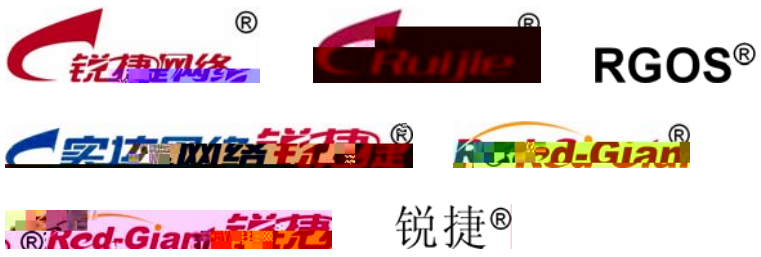


**RG-S20**

**RGOS 10.2(5)**

©2009



RGOS®10.2(5)

[] []

{x|y|...}

[x|y|...]

//

**3.**

r 注意:

/ 说明:

# CLI

## alias

alias

no

**alias** *mode command-alias original-command*  
**no alias** *mode [original-command]*

*mode*  
*command-alias*  
*original-command*

EXEC

EXEC

<b>h</b>	<b>help</b>
<b>p</b>	<b>ping</b>
<b>s</b>	<b>show</b>
<b>u</b>	<b>undebug</b>
<b>un</b>	<b>undebug</b>

**no alias exec****alias ?**

```
Ruijie(config)# alias ?
aaa-gs          AAA server group mode
acl             acl configure mode
bgp            Configure bgp Protocol
config         globle configure mode
```

\*

*\*command-alias=original-command*

```
EXEC          "s"  "show"
"s?"         's'
```

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"
```

Ruijieig)# 9ff)# **ia ?**

A.B.C.D IP address

dhcp IP Address via DHCP

Ruijieig)# 9ff)# **ip address**

```
"ip address"
```

**show aliases**

dhcp IP Address via DHCP

Ruijie)# 9ff)#

```
*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          iproute 0.0.0.0 0.0.0.0 192.168.1.1
```



<b>exec</b>	
<b>interface</b>	
<b>ip-dhcp-pool</b>	DHCP
<b>keychain</b>	KeyChain
<b>keychain-key</b>	KeyChain-key
<b>time-range</b>	Time-Range

CLI 1 "test" reload

```
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>
```

<b>enable secret</b>	CLI

## show aliases

EXEC

show aliases

show aliases [mode]

mode

EXEC

### EXEC

Ruijie# **show aliases exec**

exec mode alias:

h	help
p	ping
s	show
u	undebug
un	undebug

<b>alias</b>	

---

CLI

- ' **disable**
- ' **enable**
- ' **enable password**
- ' **enable secret**
- ' **password**
- ' **login**
- ' **login local**
- ' **login authentication**
- ' **username**
- ' **lock**
- ' **lockable**
- ' **telnet**
- ' **enable service**

## **disable**

disable

**disable** [ *privilege-level* ]

*privilege-level*

---

/ 说明:

**disable**

Ruijie# **disable** 10

<b>enable</b>	

**enable**

enable

**enable password**

**enable password**

**no**

**enable password** [level *level*] {*password* | [0 | 7] *encrypted-password*}

**no enable password**

*Password*

EXEC

---

' 1 26  
'

r 注意:

EXEC

---

```

15          15          security          0
15
password          15          password
          security          15          password
security
password          security

          pw10

Ruijie(config)# enable secret 0 pw10

```

<b>enable password</b>	

## password

```

          line          line          password
no          line

password {password | [0|7] encrypted-password}
no password

password          line
0|7          0          7
encrypted-password

line

          line

          line          red

Ruijie(config)# line vty 0
Ruijie(config-line)# password red

```

---

<b>login</b>	

## login

```
AAA
    login      no
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
```

<b>password</b>	line

## login local

```
AAA
```

---

line

AAA

**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**

<b>username</b>	

## login authentication

AAA

AAA

**no**

**login authentication {default | list-name}**

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

**default**

*list-name*

line

AAA

---

VTY

radius

```
Ruijie(config)# aaa new-model  
Ruijie(config)# aaa authentication login default radius  
Ruijie(config)# line vty 0  
Ruijie(config-line)# login authentication default
```

<b>aaa new-model</b>	AAA
<b>aaa authentication login</b>	

## username

username

```
username name {nopassword | password { secret | local | radius | tacacs } } @username
```

```
Ruijie(config)# username test privilege 15 password 0
pw15
```

<b>login local</b>	

## lock

EXEC      **lock**

**lock**

1.      **lock**

2.

Locked

3.

line

**lockable**

line

```
Ruijie(config-line)# lockable
```

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

```
Ruijie# lock
```

```
Password: <password>
```

```
Again: <password>
```

```
Locked
```

```
Password: <password>
```

---

Ruijie#

<b>lockable</b>	

## lockable

**lock**                    **lock**                    **line**                    **no**                    **lockable**

**lockable**

**no lockable**

line

EXEC                    **lock**

```
Ruijie(config)# line console 0
Ruijie(config-line)# lockable
Ruijie(config-line)# end
Ruijie# lock
Password: <password>
Again: <password>
Locked
Password: <password>
Ruijie#
```

<b>lock</b>	



---

<b>ssh-server</b>	SSH Server
<b>telnet-server</b>	Telnet Server
<b>web-server</b>	Http Server
<b>snmp-agent</b>	Snmp Agent

---

Web

**no ip http authentication**

**ip http authentication local,** Web

local

Ruijie(Config # **ip http authentication local**

<b>enable service</b>	

## ip http port

HTTP

**ip http port**

**ip http port** *number*

*number* HTTP Server 80

HTTP

**no ip http port**

HTTP 8080

Ruijie(Config # **ip http port 8080**

<b>enable service</b>	

---

```
' clock set
' clock update-calendar
' exec-timeout
' hostname
' session-timeout
' show clock
' show cpu
' show cpu slot
' show memory
' show memory slot
' show running-config
' show startup-config
' reload
' show reload
' prompt
' banner motd
' banner login
' speed
' show line
' write
```

## clock set

clock set

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

---

clock set

S2026G S2026F S2028

2008 1 30 05 54 43

Ruijie# **clock set** 05:54:43 1 30 2008

Ruijie# **show clock**

05:54:43 CHN-BJ Wed 2008-01-30

<b>show clock</b>	

## clock update-calendar

clock clock privileged EXEC clock  
**update-calendar** clock clock  
**clock update-calendar**

calendar

S2026G S2026F S2028

clock

clock

---

Ruijie# **clock update-calendar**

## **exec-timeout**

LINE  
**no exec-timeout**                   LINE  
**exec-timeout** *minutes* [*seconds*]  
**no exec-timeout**

*minutes*  
*seconds*

10 min

LINE

LINE

line vty 0                   5 30 :

Ruijie(config-line)# **exec-timeout 5 30**

## **hostname**

**hostname**

**hostname** *name*

*name*  
63

Ruijie

---

CHAP

BeiJingAgenda

```
Ruijie(config)# hostname BeiJingAgenda
BeiJingAgenda(config)#
```

## session-timeout

```
LINE
session-timeout          no session-timeout          LINE
```

```
session-timeout minutes [seconds]
no session-timeout
```

```
minutes
seconds
```

```
0 min
```

```
LINE
```

```
LINE
```

```
LINE
```

```
line vty 0          5 30 :
```

```
Ruijie(config-line)# exec-timeout 5 30
```

## show clock

```
show clock
```

```
show clock [detail]
```

---

**detail**

detail

**show clock**

```
Ruijie# show clock detail
05:54:43 CHN-BJ Wed 2008-01-30
Clock read from calendar when system boot.
```

<b>clock set</b>	

**show cpu**

CPU

**show cpu**

CPU

**show cpu**

```
Ruijie# show cpu
CPU utilization in five seconds: 0%
CPU utilization in one minute : 35%
CPU utilization in five minutes: 33%
NO 5Sec 1Min 5Min Process
0 0% 0% 0% LISR INT
```

---

```

 1   0%   0%   0%   HISR INT
 2   0%   0%   0%   ktimer
 3   0%   0%   0%   atimer
 4   0%   0%   0%   printk_task
 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%   mtddblock
11   0%  35%  33%   gc_task
12   0%   0%   0%   Context
13   0%   0%   0%   kswapd
14   0%   0%   0%   bdflush
15   0%   0%   0%   kupdate
16   0%   0%   0%   buffcopy
17   0%   0%   0%   ll_mt
18   0%   0%   0%   ll main process
19   0%   0%   0%   ISDN MAIN
20   0%   0%   0%   tnet
21   0%   0%   0%   Tarptime
22   0%   0%   0%   gra_arp
23   0%   0%   0%   Ttcptimer
24   0%   0%   0%   gk process
25   0%   0%   0%   rl_con
26 100%  65%  67%   idle

```

**show cpu**

CPU utilization in five seconds	5 CPU
CPU utilization in one minute	1 CPU
CPU utilization in five minutes	5 CPU
NO	
Process	
5Sec	5 CPU
1Min	1 CPU
5Min	5 CPU

--	--

---

<b>show cpu slot</b>	CPU
----------------------	-----

## show cpu slot

CPU

**show cpu slot** [*slot-number*]

*slot-number*

CPU

CPU

1 1 CPU

Ruijie# **show cpu slot 1**

CPU utilization for five seconds: 3%

CPU utilization for one minute : 2%

CPU utilization for five minutes: 1%

2 CPU

Ruijie# **show cpu slot**

slot 1 CPU information

CPU utilization for five seconds: 3%

CPU utilization for one minute : 2%

CPU utilization for five minutes: 1%

slot 3 CPU information

CPU utilization for five seconds: 5%

CPU utilization for one minute : 2%

CPU utilization for five minutes: 1%





---

## show running-config

show running-config

show running-config

## show startup-config

NVRAM

show startup-config

show startup-config

NVRAM

startup-config

## reload

reload

**reload** [ *text* | **in** [ *hh:* ] *mm* [ *text* ] | **at** *hh:mm* [ *month day* | *day month* ]  
[ *text* ] | **cancel** ]

*text* 1-255

**in** [ *hh:* ] *mm* 24

**at** *hh:mm*

*month* 3 Mar

*day* 1 31

**cancel**

---

10

```
Ruijie# reload in 10
Router will reload in 600 seconds.
```

## show reload

show

reload

show reload

```
Ruijie# show reload
Reload scheduled in 595 seconds.
At 2003-12-29 11:37:42
Reload reason: test.
```

## prompt

prompt

no prompt

prompt *string*

*string*

32

---

EXEC

RGOS

Ruijie(config)# **prompt** *RGOS*

Ruijie(config)# **end**

RGOS

**banner motd**

**banner motd**

**no banner motd**

**ueoq**



---

**show line**

**show line**

---

<b>memory</b>	running-config	NVRAM	copy
running-config	startup-config		
<b>network</b>	TFTP		copy
running-config	tftp		
<b>terminal</b>	<b>show running-config</b>		

### memory

```
Ruijie# write  
Building configuration...  
[OK]
```



# LINE

## LINE

### line

#### LINE

**line** [**aux** | **console** | **tty** | **vty**] *first-line* [*last-line*]

<b>aux</b>	
<b>console</b>	
<b>tty</b>	
<b>vty</b>	telnet/ssh
<i>First-line</i>	first-line
<i>Last-line</i>	last-line

#### LINE

LINE VTY 1 3 LINE

Ruijie(config)# **line vty 1 3**

## line vty

```

VTY
VTY
no
line vty line-number
no line vty line-number

```

```

VTY      5      0--4

```

```

VTY

```

```

VTY      20      VTY      0--19
Ruijie(config)# line vty 19
VTY      10      VTY      0—9
Ruijie(config)# line vty 10

```

## transport input

```

Line
transport input
default transport input
Line
LINE

transport input {all | ssh | telnet | none}
default transport input

```

<b>all</b>	Line
<b>ssh</b>	Line      SSH
<b>telnet</b>	Line      Telnet

LINE

---

none	Line
------	------

NONE                      VTY                      TTY  
**default transport input**

Line

Line                      VTY  
VTY                      **show running**                      Line

r 注意:

ut                      **default transport input**                      **no transport inp**  
rt input none                      LINE                      transpo

**[no] access-class** *access-list-number* {**in** | **out**}

<i>access-list-number</i>	access-list
<b>in</b>	
<b>out</b>	

Line

Line

Line

access list **access-class**  
Line **show running**

line vty 0 4 access-list 10

```
Ruijie# configure terminal
Ruijie(config)# line vty 0 4
Ruijie(config-line)# access-class 10 in
```

<b>show running</b>	

RGOS10.1

---

	CLI	COPY
' Xmodem		<b>copy xmodem</b>
' Tftp		<b>copy tftp</b>

## copy xmodem

xmodem

xmodem

**copy flash: filename xmodem**

**copy xmodem flash: filename**

*filename*

Xmodem

Xmodem

:

xmodem

xmodem

:

Ruijie# **copy xmodem flash: config.text**

Ruijie# **copy flash: config.text xmodem**





---

IP . 2 ping ping 5 ! ping 100Byte  
DNS

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
```

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
```

<i>ip-address</i>	IPv4
<i>number</i>	
<i>source-address</i>	IPV4
<i>seconds</i>	
<i>minimum maximum</i>	TTL

traceroute

DNS

traceroute

1 traceroute

Ruijie# **traceroute** 61.154.22.36

< press Ctrl+C to break >

Tracing the route to 61.154.22.36

```

1    192.168.12.1    0 msec  0 msec  0 msec
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

```

Ruijie#

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
```

Ruijie#

```
                                     IP
202.108.37.42                         1 17
4
```

Ruijie# **traceroute** *www.ietf.org*

TranslatiniT2 1 Tf-0 1 Tf-0.0013 -6(84)Tj/TT4.org 84

---

---

```
' interface aggregateport
' interface fastEthernet
' interface giagbitEthernet
' interface tenGigabitEthernet
' interface vlan
' medium-type
' descriptioin
' shutdown
' speed
' duplex
' flowcontrol
' mtu
' clear counters
' clear interface
' switchport
' snmp trap link-status
' line-detect
```

## interface aggregateport

no

```
interface aggregateport port-number
```

*port-number* Aggregate port

aggregate port

---

aggregate port

aggregate port  
**interfaces aggregateport**

**show interfaces show**

Ruijie(config)# **interface aggregateport 3**  
Ruijie(config-if)#

<b>show interfaces</b>	

## **interface fastEthernet**

**interface fastEthernet** *mod-num/port-num*

*mod-num/port-num /*

no

---

---

show interfaces	
-----------------	--

## 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	

## descriptoin

no

**description *string***

**no description**

*string*

---

**show interfaces**

```
Ruijie(config)# interface gigabitethernet 1/1  
Ruijie(config-if)# description GBIC-1
```

<b>show interfaces</b>	

**shutdown**

**no**

**shutdown**  
**no shutdown**

Ap

SVI

**show interfaces**

Ap 1

---

<b>clear interface</b>	
<b>show interfaces</b>	

/ 说明:

**no shutdown**

**speed**

**no**

<b>10</b>	10Mbps
<b>100</b>	100Mbps
<b>1000</b>	1000Mbps
<b>10G</b>	10Gbps
<b>auto</b>	

></A@

d(TPO 1 T

---

<b>show interfaces</b>	

## duplex

no

**duplex {auto | full | half}**

**no duplex**

**auto**

**full**

**half**

**show interfaces**

Ruijie(config-if)# **duplex full**

<b>show interfaces</b>	

## flowcontrol

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
```

<b>show interfaces</b>	

**mtu**

mtu

**Mtu num**

*num* 64 9216( 65536 )

1500

mtu

---

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

show interfaces	

## carrier-delay

```
no
carrier-delay
carrier-delay [ seconds ]
no carrier-delay

seconds 1 60

2 1/1
```

---

## clear counters

**clear counters** [*interface-id*]

*interface-id*

**show interfaces**

**clear counters**

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

<b>show interfaces</b>	

## clear interface

**clear interface** *interface-id*

*interface-id*

Aggregate port      Switch Port,L2 Aggregate port      ,Routed port,L3  
**shutdown**    **no shutdown**

Ruijie# **clear interface** gigabitethernet 1/1

---

shutdown	

**switchport**

2

3

**switchport**

**no switchport**

**switchport**

**no switchport**

2

switchport

<b>access</b>	switch port	access port
<b>trunk</b>	switch port	trunk port

switch port                  access

```

switch port                  access                  VLAN
switchport access vlan                  VLAN

switch port                  trunk                  VLAN
port                  VLAN                  VLAN                  VLAN                  trunk
trunk                  VLAN                  switchport

```

Ruijie(config-if)# **switchport mode trunk**

<b>switchport access</b>	statics	accessport VLAN
<b>switchport trunk</b>	trunkport Trunk	native VLAN VLAN

## switchport access

```

access port                  VLAN
no                  VLAN

switchport access vlan vlan-id
no switchport access vlan

vlan-id                  VLAN    ID

switch port                  access                  VLAN    VLAN 1

```







---

line-detect

```
Ruijie(config)#interface gigabitEthernet 0/1  
Ruijie(config-if-GigabitEthernet 0/1)#line-detect
```

---

length

---

# Aggregate Port

## port-group

Aggregate Port no  
Aggregate Port

**port-group** *port-group-number*  
**no port-group**

Aggregate Port

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

AP VLAN trunk port  
native VLAN AP

1/3 AP 3

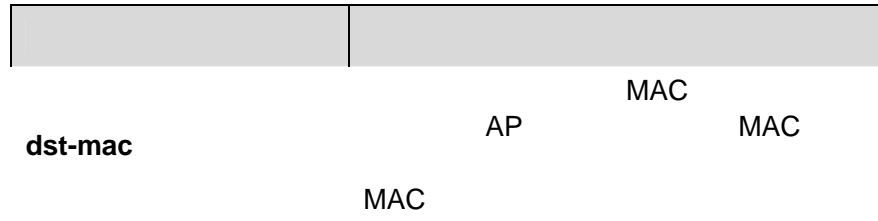
```
Ruijie(config)# interface gigabitethernet 1/3  
Ruijie(config-if)# port-group 3
```

## aggregateport load-balance

AP no

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

**no aggregateport load-balance**







**no name**

<i>vlan-name</i>	VLAN

VLAN

VLAN

**show vlan**          vlan

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

<b>show vlan</b>	VLAN

## switchport mode

access port          trunk port,          switch port          802.1Q          no

**switchport mode {access | trunk}**

**no switchport mode**

<b>access</b>	switch port    access port
<b>trunk</b>	switch port    trunk port

switch port          access



## trunkport

```
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# switchport access vlan 2
```

<b>switchport mode</b>	switch port
<b>switchport trunk</b>	trunkport native VLAN Trunk VLAN

**switchport trunk**

```
trunkport native VLAN Trunk VLAN
no trunk
```

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

```
no switchport trunk {allowed vlan | native vlan }
```

	Trunk VLAN
	vlan-list VLAN
	VLAN ID VLAN ID
	VLAN ID -
	10-20 ,
	1-10,20-25,30,33
<b>allowed vlan</b> vlan-list	all VLAN
	VLAN
	add

**Native VLAN**

```

Trunk          native VLAN      native VLAN
              UNTAG             VLAN
              VLAN ID           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
Switchport is1 TUuSed
Mode isltrunk port
Acsess vlan is11,Native vlan is11
Protected isldisUuSed
Vlan lists is1
1,3-4094
    
```

<b>show interfaces</b>	
<b>switchport access</b>	statics accessport VLAN

**show vlan**

VLAN

**show vlan [id *vlan-id*]**

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

# MAC

- ' **mac-address-table aging-time**
- ' **clear mac-address-table dynamic**
- ' **clear mac-address-table filtering**
- ' **clear mac-address-table static**
- ' **mac-address-table static**
- ' **mac-address-table filtering**
- ' **mac-address-table notification**
- ' **nmp trap mac-notification**
- ' **address-bind**

## mac-address-table aging-time

no

**mac-address-table aging-time** *seconds*

**no mac-address-table aging-time**

*seconds*

300

**show mac-address-table aging-time**

**show mac-address-table dynamic**

Ruijie(config)# **mac-address-table aging-time** 150

<b>show mac-address-table aging-time</b>	
<b>show mac-address-table dynamic</b>	

## **clear mac-address-table dynamic**

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

## clear mac-address-table filtering

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

<b>filtering</b>	
<b>address</b> <i>mac-addr</i>	
<b>vlan</b> <i>vlan-id</i>	VLAN

## show mac-address-table filtering

00d0.f800.0c0c

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

<b>mac-address-table filtering</b>	
<b>show mac-address-table filtering</b>	

## clear mac-address-table static

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

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

### show mac-address-table static

MAC 00d0.f800.073c

```
Ruijie# clear mac-address-table static address
00d0.f800.073c
```

<b>mac-address-table static</b>	
<b>show mac-address-table static</b>	

### mac-address-table static

**no**

**mac-address-table static** *mac-addr* **vlan** *vlan-id* **interface** *interface-id*

**no mac-address-table static** *mac-addr* **vlan** *vlan-id* **interface** *interface-id*

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

%Hr ft H4w 8SHã H IÒ IÒ 2Hr fm H G m 2 G) ãn Hq 1e %2 Úf X)B K H (Ch G 42 PA 4 B, A, B, 5) 2010. 8. 10

**show mac-address-table filtering**

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

<b>clear mac-address-table filtering</b>	
<b>show mac-address-table filtering</b>	

**mac-address-table notification**

MAC no

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

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

<b>snmp-server enable traps</b>	trap
<b>show mac-address-table notification</b>	MAC
<b>snmp trap mac-notification</b>	MAC

## snmp trap mac-notification

MAC

no

**snmp trap mac-notification {added | removed}**

**no snmp trap mac-notification {added | removed}**

<b>added</b>	
<b>removed</b>	

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

```
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# snmp trap mac-notification added
```

<b>mac-address-table notification</b>	MAC
<b>show mac-address-table notification</b>	MAC

- ' **show mac-address-table address**
- ' **show mac-address-table aging-time**
- ' **show mac-address-table count**
- ' **show mac-address-table dynamic**
- ' **show mac-address-table filtering**
- ' **show mac-address-table interface**
- ' **show mac-address-table notification**
- ' **show mac-address-table static**
- ' **show mac-address-table vlan**
- ' **show address-bind**

## **show mac-address-table address**

MAC

```
Ruijie# show mac-address-table address 00d0.f800.1001
Vlan      MAC Address      Type      Interface
-----
1         00d0.f800.1001  STATIC   Gi1/1
```

<b>show mac-address-table static</b>	
<b>show mac-address-table filtering</b>	
<b>show mac-address-table dynamic</b>	
<b>show mac-address-table interface</b>	
<b>show mac-address-table vlan</b>	VLAN
<b>show mac-address-table count</b>	
<b>show mac-address-table static</b>	
<b>show mac-address-table filtering</b>	

## show mac-address-table aging-time

**show mac-address-table aging-time**

```
Ruijie# show mac-address-table aging-time
Aging time      : 300
```

<b>mac-address-table aging-time</b>	

## 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

## 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

<b>clear mac-address-table dynamic</b>	

## show mac-address-table filtering

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

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

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



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

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

<b>mac-address-table notification</b>	MAC
<b>snmp trap mac-notification</b>	MAC

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

**show mac-address-table static [addr**

## 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
```

<b>show mac-address-table static</b>	
<b>show mac-address-table filtering</b>	
<b>show mac-address-table dynamic</b>	
<b>show mac-address-table address</b>	
<b>show mac-address-table interface</b>	
<b>show mac-address-table count</b>	

# IGMP Snooping

**deny**

```

profile
deny
deny
profile
    
```

<b>deny</b>	profile

```

profile deny
    
```

```

profile
    
```

```

profile range
profile profile
    
```

```

profile
deny permit
    
```

```

224.2.2.2 profile :
    
```

```

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

--	--

<b>ip igmp profile</b>	profile
<b>range</b>	

**permit**

profile profile permit  
 profile

**permit**

<b>permit</b>	profile

profile deny

profile

profile range  
 profile profile  
 profile  
 deny permit

224.2.2.2 profile :

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

<b>ip igmp profile</b>	profile
<b>range</b>	

## range

```

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

low-ip-address
high-ip-address

```

```

profile

deny                               profile                               profile
                               profile                               profile

                               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

```

<b>ip igmp profile</b>	profile
<b>deny</b>	profile deny
<b>permit</b>	profile permit

## ip igmp profile

```

profile-number       igmp profile

```

**ip igmp profile** *profile-number*  
**no ip igmp profile** *profile-number*

*profile-number* profile 1-65535

profile

1 profile profile

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

<b>range</b>	profile
<b>ip igmp snooping filter</b> <i>profile-num</i>	

## ip igmp snooping filter

profile no profile

**ip igmp snooping filter** *profile-number*  
**no ip igmp snooping filter** *profile-number*

*Profile-number* profile

profile filter

0/1 profile 1

```
Ruijie(config)# interface fastEthernet 0/1
Ruijie(config-if)# ip igmp snooping filter 1
```

ip igmp profile	profile

### ip igmp snooping ivgl

```

    igmp snooping          ivgl          ip
ip igmp snooping ivgl    no          igmp snooping
ip igmp snooping ivgl
no ip igmp snooping

```

disable

IGMP Snooping VLAN VLAN

igmp snooping ivgl

```
Ruijie(config)# ip igmp snooping ivgl
```

--	--



## ip igmp snooping max-groups

```

ip igmp snooping max-groups number
no ip igmp snooping max-groups
    
```

*number* 0 – 4294967294

### IGMP Report

0/1 100

```

Ruijie(config)# interface fastEthernet 0/1
Ruijie(config-if)# ip igmp snooping max-group 100
    
```

ip igmp snooping filter	

## ip igmp snooping vlan mrouter interface profile

VLAN

IGMP Profile

```

ip igmp snooping vlan mrouter
interface profile no profile
ip igmp snooping vlan vid mrouter interface interface-id profile
profile-num
no ip igmp snooping vlan vid mrouter interface interface-id profile
    
```

*vid*

vlan id

*interface-id*

igmp snooping

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

<b>ip igmp snooping vlan <i>vid</i> mrouter learn pim-dvmrp</b>	

## ip igmp snooping dyn-mr-aging-time

```
ip igmp snooping dyn-mr-aging-time time  
no ip igmp snooping dyn-mr-aging-time
```

*time*

300s

100s

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

--	--



fast-leave

**ip igmp snooping fast-leave enable**

**no ip igmp snooping fast-leave enable**

disable

fast-leave



- ' **show ip igmp snooping** [*gda-table* | **interface** | **mrouter** ]
- ' **show ip igmp profile** [*profile-number*]
- ' **debug igmp**

## **show ip igmp snooping**

igmp snooping

**show ip igmp snooping** [*gda-table* | **interfaces** | **mrouter/ statistics**  
[ *X* , *ì* *À* *\$* " *Q* | *t* 0 *Ò* *Å* , *ì* *À* *G* *μ*

**undebug igmp**

EXEC

# MSTP

## spanning-tree

```

MSTP          no          MSTP          MSTP
                spanning-tree          no
                                spanning tree
```

**spanning-tree** [ **forward-time** *seconds* | **hello-time** *seconds* | **max-age** *seconds* ]

**no spanning-tree** [**forward-time** | **hello-time** | **max-age**]

**forward-time** *seconds*

**hello-time** *seconds*                      BPDU

**max-age** *seconds*    BPDU

spanning-tree

**forward-time**    **hello-time**    **max-age**

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

spanning-tree

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

### **spanning-tree bpdudfilter**

```
disabled    BPDU filter    enabled  
disabled    BPDU filter  
spanning-tree bpdudfilter [enabled | disabled]
```

```
enabled    BPDU filter  
Disabled
```

---

**spanning-tree bpduguard [enabled | disabled]****enabled**           BPDU Guard**disabled**           BPDU Guard

```
Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# spanning-tree bpduguard enable
```

```
show spanning-tree interface    STP
```

**spanning-tree link-type**

“                   ”                   no

**spanning-tree link-type [point-to-point | shared]****no spanning-tree link-type****point-to-point**                               point-to-point.**Shared**                                       shared

  point-to-point  
  shared

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

```
show spanning-tree interface STP
```

## spanning-tree max-hops

Count	BPDU Instance	BPDU Region	Max-hops
		no	

```
spanning-tree max-hops hop-count
```

```
no spanning-tree max-hops
```

<i>hop-count</i>	BPDU		1	40
------------------	------	--	---	----

<i>hop-count</i>	20			
------------------	----	--	--	--

Region	Root Bridge	BPDU	Hot Count
Root Bridge		Hop Count	1
BPDU		Hops	0
max-hops	Instance		

MST Instance	Max-hops	10
--------------	----------	----

```
Ruijie(config)# spanning-tree max-hops 10
```

```
show spanning-tree mst
```

```
show spanning-tree MSTP
```

## 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**

## spanning-tree mst configure

no MST MSTP Region  
name revision vlan map

**spanning-tree mst configuration**

**no spanning-tree mst configuration**

instance vlan Vlan Instance 0  
name  
revision 0

end

```
Ruijie(config)#  
        VLAN 3 Instance 1 MST
```

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

```
Ruijie(config-mst)# no instance 1  
        MST show
```

```
show spanning-tree mst MST region  
instance instance-id vlan vlan-range Vlan MST Instance  
  
name MST  
revision MST  
show MST MST
```

## spanning-tree mst cost

```
Instance no  
  
spanning-tree [mst instance-id] cost cost  
no spanning-tree [mst instance-id] cost
```

```
instance-id Instance 0 64  
cost 1 200 000 000
```

```
Instance-ID 0  
Interface
```

cost

Instance 3

400

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

```
Ruijie(config-if)# spanning-tree mst 3 cost 400
```

Region

Instance 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***

```
show spanning-tree mst                    MSTP
spanning-tree mst cost
spanning-tree mst priority                Instance
```

## spanning-tree mst priority

Instance                                  no

**spanning-tree [mst *instance-id*] priority *priority***

**no spanning-tree [mst *instance-id*] priority**

```
instance-id   Instance                    0   64
priority                                    0, 4096,8192, 12288, 16384, 20480,
24576, 28672, 32768, 36864, 40960, 45056, 49152,53248, 57344
61440      16                                4096
```

```
instance-id                                0
```

```
priority                                    32768
```

Instance 20

8192

*tx-hold-count* TxHoldCount 1 10

3

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

**show spanning-tree** MSTP

## spanning-tree pathcost method

no

**spanning-tree pathcost method [long | short]**

**no spanning-tree pathcost method**

**long** 802.1t path-cost

**short** 802.1d path-cost

802.1T Path-cost

Ruijie(config-if)# **spanning-tree pathcost method long**

**show spanning-tree interface** STP

## 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
```

## spanning-tree portfast bpduguard default

```
BPDU guard no
BPDU guard
```

**spanning-tree portfast bpduguard default**

**no spanning-tree portfast bpduguard default**

BPDU Guard.

BPDU guard BPDU  
error-disabled **show spanning-tree**

```
Ruijie(config)# spanning-tree portfast bpduguard  
default
```

**show spanning-tree interface** STP

### **spanning-tree portfast bpdudfilter default**

BPDU filter no BPDU  
filter

**spanning-tree portfast bpdudfilter default**

**no spanning-tree portfast bpdudfilter default**

BPDU filter

BPDU Filter BPDU **show**  
**spanning-tree**

```
Ruijie(config)# spanning-tree portfast bpdudfilter  
default
```

**show spanning-tree interface** STP

## spanning-tree portfast default

Portfast no  
Portfast

**spanning-tree portfast default**

**no spanning-tree portfast default**

Portfast

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

```
show spanning-tree interface STP
```

## spanning-tree tc-protection tc-guard

tc-guard no tc-guard  
tc-guard tc

**spanning-tree tc-protection tc-guard**

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

## **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
```

## **spanning-tree guard root**

```
root guard no root guard  
root guard
```

```
spanning-tree guard root
```

```
no spanning-tree guard root
```

```
root guard
```

```
Ruijie(config-if)# spanning-tree guard root
```

## **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)# interface gigabitethernet 1/1
Ruijie(config-if)# spanning-tree autoedge disabled
```

```
show spanning-tree interface STP
```

## 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
```

## clear spanning-tree detected-protocols

```
RSTP BPDU BPDU
clear spanning-tree detected-protocols [interface interface-id]
```

```
interface-id
```

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

```
show spanning-tree interface          STP
```

**spanning-tree compatible enable**

MSTI

```
spanning-tree compatible enable
```

```
no spanning-tree compatible enable
```

```
Ruijie(config-if)#spanning-tree compatible enable
```

## show spanning-tree

```
show spanning-tree [summary | forward-time | hello-time |  
max-age | inconsistentports| tx-hold-count | pathcost method |  
max_hops]
```

```
summary          MSTP      instance
```

```
Inconsistentports
```

## show spanning-tree interface

STP

```
show spanning-tree interface interface-id [{bpdufilter | portfast |  
bpduguard | link-type } ]
```

*interface-id*

**bpdufilter**            bpdufilter

**portfast**            portfast

**bpduguard**           bpduguard

**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**

Instance

# SPAN

## monitor session

SPAN

no

**monitor session** *session\_number* {**source interface** *interface-id* [**both** | **rx** | **tx**] | **destination interface** *interface-id* { **encapsulation** | **switch** } | **mac** {**source** *mac-addr* | **destination** *mac-addr* } [**both** | **rx** | **tx**]}

**no monitor session** *session\_number* [**source interface** *interface-id* [**both** | **rx** | **tx**] | **destination interface** *interface-id* { **encapsulation** | **switch** } ] | **mac** {**source** *mac-addr* | **destination** *mac-addr* } [**both** | **rx** | **tx**]

**no monitor session all**

<i>session_number</i>	SPAN
<b>source interface</b> <i>interface-id</i>	<i>interface-id</i> AP SVI
<b>destination interface</b> <i>interface-id</i>	<i>interface-id</i> AP SVI
<b>mac source</b> <i>mac-addr</i>	MAC
<b>mac destination</b> <i>mac-addr</i>	MAC
<b>both</b>	
<b>rx</b>	
<b>tx</b>	
<b>all</b>	
<b>encapsulation</b>	,
<b>switch</b>	tag



**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
```

<b>monitor session</b>	SPAN





IP

---

RGOS

ARP

32

IP

48

ARP

30s

arp retry interval 30

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

### arp retry times

arp

IP

ARP

no

5 ARP

arp retry times *number*

no arp retry times

<i>number</i>	<p>ARP &lt;1-100&gt;</p> <p>1 ARP</p>

ARP

ARP

5

ARP

ARP

ARP

arp retry times 1

ARP

1

arp retry times 2

arp retry interval seconds	arp

### arp trusted NUM

ARP

no

arp trusted number

no arp trusted

number	ARP , <10-4096>

ARP

42117/TT1 Td8/T

## arp trusted aging

ARP

no

**arp trusted aging**

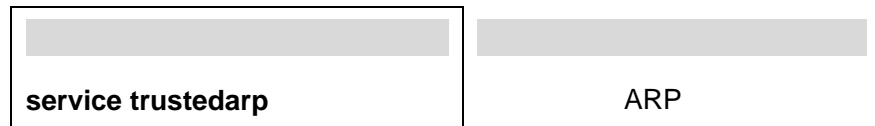
**no arp trusted aging**

GSN ARP

ARP

**arp timeout**

ARP



## arp unresolve

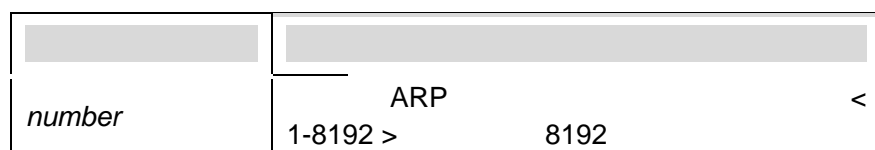
ARP

no

8192

**arp unresolve number**

**no arp unresolve**





IP

---

SVI 1

IP

---



---

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

RGOS  
RGOS  
RGOS

UP

UP

### show ip interface

```
Ruijie# show ip interface FastEthernet 0/1
IP interface state is: UP
IP interface type is: BROADCAST
IP interface metric is: 0
IP interface MTU is: 1500
IP address is:
192.168.5.133/24 (primary)
IP address negotiate is: OFF
Forward direct-boardcast is: ON
ICMP mask reply is: ON
Send ICMP redirect is: ON
```

---

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 unreachable 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	

## show ip redirects

**show ip redirects**

**show ip redirects**

Ruijie# **show ip redirects**

Default Gateway: 192.168.195.1

<b>ip default-gateway</b>	

**ip default-gateway**

Ä

**ip default-gateway**



no

**ip name-server** *ip-address*

**no ip name-server** [*ip-address*]

<i>ip-address</i>	IP

3@a,ŌA'È ÛĐ Û %!fĐsÁ!Dr TA' ð R /™ ü l",1-tV- l" xc È í=ÿpPqð 1A! °„Ž Â&b Q€b°, s V„IP p „ /

```

DNS Server IP
DNS Server Server
Server DNS
6 DNS Server
ip-address DNS
    
```

Ruijie(config)# **ip name-server** 192.168.5.134

--	--

**show hosts**

DNS



-IP

clear host \*

<b>show hosts</b>	

RGNOS10.1

**show hosts**

DNS

**show hosts**

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

```

<b>ip host</b>	IP
<b>ip name-server</b>	DNS

RGNOS10.1

# SNTP

- ' **sntp enable**
- ' **sntp server**
- ' **sntp interval**

## sntp enable

SNTP **no**  
 —Disable  
**[no] sntp enable**

SNTP Disable

**show sntp** SNTP

RedGiant(config)# **sntp enable**

<b>show sntp</b>	SNTP
<b>clock update-calendar</b>	
<b>clock set</b>	

RGOS10.0

## **sntp server**

Server                   SNTP Server           SNTP           NTP  
  internet

---

*seconds*

60 --65535

1800s

**show sntp**

SNTP

RedGiant(config)# **sntp interval 3600**

<b>sntp enable</b>	SNTP
<b>show sntp</b>	SNTP
<b>clock update-calendar</b>	

RGOS10.0

:

**show sntp**

**show sntp**

SNTP

**show sntp**

SNTP

```
RedGiant# show sntp
SNTP state           : Enable
SNTP server          : 192.168.4.12
SNTP sync interval   : 60
Time zone            : +8
```

<b>sntp enable</b>	SNTP
<b>show sntp</b>	SNTP

RGOS10.0



NTP

---

<b>ntp server</b>	NTP

## **ntp authenticate**

NTP

NTP

## **ntp authentication-key**

NTP

NTP

## ntp disable

NTP

`ntp disable`

NTP

NTP

NTP

r 注意:

IP

NTP

`no ntp`

## ntp server

NTP

NTP

t

n

`ntp server ip-addr [ version version ] [ source if-name ] [ key  
keyid][prefer]`

<i>version</i>	NTP 1-3 NTPv3
<i>if-name</i>	NTP
<i>keyid</i>	
<b>prefer</b>	Prefer

NTP

20

prefer

NTP  
IP

NTP

NTP server

ntp server 192.168.210.222

<b>no ntp</b>	NTP

## ntp synchronize

NTP

**ntp synchronize**

**no ntp synchronize**



```
ntp authentication-key 6 md5 woooooop
ntp trusted-key 6
ntp server 192.168.210.222 key 6
```

<b>ntp authenticate</b>	
<b>ntp authentication-key</b>	NTP
<b>ntp server</b>	NTP

- ' **debug ntp**
- ' **show ntp status**

### **debug ntp**

```
NTP
debug ntp
no debug ntp
```

NTP

NTP

NTP

---

debug ntp

## **show ntp status**

NTP

**show ntp status**

NTP

NTP

NTP

show ntp status

# SNMP

SNMP

```
' no snmp-server
' show snmp
' snmp-server chassis-id
' snmp-server community
' snmp-server contact
' snmp-server enable traps
' snmp-server host
' snmp-server location
' snmp-server packetsize
' snmp-server queue-length
' snmp-server system-shutdown
' snmp-server trap-source
' snmp-server trap-timeout
```

**no snmp-server**

SNMP

**no snmp-server**

**no snmp-server**

SNMP

SNMP

SNMP

Ruijie(config)# **no snmp-server**

## snmp-server chassis-id

```

SNMP
chassis-id no snmp-server
snmp-server chassis-id text
no snmp-server chassis-id

```

*text*

60FF60

SNMP

**show snmp**

SNMP 123456:

Ruijie(config)# **snmp-server chassis-id 123456**

<b>show snmp</b>	SNMP

## snmp-server community

```

SNMP
community no SNMP snmp-server
snmp-server community string [view view-name] [[ro | rw] [host
ipaddr] [ number ]
no snmp-server community string

```

*string* NMS SNMP

*view-name*

```

ro          NMS  MIB
rw          NMS  MIB
number     0-99
MIB  NMS
ipaddr     NMS          MIB  NMS
    
```

```

SNMP
MIB  NMS
SNMP          no snmp-server
    
```

```

MIB
192.168.12.1  NMS  MIB
Ruijie(config)# access-list 2 permit 192.168.12.1
Ruijie(config)# access-list 2 deny any
Ruijie(config)# snmp-server community public ro 2
    
```

access-list	

### snmp-server contact

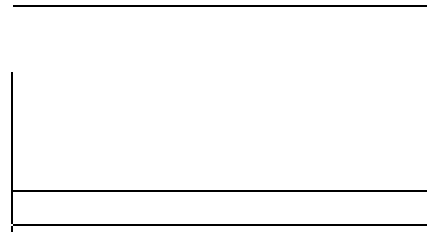
```

SNMP          snmp-server
contact       no          SNMP
snmp-server contact text
no snmp-server contact
text
    
```

SNMP

i-net800@i-net.com.cn

```
Ruijie(config)# snmp-server contact i-net800@i-net.com.cn
```



**snmp-server enable traps**      SNMP      NMS      Trap      **snmp-server enable traps**  
no      SNMP      NMS      Trap

**snmp-server enable traps [snmp ]**

**no snmp-server enable traps**

**snmp**      SNMP

**snmp-server**

SNMP

```
Ruijie(config)# snmp-server enable traps snmp
```

```
Ruijie(config)# snmp-server host public 2.219
```

---

**show snmp-server**

SNMP

<http://www.ruijie.com.cn>

**snmp**

	À	g
<b>snmp-server host</b>	SNMP	

## **snmp-server host**

**snmp-server host** SNMP NMS  
**no** SNMP  
**snmp-server host** *host-addr*

SNMP

SNMP

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

**no snmp-server packetsize**

*byte-count* 484 17876

1500

SNMP 1492

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

<b>snmp-server queue-length</b>	SNMP

**snmp-server queue-length**

**snmp-server**

**queue-length**

**snmp-server queue-length *length***

*length* 1 1000

10

```
Ruijie(config)# snmp-server queue-length 4
```





```
md5 authpassstr priv des56 despassstr
```

show snmp user	SNMP

## snmp-server group

SNMP  
no

snmp-server group

```
snmp-server group groupname {v1 | v2c | v3 {auth | noauth | priv}}
[read readview][write writeview] [access {num | name}]
```

```
no snmp-server group groupname {v1 | v2c | v3 }
```

```
v1 | v2c | v3 {auth | noauth | priv} [read readview][write writeview] [access {num | name}]
```

<b>show snmp group</b>	SNMP

## snmp-server view

```

SNMP                                snmp-server view
no
snmp-server view view-name oid-tree {include | exclude}
no snmp-server view view-name [oid-tree]

view-name
oid-tree          MIB          MIB
include          MIB
exclude          MIB

default          MIB

MIB-2    oid    1.3.6.1
Ruijie(config)# snmp-server view mib2 1.3.6.1 include

```

<b>show snmp view</b>	SNMP

## show snmp

```

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

```

**show snmp** SNMP  
**show snmp mib** snmp mib  
**show snmp user** snmp  
**show snmp view** snmp  
**show snmp group** snmp

### 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
```

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

# RMON

RMON

' **rmon collection stats** *index* [**owner** *owner-string*]

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

' **rmon alarm** *number* *variable* *interval* {**absolute** | **delta** }

**rising-threshold** *value* [*event-number*] *event-number* {**0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** | **30** | **31** | **32** | **33** | **34** | **35** | **36** | **37** | **38** | **39** | **40** | **41** | **42** | **43** | **44** | **45** | **46** | **47** | **48** | **49** | **50** | **51** | **52** | **53** | **54** | **55** | **56** | **57** | **58** | **59** | **60** | **61** | **62** | **63** | **64** | **65** | **66** | **67** | **68** | **69** | **70** | **71** | **72** | **73** | **74** | **75** | **76** | **77** | **78** | **79** | **80** | **81** | **82** | **83** | **84** | **85** | **86** | **87** | **88** | **89** | **90** | **91** | **92** | **93** | **94** | **95** | **96** | **97** | **98** | **99** | **100** | **101** | **102** | **103** | **104** | **105** | **106** | **107** | **108** | **109** | **110** | **111** | **112** | **113** | **114** | **115** | **116** | **117** | **118** | **119** | **120** | **121** | **122** | **123** | **124** | **125** | **126** | **127** | **128** | **129** | **130** | **131** | **132** | **133** | **134** | **135** | **136** | **137** | **138** | **139** | **140** | **141** | **142** | **143** | **144** | **145** | **146** | **147** | **148** | **149** | **150** | **151** | **152** | **153** | **154** | **155** | **156** | **157** | **158** | **159** | **160** | **161** | **162** | **163** | **164** | **165** | **166** | **167** | **168** | **169** | **170** | **171** | **172** | **173** | **174** | **175** | **176** | **177** | **178** | **179** | **180** | **181** | **182** | **183** | **184** | **185** | **186** | **187** | **188** | **189** | **190** | **191** | **192** | **193** | **194** | **195** | **196** | **197** | **198** | **199** | **200** | **201** | **202** | **203** | **204** | **205** | **206** | **207** | **208** | **209** | **210** | **211** | **212** | **213** | **214** | **215** | **216** | **217** | **218** | **219** | **220** | **221** | **222** | **223** | **224** | **225** | **226** | **227** | **228** | **229** | **230** | **231** | **232** | **233** | **234** | **235** | **236** | **237** | **238** | **239** | **240** | **241** | **242** | **243** | **244** | **245** | **246** | **247** | **248** | **249** | **250** | **251** | **252** | **253** | **254** | **255** | **256** | **257** | **258** | **259** | **260** | **261** | **262** | **263** | **264** | **265** | **266** | **267** | **268** | **269** | **270** | **271** | **272** | **273** | **274** | **275** | **276** | **277** | **278** | **279** | **280** | **281** | **282** | **283** | **284** | **285** | **286** | **287** | **288** | **289** | **290** | **291** | **292** | **293** | **294** | **295** | **296** | **297** | **298** | **299** | **300** | **301** | **302** | **303** | **304** | **305** | **306** | **307** | **308** | **309** | **310** | **311** | **312** | **313** | **314** | **315** | **316** | **317** | **318** | **319** | **320** | **321** | **322** | **323** | **324** | **325** | **326** | **327** | **328** | **329** | **330** | **331** | **332** | **333** | **334** | **335** | **336** | **337** | **338** | **339** | **340** | **341** | **342** | **343** | **344** | **345** | **346** | **347** | **348** | **349** | **350** | **351** | **352** | **353** | **354** | **355** | **356** | **357** | **358** | **359** | **360** | **361** | **362** | **363** | **364** | **365** | **366** | **367** | **368** | **369** | **370** | **371** | **372** | **373** | **374** | **375** | **376** | **377** | **378** | **379** | **380** | **381** | **382** | **383** | **384** | **385** | **386** | **387** | **388** | **389** | **390** | **391** | **392** | **393** | **394** | **395** | **396** | **397** | **398** | **399** | **400** | **401** | **402** | **403** | **404** | **405** | **406** | **407** | **408** | **409** | **410** | **411** | **412** | **413** | **414** | **415** | **416** | **417** | **418** | **419** | **420** | **421** | **422** | **423** | **424** | **425** | **426** | **427** | **428** | **429** | **430** | **431** | **432** | **433** | **434** | **435** | **436** | **437** | **438** | **439** | **440** | **441** | **442** | **443** | **444** | **445** | **446** | **447** | **448** | **449** | **450** | **451** | **452** | **453** | **454** | **455** | **456** | **457** | **458** | **459** | **460** | **461** | **462** | **463** | **464** | **465** | **466** | **467** | **468** | **469** | **470** | **471** | **472** | **473** | **474** | **475** | **476** | **477** | **478** | **479** | **480** | **481** | **482** | **483** | **484** | **485** | **486** | **487** | **488** | **489** | **490** | **491** | **492** | **493** | **494** | **495** | **496** | **497** | **498** | **499** | **500** | **501** | **502** | **503** | **504** | **505** | **506** | **507** | **508** | **509** | **510** | **511** | **512** | **513** | **514** | **515** | **516** | **517** | **518** | **519** | **520** | **521** | **522** | **523** | **524** | **525** | **526** | **527** | **528** | **529** | **530** | **531** | **532** | **533** | **534** | **535** | **536** | **537** | **538** | **539** | **540** | **541** | **542** | **543** | **544** | **545** | **546** | **547** | **548** | **549** | **550** | **551** | **552** | **553** | **554** | **555** | **556** | **557** | **558** | **559** | **560** | **561** | **562** | **563** | **564** | **565** | **566** | **567** | **568** | **569** | **570** | **571** | **572** | **573** | **574** | **575** | **576** | **577** | **578** | **579** | **580** | **581** | **582** | **583** | **584** | **585** | **586** | **587** | **588** | **589** | **590** | **591** | **592** | **593** | **594** | **595** | **596** | **597** | **598** | **599** | **600** | **601** | **602** | **603** | **604** | **605** | **606** | **607** | **608** | **609** | **610** | **611** | **612** | **613** | **614** | **615** | **616** | **617** | **618** | **619** | **620** | **621** | **622** | **623** | **624** | **625** | **626** | **627** | **628** | **629** | **630** | **631** | **632** | **633** | **634** | **635** | **636** | **637** | **638** | **639** | **640** | **641** | **642** | **643** | **644** | **645** | **646** | **647** | **648** | **649** | **650** | **651** | **652** | **653** | **654** | **655** | **656** | **657** | **658** | **659** | **660** | **661** | **662** | **663** | **664** | **665** | **666** | **667** | **668** | **669** | **670** | **671** | **672** | **673** | **674** | **675** | **676** | **677** | **678** | **679** | **680** | **681** | **682** | **683** | **684** | **685** | **686** | **687** | **688** | **689** | **690** | **691** | **692** | **693** | **694** | **695** | **696** | **697** | **698** | **699** | **700** | **701** | **702** | **703** | **704** | **705** | **706** | **707** | **708** | **709** | **710** | **711** | **712** | **713** | **714** | **715** | **716** | **717** | **718** | **719** | **720** | **721** | **722** | **723** | **724** | **725** | **726** | **727** | **728** | **729** | **730** | **731** | **732** | **733** | **734** | **735** | **736** | **737** | **738** | **739** | **740** | **741** | **742** | **743** | **744** | **745** | **746** | **747** | **748** | **749** | **750** | **751** | **752** | **753** | **754** | **755** | **756** | **757** | **758** | **759** | **760** | **761** | **762** | **763** | **764** | **765** | **766** | **767** | **768** | **769** | **770** | **771** | **772** | **773** | **774** | **775** | **776** | **777** | **778** | **779** | **780** | **781** | **782** | **783** | **784** | **785** | **786** | **787** | **788** | **789** | **790** | **791** | **792** | **793** | **794** | **795** | **796** | **797** | **798** | **799** | **800** | **801** | **802** | **803** | **804** | **805** | **806** | **807** | **808** | **809** | **810** | **811** | **812** | **813** | **814** | **815** | **816** | **817** | **818** | **819** | **820** | **821** | **822** | **823** | **824** | **825** | **826** | **827** | **828** | **829** | **830** | **831** | **832** | **833** | **834** | **835** | **836** | **837** | **838** | **839** | **840** | **841** | **842** | **843** | **844** | **845** | **846** | **847** | **848** | **849** | **850** | **851** | **852** | **853** | **854** | **855** | **856** | **857** | **858** | **859** | **860** | **861** | **862** | **863** | **864** | **865** | **866** | **867** | **868** | **869** | **870** | **871** | **872** | **873** | **874** | **875** | **876** | **877** | **878** | **879** | **880** | **881** | **882** | **883** | **884** | **885** | **886** | **887** | **888** | **889** | **890** | **891** | **892** | **893** | **894** | **895** | **896** | **897** | **898** | **899** | **900** | **901** | **902** | **903** | **904** | **905** | **906** | **907** | **908** | **909** | **910** | **911** | **912** | **913** | **914** | **915** | **916** | **917** | **918** | **919** | **920** | **921** | **922** | **923** | **924** | **925** | **926** | **927** | **928** | **929** | **930** | **931** | **932** | **933** | **934** | **935** | **936** | **937** | **938** | **939** | **940** | **941** | **942** | **943** | **944** | **945** | **946** | **947** | **948** | **949** | **950** | **951** | **952** | **953** | **954** | **955** | **956** | **957** | **958** | **959** | **960** | **961** | **962** | **963** | **964** | **965** | **966** | **967** | **968** | **969** | **970** | **971** | **972** | **973** | **974** | **975** | **976** | **977** | **978** | **979** | **980** | **981** | **982** | **983** | **984** | **985** | **986** | **987** | **988** | **989** | **990** | **991** | **992** | **993** | **994** | **995** | **996** | **997** | **998** | **999** | **1000** | **1001** | **1002** | **1003** | **1004** | **1005** | **1006** | **1007** | **1008** | **1009** | **1010** | **1011** | **1012** | **1013** | **1014** | **1015** | **1016** | **1017** | **1018** | **1019** | **1020** | **1021** | **1022** | **1023** | **1024** | **1025** | **1026** | **1027** | **1028** | **1029** | **1030** | **1031** | **1032** | **1033** | **1034** | **1035** | **1036** | **1037** | **1038** | **1039** | **1040** | **1041** | **1042** | **1043** | **1044** | **1045** | **1046** | **1047** | **1048** | **1049** | **1050** | **1051** | **1052** | **1053** | **1054** | **1055** | **1056** | **1057** | **1058** | **1059** | **1060** | **1061** | **1062** | **1063** | **1064** | **1065** | **1066** | **1067** | **1068** | **1069** | **1070** | **1071** | **1072** | **1073** | **1074** | **1075** | **1076** | **1077** | **1078** | **1079** | **1080** | **1081** | **1082** | **1083** | **1084** | **1085** | **1086** | **1087** | **1088** | **1089** | **1090** | **1091** | **1092** | **1093** | **1094** | **1095** | **1096** | **1097** | **1098** | **1099** | **1100** | **1101** | **1102** | **1103** | **1104** | **1105** | **1106** | **1107** | **1108** | **1109** | **1110** | **1111** | **1112** | **1113** | **1114** | **1115** | **1116** | **1117** | **1118** | **1119** | **1120** | **1121** | **1122** | **1123** | **1124** | **1125** | **1126** | **1127** | **1128** | **1129** | **1130** | **1131** | **1132** | **1133** | **1134** | **1135** | **1136** | **1137** | **1138** | **1139** | **1140** | **1141** | **1142** | **1143** | **1144** | **1145** | **1146** | **1147** | **1148** | **1149** | **1150** | **1151** | **1152** | **1153** | **1154** | **1155** | **1156** | **1157** | **1158** | **1159** | **1160** | **1161** | **1162** | **1163** | **1164** | **1165** | **1166** | **1167** | **1168** | **1169** | **1170** | **1171** | **1172** | **1173** | **1174** | **1175** | **1176** | **1177** | **1178** | **1179** | **1180** | **1181** | **1182** | **1183** | **1184** | **1185** | **1186** | **1187** | **1188** | **11**

```
Ruijie(config-if)# rmon collection stats 1 zhansan
```

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

## rmon collection history

**no**

```
rmon collection history index [owner ownername] [buckets  

bucket-number] [interval seconds]  

no rmon collection history index
```

```
owner buckets interval  

RGOS
```

1

```
Ruijie(config)# interface fast-Ethernet 0/1  

Ruijie(config-if)# rmon collection history 1 zhansan  

buckets 10 interval 10
```

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

## 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	interval	absolute/delta	owner	interval
rising-threshold/falling-threshold			event	

MIB ifInNUcastPkts.6

```
Ruijie(config)# rmon alarm 10 1.3.6.1.2.1.2.2.1.12.6 30
delta rising-threshold 9.315 0 falling-threshold 0
owner Td00 Td(rising-t30.377 -1.4
```

trap

```
Ruijie(config)# rmon event 1 log trap rmon description  
"ifInNUcastPkts is too much " owner zhangsan
```



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

```

Octets : 1884085
Pkts : 3096
BroadcastPkts : 161
MulticastPkts : 97
CRCAlignErrors : 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
    
```

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

## show rmon history

**show rmon history**

```

Ruijie# show rmon history
Entry : 1
Data source : Gil/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
    
```

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

## show rmon alarm

**show rmon alarm**

```

Ruijie# show rmon alarm
Event : 1
    
```

Description : firstevent  
Event type : log-and-trap  
Community : public  
Last time sent : 0d:0h:0m:0s  
Owner : zhangsan  
Log : 1  
Log time : 0d:0h:37m:47s  
Log description : ipttl  
Log : 2  
Log time : 0d:0h:38m:56s  
Log description : ipttl

Rising threshold : 10  
Falling threshold : 22  
Rising event : 0  
Falling event : 0  
Owner : zhangsan

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

---

```
' storm-control
' switchport protected
' switchport port-security
' switchport port-security aging
' switchport port-security mac-address
' port-security arp-check
```

## storm-control

no

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

```
no storm-control {broadcast | multicast
```

---

---

---

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 aging

no

```
switchport port-security aging {static | time time }
no switchport port-security aging {static | time }
```

--	--

---

**Static**

**time time** 0

---

```

no switchport port-security aging
time
no switchport
port-security aging static

```

**show port-security**

```

Ruijie(config)# interface gigabitethernet 1/1
Ruijie(config-if)# switchport port-security aging time
8
Ruijie(config-if)# switchport port-security aging
static

```

<b>show port-security</b>	

**switchport port-security mac-address**

no

```

switchport port-security [mac-address mac-address] [maximum
value]

```

```

no switchport port-security [ mac-address mac-address ] |
[maximum]

```

<b>mac-address mac-address</b>	
<b>maximum value</b>	

802.1x

IP

---

IP

gigabitethernet 1/1

00d0.f800.073c

Ruijie# **configure terminal**

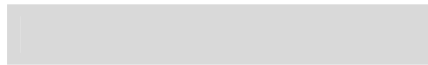
Ruijie(config)# **interface gigabitethernet 1/1**

Ruijie(config-if)# **switchport mode access**

Ruijie(config-if)# **switchport port-security**

Ruijie(config-if)# **switchport port-security**

**mac-address 00d0.f800.073c**



---

```
Interface Broadcast Control Multicast Control Unicast  
Control
```

```
-----  
Gi1/1 Disabled Disabled Disabled
```

<b>storm-control</b>	

## show port-security

```
show port-security [address] [interface interface-id]
```



---

<b>switchport port-security aging</b>	
<b>switchport port-security mac-address</b>	

# 802.1X

## dot1x

dot1x

' dot1x auto-req

' dot1x auto-req p

Packet-Num : 0  
Req-Interval: 30 Second

<b>show dot1x auto-req</b>	

## dot1x auto-req packet-num

no

**dot1x auto-req packet-num** *num*  
**no dot1x auto-req packet-num**

*num*

num = 0;

**show dot1x**

**auto-req**

802.1x

```
Ruijie# configure terminal  
Ruijie(config)# dot1x auto-req packet-num 0  
Ruijie(config)# end  
Ruijie# show dot1x auto-req
```

Auto-Req: Enabled  
User-Detect : Enabled  
Packet-Num : 0  
Req-Interval: 30 Second

--	--

<code>show dot1x auto-req</code>	
----------------------------------	--

## **dot1x auto-req req-interval**

**no**

`dot1x auto-req req-interval interval`

`no dot1x auto-req req-interval`

## 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
```

<b>show dot1x auto-req</b>	

## dot1x

dot1x

' **dot1x timeout quiet-period**

```
' dot1x timeout re-authperiod  
' dot1x timeout server-timeout  
' dot1x timeout supp-timeout  
' dot1x timeout tx-period
```

## dot1x timeout quiet-period

**no**

**dot1x timeout quiet-period** *seconds*

**no dot1x timeout quiet-period**

*seconds*

0 65535 s

10

**show dot1x**

1000s

Ruijie# **configure terminal**

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

Ruijie(config)#

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

<b>show dot1x</b>	802.1x

### **dot1x timeout re-authperiod**

**no**

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 Request: 3 times  
Filter Non-RG Supp: Disabled  
Client Oline Probe: Disabled  
Eapol Tag Enable: Disabled  
Authorization Mode: Group Server

<b>show dot1x</b>	802.1x

### **dot1x timeout server-timeout**

```

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:    3 sec
Supplicant Timeout: 3 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

```

<b>show dot1x</b>	802.1x

## dot1x timeout supp-timeout

no

```

dot1x timeout supp-timeout seconds
no dot1x timeout supp-timeout

```

```

seconds                                0
65535

```

3

```

show dot1x

```

10s

```

Ruijie# configure terminal
Ruijie(config)# dot1x timeout supp-timeout 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:   3 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

```

<b>show dot1x</b>	802.1x

## dot1x timeout tx-period

no

```

dot1x timeout tx-period seconds
no dot1x timeout tx-period

```

```

seconds          0  65535

```

**show dot1x**

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

```

<b>show dot1x</b>	802.1x

**dot1x**

- ' **dot1x re-authentication**
- ' **dot1x reauth-max**

**dot1x re-authentication**

no

**[no] dot1x re-authentication****show dot1x**

```
Ruijie# configure terminal
Ruijie(config)# dot1x re-authentication
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:      3 times
Maximum Request:    3 times
Filter Non-RG Supp: Disabled
Client Oline Probe: Disabled
Eapol Tag Enable:   Disabled
Authorization Mode:  Group Server
```

<b>show dot1x</b>	802.1x

## dot1x reauth-max

**no**

**dot1x reauth-max** *count*

**no dot1x reauth-max**

*count*

3

### show dot1x

```
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
```

<b>show dot1x</b>	802.1x

## dot1x

- ' **dot1x probe-timer**
- ' **dot1x client-probe enable**

### dot1x probe-timer

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

**no**

**alive**

**interval**

*interval* hello

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**



Server Timeout: 10 sec  
Re-authen Max: 5 times  
Maximum Request: 3 times  
Filter Non-RG Supp: Disabled  
Client Oline Probe: Enabled  
Eapol Tag Enable: Disabled  
Authorization Mode: Group Server

*list-name*

AAA

AAA

AAA

dot1x

enable      AAA      **aaa domain**  
              **dot1x authentication** *auth*      *auth*

AAA

group radius

```
Ruijie# configure terminal
Ruijie(config)# aaa new-model
Ruijie(config)# aaa authentication dot1x default group
radius
Ruijie(config)# dot1x authentication default
Ruijie(config)# end
Ruijie#
```

<b>aaa new-model</b>	AAA
<b>aaa authentication dot1x</b>	

## dot1x accounting

AAA

AAA

**no**

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

**default***list-name*

AAA default

AAA dot1x

enable AAA dot1x accounting aaa domain

AAA

group radius

```
Ruijie# configure terminal  
Ruijie(config)# aaa new-model  
Ruijie(config)#aaa accounting network
```

802.1X

show dot1x

**auth-address table**

```
Ruijie# configure terminal
Ruijie(config)# dot1x auth-address-table address
00d0f8000000 interface ethernet 1/1
Ruijie(config)# end
Ruijie#
```

<b>show dot1x auth-address-table</b>	802.1X

**dot1x auth-mode**

802.1x

**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



## dot1x dynamic-vlan enable

vlan no

```
dot1x dynamic-vlan enable
no dot1x dynamic-vlan enable
```

### show dot1x dynamic-vlan

802.1x vlan

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

show dot1x	802.1x

## dot1x eapol-tag

EAPOL TAG

```
dot1x eapol-tag
no dot1x eapol-tag
```

**show dot1x**

802.1X tag

```
Ruijie# configure terminal  
Ruijie(config)# dot1x eapol-tag  
Ruijie(config)# end  
Ruijie#
```

<b>show dot1x</b>	802.1x

**dot1x max-req**

```
DOT1X DOT1X DOT1X  
DOT1X  
no
```

```
dot1x max-req count  
no dot1x max-req
```

*count*

3

**show dot1x**

802.1x 7

Ruijie# **configure terminal**



```
dot1x port-control-mode {mac-based | port-based}  
no dot1x port-control-mode
```

```
mac-based      mac  802.1X
```

```
port-based      802.1X
```

```
mac-based
```

```
show dot1x port-control      802.1x
```

```
802.1x
```

```
Ruijie(config)#
```

## 802.1x

```
Ruijie# configure terminal
Ruijie(config)# dot1x stationarity enable
Ruijie(config)# end
Ruijie#
```

**dot1x**

```
' show dot1x
' show dot1x auth-address-table
' show dot1x auto-req
' show dot1x private-supPLICANT-only
' show dot1x max-req
' show dot1x port-control
' show dot1x probe-timer
' show dot1x re-authentication
' show dot1x reauth-max
' show dot1x summary
' show dot1x timeout
' show dot1x user id
```

**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
```

## 802.1X 认证失败原因

<b>dot1x re-authentication</b>	
<b>dot1x timeout quiet-period</b>	
<b>dot1x timeout re-authperiod</b>	
<b>dot1x timeout server-timeout</b>	
<b>dot1x timeout supp-timeout</b>	
<b>dot1x timeout tx-period</b>	

## 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  
Ruijie#
```

--	--



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

## show dot1x max-req

**show dot1x max-req**

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

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

## show dot1x port-control

**show dot1x port-control** [*interface interface*]

*interface*

```
Ruijie# show dot1x port-control  
interface dyn-user static-user max-user qos
```



```
Ruijie# show dot1x probe-timer
```

```
Hello Interval: 20 Seconds
```

```
Hello Alive: 250 Seconds
```

```
Ruijie#
```

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

## **show dot1x re-authentication**

```
show dot1x re-authentication
```

```
Ruijie# show dot1x re-authentication
reauth-enabled: disabled
Ruijie#
```

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

**show dot1x reauth-max**

**show dot1x reauth-max**

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

---

<b>dot1x auth-mode</b>	802.1x
<b>dot1x max-req</b>	
<b>dot1x port-control auto</b>	
<b>dot1x reauth-max</b>	

```

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#

```

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

## show dot1x user id

802.1X



<b>dot1x port-control auto</b>	
<b>dot1x reauth-max</b>	
<b>dot1x re-authentication</b>	
<b>dot1x timeout quiet-period</b>	
<b>dot1x timeout re-authperiod</b>	
<b>dot1x timeout server-timeout</b>	
<b>dot1x timeout supp-timeout</b>	
<b>dot1x timeout tx-period</b>	

## show dot1x timeout

802.1X

**show dot1x timeout quiet-period**  
**show dot1x timeout re-authperiod**  
**show dot1x timeout server-timeout**  
**show dot1x timeout supp-timeout**  
**show dot1x timeout tx-period**

```
Ruijie# show dot1x timeout quiet-period  
quiet-period: 60 sec  
Ruijie#
```

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



---

default

**aaa authentication {dot1x | enable | ppp | login} default group  
radius**

AAA

AAA

**aaa authentication**

RDS\_D1X AAA

RADIUS

RADIUS

Ruijie(config)# **aaa authentication dot1x rds\_d1x group  
radius local**

<b>aaa new-model</b>	AAA
<b>dot1x authentication</b>	DOT1x
<b>ppp authentication</b>	PPP
<b>login authentication</b>	Login
<b>username</b>	

RGOS





## RADIUS

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

<b>aaa new-model</b>	AAA
<b>aaa authorization network</b>	AAA
<b>aaa authentication</b>	AAA
<b>username</b>	

**aaa accounting update**

```
aaa accounting update  
no
```

```
aaa accounting update  
no aaa accounting update
```

AAA

AAA

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

<b>aaa new-model</b>	AAA

**aaa accounting network**

## show aaa method-list

```
method-list EXEC show aaa  
show aaa method-list
```

EXEC

```
Ruijie# show aaa method-list
```

## AAA

```
AAA  
' aaa domain enable  
' aaa domain {default | }  
' authentication  
' accounting  
' authorization  
' state {block | active}  
' username-format {without-domain | with-domain}  
' access-limit <1-1024>  
' show aaa domain [word]
```

## aaa domain enable

```
AAA AAA no  
aaa domain enable  
no aaa domain enable
```



AAA

---

Ruijie(config-domain)#

Show aaa domain	
-----------------	--

## accounting

no

**accounting { update | network } { default | *methodlist* }**

**no accounting { update | network }**

### default:

*methodlist*

default

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

```
Ruijie(config-domain)# accounting network default
```

<b>aaa new-model</b>	AAA
<b>aaa domain enable</b>	AAA
<b>Show aaa domain</b>	

## authorization

no

**authorization { ip-auth-mode | network } { default | *methodlist* }**

**no authorization { ip-auth-mode | network }**



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

<b>aaa new-model</b>	AAA
<b>aaa domain enable</b>	AAA
<b>Show aaa domain</b>	

## username-format

NAS

no

**username-format {without-domain | with-domain}**

**no username-format**

**without-domain:**

**with-domain**

NAS

```
Ruijie(config)# aaa domain ruijie.com  
Ruijie(config-domain)# username-domain without-domain
```

<b>aaa new-model</b>	AAA
<b>aaa domain enable</b>	AAA
<b>Show aaa domain</b>	

**access-limit <1-1024>**

1X

no

**access-limit <1-1024>****no access-limit**

&lt;1-1024&gt;:

802.1X

```
Ruijie(config)# aaa domain ruijie.com  
Ruijie(config-domain)# access-limit 20
```

<b>aaa new-model</b>	AAA
<b>aaa domain enable</b>	AAA
<b>Show aaa domain</b>	

## show aaa domain

EXEC      **show aaa domain**

**show aaa domain** {Domain name|Default}

Domain name

**Default:**

EXEC

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

```
=====Domain ruijie.com=====
```

```
State: Active
```

```
Username format: Without-domain
```

```
Access limit: No limit
```

```
802.1X Access statistic: 0
```

```
Selected method list:
```

```
authentication login default
```

```
Ruijie(config)#
```

## AAA

- ' **show aaa group**
- ' **aaa group server**
- ' **server ip-addr authen-port port1 acct-port port2**

## show aaa group

AAA

**show aaa group**

AAA

```
Ruijie# show aaa group
Group Name:  ss
Group Type:  radius
Referred:    2
Server List:
IP Address:  192.168.217.64
Authentication Port: 1812
Accounting Port: 1813
Referred:    1
Ruijie#
```

<b>aaa group server</b>	AAA

## aaa group server

AAA

no

**aaa group server radius *name*****no aaa group server radius *name***

AAA

---

*name*

"radius" "tacacs+"

AAA

Radius

Ruijie(config)#

```
Ruijie(config)# aaa group server radius ss
Ruijie(config-gs-radius)# server 192.168.4.12
acct-port 5 authen-port 6
Ruijie(config-gs-radius)# end
Ruijie# show aaa group
Group Name: ss
Group Type: radius
Referred: 2
Server List:
IP Address: 192.168.4.12
Authentication Port: 6
Accounting Port: 5
Referred: 1
Ruijie#
```

<b>aaa group server</b>	aaa
<b>show aaa group</b>	aaa

## AAA

```
' aaa new-model
' debug aaa
' show aaa method-list
' aaa local authentication attempts
' aaa local authentication lockout-time
' show aaa user lockout
' clear aaa local user lockout
```

### aaa new-model


```
RGOS AAA aaa
new-model AAA no AAA
aaa new-model
no aaa new-model
```

---

AAA

AAA  
a new-model AAA AAA AAA AAA

AAA  
ijie(config)# aaa new-model



AAA

AAA

```
Ruijie# show aaa method-list
Authentication method-list
aaa authentication login default group radius
aaa authentication ppp default group radius
aaa authentication dotlx default group radius
aaa authentication dotlx 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#
```

<b>aaa authentication</b>	
<b>aaa authorization</b>	
<b>aaa accounting</b>	

## aaa local authentication attempts

login

```
aaa local authentication attempts <1-2147483647>
```

```
<1-2147483647>
```

3

login

Ruijie#**configure terminal**Ruijie(config)#**aaa local authentication attempts 6**

Ruijie0(config)#

<b>Show running-config</b>	
<b>Show aaa lockout</b>	login

## aaa local authentication lockout-time

login

**aaa local authentication lockout-time** <1-2147483647>

&lt;1-2147483647&gt;

15

login

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

Ruijie(config)#

<b>Show running-config</b>	
<b>Show aaa logout</b>	login

## show aaa user logout

**show aaa user logout** {all | user-name <word>}

ID

ruijie#

Ruijie#**show aaa user logout all**

<b>Show running-config</b>	
<b>Show aaa logout</b>	login

## clear aaa local user logout

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

ID

Ruijie# **clear aaa local user lockout all**

<b>Show running-config</b>	
<b>Show aaa lockout</b>	login

# RADIUS

## RADIUS

RADIUS

- ' **ip radius source-interface**
- ' **radius-server host**
- ' **radius-server key**
- ' **radius-server retransmit**
- ' **radius-server timeout**
- ' **radius-server dead-time**
- ' **radius attribute**
- ' **radius set qos cos**
- ' **radius vendor-specific extend**

## ip radius source-interface

```
radius source-interface no ip radius RADIUS
ip radius source-interface interface
no radius source-interface
```

*Interface* radius

radius

```
radius nas
radius ip
radius
```

```

radius                radius    fastEthernet 0/0      ip
radius
Ruijie(config)# ip radius source-interface
fastEthernet 0/0
    
```

<b>radius-server host</b>	RADIUS
<b>ip address</b>	ip

### radius-server host

```

RADIUS                                radius-server
no                                    RADIUS

radius-server host {hostname | ip-address} [auth-port port-number]
[acct-port port-number][key 0|7 text]
no radius-server host {hostname | ip-address}
    
```

```

hostname: RADIUS                      DNS
ip-address: RADIUS                    IP
auth-port: RADIUS                    UDP
port-number: RADIUS                   UDP          0

acct-port: Radius                    UDP
port-number: RADIUS                   UDP          0

text
0
7
    
```

RADIUS

RADIUS AAA  
**radius-server**

RADIUS  
RADIUS

0 7 0  
0

7

**service password-encryption**

```

RADIUS
RADIUS
RADIUS
radius-server host ip key
0 7 0
0
service password-encryption RADIUS
7 show running RADIUS
show running RADIUS
RADIUS
aaa
Ruijie(config)#radius-server key aaa
    
```

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

### radius-server retransmit

```

RADIUS
radius-server retransmit no
radius-server retransmit retries
no radius-server retransmit
    
```

*retries* RADIUS

3

AAA

RADIUS

4

Ruijie(config)# **radius-server retransmit 4**

<b>radius-server host</b>	RADIUS
<b>radius-server key</b>	RADIUS
<b>radius-server timeout</b>	RADIUS

## radius-server timeout

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

## radius-server deadtime

```

t
t      t      RGOS      RADIUS
      deadtime
      radius-server deadtime
no
radius-server deadtime minutes
no radius-server deadtime

minutes      1-1000

5

```

10

```
Ruijie(config)# radius-server deadtime 10
```



<b>radius-server host</b>	RADIUS
<b>radius-server retransmit</b>	RADIUS
<b>radius-server key</b>	RADIUS
<b>radius-server timeout</b>	RADIUS

## radius attribute

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

RADIUS

---

15	file-name-4	15
----	-------------	----

19	flux-max-low32	19
20	proxy-avoid	20
21	dailup-avoid	21
22	ip privilege	22
23	login privilege	42
24	limit to user number	50

max up-rate 211

Ruijie(config)# radius attribute 16 vendor-type 211

radius set qos cos	radius qos cos

### radius set qos cos

radius qos cos

**radius set qos cos**

**no radius set qos cos**

qos dscp

qos          cos          dscp

Ruijie(config)# **radius set qos cos**

<b>radius vendor-specific extend</b>	Radius id

## radius vendor-specific extend

id

**radius vendor-specific extend**

**no radius vendor-specific extend**

id

id

Ruijie(config)# **radius vendor-specific extend**

<b>radius attribute</b>	
<b>radius set</b>	qos          cos

## RADIUS

- ' **debug radius [event | detail]**
- ' **show radius server**
- ' **show radius parameter**
- ' **show radius vendor-specific**

## debug radius

RADIUS no RADIUS

- debug radius [event | detail]**
- no debug radius [event | detail]**

EXEC

## show radius server

RADIUS

- show radius server**

radius

```
Ruijie# show radius server  
server ip : 192.168.4.12  
acct port: 23
```

RADIUS

---

authen port: 77

<b>radius-server host</b>	RADIUS
<b>radius-server retransmit</b>	RADIUS
<b>radius-server key</b>	RADIUS
<b>radius-server timeout</b>	RADIUS

## 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
9    file-directory       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
```

## RADIUS

---

16	max up-rate	75
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 privilige	22
23	login privilige	42
24	limit to user number	50

<b>radius-server host</b>	RADIUS
<b>radius-server retransmit</b>	RADIUS
<b>radius-server key</b>	RADIUS
<b>radius-server timeout</b>	RADIUS

# TACACS+

## TACACS+

TACACS+

```
' aaa group server tacacs+  
' ip tacacs source-interface  
' server(TACACS+)  
' tacacs-server host  
' tacacs-server key  
' tacacs-server timeout
```

## 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
```

<b>server</b>	TACACS+      server

## server(TACACS+)

TACACS+

**server** *ip-address*

**no server** *ip-address*

*ip-address*      TACACS+

TACACS+

**aaa group server tacacs+**

TACACS+

TACACS+

**tacacs-server 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**

<b>aaa group server tacacs+</b>	TACACS+

## ip tacacs source-interface

TACACS+

```
ip tacacs source-interface interface
```

```
no ip tacacs source-interface
```

```
Interface TACACS+
```

TACACS+

```
TACACS+
TACACS+
ip TACACS+
nas
```

```
TACACS+ fastEthernet 0/0 ip
TACACS+
```

```
Ruijie(config)# ip tacacs source-interface fastEthernet
0/0
```

<b>tacacs-server host</b>	TACACS+
<b>ip address</b>	ip

## tacacs-server host

TACACS+ IP

```
tacacs-server host ip-address [port integer] [timeout integer] [key
string]
```

```
no tacacs-server host ip-address
```

```
ip-address TACACS+ IP
```

**port** *integer* TACACS+ TCP  
**timeout** *integer* TACACS+  
**key** *string* TACACS+ client

TACACS+

TACACS+ AAA TACACS+  
**tacacs-server** TACACS+

TACACS+

Ruijie(config)# **tacacs-server host** 192.168.12.1

<b>aaa authentication</b>	AAA
<b>tacacs-server key</b>	TACACS+
<b>tacacs-server timeout</b>	TACACS+

## **tacacs-server key**

TACACS+

**tacacs-server key** [0 | 7] *string*  
**no tacacs-server key**

*string*

**0 | 7** 0 7



```
Ruijie(config)# tacacs-server timeout 10
```

<b>tacacs-server host</b>	TACACS+
<b>tacacs-server key</b>	TACACS+

## TACACS+

- ' **debug tacacs+**
- ' **show tacacs**

### debug tacacs+

```
TACACS+ no TACACS+  
debug tacacs+  
no debug tacacs+
```

```
EXEC
```

### show tacacs

```
TACACS+  
show tacacs
```

TACACS+

w

```
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
```





---

r 注意:

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

## crypto key zeroize

SSH

crypto key zeroize {rsa / dsa}

rsa	RSA
dsa	DSA

DISABLE                      SSH Server                      SSH Server  
**service ssh-server**                      **no enable**

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

<b>show ip ssh</b>	SSH Server
<b>crypto key generate {rsa dsa}</b>	DSA RSA

RGOS10.1

## ip ssh version

SSH server no

```
ip ssh version {1 / 2}
no ip ssh version
```

<b>1</b>	SSH Server	SSH1
<b>2</b>	SSH Server	SSH2

```
SSH SSH 1 2
no ip ssh version
```

```
SSH Server SSH
SSH Server SSH1 SSH2 SSH 1
SSH 2 1 2
SSH show ip ssh SSH Serv
er
```



<b>show ip ssh</b>	ssh-server

RGOS10.1

**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**

<b>show ip ssh</b>	SSH Server



<b>Ip ssh authentication-retries retry times</b>	SSH Server
--	------------

RGOS10.1

**show ssh**

SSH

**show ssh**

SSH

VTY

SSH

Ruijie# **show ssh**

RGOS10.1

**show crypto key mypubkey**

SSH Server

**show crypto key mypubkey {rsa/dsa}**

--	--

<b>rsa</b>	RSA
<b>dsa</b>	DSA

## SSH Server

Ruijie# **show crypto key mypubkey rsa**

<b>crypto key generate {rsa   dsa}</b>	DSA RSA

RGOS10.1

**disconnect ssh**

SSH

**disconnect ssh [vty] *session-id***

<i>session-id</i>	SSH



# QoS

QoS

QoS

1 policy-map

IP-Precedence to DSCP

IP-Precedence	0	1	2	3	4	5	6	7
DSCP	0	8	16	24	32	40	48	56

DSCP to CoS

DSCP	0	8	16	24	32	40	48	56
------	---	---	----	----	----	----	----	----

**wrr-queue bandwidth** *weight1 ... weightn*

**no wrr-queue bandwidth**

*weight1...weightn*                    n                    n

**no**

weight1: ...: weightn = 1:...:1

ip-prec-dscp maps

## mls qos map dscp-cos

DSCP CoS

**mls qos map dscp-cos** *dscp-list* to *cos*

**no mls qos map dscp-cos**

*dscp-list*

**cos** 0 7

**no**

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

## interface rate-limit

**rate-limit** {input | output} *bps* *burst-size*

**no rate-limit**

**input**

**output**

*bps*

*burst-size* (Kbyte)dscp-list

**no**

*weight1...weight8*

**no**

Ruijie(config)# **drp-queue bandwidth 1 2 3 4 5 6 7 8**

**show mls qos queueing**

## **show mls qos interface**

QoS

**show mls qos interface *interface-id* [policers]**

*interface-id*

**policers**

police

QOS

Ruijie# **show mls qos interface fastEthernet 0/1**

## **show mls qos queueing**

QoS

(cos-to-queue map,wrr weight)

## show mls qos queueing

```
Ruijie# show mls qos queueing
```

## show mls qos scheduler

```
show mls qos scheduler
```

```
Ruijie# show mls qos scheduler
```

## show mls qos maps

```
dscp-cos maps,dscp-cos maps ip-prec-dscp maps
```

```
show mls qos maps [cos-dscp | dscp-cos]
```

```
cos-dscp cos-dscp maps
```

```
dscp-cos dscp-cos maps
```

```
dscp-cos maps dscp-cos maps
```

```
Ruijie# show mls qos maps
```

## show mls qos rate-limit





```
Ruijie(config)# rldp enable
```



**no rldp detect-max**

*num* , 2-10

2

5 :

Ruijie(config)# **rldp detect-max 5**

<b>rldp detect-interval</b>	

**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
```

<b>rldp enable</b>	rldp

### rldp reset

**rldp shutdown disable**

rldp

**rldp reset**

```
Ruijie# rldp reset
```

<b>rldp enable</b>	Rldp

RLDP

# TPP

**topology guard**

**[no] tp-guard port enable**

CPU

( AP )

```
Ruijie(config-if)# tp-guard port enable  
Ruijie(config-if)# no tp-guard port enable
```

**topology guard**

## **TPP**

**show tpp**

**show tpp**

tpp

```
Ruijie# show tpp
```

```
topology guard
```

- 
- ' **cat**
  - ' **cd**
  - ' **cp**
  - ' **ls**
  - ' **makefs**
  - ' **mkdir**
  - ' **mv**
  - ' **pwd**
  - ' **rm**
  - ' **rmdir**

## **cat**

**cat type {bin | text} file path**

**cat file path type {bin | text}**

<b>bin</b>	
<b>text</b>	
<b>path</b>	(            )

---

---

## cp

**cp dest** {*DESTINE\_FILE* | *DIRECTORY*} **sour** *SOURCE\_FILE*  
**cp sour** *SOURCE\_FILE* **dest** {*DESTINE\_FILE* | *DIRECTORY*}

*DESTINE\_FILE*

*DIRECTORY*

*SOURCE\_FILE* ( )

---

r 注意:

**cp**

---

log.txt :

Ruijie# **cp sour** *log.txt* **dest** *../log\_bak.txt*

## ls

**ls** *PATHNAME*

---

*PATHNAME*

```
Ruijie# ls
      tmp
Ruijie# ls tmp
```

## **makefs**

```
makefs dev DEVNAME fs FSNAME
makefs fs FSNAME dev
```

```
Ö?U ã ê,XA' Û á/Ä (      )FSNAME
```

---

b

---

**mv dest** {*DESTINE\_FILE* | *DIRECTORY*} **sour** *SOURCE\_FILE*

*SOURCE\_FILE*

*DESTINE\_FILE/DIRECTORY*

a ( **type file**); b '?'  
'? '

,

log.txt , config.txt,

,

Ruijie# **mv sour** tmp/log.txt **dest** ../config.txt

log.txt tmp

Ruijie# **mv dest** /mnt/tmp **sour** tmp/log.txt

**pwd**

**pwd**

<b>pwd</b>	

---

Ruijie# **pwd**

**rm**

**rm** *FILE*

---

## **rmdir**

**rmdir** *DIRECTORY*

*DIRECTORY* ,

---

## logging on

no

**logging on**

**no logging on**

```
RGOS                               Console   VTY
Server                             FLASH    Syslog
                                   1 Log
```

```
Ruijie(config)# no logging on
```

<b>logging buffered</b>	
<b>logging</b>	Syslog Server
<b>logging file flash:</b>	FLASH

---

**logging console**



---



---

FLASH

trace.txt

64K,

6

Ruijie(config)# **logging file flash:trace**

<b>logging on</b>	
<b>show logging</b>	
<b>more flash</b>	FLASH

## logging console

no

**logging console *level***

**no logging console**

*level*

0 7

1

Debugging (7)

**show logging**

6

Ruijie(config)# **logging console informational**

--	--

<b>logging on</b>	
<b>show logging</b>	

## logging monitor

```

VTY telnet SSH
no VTY

```

**logging monitor level**

**no logging monitor**

*level*

1

Debugging (7)

```

VTY terminal
monitor VTY
logging monitor

```

**Logging monitor** VTY

VTY 6

Ruijie(config)# **logging monitor informational**

<b>logging on</b>	
<b>show logging</b>	

---

## logging trap

```
                Syslog Server
                no                               Syslog Server

logging trap level
no logging trap

level

1

Informational(6)
```

```
                Syslog Server                               logging
Syslog Server                logging trap

show logging

                6                               202.101.11.22
Syslog Server

Ruijie(config)# logging 202.101.11.22
Ruijie(config)# logging trap informational
```

---

**no**

**logging source interface** *interface-type interface-number*

**no logging source interface**

*interface-type*

*interface-number*

Syslog Server

Loopback 0

Syslog

Ruijie(config)# **logging source interface loopback 0**

<b>logging</b>	Syslog Server

## logging source ip

**no**

**logging source ip** *A.B.C.D*

**no logging source ip**

*A.B.C.D* IP

---

## Syslog Server

Loopback 0          Syslog

```
Ruijie(config)# logging source ip 192.168.1.1
```

<b>logging</b>	Syslog server

## logging facility

---

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

---

---

**no service sequence-numbers**

1

Ruijie(config)# **service sequence-numbers**

<b>logging on</b>	
<b>service timestamps</b>	

## **service timestamps**

no

default

**service timestamps** *message-type* [*uptime* | *datetime*]

**no service timestamps** *message-type* [*uptime* | *datetime*]

**default service timestamps** *message-type* [*uptime* | *datetime*]

*message-type*  
0 6

Log Debug Log  
Debug 7

*uptime*

\* \* \* \* 07:00:10:41

---

*datetime*  
16:53:07

Jul 27

RTC

Uptime

Datetime

Log

Debug

Datetime

Ruijie(config)# **service timestamps debug datetime**

Ruijie(config)# **service timestamps log datetime**

<b>logging on</b>	
<b>service sequence-numbers</b>	

## **service sysname**

no

**service sysname**

**no service sysname**

---

```
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
Ruijie#
Mar 22 15:35:57 S20 %SYS-5-CONFIG: Configured from
console by console
```

<b>show logging</b>	

## more flash

FLASH

**more flash:filename**

*Filename*

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

## clear logging

**clear logging**

Ruijie# **clear logging**

logging on	
show logging	
logging buffered	

## show logging

---

## show logging

### 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	<b>disabled</b> <b>enabled,</b>
Console logging	

---

Monitor logging	VTY
Buffer logging	
Timestamp debug messages	Debug
Timestamp log messages	Log
Sequence log messages	
Trap logging	Syslog Server
Log Buffer	

<b>logging on</b>	
<b>clear logging</b>	

**show logging count**

**show logging count**

**count**

**show logging count**

**logging**

---

```
=====
SYS          CONFIG_I          5  1          Jul 6 10:29:57
-----
SYS TOTAL                    1
```

<b>logging count</b>	
<b>show logging</b>	
<b>clear logging</b>	

- ' **device-priority**
- ' **device-description**
- ' **stack on**
- ' **show member**

## device-priority

**device-priority** [*member*] *priority*

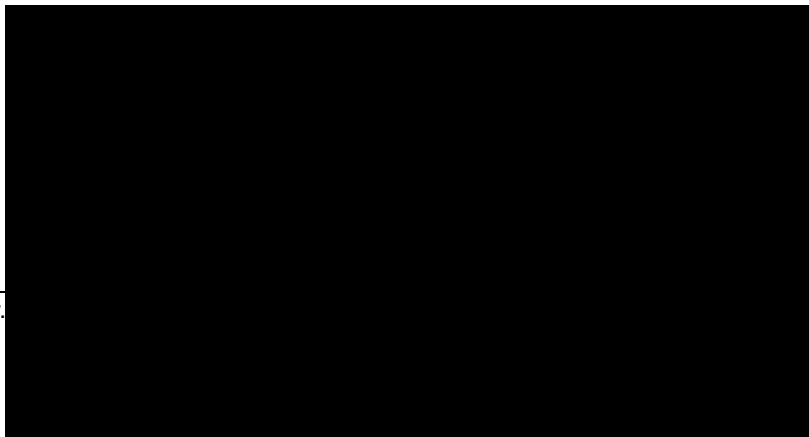
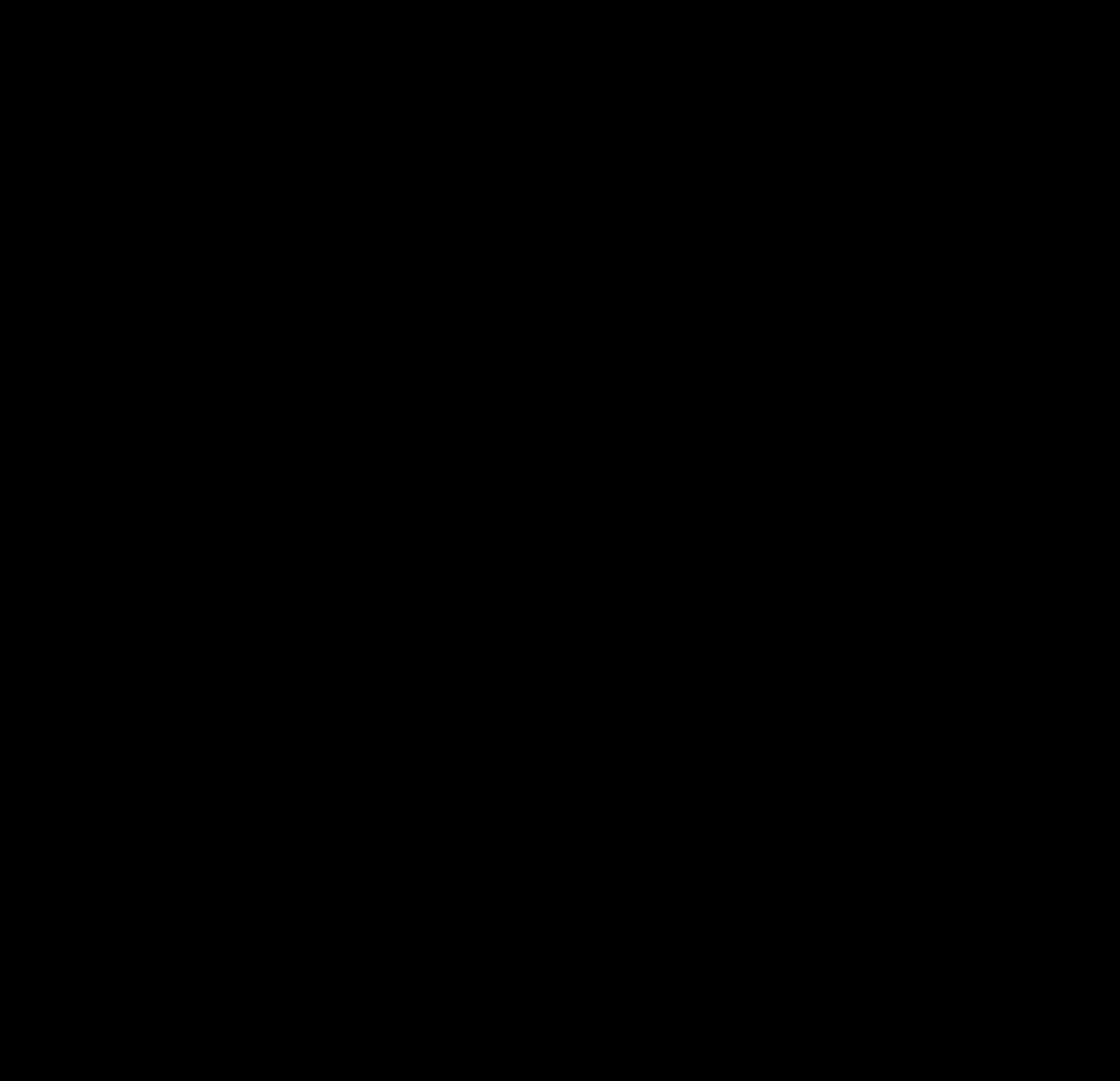
<i>member</i>	ID member 1
<i>priority</i>	[1, 10]

```

10 1 10
write
2 8
Ruijie(config)# device-priority 2 8

```

--	--



---

<http://www.>

<i>member</i>	ID
---------------	----

Ruijie# **show member**

```

Member Mac Address      Priority Software Version
HardwareVersion Description
-----
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

```