

RG-S20

RGOS 10.2(5)

©2009



RGOS®



锐捷®

RGOS® 10.2(5)

$[\] \qquad [\]$

$\{x|y|\dots\}$

$[x|y|\dots]$

//

3.

~ 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

h	help
p	ping
s	show
u	undebug
un	undebug

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          ip route 0.0.0.0 0.0.0.0 192.168.1.1
```



exec	
interface	
ip-dhcp-pool	DHCP
keychain	KeyChain
keychain-key	KeyChain-key
time-range	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>
```

enable secret	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

alias	

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**

enable	

enable

enable

enable password

enable password

no

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

no enable password

Password

EXEC

o 1 26
o

~ 注意:

EXEC

```

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

          pw10
Ruijie(config)# enable secret 0 pw10

```

enable password	

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

```

login	

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**

password	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**

username	

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
```

aaa new-model	AAA
aaa authentication login	

username

username

```
username name { nopassword | password { 66617431 $6$17431PBz$MBi0/AP%imZ@ } } username
```

15

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

login local	

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#

lockable	

lockable

	lock	line	lockable
	lock	no	
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#
```

lock	

ssh-server	SSH Server
telnet-server	Telnet Server
web-server	Http Server
snmp-agent	Snmp Agent

Web

no ip http authentication

ip http authentication local,

Web

local

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

enable service	

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**

enable service	

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

show clock	

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**
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.

clock set	

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%	mtdblock
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

--	--

show cpu slot	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

ureq

show line

show line

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

memory

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



LINE

LINE

line

LINE

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

aux	
console	
tty	
vty	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 Line

default transport input LINE

transport input {all | ssh | telnet | none}

default transport input

all	Line
ssh	Line SSH
telnet	Line Telnet

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

VTY TTY
 NONE
default transport input

Line

Line VTY
 VTY **show running** Line

~ 注意:

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

access-class

```
access-class
show running
```

```
Ruijie# configure terminal
```

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

```
Ruijie(config-line)# access-class 10 in
```

	CLI	COPY
° Xmodem		copy xmodem
° Tftp		copy tftp

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**

tftp

copy flash: *filename* **tftp://** *location / filename*

copy **tftp://** *location/filename* **flash:** *filename*

filename

TFTP

TFTP

```

: ip 192.168.12. 1
config.bak ; switch.bin
ip 192.168.12.1 :

```

```
Ruijie# copy tftp://192.168.12.1/config.bak flash:
config.text
```

```
Ruijie# copy flash: swhich.bin tftp://192.168.12.1/
```

- ping
- traceroute

ping

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

<i>ip-address</i>	IPv4
<i>length</i>	
<i>times</i>	
timeout	
<i>data</i>	
<i>source</i>	IPv4

IP 2 5 100Byte

Ping ping ping

2 5 100Byte
IP !
.
ping
ping
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)#

show interfaces	

interface fastEthernet

interface fastEthernet *mod-num/port-num*

mod-num/port-num /

no

77<0787116Ew

Ru69ie(config)# **interface aggregatenet**

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
```

show interfaces	

shutdown

no

```
shutdown
no shutdown
```

Ap SVI

show interfaces

Ap 1

clear interface	
show interfaces	

& 说明:

no shutdown

speed

no

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

></A@

d(Tp0 1 7

show interfaces	

duplex

no

duplex {auto | full | half}

no duplex

auto

full

half

show interfaces

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

show interfaces	

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**

show interfaces	

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**

show interfaces	

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

switchport
no switchport

2
3

switchport
no switchport

2

switchport


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

switchport mode	switch port
switchport trunk	trunkport native VLAN Trunk VLAN

trunkport	native VLAN	Trunk	VLAN
no	trunk		

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

snmp trap link-status

```

LinkTrap
Link
SNMP
LinkTrap,
no SNMP LinkTrap

snmp trap link-status
no snmp trap link-status

```

	Link	SNMP
LinkTrap		

Ap SVI Link SNMP

LinkTrap LinkTrap,

```
Link trap:
Ruijie(config)# interface gigabitEthernet 1/1
Ruijie(config-if)# no snmp trap link-status
```

```
Link trap:
Ruijie(config)# interface gigabitEthernet 1/1
Ruijie(config-if)# snmp trap link-status
```

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

line-detect

line-detect

line-detect

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**

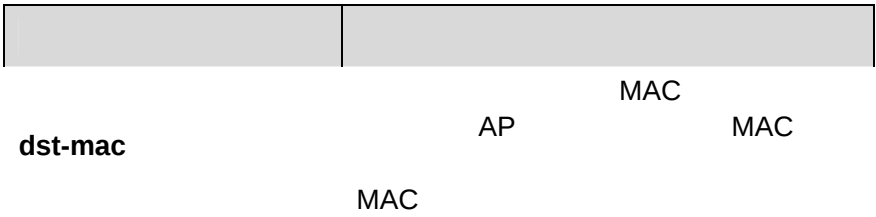
Ruijie(config-if)# **port-group 3**

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
```

show vlan	VLAN

switchport mode

access port switch port
trunk port, 802.1Q no

switchport mode {access | trunk}

no switchport mode

access	switch port access port
trunk	switch port trunk port

switch port access

trunkport

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

switchport mode	switch port
switchport trunk	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
	10-20 -
	1-10,20-25,30,33 ,
allowed vlan vlan-list	all VLAN
	VLAN
	add

Native VLAN

Trunk native VLAN native VLAN
UNTAG VLAN ID IEEE 802.1Q PVID native
VLAN VLAN ID Trunk native VLAN
UNTAG

VLAN

Trunk VLAN 1 4094
Trunk VLAN VLAN
Trunk

show interfaces switchport

VLAN 2 1/15

```
Ruijie(config)# interface fastethernet 1/15
Ruijie(config-if)# switchport trunk allowed vlan remove
2
Ruijie(config-if)# end
Ruijie# show interfaces fastethernet1/15 switchport
Switchport is1 TUuSed
Mode is1trunk port
Access vlan is11,Native vlan is11
Protected is1disUuSed
Vlan lists is1
1,3-4094
```

show interfaces	
switchport access	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**

show mac-address-table aging-time	
show mac-address-table dynamic	

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*]

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

show mac-address-table filtering

00d0.f800.0c0c

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

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

clear mac-address-table static

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

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

show mac-address-table static

MAC 00d0.f800.073c

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

mac-address-table static	
show mac-address-table static	

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 f H4w 8SH H IC IC 2Hr fm H Gm 2 (C) 5n Hq1e%2 5f XQB 5H4@b G 42 1A %1B,AG, B,5n) 5H5H4 5A 5H5H5

show mac-address-table filtering

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

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

mac-address-table notification

MAC

no

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

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

1

50

MAC

Trap

snmp-server**enable traps mac-notification**

MAC Trap

```
Ruijie(config)# mac-address-table notification
Ruijie(config)# mac-address-table notification
interval 40
Ruijie(config)# mac-address-table notification
history-size 100
```

snmp-server enable traps	trap
show mac-address-table notification	MAC
snmp trap mac-notification	MAC

snmp trap mac-notification

MAC

no

snmp trap mac-notification {added | removed}

no snmp trap mac-notification {added | removed}

added	
removed	

show mac-address-table notification *interface*

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

mac-address-table notification	MAC
show mac-address-table notification	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

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

show mac-address-table aging-time

show mac-address-table aging-time

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

Aging time : 300

mac-address-table aging-time	

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

clear mac-address-table dynamic	

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

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

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

IGMP Snooping

deny

profile profile

deny

deny

deny	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

--	--

ip igmp profile	profile
range	

permit

profile profile permit
profile

permit

permit	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
```

ip igmp profile	profile
range	

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

224.2.2.2~224.2.2.244 profile :

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

Ruijie(config-profile)# **range** 224.2.2.2 224.2.2.244

ip igmp profile	profile
deny	profile deny
permit	profile permit

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)#

range	profile
ip igmp snooping filter <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
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

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

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**

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

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**

--	--

ip igmp snooping	
-------------------------	--

ip igmp snooping vlan static interface

igmp snooping IGMP **ip**
igmp snooping vlan static interface no

ip igmp snooping vlan *vid* **static** *ip-addr* **interface** *interface-id*
no ip igmp snooping vlan *vid* **static** *ip-addr* **interface** *interface-id*

vid vlan id

ip-addr

interface-id id

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

[[i749

0

undebug igmp

EXEC

MSTP

spanning-tree

MSTP

no

MSTP

spanning-tree

MSTP

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 bpdupfilter

disabled BPDU filter enabled
BPDU filter

spanning-tree bpdupfilter [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

pointit-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	BPDU	Max-hops
Instance	Region	no	

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

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

hop-count	BPDU	1	40
-----------	------	---	----

hop-count	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

	MST	MSTP Region	
no	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

<i>tx-hold-count</i>	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 bpdufilter default

BPDU filter no BPDU
filter

spanning-tree portfast bpdufilter default

no spanning-tree portfast bpdufilter default

BPDU filter

BPDU Filter BPDU **show**
spanning-tree

Ruijie(config)# **spanning-tree portfast bpdufilter 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
source interface <i>interface-id</i>	<i>interface-id</i> AP SVI
destination interface <i>interface-id</i>	<i>interface-id</i> AP SVI
mac source <i>mac-addr</i>	MAC
mac destination <i>mac-addr</i>	MAC
both	
rx	
tx	
all	
encapsulation	, tag
switch	

switch port	routed port		SPAN
port	SPAN	SPAN	disabled

show monitor	SPAN
--------------	------

SPAN	1.	
1		1
8		

```
Ruijie(config)# no monitor session 1
Ruijie(config)# monitor session 1 source interface
gigabitEthernet 1/1 both
Ruijie(config)# monitor session 1 destination interface
gigabitEthernet 1/8
```

--	--

show monitor

SPAN 1

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

monitor session	SPAN

IP

° ip address

ip address

IP no IP

ip address ip-address network-mask
no ip address ip-address network-mask

ip-address	32	IP	8	
network-mask	32	8		"1" "0"

IP

IP IP IP
IP IP IP
32 IP IP
1 IP IP
0 IP
A 255.0.0.0

IP

255.255.255.0 IP 10.10.10.1
ip address 10.10.10.1 255.255.255.0

show interface	

secondary IP

arp

ARP IP MAC

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>	ARP 1 1 ARP <1-100> ARP

ARP

ARP

5

ARP

ARP

ARP

arp retry times 1

ARP

1

arp retry times 2

arp trusted NUM

no

no arp trusted

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ARCD17/TT1 Td8/T

arp trusted aging

ARP

no

arp trusted aging**no arp trusted aging**

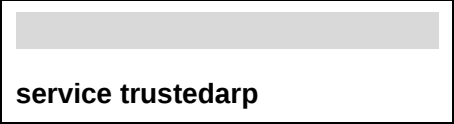
GSN

ARP

ARP

arp timeout

ARP

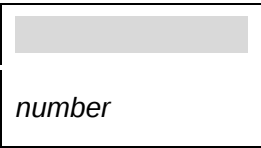

service trustedarp
ARP

arp unresolve

ARP

no

8192

arp unresolve *number***no arp unresolve**
number
1-8192 >

ARP

8192

<

IP

SVI 1



<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

ip default-gateway	

ip default-gateway

Ä

ip default-gateway



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

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


-IP

clear host *

show hosts	

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

ip host	IP
ip name-server	DNS

RGNOS10.1

SNTP

- ```
0 sntp enable
0 sntp server
0 sntp interval
```

## sntp enable

SNTP **no**

—Disable

**[no] sntp enable**

SNTP      Disable

**show sntp**                      Sntp

```
RedGiant(config)# snmp 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

:

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

---

|            |     |
|------------|-----|
|            |     |
| ntp server | NTP |

## ntp authenticate

NTP

NTP

## **ntp authentication-key**

NTP

NTP

## ntp disable

NTP

ntp disable

NTP

NTP

NTP

~ 注意:

IP

NTP

no ntp

## ntp server

NTP

NTP

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

ntp serveTf 7 0 4id Ĩ – DAÈ â Đ-„rbáu-% p6.`... 1 PÜG&.ö R €`nsb

|                |               |
|----------------|---------------|
| <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 **snmp-server**  
**chassis-id** **no**

**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 **snmp-server**  
**community** **no** SNMP

**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

NMS

Trap

**snmp-server enable traps****snmp-server enable traps****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**

|                  | 缺省   |
|------------------|------|
| snmp-server host | 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*

| <b>show snmp user</b> | 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** /TTTid(SNMP0)/C7\_c0c50722c18382060f5074736280bd4302980194e0928036230c

|                        |      |
|------------------------|------|
|                        |      |
| <b>show snmp group</b> | SNMP |

## snmp-server view

SNMP  
no

**snmp-server view**

**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**]

|                        |          |
|------------------------|----------|
| <b>show snmp</b>       | SNMP     |
| <b>show snmp mib</b>   | snmp mib |
| <b>show snmp user</b>  | snmp     |
| <b>show snmp view</b>  | snmp     |
| <b>show snmp group</b> | 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*]

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

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

## 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><br>[owner owner-name] |  |
|-----------------------------------------------------------------|--|



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><br>[owner owner-string] |  |
|-------------------------------------------------------------------|--|

## show rmon history

```
show rmon history
```

```

Ruijie# show rmon history
Entry : 1
Data source : Gi1/1
Buckets requested : 65535

```

```

Buckets granted : 10
Interval : 1
Owner : zhangsan
Sample : 198
Interval start : 0d:0h:15m:0s
DropEvents : 0
Octets : 67988
Pkts : 726
BroadcastPkts : 502
MulticastPkts : 189
CRCAAlignErrors : 0
UndersizePkts : 0
OversizePkts : 0
Fragments : 0
Jabbers : 0
Collisions : 0
Utilization : 0

```

| <b>rmon collection history</b> <i>index</i><br><b>[owner</b> <i>ownername</i> <b>]</b> <b>[buckets</b><br><i>bucket-number</i> <b>]</b> <b>[interval</b><br><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><br><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 <i>mac-address</i></b> |  |
| <b>maximum <i>value</i></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
```

| storm-control |  |
|---------------|--|

## show port-security

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



---

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

# 802.1X

## dot1x

dot1x

- **dot1x auto-req**
- **dot1x auto-req p**

Packet-Num : 0  
Req-Interval: 30 Second

|                     |  |
|---------------------|--|
|                     |  |
| show dot1x auto-req |  |

## 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

|  |  |
|--|--|
|  |  |
|--|--|

|                     |  |
|---------------------|--|
| show dot1x auto-req |  |
|---------------------|--|

## 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

| show dot1x | 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#
```

| aaa new-model            | AAA |
|--------------------------|-----|
| aaa authentication dot1x |     |

## 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                      aaa domain  
                          dot1x accounting

AAA

group radius

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

**auth-address table**                      802.1X                      **show dot1x**

```
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#

| <b>show dot1x</b> | 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

**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

Suppl1Eble66( 3600 )-103(se)-niod: 10 Supp(Tx )-103(Timer )-103(P

802.1X timeout server-timeout

|                                     |  |
|-------------------------------------|--|
| <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#
```

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

**show dot1x reauth-max**

**show dot1x reauth-max**

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

---

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

```
Ruijie# show dot1x summary
ID MAC Interface VLAN Auth-State
Backend-State Port-Status Type

1 00d0f8000000 Gi0/1 1 Authenticated Idle
Authed Static
Ruijie#
```

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

**show dot1x user id**



|                                     |  |
|-------------------------------------|--|
| <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



RGOS

RADIUS

- **aaa accounting network**
- **aaa accounting update**
- **aaa accounting update periodic**
- **show aaa method-list**
- **debug aaa**

## **aaa accounting network**

**aaa accounting network** no

**aaa accounting network {default | *list-name*} start-stop group radius**

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

**network** DOT1X PPP

**resource**

*list-name*

**start-stop**

**group**

**radius** RADIUS

RGOS

**start-stop**

## 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)#

|               |     |
|---------------|-----|
|               |     |
| aaa new-model | 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



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**

| aaa new-model     | AAA |
|-------------------|-----|
| aaa domain enable | AAA |
| Show aaa domain   |     |

## 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
```

| aaa new-model     | AAA |
|-------------------|-----|
| aaa domain enable | AAA |
| Show aaa domain   |     |

**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
```

| aaa new-model     | AAA |
|-------------------|-----|
| aaa domain enable | AAA |
| Show aaa domain   |     |

## 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#
```

|                  |     |
|------------------|-----|
|                  |     |
| aaa group server | 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#
```

| aaa group server | aaa |
|------------------|-----|
| show aaa group   | 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  
lijie(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 dot1x default group radius
aaa authentication dot1x san-f local group angel group
rain none
aaa authentication enable default group radius
Accounting method-list
aaa accounting network default start-stop group radius
Authorization method-list
aaa authorizing network default group radius
Ruijie#
```

| aaa authentication |  |
|--------------------|--|
| aaa authorization  |  |
| aaa accounting     |  |

## 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 logout</b>     | login |

## aaa local authentication logout-time

login

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

&lt;1-2147483647&gt;

15

login

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

Ruijie(config)#

| Show running-config |       |
|---------------------|-------|
| Show aaa logout     | login |

## show aaa user logout

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

ID

ruijie#

Ruijie#show aaa user logout all

| Show running-config |       |
|---------------------|-------|
| Show aaa logout     | login |

## clear aaa local user logout

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

ID

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

| <b>Show running-config</b> |       |
|----------------------------|-------|
| <b>Show aaa logout</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                            |                  | <b>ip radius</b> |
| <b>source-interface</b>           | <b>no</b>        | RADIUS           |
| <b>ip radius source-interface</b> | <i>interface</i> |                  |
| <b>no radius source-interface</b> |                  |                  |

*Interface*      radius

radius

|        |     |    |
|--------|-----|----|
| radius | nas |    |
| radius |     | ip |
| radius |     |    |

```

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

```

| radius-server host | RADIUS |
|--------------------|--------|
| ip address         | 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 |
| radius-server               |     |   | RADIUS |
| 0                           | 7   | 0 | 7      |
|                             |     | 0 |        |
| service password-encryption |     |   |        |

RADIUS

RADIUS

RADIUS

RADIUS

radius-server host ip key

0 7 0 7

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

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

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

## radius-server deadtime

no radius-server deadline

|                 |        |
|-----------------|--------|
| <i>minnutes</i> | 1-1000 |
|-----------------|--------|

5

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

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

| <b>radius set qos cos</b> | radius qos<br>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<br>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

---

authen port: 77

|                          |        |
|--------------------------|--------|
| radius-server host       | RADIUS |
| radius-server retransmit | RADIUS |
| radius-server key        | RADIUS |
| radius-server timeout    | 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-diractory 9
10 file-count 10
11 file-name-0 11
12 file-name-1 12
13 file-name-2 13
14 file-name-3 14
15 file-name-4 15
```

|    |                      |    |
|----|----------------------|----|
| 16 | max up-rate          | 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 privilege         | 22 |
| 23 | login privilege      | 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+ nas  
TACACS+  
ip TACACS+

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

```
TACACS+ aaa
```

```
Ruijie(config)#tacacs-server key aaa
```

|                              |         |
|------------------------------|---------|
|                              |         |
| <b>tacacs-server host</b>    | TACACS+ |
| <b>tacacs-server timeout</b> | TACACS+ |

seconds 1-1000

```
host timeout
timeout timeout
```

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

```
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+

```
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
```

|  |  |
|--|--|
|  |  |
|--|--|



---

~ 注意:

no crypto key generate

crypto key zeroize

---

Ruijie# **configure terminal**

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

| <b>show ip ssh</b>                    | SSH Server                 |
|---------------------------------------|----------------------------|
| <b>crypto key zeroize {rsa   dsa}</b> | DSA      RSA<br>SSH Server |

RGOS10.1

## crypto key zeroize

SSH

**crypto key zeroize {rsa | dsa}**

| <b>rsa</b> | RSA |
|------------|-----|
| <b>dsa</b> | 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  
SSH                                    **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 |

RGOS10.1

## SSH

SSH

- **show ip ssh**
- **show ssh**
- **show crypto key mypubkey**
- **disconnect ssh**

## show ip ssh

SSH Server

**show ip ssh**

SSH Server  
Server

SSH

SSH

Ruijie# **show ip ssh**

| <b>ip ssh version {1   2}</b> | SSH Server |
|-------------------------------|------------|
| <b>ip ssh time-out time</b>   | SSH Server |

|                                                      |            |
|------------------------------------------------------|------------|
| <b>Ip ssh authentication-retries<br/>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 {rsaldsa}**

|  |  |
|--|--|
|  |  |
|--|--|

|            |     |
|------------|-----|
| <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

QOS

---

**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**



RLDP

0 <38>pler2\_2011f05749TM20T1s610.3073idr0210sde<717A>Tf<81TF00>re<1B41C81B

```
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
```

| rldp enable | rldp |
|-------------|------|

## rldp reset

**rldp shutdown    disable**

rldp

**rldp reset**

```
Ruijie# rldp reset
```

| rldp enable | 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* ( )

---

~ 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 1 104B80 Tw 4.886T8 1 Tf-0. Tm1E1014E3081 E2C5F0E2C*

---

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**

|     |  |
|-----|--|
|     |  |
| pwd |  |

---

Ruijie# **pwd**

**rm**

**rm** *FILE*

---

**rmdir**

**rmdir** *DIRECTORY*

*DIRECTORY* ,

---

## logging on

no

logging on

no logging on

RGOS

Console

VTY

FLASH Syslog

Server

1 Log

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

| logging buffered    |               |
|---------------------|---------------|
| logging             | Syslog Server |
| logging file flash: | FLASH         |

---

**logging console**

**logging buffered** [*buffer-size* | *level*]

no logging buffered

|                    |    |            |
|--------------------|----|------------|
| <i>buffer-size</i> | 4K | 128K Bytes |
|--------------------|----|------------|

|               |   |   |
|---------------|---|---|
| <i>levell</i> | 0 | 7 |
|---------------|---|---|

4k Bytes

7

---



---

```

64K, FLASH trace.txt
6
Ruijie(config)# logging file flash:trace

```

| logging on   |       |
|--------------|-------|
| show logging |       |
| more flash   | FLASH |

## logging console

```

no
logging console level
no logging console

level 0 7
1

```

Debugging (7)

**show logging**

```

6
Ruijie(config)# logging console informational

```

|  |  |
|--|--|
|  |  |
|--|--|

---

|              |  |
|--------------|--|
| logging on   |  |
| show logging |  |

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

|              |  |
|--------------|--|
|              |  |
| logging on   |  |
| show logging |  |

---

## logging trap

Syslog Server  
no

Syslog Server

**logging trap** *level*

**no logging trap**

*level*

1

Informational(6)

Syslog Server                      Syslog Server  
Syslog Server                      logging trap

logging

**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
```

|         |               |
|---------|---------------|
|         |               |
| logging | 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**

|                    |  |
|--------------------|--|
|                    |  |
| logging on         |  |
| service timestamps |  |

**service timestamps**

no default

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

|                     |  |       |       |     |             |
|---------------------|--|-------|-------|-----|-------------|
| <i>message-type</i> |  | Log   | Debug | Log |             |
| 0 6                 |  | Debug |       |     | 7           |
| <i>uptime</i>       |  | * *   | * *   |     | 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**

| logging on               |  |
|--------------------------|--|
| service sequence-numbers |  |

## **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               |               |

|               |  |
|---------------|--|
|               |  |
| logging on    |  |
| clear logging |  |

**show logging count**

**show logging count**

**count      show logging count      logging**

---

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

SYS TOTAL 1
```

| logging count |  |
|---------------|--|
| show logging  |  |
| clear logging |  |

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

**device-priority**

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

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

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

|  |  |
|--|--|
|  |  |
|--|--|

---

|             |  |
|-------------|--|
| show member |  |
|-------------|--|

**device-description**

**device-description** [**member** *member*] *description*

| <b>member</b> <i>member</i> | ID<br>member 1 |
|-----------------------------|----------------|
| <i>description</i>          | 31             |

write

2 red-giant  
Ruijie(config)# **device-description** member 2 red-giant



---

|               |    |
|---------------|----|
| <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           |                 |             |