag**]

Â User Datagram Protocol (UDP)

[sn] **permit udp** {*source-ipv6-prefix / prefix-length* | **host** *source-ipv6-address* | **any**}
[*operator port [port]*] {*destination-ipv6-prefix / prefix-length* | **host** *destination-ipv6-address*
| **any**} [*operator port [port]*] [**dscp** *dscp*] [**flow-label** *flow-label*] [**fragments**] [**range** *lower*
upper] [**time-range** *time-range-name*]




```
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# ip access-group 102 in
Ruijie(config-if)#
    3      MAC      ACL      MAC  0013.0049.8272
      100      1
Ruijie(config)# mac access-list extended 702
Ruijie(config-mac-nacl)# permit host 0013.0049.8272 any aarp
Ruijie(config-mac-nacl)# show access-lists
mac access-list extended
10 permit host 0013.0049.8272 any aarp702
Ruijie(config-mac-nacl)# exit
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# mac access-group 702 in
    4      ip      ACL      IP  192.168.4.12
      1
Ruijie(config)# ip access-list standard std-acl
Ruijie(config-std-nacl)# permit host 192.168.4.12
Ruijie(config-std-nacl)# show access-lists
ip access-list standard std-acl
10 permit host 192.168.4.12
Ruijie(config-std-nacl)# exit
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# ip access-group std-acl in
    5      IPV6      ACL      IP  192.168.4.12
      1
Ruijie(config)# ipv6 access-list extended v6-acl
Ruijie(config-ipv6-nacl)# 11 permit ipv6
host ::192.168.4.12 any
Ruijie(config-ipv6-nacl)# show access-lists
ipv6 access-list extended v6-acl
11 permit ipv6 host ::192.168.4.12 any 6f62v6-acl
```

ip access-group	IP ACL
mac access-group	MAC ACL
ip access-list	IP ACL
mac access-list	MAC ACL
expert access-list	ACL
ipv6 access-list	IPV6 ACL
deny	ACL

V10.0	V10.0 arp V10.2(3)

42.2

42.2.1 show access-group

ACL

show access-group [*interface* <interface>]

<interface>	

ACL

ACL

```
Ruijie# show access-group
ip access-list standard ipstd3
Applied On interface GigabitEthernet 0/1.
ip access-list standard ipstd4
Applied On interface GigabitEthernet 0/2.
ip access-list extended 101
```

Applied On interface GigabitEthernet 0/3.
 ip access-list extended 102
 Applied On interface GigabitEthernet 0/8.

ip access-group	ip
mac access-group	MAC
expert access-group	Expert
ipv6 traffic-filter	IPV6

V10.0	V10.0

42.2.2 show access-lists

ACL

ACL

show access-lists [*id* | *name*]

<i>id</i>	
<i>name</i>	

acl

id *name*

ACL

```
Ruijie# show access-lists n_acl
ip access-list standard n_acl
Ruijie# show access-lists 102
ip access-list extended 102
Ruijie# show access-lists
ip access-list standard n_acl
```

ACL

V10.0	V10.0

42.2.4 show ip access-group

IP ACL

show ip access-group[interface <interface>]

<interface>	

IP ACL

IP ACL

```
Ruijie# show ip access-group interface gigabitethernet 0/1
ip access-group aaa in
Applied On interface GigabitEthernet 0/1.
```

ip access-list	IP ACL

\$œ È

	<interface>	
	IPv6 ACL	IPv6 ACL
	Ruijie# show ipv6 traffic-filter interface gigabitethernet 0/4 ipv6 traffic-filter v6 in Applied On interface GigabitEthernet 0/4.	

```
mac access-group mm in
Applied On interface GigabitEthernet 0/3.
```

mac access-list	MAC ACL

V10.0	V10.0

42.3

42.3.1 security access-group

security access-group {*id*|*name*}

no security access-group

<i>id</i>	ACL id
<i>name</i>	ACL

```
Ruijie(config-if)#security access-group 1
```

show secu-acl	

	V10.2	V10.2

42.3.2 security global access-group

security global access-group {*id*|*name*}

no security global access-group

--	--	--

11

43 VACL

43.1

Vlan access map		map_name	map_sn
		map	map
1	vlan access map	map	map_sn
	map	map	map_sn 10
2	map_sn	vlan access map	map_name
	Map_name	map	
3	map_sn	vlan access map	map
	map map	map	map
4	map	6553	map

no action redirect{GigabitEthernet | Aggregateport | FastEthernet } {*port_id* }



<i>acl_id</i>	numbered acl;
---------------	---------------

Config-access-map	vACL
-------------------	------

	+	acl,	8	acl
^	map	ip acl	map acl	
^	map	8	acl	
^	map	acl		
^	map	ace	acl	acl
&	map	ip acl (mac acl)		
	ip acl (mac acl)	ip acl (mac acl)		
	ip acl (mac acl)			
^	map	ip acl (mac acl)		
	mac acl (ip acl)			ip acl (mac
	acl)	mac acl (ip acl)		

map	match
-----	-------

```

Ruijie(config)# vlan access-map dd
Ruijie(config-access-map)# match ip address 10 20 sp1 30 sp2
Ruijie(config-access-map)# exit
Ruijie(config)# vlan access-map dd 20
Ruijie(config-access-map)# match mac address 710 720 m1 760
Ruijie(config-access-map)# exit
Ruijie(config)#

```

VACL

<i>map_name</i>	map
<i>vlan_id</i>	vlan id

```

vlan access map          vlan          vlan          vlan
filter aa vlan-list 1-33  map      1-33      vlan

```

```

map ff vlan access map      vlan 5
Ruijie(config)# vlan filter ff vlan-list 5

```

-	-

-	-

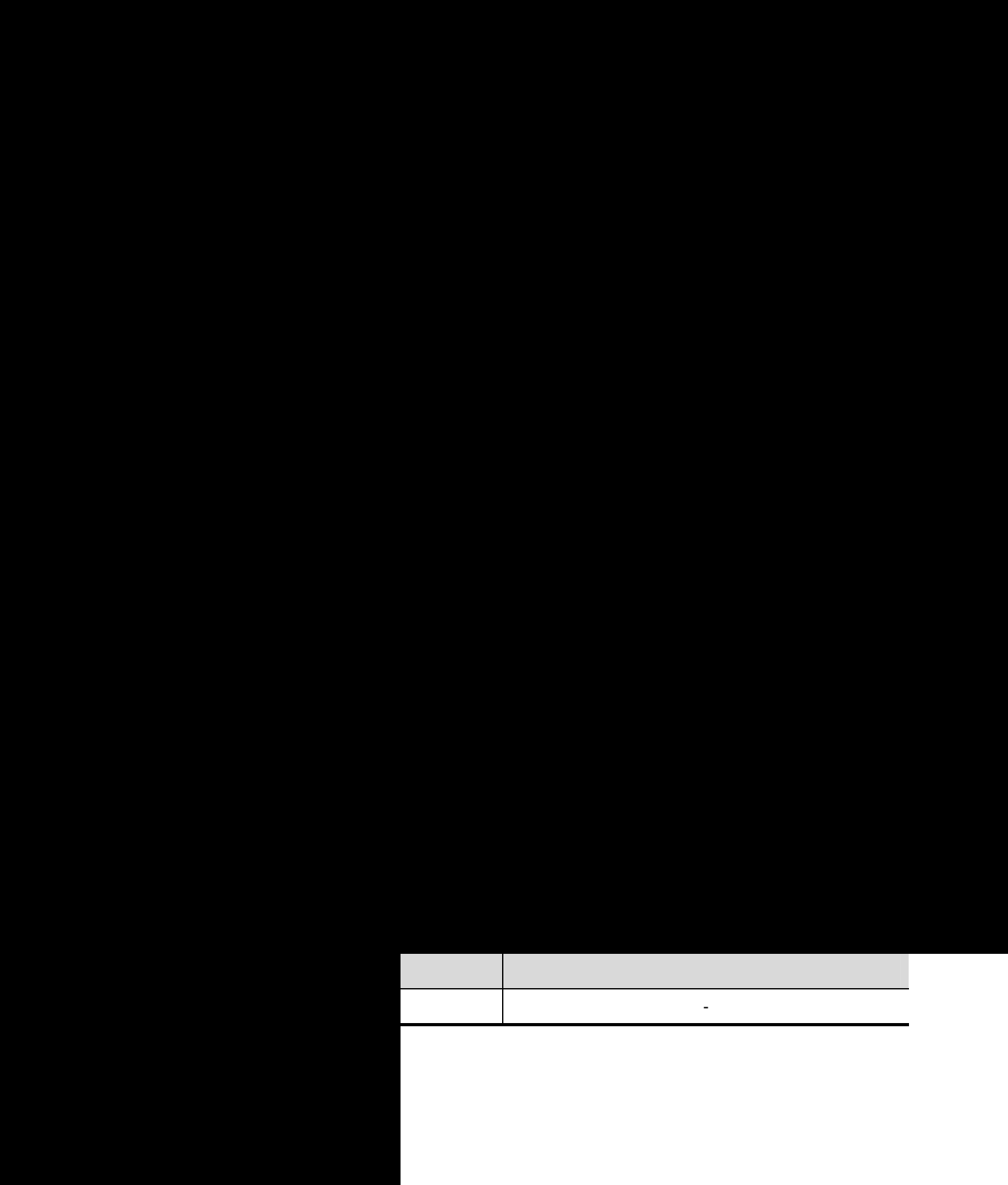
43.2

43.2.1 show vlan access map

```

map
show vlan access map
map
show vlan access map map_name

```



	-

f [REDACTED] 0.64 re11ef1452 g147..36 354.8 209.22 19.62 ref0 gBT/C2_0 1 Tf0

Show vlan filter access-map aa
Ruijie(config)# **show vlan filter**
VLAN Map aa
Configured on VLANs: 1, 5, 6,
Ruijie(config)#

show vlan filter access-map map_name	map vlan
show vlan filter vlan vlan_id	map vlan

-	-

44 QoS

44.1

QoS QoS

Â 1 policy-map

Â policy-map class-map

Â class-map 1 ACL ACL ACE

Â ACE “ ACL”

QoS Policy Map

QoS QoS

QoS Policy Map Off

QoS

CoS	0
	8
	WRR
QueueWeight	1:1:1:1:1:1:1:1
WRR Weight Range	1:15
DRR Weight Range	1:15
	No Trust

Cos

CoS

CoS to DSCP	CoS	DSCP
	0	0
	1	8
	2	16
	3	24
	4	32
	5	40
	6	48
	7	56

IP-Precedence to DSCP

IP-Precedence to DSCP	IP-Precedence	DSCP
	0	0
	1	8
	2	16
	3	24
	4	32
	5	40
	6	48
	7	56

DSCP to CoS

DSCP to CoS	DSCP	CoS
	0	0
	8	1
	16	2
	24	3
	32	4
	40	5
	48	6
	56	7

44.2

44.2.1 class maps

ACL

ip access-list {**extended** | **standard**} { *acl-id* | *acl-name* }

mac access-list extended {*acl-id* | *acl-name*}

expert access-list extended {*acl-id* | *acl-name*}

ipv6 access-list extended *acl-name*

```

4      class-map,      cm
Ruijie(config)# class-map cm
5      ACL
Ruijie(config-cmap)# match access-group me
6      class-map
Ruijie(config-cmap)# exit

```

show mac access-lists	-
show ip access-lists	-
show class-map	-

-	-

44.2.2 drr-queue bandwidth

DRR

drr-queue bandwidth *weight1...weight8*

no drr-queue bandwidth

<i>weight1...weight8</i>	
no	

```

Ruijie(config)# drr-queue bandwidth 1 2 3 4 5 6 7 8

```

|--|--|

-

	-	-
--	---	---

44.2.4 mls qos cos

CoS

mls qos cos default-cos

no mls qos cos

	<i>default-cos</i>	0 7
	no	

CoS 0

```
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# mls qos cos 7
```

R u i j

dscp	
no	

```
Ruijie(config)# mls qos map cos-dscp 8 10 16 18 24 26 32 34
```



```
Ruijie(config)# mls qos map dscp-cos 8 10 16 18 to 0
```

-	-

```
show mls qos maps      dscp-cos maps,dscp-cos maps  ip-prec-dscp maps
```

-	-

44.2.7 mls qos map ip-prec-dscp

ippre

DSCP

```
mls qos map ip-prec-dscp dscp1...dscp8
```

```
no mls qos map ip-prec-dscp
```

dscp	
no	

```
Ruijie(config)# mls qos map ip-prec-dscp 8 10 16 18 24 26 32 34
```

--	--

```
show mls qos maps
```

```
dscp-cos maps,dscp-cos maps
ip-prec-dscp maps
```

44.2.8 mls qos scheduler

mls qos scheduler [sp | rr | wrr | drr]

no mls qos scheduler

sp	
rr	
wrr	
drr	
no	

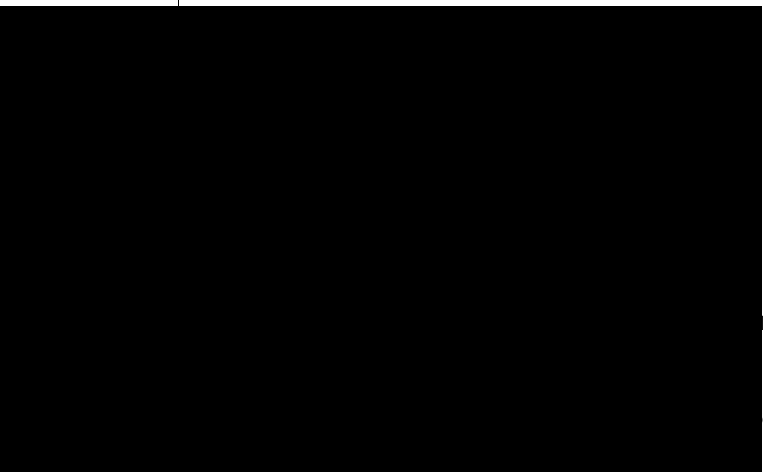
wrr

Ruijie(config)# **mls qos scheduler sp**

cos	Qos	CoS
dscp	Qos	DSCP
<i>ip-precedence</i>	Qos	IP-PRE
no		

```
Ruijie(config)# interface gigabitethernet 1/1  
Ruijie(config-if)# mls qos trust cos
```

no policy-map <i>policy-map-name</i>	policy map
<i>class-map-name</i>	class map
no class <i>class-map-name</i>	
<i>new-dscp</i>	DSCP
<i>rate-bps</i>	kbps
<i>burst-byte</i>	kbyte
<i>drop</i>	
<i>dscp-value</i>	DSCP



map po

ass cm

Ruijie(config-pmap-c)# **set ip dscp 10**

4 1M, 4096k, dscp 16

Ruijie(config-pmap-c)# **police 1000000 4096 exceed-action dscp 16**



priority-queue	SP
no priority-queue	WRR

WRR

Ruijie(config)# **no priority-queue**

show mls qos queueing	-

-	-

44.2.12 priority-queue cos-map

CoS

priority-queue cos-map *qid* *cos0* [*cos1* [*cos2* [*cos3* [*cos4* [*cos5* [*cos6* [*cos7*]]]]]]]

no priority-queue cos-map

<i>qid</i>	id
<i>cos7</i>	<i>cos0 ...</i> CoS
<i>no</i>	

```
Ruijie(config)# priority-queue cos-map 1 0 1
```

show mls qos queueing	-
------------------------------	---

-	-
---	---

44.2.13 service-policy

policy map

service-policy {input | output} *policy-map-name*

no service-policy {input | output}

<i>policy-map-name</i>	polycymap
no	policy map

```
Ruijie(config)# interface fastEthernet 0/1
```

```
Ruijie(config-if)# service-policy input po
```

show mls qos interface	-
-------------------------------	---

-	-
---	---

44.2.14 wrr-queue bandwidth

WRR

wrr-queue bandwidth *weight1 ... weightn*

no wrr-queue bandwidth

<i>weight1...weightn</i>	n	n
no		

weight1: ...: weightn = 1:::1

Ruijie(config)# **wrr-queue bandwidth** 1 2 3 4 5 6 7 8

show mls qos queueing		-

-		-

44.3

44.3.1 show class-map

class map

show class-map [*class-name*]

<i>class-name</i>		class map

class map

Ruijie# **show class-map**

-	-

-	-

44.3.2 show policy-map

QoS policy map [class class-name]

show policy-map [*policy-name* [**class** *class-name*]]

<i>policy-name</i>	policy name
<i>class-name</i>	class map

policy name

Ruijie# **show policy-map**

-	-

ip-prec-dscp	ip-prec-dscp maps
---------------------	-------------------

dscp-cos maps	dscp-cos maps	ip-prec-dscp maps
---------------	---------------	-------------------

```
Ruijie# show mls qos maps
```

-	-
---	---

-	-
---	---

44.3.5 show mls qos queueing

QoS

(cos-to-queue map, wrr weight, drr weight)

```
show mls qos queueing
```

-	-
---	---

```
Ruijie# show mls qos queueing
```

-	-
---	---

	-	-

44.3.6 show mls qos rate-limit

show mls qos rate-limit [**interface** *interface-id*]

	interface	interface-id rate-limit

Ruijie# **show mls qos rate-limit**

--	--	--

Ruijie# show mls qos scheduler

-	-

-	-

45 Voice VLAN

45.1

45.1.1 voice vlan

Voice VLAN

VLAN

Voice VLAN

no

Voice VLAN

voice vlan *vlan-id*

no voice vlan

<i>vlan-id</i>	Voice VLAN ID

Voice VLAN

Voice VLAN ID

1

Voice VLAN



show voice vlan

Voice VLAN
45-2

45.1.3 voice vlan cos

Voice VLAN

CoS

no

voice vlan cos cos-value

no voice vlan cos

cos-value	Voice VLAN	CoS

cos-value

6

	Voice VLAN	CoS	DSCP
--	------------	-----	------

1

Voice VLAN

CoS

5

Ruijie(config)# voice vlan cos 5

--	--

show voice vlan

Voice VLAN

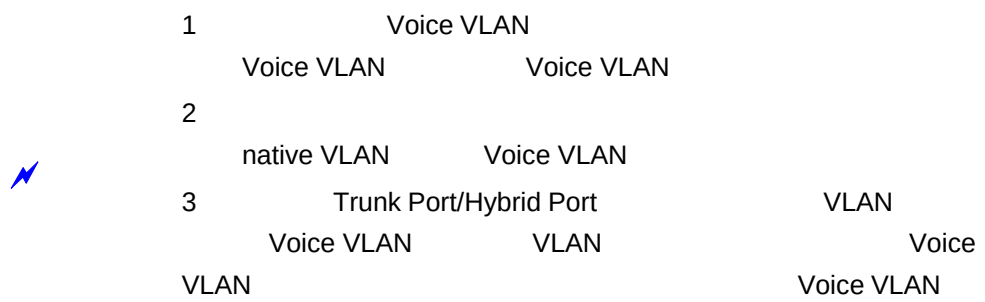
cah8bHT"t15P#\$6APPBDry@9pma

	dscp-value	Voice VLAN	DSCP
	dscp-value	46	
	Voice VLAN	CoS	DSCP
	1	Voice VLAN	DSCP 40
	Ruijie(config)# voice vlan dscp 40		
	show voice vlan		Voice VLAN

1 OUI 0012.3400.0000 Voice VLAN Company A

Ruijie(config)# **voice vlan mac-address 0012.3400.0000 mask**

ffff.ff00.0000 description Company A



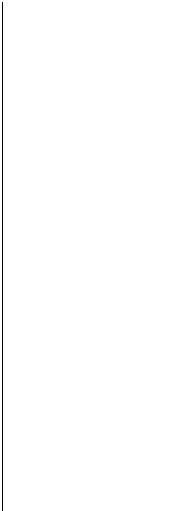
Voice VLAN OUI		MAC	Voice VLAN		MAC
			Voice VLAN		
			Voice VLAN		
			untagged	Voice VLAN tag	
		MAC		Voice VLAN tag	
		VLAN		Voice VLAN /	

1

Voice VLAN

Ruijie(config)# voice vlan security enable

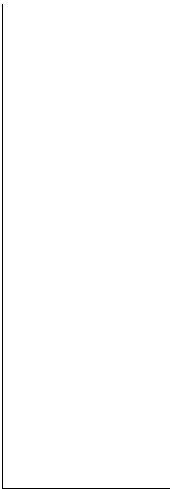
show voice vlan	Voice VLAN



Voice VLAN

Voice VLAN

```
1 Voice VLAN
Ruijie(config)# show voice vlan
Voice VLAN status: ENABLE //Voice VLAN
Voice VLAN ID: 2 //Voice VLAN ID
Voice VLAN security mode: Security //
Voice VLAN aging time: 5 minutes //
Voice VLAN cos: 6 // CoS
Voice VLAN dscp: 46 // DSCP
Current voice vlan enabled port mode: // Voice VLAN
PORT MODE
-----
Fa0/1 Auto
```



voice vlan <i>vlan-id</i>	Voice VLAN VLAN	Voice VLAN
voice vlan aging <i>minutes</i>	Voice VLAN	
voice vlan cos <i>cos-value</i>	Voice VLAN	CoS
voice vlan dscp <i>dscp-value</i>	Voice VLAN	DSCP
voice vlan enable	Voice VLAN	
voice vlan mode auto	Voice VLAN	
voice vlan security enable	Voice VLAN	



10.4	

45.2.2 show voice vlan oui

OUI OUI

show voice vlan oui

46

46.1

46.1.1 rgos-security compatible

		RGOS	rgos-security
compatible		RGOS	no
rgos-security compatible			
no rgos-security compatible			
		RGOS	
	1	RGOS	
	Ruijie(config)#no gos-security compatible		

47 RLDP

47.1

47.1.1 rldp detect-interval

RLDP

rldp detect-interval interval

no rldp detect-interval

interval	2-15

3

stp

×

stp

5s

:

Ruijie(config)# rldp detect-interval 5

rldp detect-max	

-	-

47.1.2 rldp detect-max

RLDP

rldp detect-max *num*

no rldp detect-max

	<i>num</i>	, 2-10

2

5
Ruijie(config)# **rldp detect-max 5**

	rldp detect-interval	

	-	-

47.1.3 rldp enable

RLDP

rldp enable

no rldp enable

	RLDP	RLDP
	Ruijie(config)# rldp enable	
	rldp port	RLDP
	-	-

47.1.4 rldp port

	rldp	
	rldp port {unidirection-detect bidirection-detect loop-detect } {warning shutdown-svi shutdown-port block}	
	no rldp port { unidirection-detect bidirection-detect loop-detect }	
	unidirection-detect	
	bidirection-detect	
	loop-detect	
	warning	
	shutdown-svi	shutdown svi
	shutdown-port	shutdown
	block	
	RLDP	RLDP
	fas 0/1	rldp

```
Ruijie(config)# interface fas 0/1
Ruijie(config-if)# rldp port loop-detect block
```

rldp enable	rldp

-	-

47.1.5 rldp reset

rldp shutdown disable rldp

rldp reset

-	-

```
Ruijie# rldp reset
```

rldp enable	Rldp

EXEC

-	-

-	-

48 TPP

48.1

48.1.1 topology guard

	topology guard	
no		
[no] topology guard		
	-	-
	cpu topology-limit	
	Ruijie(config)# topology guard	
	Ruijie(config)# no topology guard	
	tp-guard port enable	
	cpu topology-limit	CPU
	-	-

48.1.2 tp-guard port enable

no

[no] tp-guard port enable



|

|

tpp

|

Ruijie# show tpp

|

topology guard	

|

|

-	-

49

49.1

49.1.1 cd

cd [*filesystem:*][*directory*]

49.1.2 copy

copy *source-url destination-url*

<i>source-url</i>	URL
<i>destination-url</i>	URL

```

Ruijie#copy tftp://192.168.201.54/rgos.bin flash:/
2          tftp
Ruijie#copy flash:/rgos.bin tftp://192.168.201.54/rgos.bin
3          xmodem
Ruijie# copy xmodem: flash:/config.text
4          U
Ruijie#copy flash:/config.text usb0:/config.text
5
Ruijie#copy flash:/config.text slave:/config.text
6          flash      sd
Ruijie#copy flash:/rgos.bin sd0:/rgos.bin
7          U          sd
Ruijie#copy usb0:/config.text sd0:/config.text
8          sd          U
Ruijie#copy sd0:/config.text usb0:/config.text

```

del	
rename	
dir	

49.1.3 delete

delete url

<i>url</i>	url

L

L

url



1

Ruijie# **dir** slave0:/

Directory of slave:/

Mode	Link	Size	MTime	Name

1		10838016	2008-01-01 00:01:53	rgos.bin
1		399	2008-01-01 00:01:37	config.text
1		399	2008-01-01 00:17:58	cfg.txt

3 Files (Total size 11210782 Bytes), 0 Directories.

Total 33030144 bytes (31MB) in this device, 20463616 bytes (19MB) available.

2

Ruijie# **dir**

Directory of temp:/

Mode	Link	Size	MTime	Name

1		399	2008-01-01 00:17:58	a.dat

1 Files (Total size 399 Bytes), 0 Directories.

Total 33030144 bytes (31MB) in this device, 20463616 bytes (19MB) available.

pwd	
cd	

49.1.5 mkdir

mkdir *directory*

<i>directory</i>	

(	)
	flash:/backup/temp flash:/backup flash:/bakcup
	flash:/backup/temp

1	test
Ruijie#	mkdir test
2	sd test2
Ruijie#	mkdir sd0:/test2

rmdir	
pwd	

49.1.6 rename

rename *url1 url2*

	<i>url1</i>	URL
	<i>url2</i>	URL

--	--

--	--

--	--

usb0/1, flash, slave

49.1.7 rmdir

rmdir *directory*

<i>directory</i>		,

--	--

--	--

--	--

		tmp
Ruijie#	rmdir	<i>tmp</i>

mkdir		

--	--

49.2

49.2.1 pwd

pwd

1

Ruijie# **pwd**

flash:/

cd		

49.2.2 show file systems

show file systems

	1								
	Ruijie#show file systems								
	<table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>								
	<table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>								

50

50.1 CPU

50.1.1 cpu-log

CPU , **cpu-log**
cpu-log *log-limit low_num high_num*

5	0%	0%	0%	waitqueue_process
6	0%	0%	0%	tasklet_task
7	0%	0%	0%	kevents
8	0%	0%	0%	snmpd
9	0%	0%	0%	snmp_trapd
10	0%	0%	0%	mtdblock
11	0%	0%	0%	gc_task
12	0%	0%	0%	Context
13	0%	0%	0%	kswapd
14	0%	0%	0%	bdflush
15	0%	0%	0%	kupdate
16	0%	3%	1%	ll_mt
17	0%	0%	0%	ll main process
18	0%	0%	0%	bridge_relay
19	0%	0%	0%	d1x_task
20	0%	0%	0%	secu_policy_task
21	0%	0%	0%	dhcpa_task
22	0%	0%	0%	dhcpsnp_task
23	0%	0%	0%	igmp_snp
24	0%	0%	0%	mstp_event
25	0%	0%	0%	GVRP_EVENT
26	0%	0%	0%	rldp_task
27	0%	2%	1%	rerp_task
28	0%	0%	0%	reup_event_handler
29	0%	0%	0%	tpp_task
30	0%	0%	0%	ip6timer
31	0%	0%	0%	rtadvd
32	0%	0%	0%	tnet6
33	2%	0%	0%	tnet
34	0%	0%	0%	Tarptime
35	0%	0%	0%	gra_arp
36	0%	0%	0%	Ttcptimer
37	8%	1%	0%	ef_res
38	0%	0%	0%	ef_rcv_msg
39	0%	0%	0%	ef_inconsistent_daemon
40	0%	0%	0%	ip6_tunnel_rcv_pkt
41	0%	0%	0%	res6t
42	0%	0%	0%	tunrt6
43	0%	0%	0%	ef6_rcv_msg

44	0%	0%	0%	ef6_inconsistent_daemon
45	0%	0%	0%	imid
46	0%	0%	0%	nsmd
47	0%	0%	0%	ripd
48	0%	0%	0%	ripngd
49	0%	0%	0%	ospfd
50	0%	0%	0%	ospf6d
51	0%	0%	0%	bgpd
52	0%	0%	0%	pimd
53	0%	0%	0%	pim6d
54	0%	0%	0%	pdmd
55	0%	0%	0%	dvmrpd
56	0%	0%	0%	vty_connect
57	0%	0%	0%	aaa_task
58	0%	0%	0%	Tlogtrap
59	0%	0%	0%	dhcp6c
60	0%	0%	0%	sntp_recv_task
61	0%	0%	0%	ntp_task
62	0%	0%	0%	sla_daemon
63	0%	3%	1%	track_daemon
64	0%	0%	0%	pbr_guard
65	0%	0%	0%	vrrpd
66	0%	0%	0%	psnpgd
67	0%	0%	0%	igsnpgd
68	0%	0%	0%	coa_recv
69	0%	0%	0%	co_oper
70	0%	0%	0%	co_mac
71	0%	0%	0%	radius_task
72	0%	0%	0%	tac+_acct_task
73	0%	0%	0%	tac+_task
74	0%	0%	0%	dhcpgd_task
75	0%	0%	0%	dhcps_task
76	0%	0%	0%	dhcpping_task
77	0%	0%	0%	dhcpc_task
78	0%	0%	0%	uart_debug_file_task
79	0%	0%	0%	ssp_init_task
80	0%	0%	0%	rl_listen
81	0%	0%	0%	ikl_msg_operate_thread
82	0%	0%	0%	bcmDPC

83	0%	0%	0%	bcmL2X.0	
84	3%	3%	3%	bcmL2X.0	
85	0%	0%	0%	bcmCNTR.0	
86	0%	0%	0%	bcmTX	
87	0%	0%	0%	bcmXGS3AsyncTX	
88	0%	2%	1%	bcmLINK.0	
89	0%	0%	0%	bcmRX	
90	0%	0%	0%	mngpkt_rcv_thread	
91	0%	0%	0%	mngpkt_recycle_thread	
92	0%	0%	0%	stack_task	
93	0%	0%	0%	stack_disc_task	
94	0%	0%	0%	redun_sync_task	
95	0%	0%	0%	conf_dispatch_task	
96	0%	0%	0%	devprob_task	
97	0%	0%	0%	rdp_snd_thread	
98	0%	0%	0%	rdp_rcv_thread	
99	0%	0%	0%	rdp_slot_change_thread	
100	4%	2%	1%	datapkt_rcv_thread	
101	0%	0%	0%	keepalive_link_notify	
102	0%	0%	0%	rerp_msg_rcv_thread	
103	0%	0%	0%	ip_scan_guard_task	
104	0%	0%	0%	ssp_ipmc_hit_task	
105	0%	0%	0%	ssp_ipmc_trap_task	
106	0%	0%	0%	hw_err_snd_task	
107	0%	0%	0%	rerp_packet_send_task	
108	0%	0%	0%	idle_vlan_proc_thread	
109	0%	0%	0%	cmic_pause_detect	
110	1%	1%	1%	stat_get_and_send	
111	0%	1%	0%	rl_con	
112	75%	80%	90%	idle	
		3	5	1	5
	CPU	LISR	HISR		CPU

No	
5Sec	5 CPU
1Min	1 CPU
5Min	5 CPU

2

,X

Ş

ō ł

bgp

&

1 BGP
Ruijie(config)# memory-lack exit-policy bgp

show memory	

-

10.3(4b3)	

50.2.2 show memory

show memory

show memory

-	-

show memory

Ruijie#show memory

System Memory Statistic:

Free pages: 1079
watermarks : min 379, lower 758, low 1137, high 1516
System Total Memory : 128MB, Current Free Memory : 5283KB
Used Rate : 96%

1. 4k

2.

min	
lower	memory-lack exit-policy
low	OVERFLOW
high	OVERFLOW

3.

-	-

-	-

50.2.3 show memory protocols

show memory protocols

51

51.1

51.1.1 clear logging

clear logging

	-	-

Ruijie# clear logging

	logging on	
	show logging	
	logging buffered	

	-	-

51.1.2 more flash

FLASH

more flash:filename

<i>Filename</i>	

FLASH	"//f2/" "//f3/"
-------	-----------------

FLASH
Ruijie# more flash://f2/log.txt
look up file in the extended flash://f2/log.txt
00004 2004-11-17 4:1:32 Ruijie: %5:Reload requested by Administrator. Reload Reason :Reload command

logging file flash:	FLASH

-	-

51.1.3 logging buffered

nonle f

	<i>level</i>	0 7
--	--------------	-----



4k Bytes
7



show logging
clear logging
FLASH

Syslog Server
8

51.1.5 logging count

no

logging count

no logging count

	-	-

no logging count

Ruijie(config)# logging count

show logging count		
show logging		

-	-	

(23)

logging facility *facility-type*

no logging facility

no

<i>facility-type</i>	Syslog

Local7(23)

2 Syslog

Numerical Code	Facility
0	kernel messages
1	user-level messages
2	mail system
3	system daemons
4	security/authorization messages
5	messages generated internally by syslogd
6	line printer subsystem
7	network news subsystem
8	UUCP subsystem
9	clock daemon
10	security/authorization messages
11	FTP daemon
12	NTP subsystem
13	log audit
14	log alert
15	clock daemon
16	local use 0 (local0)
17	local use 1 (local1)
18	local use 2 (local2)
19	local use 3 (local3)
20	local use 4 (local4)
21	local use 5 (local5)
22	local use 6 (local6)
23	local use 7 (local7)

(local7) 23

Syslog kernel

Ruijie(config)# **logging facility kern**

logging console

	FLASH	FLASH
	FLASH logging file flash	

FLASH

trace.txt

64K,

6

Ruijie(config)# logging file flash:trace

logging on	
show logging	
more flash	FLASH

-	-

51.1.8 logging monitor

VTYtelnetSSH

noVTY

logging monitor level

no logging monitor

--	--

level

50648 ref66.82 -32.68 62.76 0.24 ref142.32534.98 154.38 1.5 m

VTY

6

Ruijie(config)# **logging monitor informational**

logging on	
show logging	

--	--

logging	Syslog Server
logging file flash:	FLASH
logging console	
logging monitor	VTY (telnet)
logging trap	Syslog Server

-	-

51.1.10 logging rate-limit

no

logging rate-limit {*number* | *all number* | *console {number | all number}*} [*except severity*]

no logging rate-limit

<i>number</i>	1—10000
<i>all</i>	0—7
<i>console</i>	
<i>except</i>	error(3) error
<i>severity</i>	0—7

debug 10 warning

Ruijie(config)#**logging rate-limit all 10 except warnings**

--	--

show logging count

2

IPV6

AAAA:BBBB::FFFF

Ruijie(config)# **logging server ipv6** *AAAA:BBBB::FFFF*

logging on	
show logging	
logging trap	syslog server

	-	-

51.1.14 logging synchronous

no

logging synchronous

no logging synchronous

	-	-

```
Ruijie(config)#line console 0
Ruijie(config-line)#logging synchronous
UP-DOWN
Ruijie#configure terminal
Oct 9 23:40:55 %LINK-5-CHANGED: Interface GigabitEthernet 0/1,
changed state to down
Oct 9 23:40:55 %LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet 0/1, changed state to DOWN
Ruijie# configure terminal //
```

	show running-config	

	-	-

51.1.15 logging trap

Syslog Server

service sequence-numbers

no service sequence-numbers

	-	-

```

Mar 22 15:28:02 %SYS-5-CONFIG: Configured from console by console
Ruijie# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Ruijie(config)# service sysname
Ruijie(config)# end
Mar 22 15:35:57 S3250 %SYS-5-CONFIG: Configured from console by
console

```

show logging	

-	-

51.1.18 service timestamps

no

default

service timestamps *message-type* [*uptime* | *datetime* [*msec* | *year*]]

no service timestamps *message-type*

default service timestamps *message-type*

<i>message-type</i>	0	6	log	debug	log
<i>uptime</i>	7				debug

msec

.

Jul 27 16:53:07.299

: :

show logging

Ruijie# **show logging**

Syslog logging: enabled

Console logging: level debugging, 4 messages logged

Monitor logging: level informational, 0 messages logged

Buffer logging: level debugging, 6 messages logged

Timestamp debug messages: datetime

Timestamp log messages: disabled

Sequence log messages: enable

Trap logging: level debugging, 2 message lines logged,0 reserved,0 fail

logging to 202.101.11.22

logging to 192.168.200.112

Log Buffer (Total 4096 Bytes) : have written 680

00001 2004-11-17 10:20:59 Ruijie: %7:%LINK CHANGED: Interface FastEthernet 0/0, changed state to up

00002 2004-11-17 10:20:59 Ruijie: %7:%LINE PROTOCOL CHANGE: Interface FastEthernet 0/0, changed state to UP

00003 2004-11-17 10:57:18 Ruijie: %7:%LINK CHANGED: Interface FastEthernet 0/1, changed state to administratively down

00004 2004-11-17 10:57:21 Ruijie: %7:%LINK CHANGED: Interface FastEthernet 0/1, changed state to down

00005 2004-11-17 10:57:41 Ruijie: %7:%LINK CHANGED: Interface FastEthernet 0/1, changed state to administratively down

00006 2004-11-17 10:57:43 Ruijie: %7:%LINK CHANGED: Interface FastEthernet 0/1, changed state to down

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Timestamp debug messages	Debug
Timestamp log messages	Log
Sequence log messages	

	logging on	
	clear logging	

[illegible][illegible]

Module Name	Message Name	Sev	Occur	Last Time
=====SYS				
CONFIG_I	5 1		Jul 6 10:29:57	
-----SYS				TOTAL 1

--	--	--

	logging count
	show logging
	clear logging

52 POE

52.1

52.1.1 Poe disconnect-mode mode/no poe disconnect-mode

	mode	[ac/dc]
	POE	dc
	Ruijie# configure	
	Ruijie(config)# poe disconnect-mode dc	
	Ruijie(config)# end	
	-	-
	-	-

52.1.2 Poe enable/no poe enable

	--	-

/

```
Ruijie(config-if)#
Ruijie(config-if)# poe enable
Ruijie(config-if)# no poe enable
Ruijie(config-if)#
```

-

-	-

-

-	-

52.1.3 Poe-power lower lower/no poe-power lower

<i>lower</i>

	[45000-47000]

```
POE 46000
Ruijie# configure
Ruijie(config)# poe-power lower 46000
Ruijie(config)# end
```

--

--	--

[illegible][illegible]

52.2.1 show poe interfaces

	-	-

poe

```
Ruijie# show poe interface gigabitethernet 0/2
Interface : Gi0/2
Port power enabled : ENABLE
Port connect status : OFF
Port PD Class : no PD devices
Port max power : 15400 mW
Port current power : 0 mW
Port peak power : 0 mW
Port current : 0 mA
Port voltage : 48082 mV
Port trouble cause : normal
```

	-	-

	-	-

52.2.2 show poe powersupply

	-	-

POE

```
Ruijie# show poe powersupply
PSE Total Power : 379971 mW
PSE Total Power Consumption : 0 mW
PSE Available Power : 379971 mW
PSE Peak Value : 0 mW
PSE Min Allow Voltage : 45000 mV
PSE Max Allow Voltage : 57000 mV
PSE Disconnect Sense Mode : ac
```

53

53.1

53.1.1 device-priority

device-priority [*member*] *priority*

<i>member</i>	ID	member 1
<i>priority</i>	[1, 10]	

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		1	10	10
	1			
	write			

	2	8
	Ruijie(config)# device-priority 2 8	

show member		

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53.1.2 device-description

device-description [

member member	ID member 1
<i>description</i>	31

write

2 red-giant
Ruijie(config)# device-description member 2 red-giant

show member	

-	-

53.2

53.2.1 show member

show member [member]

<i>member</i>	ID

Ruijie# show member

Member	Mac Address	Priority	Software Version	HardwareVersion	Description
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1	00d0.f810.3323	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
2	00d0.f822.33aa	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
3	00d0.f822.33ae	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
4	00d0.f822.33b0	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
5	00d0.f822.33b2	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
6	00d0.f824.23b4	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
7	00d0.f833.44b4	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH
8	00d0.f855.33ae	1	RGOS 10.1.00(2),Release(12889)	1.0	SWITCH

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