



**RG-S2700**

©2009

# RGOS®10.2(4)

'  
'  
'

**1.**

5

---

注意、说明

---

Courier New

5

**2.**

Arial

[] []

{x|y|...}

[x|y|...]

//

**3.**

r 注意:

/ 说明:

---

/ 说明:

1)

2)

---

# CLI

## alias

alias

no

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

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

EXEC

EXEC

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

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

```
Ruijie(config)# alias ?
aaa-gs          AAA server group mode
acl             acl configure mode
bgp            Configure bgp Protocol
config         globle configure mode
*
*command-alias=original-command
EXEC           "s"   "show"
"s?"          's'
Ruijie# s?
*s=show show start-chat start-terminal-service
EXEC          "sv"   "show version"
Ruijie# s?
*s=show *sv="show version" show start-chat
start-terminal-service
Ruijie# s?
show start-chat start-terminal-service
"ia"   "ip address"
Ruijie(config-if)# ia ?
A.B.C.D IP address
dhcp    IP Address via DHCP
Ruijie(config-if)# ip address
"ip address"
show aliases
"def-route"
"ip route 0.0.0.0 0.0.0.0 192.168.1.1"
Ruijie# configure terminal
Ruijie(config)# alias config def-route ip route 0.0.0.0
0.0.0.0 192.168.1.1
Ruijie(config)# def-route?
```

```
*def-route="ip route 0.0.0.0 0.0.0.0 192.168.1.1"
Ruijie(config)# def-route?
% Unrecognized command.
Ruijie(config)# end
Ruijie# show aliases config
globe configure mode alias:
def-route          ip route 0.0.0.0 0.0.0.0 192.168.1.1
```

<b>show aliases</b>	

## privilege

**privilege**                      **no**

**privilege** *mode* [**all**] {**level** *level* | **reset**} *command-string*  
**no privilege** *mode* [**all**] [**level** *level*] *command-string*

*mode*                              CLI

**[all]**

**level** *level*                      0-15

**reset**

*command-string*

**privilege**                      CLI

**privilege ?**                      CLI

<b>config</b>	

<b>exec</b>	
<b>interface</b>	
<b>ip-dhcp-pool</b>	DHCP

mode

---

CLI

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

**disable**

---

/ 说明:

**disable**

Ruijie# **disable** 10

<b>enable</b>	

**enable**

enable

---

' 1 26  
'

---

r 注意:

EXEC

---

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

<b>enable secret</b>	

## enable secret

**secret**                      **no**    **enable**  
**enable secret** [level level] {secret | [0 | 5] encrypted-secret}  
**no enable secret**

Secret                                      EXEC  
Level  
**0|5**                                      0                                      5  
encrypted-password

password      security                      password

---

```

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

          pw10

Ruijie(config)# enable secret 0 pw10

```

<b>enable password</b>	

## password

```

          line          line          password
no          line

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

password          line
0|7          0          7
encrypted-password

line

          line

          line          red

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

```

---

<b>login</b>	

## login

AAA

**login**      **no**

**login**

**no login**

line

AAA

VTY    console

VTY

Ruijie(config)# **no aaa new-model**

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

Ruijie(config-line)# **password 0 normatest**

Ruijie(config-line)# **login**

--	--

---

line

---

VTY

radius

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

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

## username

username

```
username name {nopassword |007 Tc 0.611 0 Td[(.5Y Td[(5-1 Tf3.9.611 0 Td[(.5Y Td[(1(
```

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

login local	

## lock

EXEJTJC1 Tf00 Tc 2 Tr 10.5 0.97.88 567<1FF514

---

Ruijie#

<b>lockable</b>	

## lockable

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

**lockable**

**no lockable**

line

EXEC                      **lock**

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

<b>lock</b>	

---

## telnet

telnet EXEC

**telnet**

**telnet** *host* [*port*] [*keyword*]

*Host* IP

*Port* TCP 23

*Keyword*

<b>/source-interface</b>	telnet

telnet

telnet 192.168.1.11

vlan 1

Ruijie# **telnet** 192.168.1.11 /**source-interface** vlan 1

<b>Show session</b>	TTY
<b>exit</b>	

## enable service

SSH Server/Telnet Server/Web Server/Snmp

Agent

**enable service**

**enable service** { **ssh-server** | **telnet-server** | **web-server** | **snmp-agent**}

---

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

**no enable service**

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



---

Web

**no ip http authentication**

**ip http authentication local,** Web

local

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

<b>enable service</b>	

**ip http port**

---

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

## clock set

clock set

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

*hh:mm:ss*

24

---

---

---

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%	bufcopy
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**



---

## 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 memory**

**show memory**

Ruijie# **show memory**  
Physical Memory: 256M total  
Image: 78M  
Application Memory: 178M (57M used 121M available)  
Utilization: 52.7%

**show memory**

Physical Memory	
Image	
Application Memory	used                      available  available
Utilization	



---

*slot-number*

---

**show startup-config**

NVRAM

---

## show reload

**reload**

**show**

**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**

**no banner motd**      **banner motd**

---

```
Ruijie(config)
Ruijie(config)# banner login $ enter your password $
```

## speed

```
no speed
speed speed
```

```
Speed                               bps
    9600  19200  38400  57600  115200
    9600
```

9600

57600 bps

```
Ruijie(config)#
Ruijie(config)# line console 0
Ruijie(config-line)# speed 57600
Ruijie(config-line)#
```

## show line

---

**aux**            **aux**  
**vty**            **vty**  
*line-num*        **line**

**console**

```
Ruijie# show line console 0
CON      Type      speed  Overruns
* 0      CON       9600   45927
Line 0, Location: "", Type: "vt100"
Length: 24 lines, Width: 79 columns
Special Chars: Escape Disconnect Activation
                ^^x      none      ^M
Timeouts:      Idle EXEC   Idle Session
                never      never
History is enabled, history size is 10.
Total input: 53564 bytes
Total output: 395756 bytes
Data overflow: 27697 bytes
stop rx interrupt: 0 times
```

**write**

---

**memory**

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

<b>show running-config</b>	
<b>copy</b>	

# LINE

## LINE

### line

#### LINE

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

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

#### LINE

LINE VTY 1 3 LINE

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

## line vty

```

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

```

```

VTY      5      0--4

```

```

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

```

## transport input

```

Line
transport input
default transport input
Line
LINE

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

```

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

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

VTY TTY  
NONE  
**default transport input**

Line

Line VTY  
VTY **show running** Line

---

r 注意:

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

---

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

<b>show running</b>	

RGOS10.1

---

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

## copy xmodem

xmodem

xmodem

**copy flash: filename xmodem**

**copy xmodem flash: filename**

*filename*

Xmodem

Xmodem

:

xmodem

xmodem

:

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

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





---

IP 2 5 100Byte  
' .' ' !'  
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
```

## Traceroute

traceroute

```
traceroute [ip ip-address][ip-adress [probe number ] [source
source-address] [timeout seconds] [ttl minimum maximum]]
```

---

<i>ip-address</i>	IPv4
<i>number</i>	
<i>source-address</i>	IPV4

---

```

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
```

```
Translating " www.ietf.org "...[OK]
```

```
< press Ctrl+C to break >
```

```
Tracing the route to 64.170.98.32
```

```

1      192.168.217.1   0 msec  0 msec  0 msec
2      10.10.25.1      0 msec  0 msec  0 msec
3      10.10.24.1      0 msec  0 msec  0 msec
4      10.10.30.1     10 msec  0 msec  0 msec
5      218.5.3.254    0 msec  0 msec  0 msec
6      61.154.8.49    10 msec  0 msec  0 msec
7      202.109.204.210 0 msec  0 msec  0 msec
8      202.97.41.69   20 msec 10 msec 20 msec
9      202.97.34.65   40 msec 40 msec 50 msec
10     202.97.57.222   50 msec 40 msec 40 msec
11     219.141.130.122 40 msec 50 msec 40 msec
12     219.142.11.10   40 msec 50 msec 30 msec
13     211.157.37.14   50 msec 40 msec 50 msec
14     222.35.65.1     40 msec 50 msec 40 msec
15     222.35.65.18   40 msec 40 msec 40 msec
16     222.35.15.109  50 msec 50 msec 50 msec
17     * * *
18     64.170.98.32   40 msec 40 msec 40 msec

```

---

---

```
' 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
```

## interface aggregateport

no

```
interface aggregateport port-number 0 - 4095
```



---

S2700

## interface giagbitEthernet

**interface gigabitEthernet** *mod-num/port-num*

*mod-num/port-num* /

**no**  
**show interfaces gigabitEthernet**

**show interfaces**

Ruijie(config)# **interface gigabitEthernet** 1/2  
Ruijie(config-if)#



---

**no**  
**show interfaces tenGigabitEthernet**

**show interfaces**

Ruijie(config)# **interface tenGigabitEthernet 1/2**  
Ruijie(config-if)#

<b>show interfaces</b>	

## interface vlan

virtual interface SVI  
SVI.

switch  
**no**

**interface vlan** *vlan-id*  
**no interface vlan** *vlan-id*

*vlan-id* VLAN ID

**show interfaces** **show interfaces vlan**

Ruijie(config)# **interface vlan 2**  
Ruijie(config-if)#

<b>show interfaces</b>	

---

S2700

' 1 SVI  
' 1 IP

## 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
```

<b>show interfaces</b>	

## 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

```
Ruijie(config)# interface aggregateport 1  
Ruijie(config-if)# shutdown
```

Ap 1

```
Ruijie(config)# interface aggregateport 1  
Ruijie(config-if)# no shutdown
```

---

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

---

/ 说明:

**no shutdown**

---

**speed**

**no**

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

Ap

Ap

Ap

**show interfaces**

SFP

10M

100M

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

Ruijie(config-if)# **speed 100**

---

<b>show interfaces</b>	

**duplex**

---

**auto**  
**off**  
**on**

**show interfaces**

1/1

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



**show interfaces**

---

```
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

DCD DCD Down Up
DCD

DCD

DCD

5

Ruijie(config)# interface gigabitethernet 1/1
Ruijie(coinfig)# carrier-delay 5
```

---

## clear counters

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

*interface-id*

**show interfaces**

**clear counters**

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

<b>show interfaces</b>	

## clear interface

**clear interface** *interface-id*

*interface-id*

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

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

---

<b>shutdown</b>	

## switchport

```

2
3
switchport
no switchport

```

2

switchport

2

3

2

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

<b>show interfaces</b>	

S2700

## switchport mode

```

access port      trunk port,      switch port      802.1Q      no

```

**switchport mode {access | trunk}**

---

**no switchport mode**

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

switch port access

switch port access VLAN  
**switchport access vlan** VLAN

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

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

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

**switchport access**

access port VLAN  
 no VLAN

**switchport access vlan** *vlan-id*

**no switchport access vlan**



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

VLAN                      all                      Native VLAN                      VLAN 1

### Native VLAN

```

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

```

### VLAN

```

Trunk
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 is enabled
Mode is trunk port
Access vlan is 1,Native vlan is 1

```

Protected is disabled  
 Vlan lists is  
 1,3-4094

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

## snmp trap link-status

LinkTrap  
 LinkTrap,  
 LinkTrap  
 LinkTrap  
 LinkTrap  
 LinkTrap

**snmp trap link-status**  
**no snmp trap link-status**

LinkTrap  
 LinkTrap

LinkTrap Ap SVI Link SNMP  
 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
```



---

GigabitEthernet 0/1 enabled Access 11 Disabled ALL

<b>duplex</b>	
<b>flowcontrol</b>	
<b>interface gigabitEthernet</b>	
<b>interface aggregateport</b>	
<b>interface vlan</b>	switch virtual interface SVI
<b>shutdown</b>	
<b>speed</b>	
<b>switchport priority</b>	802.1q
<b>switchport protected</b>	

# 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

## **aggregateport load-balance**

AP

no

**show aggregateport** {[*aggregate-port-number*] **summary** | **load-balance**}

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

aggregate port

aggregate port

Ruijie# **show aggregateport 1 summary**

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

--	--

# VLAN

## vlan

```

VLAN
VLAN
vlan vlan-id
no vlan vlan-id
    
```

<i>vlan-id</i>	VLAN ID VLAN VLAN 1

```

end          Ctrl+C
exit
    
```

```

Ruijie(config)# vlan 1
Ruijie(config-vlan)#
    
```

<b>show vlan</b>	VLAN

S2700 4094 vlan

## name

VLAN **no**

**name** *vlan-name*

**no name**

<i>vlan-name</i>	VLAN

VLAN

VLAN

**show vlan** **vlan**

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

<b>show vlan</b>	VLAN

## chport mode

access port      trunk port,      switch port      802.1Q      no

**switchport mode** {access | trunk}

**no switchport mode**

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

switch port

access

switch port

access

```

                VLAN ID
VLAN
VLAN ID      VLAN
                trunkport
    
```

```

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

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

### switchport trunk

```

trunkport native VLAN Trunk VLAN
no trunk
    
```

```

switchport trunk {allowed vlan { all | [add | remove | except]
vlan-list }}| native vlan vlan-id}
no switchport trunk {allowed vlan | native vlan }
    
```

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

VLAN                    all                    Native VLAN                    VLAN 1

**Native VLAN**

```

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

**VLAN**

```

Trunk                    VLAN 1    4094
                          Trunk                    VLAN                    VLAN
                          Trunk
    
```

**show interfaces switchport**

VLAN 2                    1/15

```

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

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

## show vlan

VLAN

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

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

--	--

VLAN

---

<b>switchport access</b>	Vlan
--------------------------	------

# Protocol VLAN

- ' **protocol-vlan profile** *num* **frame-type** [*type*] **ether-type** [*type*]
- ' **protocol-vlan profile** *num* **vlan** *id*

*num* profile

*id* VLAN ID 1- VLAN

```
Ruijie(config-if)# protocol-vlan profile 1 vlan 101
```

**show protocol-vlan profile**

**show protocol-vlan profile** *num*

**no protocol-vlan profile**

**no protocol-vlan profile** *num*

RGOS10.1

**show protocol-vlan**

## **show protocol-vlan**

Protocol VLAN

**show vlan protocol-vlan**

```
Ruijie# show protocol-vlan
```

RGOS10.1



## private-vlan association

secondary VLAN    primary VLAN

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

**no private-vlan association**

*svlist*            secondary VLAN list

**no**                primary VLAN            secondary VLAN

Primary VLAN

```
Ruijie(config)# vlan 22
```

```
Ruijie(config-vlan)# private-vlan association add 24-26
```

**show vlan private-vlan**

RGOS10.1

## private-vlan mapping

secondary VLAN            SVI

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

**no private-vlan mapping**

*svlist*            secondary VLAN list

**no**

Primary VLAN

```
Ruijie(config)# interface vlan 22
```

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

**show vlan private-vlan**

RGOS10.1

**switchport mode private-vlan**

private VLAN

**switchport mode private-vlan{host|promiscuous}**

**no switchport mode**

**host** VLAN

**promiscuous** VLAN

**no** VLAN

Ruijie(config)# **interface gigabitEthernet**

**show**

RGOS10.1

**no:**

**show vlan private-vlan**

RGOS10.1

' **show vlan private-vlan**

## **show vlan private-vlan**

private VLAN

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

<b>primary</b>	primary VLAN
<b>community</b>	community VLAN
<b>isolated</b>	isolated VLAN

private VLAN

Ruijie# **show vlan private-vlan**

RGOS10.1

## **Hybrid**

' **switchport mode hybrid**  
' **switchport hybrid native vlan**  
' **switchport hybrid allowed vlan**

## switchport mode hybrid

**switchport mode hybrid**

**no switchport mode**

hybrid

**no** hybrid

```
Ruijie(config-if)# switchport mode hybrid
```

RGOS10.1

## switchport hybrid native vlan

**switchport hybrid native vlan** *vid*

**no switchport hybrid native vlan**

hybrid vlan

**no** hybrid VLAN

```
Ruijie(config-if)# switchport hybrid native vlan 3
```

RGOS10.1

## switchport hybrid allowed vlan

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

*vlist*

**no switchport hybrid allowed vlan**

hybrid

**no** hybrid

```
Ruijie(config-if)# switchport hybrid allowed vlan add  
untagged 3-5
```

RGOS10.1

# MAC

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

## mac-address-table aging-time

no

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

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

*seconds*

300

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

**show mac-address-table dynamic**

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

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

## clear mac-address-table dynamic

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

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

## show mac-address-table dynamic

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

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





```

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

```

```

                                00d0.f800.073c    VLAN
4
gigabitethernet 1/1

```

```

Ruijie(config)# mac-address-table static
00d0.f800.073c vlan 4 interface gigabitethernet 1/1

```

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

S2700

```

'   MAC                16K
'           MAC        1K

```

## mac-address-table filtering

**no**

**mac-address-table filtering** *mac-address* **vlan** *vlan-id*

**no mac-address-table filtering** *mac-address* **vlan** *vlan-id*

MAC

---

*mac-address*

MAC

```

Trap
enable traps mac-notification
snmp-server
MAC Trap

```

```

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

```

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

## snmp trap mac-notification

```

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

```

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





## address-bind uplink

**address-bind uplink** *intf-id*

**no address-bind uplink** *intf-id*

<i>intf-id</i>	

```

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

```

fa 0/1

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

<b>show address-bind uplink</b>	

RGOS10.1

## address-bind install

**address-bind install**

Ruijie(config)# **address-bind install**

<b>show address-bind uplink</b>	
<b>show address-bind summary</b>	

RGOS10.1

- ' **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

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

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

```
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]
```



## MAC

---

```
1    00d0.f800.1001  STATIC  gigabitethernet 1/1
1    00d0.f800.1002  STATIC  gigabitethernet 1/1
1    00d0.f800.1003  STATIC  gigabitethernet 1/1
1    00d0.f800.1004  STATIC  gigabitethernet 1/1
```

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

## show mac-address-table notification

MAC

```
show mac-address-table notification [interface[interface-id] |
history ]
```

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

MAC

```
Ruijie# show mac-address-table notification interface
Interface          MAC Added Trap  MAC Removed Trap
-----
GigabitEthernet1/14  Disabled        Disabled
```

```
Ruijie# show mac-address-table notification
MAC Notification Feature : Disabled
Interval between Notification Traps : 1 secs
Maximum Number of entries configured in History Table :1
Current History Table Length : 0
```

```
Ruijie# show mac-address-table notification history
History Index : 0
MAC Changed Message :
Operation:ADD Vlan : 1 MAC Addr: 00f8.d012.3456
GigabitEthernet 3/1
```

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

## show mac-address-table static

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

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

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





System Address bind status:SUCCESS

address-bind	

**show address-bind [ip-address *ip* | mac-address *MAC*]**

IP      MAC

show address-bind [ip-address *ip* | mac-address *MAC*]

```
Ruijie# show address-bind ip-address 3.3.3.3
IP Address      Binding MAC Addr
-----
3.3.3.3         00d0.f811.1112
```

address-bind	

# DHCP Snooping

## DHCP snooping

DHCP snooping

- ' **ip dhcp snooping**
- ' **ip dhcp snooping bootp-bind**
- ' **ip dhcp snooping verify mac-address**
- ' **ip dhcp snooping binding**
- ' **ip dhcp snooping database write-delay**
- ' **ip dhcp snooping database write-to-flash**
- ' **ip dhcp snooping information option**

## ip dhcp snooping

DHCP Snooping

no

DHCP snooping

**[no] ip dhcp snooping**

DHCP snooping

DHCP snooping

**show ip dhcp snooping**

DHCP snooping

```
Ruijie# configure terminal  
Ruijie(config)# ip dhcp snooping  
Ruijie(config)# end  
Ruijie# show ip dhcp snooping
```

```
Ruijie# show ip dhcp snooping

Switch DHCP snooping status  ENABLE
Verification of hwaddr field status  DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                      Trusted
-----
FastEthernet0/11                yes
```

<b>show ip dhcp snooping</b>	DHCP snooping

### ip dhcp snooping bootp-bind

```

DHCP Snooping      Bootp
                   no           DHCP snooping      Bootp
```

**[no] ip dhcp snooping bootp-bind**

```

DHCP Snooping      Bootp
DHCP Snooping      Bootp           Bootp
Bootp              DHCP Snooping
```

```
DHCP Snooping      Bootp
```

```
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping bootp-bind
Ruijie(config)# end
```

```

Ruijie# show ip dhcp snooping

Switch DHCP snooping status   ENABLE
Verification of hwaddr field status  DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                      Trusted
-----
FastEthernet0/11              yes
    
```

<b>show ip dhcp snooping</b>	DHCP snooping

## ip dhcp snooping verify mac-address

```

MAC
no          MAC
    
```

```
[no] ip dhcp snooping verify mac-address
```

```
Ruijie# show ip dhcp snooping

Switch DHCP snooping status  ENABLE
Verification of hwaddr field status  DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                      Trusted
-----
FastEthernet0/11                yes
```

<b>show ip dhcp snooping</b>	DHCP snooping

## ip dhcp snooping binding

```
DHCP snooping
no
```

```
[no] ip dhcp snooping binding mac-address vlan vlan-id ip
ip-address interface interface-id
```

```
mac-address          MAC
vlan-id              VLAN
ip-address           IP
interface-id
```

```
DHCP                      DHCP snooping
```

```
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping binding 00d0.f801.0101
```

```

vlan 1 ip 192.168.4.243 interface fastethernet 0/1
Ruijie(config)# end
Ruijie# show ip dhcp snooping binding
Total number of bindings: 1
MacAddress IpAddress Lease Type VLAN Interface
-----
00d0.f801.0101 192.168.1.1 - static 1 fastethernet 0/1
    
```

<b>show ip dhcp snooping binding</b>	DHCP snooping

### ip dhcp snooping information option

```

DHCP option82
no
    
```

**[no] ip dhcp snooping information option**

```

DHCP option82 DHCP option82 DHCP
option82
    
```

```

DHCP option82
    
```

```

Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping information option
Ruijie(config)# end
    
```

```

Ruijie# show ip dhcp snooping

Switch DHCP snooping status ENABLE
Verification of hwaddr field status DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
    
```

```

DHCP snooping Support Bootp bind status: ENABLE
Interface                Trusted
-----                -----
FastEthernet0/11        yes
    
```

<b>show ip dhcp snooping</b>	DHCP snooping

### ip dhcp snooping database write-delay

```

                                DHCP Snooping
FLASH                            no
                                FLASH
    
```

**ip dhcp snooping database write-delay *time***

**[no] ip dhcp snooping database write-delay**

```

time        DHCP snooping        FLASH
    
```

```
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                               Trusted
-----                               -
FastEthernet0/11                         yes
```

<b>show ip dhcp snooping</b>	DHCP snooping

### ip dhcp snooping database write-to-flash

```
                                DHCP Snooping
FLASH
ip dhcp snooping database write-to-flash
```

```
                                DHCP Snooping
FLASH

                                DHCP                               flash
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping database
write-to-flash
Ruijie(config)# end
```

## DHCP snooping

DHCP snooping

**ip dhcp snooping trust**

**ip dhcp snooping address-bind**

## ip dhcp snooping trust

DHCP snooping

no TRUST

UNTRUST

[no



## show ip dhcp snooping

DHCP Snooping

## show ip dhcp snooping

DHCP Snooping

DHCP Snooping

```
Ruijie# show ip dhcp snooping

Switch DHCP snooping status  ENABLE
Verification of hwaddr field status  DISABLE
DHCP snooping database write-delay time: 0 seconds
DHCP snooping option 82 status: ENABLE
DHCP snooping Support Bootp bind status: ENABLE
Interface                      Trusted
-----                      -
FastEthernet0/11                yes
```

<b>ip dhcp snooping</b>	DHCP snooping
<b>ip dhcp snooping verify</b>	

## **show ip dhcp snooping binding**

DHCP Snooping DH<01CF0996>-6<1.5 41C81BE201D0> /C22 13Tf 0 Tc 0r 2 41

## clear ip dhcp snooping binding

DHCP Snooping

**clear ip dhcp snooping binding**

DHCP snooping

DHCP snooping

```
Ruijie# clear ip dhcp snooping binding
```

```
Ruijie# show ip dhcp snooping binding
```

```
Total number of bindings: 0
```

```
MacAddress IpAddress Lease(sec) Type VLAN Interface
```

```
-----
```

<b>show ip dhcp snooping binding</b>	DHCP snooping

## debug ip dhcp snooping

DHCP Snooping

**debug ip dhcp snooping {event | packet}**

## DHCP snooping

### DHCP snooping

```
Ruijie# debug ip dhcp snooping event
```

```
Ruijie# debug ip dhcp snooping packet
```

# IGMP Snooping

**deny**

```

profile
deny
deny
profile
    
```

<b>deny</b>	profile

```

profile deny
    
```

```

profile
    
```

```

profile range
profile profile
224.2.2.2 profile :
    
```

```

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

<b>ip igmp profile</b>	profile

<b>range</b>	
--------------	--

**permit**

profile  
profile

profile

permit

**permit**

<b>permit</b>	profile

profile      deny

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

```

disable

VLAN igmp

<b>ip igmp snooping ivgl-svgl</b>	igmp snooping
-----------------------------------	---------------

### **ip igmp snooping limit-ipmc vlan server**

IP IP **ip igmp snooping**  
**limit-ipmc vlan** no IP  
**ip igmp snooping limit-ipmc vlan** *vid* **address** *gaddress* **server**  
*saddress*  
**no ip igmp snooping limit-ipmc vlan** *vid* **address** *gaddress* **server**  
*saddress*

*vid* ip vlan id  
*gaddress*  
*saddress* ( ) )

**igmp snooping max-groups** no

**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**

<b>ip igmp snooping filter</b>	

### ip igmp snooping vlan mrouter interface

**ip igmp snooping vlan mrouter**  
**interface** no

**ip igmp snooping vlan** *vid* **mrouter interface** *interface-id*

**no ip igmp snooping vlan** *vid* **mrouter interface** *interface-id*

*vid* vlan id

*interface-id* id



profile

```
Ruijie(config)# ip igmp snooping vlan 1 mrouter interface
fastEthernet 0/1 profile 1
```

ip igmp snooping vlan mrouter interface	

### ip igmp snooping vlan mrouter learn pim-dvmrp

IGMP query/dvmrp PIM

**ip igmp snooping vlan mrouter**

**learn no**

**ip igmp snooping vlan vid mrouter learn pim-dvmrp**

**no ip igmp snooping vlan vid mrouter learn pim-dvmrp**

*vid*

vlan id

igmp snooping

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

--	--

**ip igmp snooping vlan *vid***

*vid*                      vlan id  
*ip-addr*  
*interface-id*          id

```
Ruijie(config)# ip igmp snooping vlan 1 static 224.0.0.2  
interface fastEthernet 0/1
```

<b>ip igmp snooping vlan mrouter interface</b>	

### **ip igmp snooping fast-leave enable**

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

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

disable

fast-leave

IGMP leave

igmp snooping fast-leave

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

## **ip igmp snooping suppression enable**

igmp snooping suppression **ip igmp**  
**snooping suppression enable** no igmp snooping  
suppression

**ip igmp snooping suppression enable**  
**no ip igmp snooping suppression enable**

disable

## **ip igmp snooping query-max-resposne-time**

## show ip igmp snooping

igmp snooping

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

igmp snooping

**gda-table**

**interfaces** igmp snooping filtering

**mrouter**

**statistics** [**vlan** *vlan-id*] snooping

EXEC

## show ip igmp profile [ profile-number]

profile

*profile-number* profile

EXEC

## debug igmp

igmp no

**debug igmp**

**undebug igmp**

EXEC

# MSTP

## spanning-tree

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

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

```
no spanning-tree [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*(Hello Time+1.0snd) <= Max-Age Time <= 2*(Forward-Delay -
1.0snd)
```

```
spanning-tree
```

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

```
BridgeForwardDelay
```

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

```
show spanning-tree STP
```

```
spanning-tree mst cost STP PathCost
```

```
spanning-tree tx-hold-count STP TxHoldCount
```

## **spanning-tree bpdudfilter**

```
disabled BPDU filter enabled  
BPDU filter
```

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



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

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

## spanning-tree max-hops

Count	BPDU Instance	BPDU Region	Max-hops
		no	

## spanning-tree mode

STP no

**spanning-tree mode [stp | rstp | mstp]**

**no spanning-tree mode**

**stp** Spanning tree protocol(IEEE 802.1d)

**rstp** Rapid spanning tree protocol(IEEE 802.1w)

**mstp** Multiple spanning tree protocol(IEEE 802.1s)

MSTP

Ruijie(config)# **spanning-tree mode stp**

**show spanning-tree**

## spanning-tree mst configure

no MST MSTP Region  
name revision vlan map

**spanning-tree mst configuration**

**no spanning-tree mst configuration**

instance vlan Vlan Instance 0  
name  
revision 0

end                   Ctrl+C

exit

MST

```

instance instance-id vlan vlan-range      Vlan                   MST Instance
          instance-id                            0 64   vlan                1 4095
vlan-range                    vlan            VLAN ID
VLAN ID                         '            '            VLAN ID                    instance
10 vlan 2,3,6-9                 VLAN 2 3 6 7 8 9           Instance 10
                                  VLAN    Instance 0        VLAN    Instance
                                  no       no instance instance-id [vlan
vlan-range] (           no       Instance            1 64)
name name                    MST                            32
          no name
revision version            MST                            0 65535

```

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

```
Instance 1
```

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

```
MST show
```

cost

Instance 3

400

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

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

**show spanning-tree mst interface interface-id**

Region

Instance 20 8192

Ruijie(config-if)# **spanning-tree mst 20 priority 8192**

**show spanning-tree mst instance interface interface-id**

**show spanning-tree mst** MSTP

**spanning-tree mst cost**

**spanning-tree mst port-priority** Instance

## spanning-tree reset

spanning-tree no

**spanning-tree reset**

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

**show spanning-tree** STP

**show spanning-tree interface** STP

## spanning-tree tx-hold-count

STP TxHoldCount BPDU  
no

**spanning-tree tx-hold-count** *tx-hold-count*

**no spanning-tree tx-hold-count**

*tx-hold-count* TxHoldCount

## 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 bpduguard default**

BPDU filter no BPDU  
filter

**spanning-tree portfast bpduguard default**

**no spanning-tree portfast bpduguard default**

BPDU filter

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

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

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

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)# spanning-tree loopguard default
```

## spanning-tree guard loop

loop guard	no	loop guard
loop guard		bpdu

**spanning-tree guard loop**

**no spanning-tree guard loop**

loop guard

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

## **spanning-tree guard none**

```
guard no guard
```

```
spanning-tree guard none
```

```
no spanning-tree guard none
```

```
guard
```

```
Ruijie(config-if)# spanning-tree guard none
```

## **spanning-tree autoedge**

```
Autoedge disabled  
Autoedge
```

```
spanning-tree autoedge [disabled]
```

```
disabled Autoedge
```

```
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]
```

<b>summary</b>	MSTP	instance	
<b>Inconsistentports</b>			block
<b>forward-time</b>	BridgeForwardDelay		
<b>hello-time</b>	BridgeHelloTime		
<b>max-age</b>	BridgeMaxAge		
<b>max-hops</b>	instance		
<b>tx-hold-count</b>	TxHoldCount		
<b>pathcost method</b>			

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

```
spanningtree pathcost method  
spanning-tree forward-time      BridgeForwardDelay  
spanning-tree hello-time        BridgeHelloTime  
spanning-tree max-age           BridgeMaxAge  
spanning-tree max-hops          instance  
spanning-tree tx-hold-count      TxHoldCount
```

## 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**                    “            ”

## show spanning-tree mst

MST            Instance

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

**configuration**            mst*instance-id*    *Instance**interface-id*

Instance

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

```
spanning-tree mst configuration      MST region
```

```
spanning-tree mst cost              instance
```

```
spanning-tree mst max-hops          instance
```

```
spanning-tree mst priority :        instance
```

```
spanning-tree mst port-priority     instance
```

# SPAN

## monitor session

SPAN

no

```
monitor session session_number {source interface interface-id  
[both | rx | tx] | destination interface interface-id { encapsulation |  
switch } |
```



**session** *session\_number* SPAN

**show monitor** SPAN 1

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

<b>monitor session</b>	SPAN

# IP

**ip address**

**ip address**

IP

no

IP

**ip address** *ip-address network-mask*

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



*ip-address*

```

                IP          10.10.10.1
255.255.255.0
ip address 10.10.10.1 255.255.255.0
    
```

<b>show interface</b>	

IP

- ' **arp**
- ' **arp retry**
- ' **arp trusted**
- ' **arp unresolved**
- ' **arp gratuitous-send**
- ' **arp timeout**
- ' **ip proxy-arp**
- ' **service trustedarp**

## arp

```

                ARP          IP          MAC
no                MAC
arp ip-address MAC-address type [ alias ]
no arp ip-address MAC-address type [ alias ]
    
```

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

<i>MAC-address</i>	48
<i>type</i>	ARP arpa
<b>alias</b>	arp RGOS IP

ARP

RGOS ARP 32 IP 48  
MAC  
clear arp-cache ARP ARP

ARP  
arp 1.1.1.1 4e54.3800.0002 arpa

<b>clear arp-cache</b>	ARP

## arp retry interval

2 ARP arp IP

ARP

1

ARP

ARP

ARP

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 ARP ARP <1-100>

ARP

ARP

5



arp trusted 1000

<b>service trustedarp</b>	ARP

### arp trusted aging

ARP

no

**arp trusted aging**

**no arp trusted aging**

GSN ARP

ARP

**arp timeout**

ARP

<b>service trustedarp</b>	ARP

### arp unresolve

ARP

no

8192

**arp unresolve number**

**no arp unresolve**

<i>number</i>	ARP 1-8192 > 8192 <

ARP

8192

ARP

500

arp unresolved 500

**arp gratuitous-send interval**

arp

no

**arp gratuitous-send interval** *seconds***no arp gratuitous-send**

ARP

SVI 1

ARP

```
Ruijie(config)# interface vlan 1  
Ruijie(config-if)# arp gratuitous-send interval 1
```

SVI 1

ARP

```
Ruijie(config)# interface vlan 1  
Ruijie(config-if)# no arp gratuitous-send
```

## arp timeout

ARP ARP

no

**arp timeout** *seconds***no arp timeout**

<i>seconds</i>	0-2147483

3600

FastEthernet 0/0

ARP

120

```
interface fastEthernet 0/0
arp timeout 120
```

<b>clear arp-cache</b>	ARP
<b>show interface</b>	

## IP

### clear arp-cache

ARP

ARP

IP

clear arp-cache

**clear arp-cache** [A.B.C.D] | **interface** *interface-name*

ARP

ARP

clear arp-cache

ARP 1.1.1.1

clear arp-cache 1.1.1.1

SVI1 ARP

clear arp-cache interface Vlan 1

<b>arp</b>	ARP

## show ip interface

IP

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

<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
Send ICMP unreachableled is: ON
DHCP relay is: OFF
Fast switch is: ON
Route horizontal-split is: ON
Help address is: 0.0.0.0
```

Proxy ARP is: ON  
Outgoing access list is not set.  
Inbound access list is not set.

IP interface state is:	"UP"
IP interface type is:	
IP interface MTU is:	MTU
IP address is:	IP
IP address negotiate is:	IP
Forward direct-boardcast is:	
ICMP mask reply is:	ICMP
Send ICMP redirect is:	ICMP
Send ICMP 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





# DHCP Relay

## DHCP Relay

DHCP

- ' **service dhcp**
- ' **ip helper-address**

## service dhcp

```
dhcp          DHCP          service
no           DHCP          DHCP
service dhcp
no service dhcp
```

DHCP

```
DHCP          DHCP          DHCP
DHCP          DHCP          DHCP
DHCP
service dhcp
```

## **ip helper-address**

DHCP relay

802.1x

Ip dhcp relay information option dot1x



## ip dhcp relay check server-id

no ip dhcp relay check *server-id*  
ip dhcp relay information check *server-id*

server-id option DHCP REQUEST  
server

Es 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100

```
Ruijie(config)# interface fastEthernet 0/1  
Ruijie(config-if)# ip dhcp relay suppression  
Ruijie(config-if)# exit  
Ruijie(config)#
```

# DNS

## ip domain-lookup

DNS

no

DNS

**ip domain-lookup**

**no ip domain-lookup**

DNS

DNS

DNS

DNS

Ruijie(config)# **ip domain-lookup**

<b>show hosts</b>	DNS

RGOS10.1

## ip name-server

IP

no

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

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

<i>ip-address</i>	IP

```

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

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

<b>show hosts</b>	DNS

RGOS10.1

## ip host

IP

no

**ip host** *host-name ip-address*

**no ip host** *host-name ip-address*

<i>host-name</i>	
<i>ip-address</i>	IP

**no ip host host-name ip-address**

Ruijie(config)#

DNS

---

-IP

# SNTP

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

## sntp enable

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

SNTP Disable

**show sntp** SNTP

RedGiant(config)#

RGOS10.0

**sntp server**

	SNTP Server	SNTP	NTP
Server	internet		NTP Server

**sntp server ip-addr****no sntp server**

<i>ip-addr</i>	NTP/SNTP	IP
----------------	----------	----

NTP/SNTP

<b>show sntp</b>	SNTP
------------------	------

RedGiant(config)# **sntp server 192.168.4.12**

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

*seconds* " " 60 --65535

1800s

**show sntp** SNTP

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

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

RGOS10.0

:

' **show sntp**

**show sntp**

SNTP

**show sntp** SNTP

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

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

RGOS10.0

# NTP

## NTP

NTP

- ' **no ntp**
- ' **ntp authenticate**
- ' **ntp authentication-key**
- ' **ntp disable**
- ' **ntp server**
- ' **ntp synchronize**
- ' **ntp trusted-key**

## no ntp

ntp

ntp

**no ntp**

NTP

NTP  
NTP

NTP

NTP

NTP

**no ntp**

<b>ntp server</b>	NTP

## **ntp authenticate**

NTP      NTP

**ntp authenticate**

**no ntp authenticate**

NTP

**ntp authentication-key   ntp trusted-key**

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

<b>ntp authentication-key</b>	
<b>ntp trusted-key</b>	



## ntp disable

NTP

**ntp disable**

NTP

NTP

NTP

---

r 注意:

IP

---

NTP

no ntp

## ntp server

NTP

NTP

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

**no ntp server** *ip-addr*

<i>ip-addr</i>	NTP IP

<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

8

NTP

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-server chassis-id**

	SNMP		<b>snmp-server</b>
<b>chassis-id</b>		<b>no</b>	
<b>snmp-server chassis-id</b>	<i>text</i>		

```

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
```

show snmp-server	SNMP
no snmp-server	SNMP

## snmp-server enable traps

SNMP NMS Trap

**snmp-server enable traps**

no SNMP NMS Trap

**snmp-server enable traps [snmp ]****no snmp-server enable traps****snmp SNMP****snmp-server**

SNMP

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

snmp

snmp-server host	SNMP

## snmp-server host

```

snmp-server host          SNMP          NMS
snmp-server host          no           SNMP
snmp-server host host-addr traps [version {1 | 2c | 3 [auth | no
auth | priv]] community-string [udp-port port-num][notification-type]
no snmp-server host host-addr

```

```

host-addr          SNMP
version             snmp          V1 V2C V3
auth | noauth | priv V3
community-string   V3
port-num           snmp
notification-type   snmp

```

SNMP

### snmp-server enable traps

```

NMS
SNMP
vrf
[ vrf ]

```

SNMP					
	<p style="text-align: center;">SNMP                          SNMP</p> <pre>Ruijie(config)# snmp-server host 192.168.12.219 public snmp</pre>				
	<table border="1" style="width: 100%; height: 40px;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> <tr> <td>snmp-server enable traps</td> <td></td> </tr> </table>			snmp-server enable traps	
snmp-server enable traps					

## snmp-server location

```

SNMP
location no SNMP snmp-server
snmp-server location text
no snmp-server location

```

*text*

**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
```



<b>snmp-server queue-length</b>	
<b>snmp-server enable host</b>	NMS

## snmp-server user

```

SNMP                               snmp-server user
no
snmp-server user username groupname {v1 | v2 | v3 [encrypted]
[auth {md5 | sha} auth-password ] [priv des56 priv-password]}
[access {num | name}]
no snmp-server user username groupname {v1 | v2c | v3 }

username
groupname
v1 | v2 | v3           SNMP           v3
encrypted
                20           MD5           16           SHA
                32
auth              md5           MD5           sha
                SHA
auth-password:           32
priv              des56           56           DES
priv-password           32

                snmpV3           md5           DES
Ruijie(config)# snmp-server user user-2 mib2user v3 auth

```



<b>show snmp group</b>	SNMP

### **snmp-server view**

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

### SNMP

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

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

# RMON

RMON

```
' rmon collection stats index [owner owner-string]  
' rmon collection history index [owner owner-string] [buckets  
bucket-number] [interval seconds]  
' rmon alarm number variable interval {absolute | delta }  
rising-threshold value [event-number] falling-threshold value  
[event-number] [owner ownername]  
' rmon event number [log] [trap community] [description-string]  
' show rmon statistics  
' show rmon history  
' show rmon events  
' show rmon alarms
```

## rmon collection stats

no

```
rmon collection stats index [owner owner-string]
```

```
no rmon collection stats index
```

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

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

## rmon collection history

**no**

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

bucket-number] [interval seconds]  

no rmon collection history index
```

RGOS

owner buckets interval

1

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

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

buckets 10 interval 10
```

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

## rmon alarm

MIB no

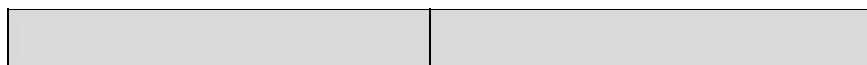
**rmon alarm** *number variable interval {absolute | delta }  
**rising-threshold** *value [event-number]* **falling-threshold** *value  
[event-number]* **owner** *ownername]*  
**no rmon alarm** *number**

RGOS

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

MIB ifInNUcastPkts.6

```
Ruijie(config)# rmon alarm 10 1.3.6.1.2.1.2.2.1.12.6 30
delta rising-threshold 20 1 falling-threshold 10 1 owner
zhangsan
```



trap

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

<b>rmon alarm</b> <i>number variable interval</i> { <b>absolute</b>   <b>delta</b> } <b>rising-threshold</b> <i>value</i> [ <i>event-number</i> ] <b>falling-threshold</b> <i>value</i> [ <i>event-number</i> ] [ <b>owner</b> <i>ownername</i> ]	

## show rmon statistics

**show rmon statistics**

```
Ruijie# show rmon statistics
Statistics : 1
Data source : Gil/1
DropEvents : 0
```

```

Octets : 1884085
Pkts : 3096
BroadcastPkts : 161
MulticastPkts : 97
CRCAlignErrors : 0
UndersizePkts : 0
OversizePkts : 1200
Fragments : 0
Jabbers : 0
Collisions : 0
Pkts64Octets : 128
Pkts65to127Octets : 336
Pkts128to255Octets : 229
Pkts256to511Octets : 3
Pkts512to1023Octets : 0
Pkts1024to1518Octets : 1200
Owner : zhangsan
    
```

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

## show rmon history

```
show rmon history
```

```
ftp
```

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

--	--

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

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

--	--

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

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

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

---

---

### show storm-control

GigabitEthernet 1/1  
4M

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 1/1
Ruijie(config-if)# storm-control multicast 4096
Ruijie(config-if)# end
```

show storm-control	

### switchport port-security

no

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

no switchport port-security [violation]

port-security	
violation protect	
violation restrict	trap
violation shutdown	Trap

---

IP( ) MAC  
(  
1

M

Gigabitethernet 1/1  
shutdown

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

show port-security	

## switchport port-security aging

no

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

--	--

<b>Static</b>	
<b>time time</b>	0 1440 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* [ip-address  
ip-address]] | [maximum *value*]**

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



---

**cpu**  
auto

CPU

Arp-check

Arp

arp

Ruijie(config-if)# **arp-check**

<b>show port-security</b>	

---

```

Ruijie# show storm-control gigabitethernet 1/1
Interface Broadcast Control Multicast Control Unicast
Control
-----
Gi1/1 Disabled Disabled Disabled

```

storm-control	

## show port-security

```

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

```

address	
interface interface-id	

```

Ruijie# show port-security
Secure Port MaxSecureAddr(count) CurrentAddr(count)
Security Action
-----
Gi1/1 128 1 Restrict
Gi1/2 128 0 Restrict

```

---

Gi1/3 8 1 Protect

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

# 802.1X

## dot1x

```
dot1x
' dot1x auto-req
' dot1x auto-req packet-num
' dot1x auto-req req-interval
' dot1x auto-req user-detect
```

## dot1x auto-req

```
802.1X dot1x auto-req
no
```

[no] dot1x auto-req

```
802.1x show dot1x auto-req
```

```
802.1x
Ruijie# configure terminal
Ruijie(config)# dot1x auto-req
Ruijie(config)# end
Ruijie# show dot1x auto-req
Ruijie(config)# dot1x auto-req
Auto-Req: Enabled
User-Detect : Enabled
```

```
Packet-Num : 0
Req-Interval: 30 Second
```

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

## dot1x auto-req packet-num

no

```
dot1x auto-req packet-num num
no dot1x auto-req packet-num
```

*num*

num = 0;

**show dot1x**

**auto-req**

802.1x

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

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

--	--

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

## dot1x auto-req req-interval

no

dot1x auto-req req-interval *interval*

no dot1x auto-req req-interval

*interval*

s

30

show dot1x

auto-req

802.1x

60s

Ruijie# **configure terminal**Ruijie(config)# **dot1x auto-req req-interval 60**Ruijie(config)# **end**Ruijie# **show dot1x auto-req**

Auto-Req: Enabled

User-Detect : Enabled

Packet-Num : 0

Req-Interval: 60 Second

show	

## dot1x auto-req 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
ure terminal
```

```
' 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)# end  
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: 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 re-authperiod

no

```

dot1x timeout re-authperiod seconds
no dot1x timeout re-authperiod

```

```
seconds          0 65535 s
```

3600

```
show dot1x      802.1x
```

1000s

```

Ruijie# configure terminal
Ruijie(config)# dot1x timeout re-authperiod 1000
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

```



```

Authentication Mode: EAP-MD5
Authenticated 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 Online 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**

802.1x

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**





802.1X

## dot1x

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

### dot1x probe-timer

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

no

interval hello

alive

interval

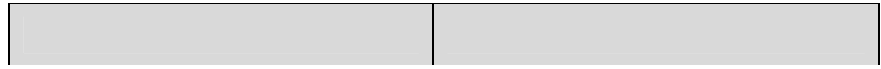
```
Hello          20  
                250
```

**show dot1x** 802.1x

```
hello          30 ,          120
```

```
Ruijie# configure terminal  
Ruijie(config)# dot1x probe-timer interval 30  
Ruijie(config)# dot1x probe-timer alive 120  
Ruijie(config)# end  
Ruijie# show dot1x probe-timer
```

```
Hello Interval: 30 Seconds  
Hello Alive: 120 Seconds
```



Eapol Tag Enable: Disabled  
 Authorization Mode: Group Server

<b>show dot1x</b>	dot1x

## dot1x

```

dot1x
' dot1x authentication
' dot1x accounting
' dot1x auth-address-table
' dot1x auth-mode
' dot1x default
' dot1x dynamic-vlan enable
' dot1x eapol-tag
' dot1x max-req
' dot1x private-supplicant-only
' dot1x port-control auto
' dot1x port-control-mode
' dot1x stationarity enable

```

## dot1x authentication

```

AAA
AAA
no

```

```

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

```

**default**

*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 acct start-stop
group radius
Ruijie(config)# dot1x accounting acct
Ruijie(config)# end
Ruijie#

```

aaa new-model	AAA
aaa authentication dot1x	

## dot1x auth-address-table

802.1X

no

```

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

```

*mac-addr**Interface*

802.1X

**show dot1x****auth-address table**

```

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

```

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

**dot1x auth-mode**

802.1x

**dot1x auth-mode {eap-md5 | chap | pap}****no dot1x auth-mode****eap-md5** 802.1x EAP-MD5**chap** 802.1x CHAP**pap** 802.1x PAP

EAP-MD5

**show dot1x**

802.1x

802.1x

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

<b>show dot1x</b>	802.1x

## **dot1x default**

802.1x

**dot1x default**







## dot1x port-control auto

no

```
dot1x port-control auto
no dot1x port-control
```

802.1x

```
show dot1x      802.1x
```

802.1x

```
Ruijie# configure terminal
Ruijie(config)# interface g0/1
Ruijie(config-if)#
Ruijie(config-if)#      end
Ruijie#
```

show dot1x	802.1x

## ruije.com.cn-mode

802.1x

MAC

**dot1x port-control-mode {mac-based | port-based}**

**no dot1x port-control-mode**

**mac-based**      mac    802.1X

**port-based**            802.1X

mac-based

## 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 User Number05BPeriodNumber: 0 Re-auth
```

<b>dot1x timeout server-timeout</b>	
<b>dot1x timeout supp-timeout</b>	
<b>dot1x timeout tx-period</b>	

## show dot1x auth-address-table

802.1X

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

*mac-addr*

*interface*

```
Ruijie# show dot1x auth-address-table
interface:g3/1
-----
mac addr: 00D0.F800.0001
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 auto-req**

802.1x

**show dot1x auto-req**



<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  
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>	

```
ctrl-mode status
```

```
-----  
-----  
Gi0/1      0          1          6000      dscp: 0  
mac-base Authed  
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 probe-timer

```
show dot1x probe-timer
```

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>	

**dot1x timeout supp-timeout**

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

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

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

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

802.1X

show dot1x summary

```

Ruijie# show dot1x summary
ID      MAC          Interface VLAN Auth-State
Backend-State Port-Status Type
-----
-----
1 00d0f8000000 Gi0/1      1 Authenticated Idle
Authed   Static
Ruijie#

```

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

## show dot1x user id

802.1X

---

**show dot1x user id <id>**

*id*    show summary            *id*

Ruijie# **show dot1x user id 1**

User name: caikov  
id: 1  
Type: static  
Mac address is 0013.2049.8272  
Vlan id is 217  
Access from port Gi0/13  
User ip address is 192.168.217.64  
Max user number on this port is 6000  
COS on this port is 5  
Up-bandwidth is 1024 kbps  
Down-bandwidth is 1024 kbps  
Authorization vlan is dep7  
Authorization session time is 1000000 seconds  
Authorization ip address is 192.168.217.64  
Start accounting  
Permit proxy user  
Permit dial user  
IP privilege is 2  
  
Ruijie#

<b>dot1x auth-mode</b>	802.1x
<b>dot1x max-req</b>	



<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>	





**aaa authorization network {default | list-name} method1 [method2...]**

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

*method1*

<b>local</b>	
<b>none</b>	
<b>group</b>	RADIUS

AAA

RGOS

PPP SLIP

RADIUS

RADIUS

RADIUS

RADIUS

RADIUS

RADIUS

Ruijie(config)# **aaa authorization network default radius**

<b>aaa new-model</b>	AAA
<b>aaa accounting</b>	AAA
<b>aaa authentication</b>	AAA
<b>username</b>	



## 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	

## aaa accounting update periodic

**aaa accounting update**  
**periodic** **no**

**aaa accounting update periodic** *interval*

## show aaa method-list

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

EXEC

AAA

AAA

AAA  
Ruijie(config)# **aaa domain enable**

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

### **aaa domain {default | *word*}**

no

**aaa domain {default | *word*}**  
**no aaa domain {default | *word*}**

default

*word*

AAA

default

*Word*

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

AAA

---

Ruijie(config-domain)#





**default:**

*methodlist*

default

```
Ruijie(config)# aaa domain ruijie.com  
Ruijie(config-domain)# authorization network default
```

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

**state**

no

```
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>	

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

1X

no

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

802.1X

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

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

AAA

---

**show aaa domain**

## show aaa group

AAA

**show aaa group**

AAA

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

<b>aaa group server</b>	AAA

## aaa group server

AAA

no

**aaa group server radius *name***

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

*name*

"radius" "tacacs+"

AAA

Radius

```
Ruijie(config)# aaa group server radius ss
Ruijie(config-gs-radius)# end
Ruijie# show aaa group
Group Name:  ss
Group Type:  radius
Referred:    1
Server List:
Ruijie#
```

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

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

## AAA

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

### aaa new-model

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



**show aaa method-list**

AAA

AAA

```
Ruijie# show aaa method-list
Authentication method-list
aaa authentication login default group radius
aaa authentication ppp default group radius
aaa authentication dot1x default group radius
aaa authentication dot1x san-f local group angel group
rain none
aaa authentication enable default group radius
Accounting method-list
aaa accounting network default start-stop group radius
Authorization method-list
aaa authorizing network default group radius
Ruijie#
```

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

**aaa local authentication attempts**

login

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

<1-2147483647>

3

login

Ruijie#configure ter 10.5 20.08 758.6603 Tm( )Tal0.0027 T50.44 44.2251C4>TJT8.73091

Ruijie#**configure terminal**

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

Ruijie(config)#

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

ID

Ruijie# clear aaa local user lockout all

Show running-config	
Show aaa lockout	login

# RADIUS

## RADIUS

### RADIUS

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

## ip radius source-interface

radius  
**source-interface**

**ip radius**

```

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

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

### radius-server host

```

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

```

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

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

text
0
7
    
```

RADIUS



7

```

RADIUS
RADIUS
RADIUS
radius-server host ip key
0 7 0
0
service password-encryption RADIUS
7 show running RADIUS
show running RADIUS

```

```

RADIUS
aaa
Ruijie(config)#radius-server key aaa

```

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

### radius-server retransmit

```

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

```

*retries* RADIUS

3

AAA

RADIUS

4

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

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

## radius-server timeout

RADIUS

**radius-server timeout no**

**radius-server timeout *seconds***

**no radius-server timeout**

*seconds*

1-1000

5





---

15	file-name-4	15
16	max up-rate	16
17	version to server	17
18	flux-max-high32	18
19	flux-max-low32	19
20	proxy-avoid	20
21	dailup-avoid	21
22	ip privilege	22
23	login privilege	42

id		type
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

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

max up-rate 211

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

radius set qos cos	radius qos cos

## radius set qos cos

radius qos cos

**radius set qos cos**

**no radius set qos cos**

qos dscp

qos

cos

dscp

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



## RADIUS

' **debug radius [**

## RADIUS

---

```
authen port: 77  
server state: ready  
server ip : 192.168.4.13  
acct port: 45  
authen port: 74  
server state: ready
```



---

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

## show radius vendor-specific

RADIUS

### show radius vendor-specific

radius

```
Ruijie# show radius vendor-specific
id   vendor-specific      type-value
-----
1    max down-rate        76
2    qos                  77
3    user ip              3
4    vlan id              4
5    version to client   5
6    net ip              6
7    user name            7
8    password             8
9    file-directory       9
10   file-count           10
11   file-name-0          11
12   file-name-1          12
13   file-name-2          13
14   file-name-3          14
15   file-name-4          15
```

## RADIUS

---

16	max up-rate	75
17	version to server	17
18	flux-max-high32	18
19	flux-max-low32	19
20	proxy-avoid	20
21	dailup-avoid	21
22	ip privilige	22
23	login privilige	42
24	limit to user number	50

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

# TACACS+

## TACACS+

TACACS+

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

## aaa group server tacacs+

TACACS+

TACACS+

```
aaa group server tacacs+ group-name
no aaa group server tacacs+ group-name
```

```
group-name TACACS+
```

TACACS+

TACACS+

```
tac1 TACACS+
1.1.1.1 TACACS+
```

<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
```



**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







# SSH

## SSH

SSH

- ' **crypto key generate**
- ' **crypto key zeroize**
- ' **ip ssh version**
- ' **ip ssh time-out**
- ' **ip ssh authentication-retries**
- ' **transport input**

## crypto key generate

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

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

SSH Server

```

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

```



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

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

2

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

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

RGOS10.1

### ip ssh time-out

SSH Server **no**

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

<i>time</i>	

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

SSH Server  
120s  
**show ip ssh** SSH server

100s

Ruijie# **configure terminal**  
Ruijie(config)# **ip ssh time-out 100**

<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

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

RGOS10.1

**show ssh**

SSH

**show ssh**

SSH

VTY

SSH

Ruijie# **show ssh**

RGOS10.1

**show crypto key mypubkey**

SSH Server

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

--	--

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

## SSH Server

Ruijie# **show crypto key mypubkey rsa**

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

RGOS10.1

**disconnect ssh**

SSH

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

<i>session-id</i>	SSH

VTY SSH SSH SSH

Ruijie# **disconnect ssh 1**  
Ruijie# **disconnect ssh vty 1**

<b>show ssh</b>	SSH
<b>Clear line vty <i>line_number</i></b>	VTY

RGOS10.1

# CPU

```
'  cpu-protect type packet-type traffic-class traffic-class-num
'  cpu-protect traffic-class id id_num bandwidth bandwidth_value
'  cpu-protect traffic-class all bandwidth bandwidth_value
'  cpu-protect cpu bandwidth bandwidth_value
'  cpu-protect mac-address storm-control enable value
```

## cpu-protect type traffic-class

```
cpu-protect type packet-type traffic-class traffic-class-num
```

*packet-type*

```
traffic-class-num          id          0 7
```

```
show cpu-protect
```

```
CPU    BPDU
```

```
Ruijie(config)# cpu-protect type bpdu traffic-class 5
```

```
Ruijie(config)# end
```

```
Ruijie # show cpu-protect type bpdu traffic-class
```

```
%*****packet type      traffic-class*****
                bpdu          5
```



<b>cpu-protect</b>	<b>traffic-class</b>	<b>id</b>
<i>id_num</i>	<b>bandwidth</b>	
<i>bandwidth_value</i>		
<b>cpu-protect</b>	<b>traffic-class</b>	<b>all</b>
<b>bandwidth</b>	<i>bandwidth_value</i>	



**cpu-protect cpu bandwiCd 13.9 0 0ph 2\_0 1 Tf0 Tc 2.36 0 Ts 110.5.9 89.5.173**

CPU

---

2000

CPU

2000 kbps

```
Ruijie#configure terminal
```

```
Ruijie(config)#
```

**show cpu-protect type all**

```

%*****packet type      traffic-class*****
      bpdu                6
      arp                  5
      igmp                 3
      dot1x                3
      gvrp                 3
      dhcp                 2
      unicast              4
      multicast            1
      broadcast            0
      error_ttl            0
      co-operate           6
      other                 0

```

<b>show cpu-protect traffic-class id id_num</b>	id_num            0 7
<b>show cpu-protect traffic-class all</b>	
<b>show cpu-protect cpu</b>	CPU

**show cpu-protect traffic-class id**

```
show cpu-protect traffic-class id id_num
```

```
id_num            0-7
```

1

1000

<b>show cpu-protect type</b> <i>packet-type</i>	
<b>show cpu-protect traffic-class all</b>	
<b>show cpu-protect cpu</b>	CPU

## show cpu-protect traffic-class all

**show cpu-protect traffic-class all**

### show cpu-protect traffic-class all

```
Ruijie# show cpu-protect traffic-class all
%*****traffic class      bandwidth(kbps)*****
      0                    1000
      1                    1000
      2                    1000
      3                    1000
      4                    1000
      5                    1000
      6                    1000
      7                   100000
```

<b>show cpu-protect type</b> <i>packet-type</i>	
<b>show cpu-protect traffic-class</b> id id_num	id_num            0 7

show cpu-protect cpu	CPU
----------------------	-----

## show cpu-protect cpu

CPU  
show cpu-protect cpu

CPU

CPU

```
Ruijie# show cpu-protect cpu
%cpu port bandwidth: 100000(kbps)
```

show cpu-protect type <i>packet-type</i>	
show cpu-protect traffic-class id id_num	id_num            0 7
show cpu-protect traffic-class all	

## show cpu-protect mac-address storm-control

show cpu-protect mac-address storm-control

CPU

```
Ruijie# show cpu-protect mac-address storm-control  
%MAC address storm control state: enable  
%MAC address storm control rate: 2000(address/second)
```



RGOS10.1

**security community**

smp

**security**

**smp-server host** *ip-address*

**no smp-server host**

*ip-address* smp server ip

smp server

**show smp-server**

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

<b>show smp-server</b>	smp server

RGOS10.1

## security event interval

**security event interval** *interval*

**no security event interval**

*interval*

5

**show security event interval**

Ruijie(config)# **security event interval 10**

<b>show security event interval</b>	

RGOS10.1

## **security address-bind enable**

**security address-bind enable**  
**no security address-bind enable**

AP AP

GSN

Ruijie(config-if)# **security address-bind enable**

<b>security gsn enable</b>	GSN

RGOS10.1

:

**show smp-server**  
**show security event interval**

### show smp-server

smp server IP

smp server IP

Ruijie# **show smp-server**  
SMP-Server IP 192.168.20.30

<b>smp-server host</b>	smp server ip

RGOS10.1

### show security evnet interval



# DAI

## VLAN DAI

**ip arp inspection vlan**

### ip arp inspection vlan vlan-id

	<i>vlan-id</i>	VLAN	DAI
no	<i>vlan-id</i>	VLAN	DAI
	<i>vlan-id</i>	VLAN	DAI

**ip arp inspection vlan** *vlan-id*

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



<b>show ip arp inspection vlan</b>	VLAN	DAI
------------------------------------	------	-----

## **ip arp inspection trust**

**trust no ip arp inspection**  
**ip arp inspection trust**  
**no ip arp inspection trust**

ARP

A

J

## ip arp inspection limit-rate limit-rate

```

                                ARP                                ip arp
inspection limit-rate          no
ip arp inspection limit-rate {limit-rate | none }
no ip arp inspection limit-rate
    
```

none	
limit-rate	2048 1

```

                                15 ARP /
0
    
```

DAI  
(Network Foundation Protection Policy)

```

                                VLAN 2          gigabitEthernet 0/2
10 ARP /
Ruijie(config)# ip arp inspection
Ruijie(config)# interface gigabitEthernet 0/2
Ruijie(config-if)# ip arp inspection limit-rate 10
    
```

## DHCP Snooping

```

                                VLAN          DAI          ARP
                                DHCP Snooping .
Snooping                        DHCP Snooping          DHCP
    
```

# arp

## arp

arp

**anti-arp-spoofing ip**

## anti-arp-spoofing ip

arp

no

**anti-arp-spoofing ip** *ip-address*

**no anti-arp-spoofing ip** *ip-address*

*ip-address*

IP

## show anti-arp-spoofing

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

```
Ruijie(config-if)#anti-arp-spoofing ip 192.168.1.1
```

<b>show anti-arp-spoofing</b>	arp

## arp

arp



QOS

## mls qos trust

Qos

**mls qos trust [cos | dscp]**

**no mls qos trust**

<b>cos</b>	Qos	CoS
<b>dscp</b>	Qos	DSCP
<b>no</b>		

```
Ruijie(config)# interface gigabitethernet 1/1  
Ruijie(config-if)# mls qos trust cos
```

**show mls qos interface *interface-id***

```
S2700
```

	<b>cos dscp</b>
--	-----------------

## mls qos cos

CoS

**mls qos cos *default-cos***

**no mls qos cos**

```
default-cos 0 7
```

QoS

---

**no**

CoS 0

**[no] priority-queue**

**priority-queue** SP

**no priority-queue** WRR

WRR

```
Ruijie(config)# no priority-queue
```

```
show mls qos queueing
```

## **priority-queue cos-map**

fz CoS

```
priority-queue cos-map qid cos0 [cos1 [cos2 [cos3 [cos4 [cos5 [cos6 [cos7]]]]]]]
```

```
no priority-queue cos-map
```

*qid* id

*cos0 ... cos7* CoS

*no*

```
Ruijie(config)# priority-queue cos-map 1 0 1
```

```
show mls qos queueing
```

## wrr-queue bandwidth

WRR

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

**no wrr-queue bandwidth**

*weight1...weightn*                    n    n

**no**

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

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

**show mls qos queueing**

## mls qos map cos-dscp

CoS                    DSCP

**mls qos map cos-dscp** *dscp1...dscp8*

**no mls qos map cos-dscp**

**dscp**

**no**

```
Ruijie(config)# mls qos map cos-dscp 8 10 16 18 24 26 32  
34
```

```
show mls qos maps      dscp-cos maps,dscp-cos maps  
ip-prec-dscp maps
```

## **mls qos map dscp-cos**

**output**

*bps*

*burst-size* (Kbyte)dscp-list

**no**

```
Ruijie(config)# interface fastEthernet 0/1  
Ruijie(config-if)# rate-limit onput 1000000 4096
```

**show mls qos interface**

## **mls qos scheduler**

**mls qos scheduler [sp | wrr]**

**no mls qos scheduler**

**sp**

**wrr**

**no**

wrr

```
Ruijie(config)# mls qos scheduler sp
```

**show mls qos scheduler**

## show class-map

class map

**show class-map** [*class-name*]

*class-name* class map

class map

Ruijie# **show class-map**

## show policy-map

QoS policy map [ class *class-name*]

**show policy-map** [*policy-name* [**class** *class-name*]]

*policy-name* policy name

*class-name* class map

policy name

Ruijie# **show policy-map**

## 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,drr weight)

**show mls qos queueing**

Ruijie# **show mls qos queueing**

S2700

cos-to-queue map,wrr weight

## 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 ip-prec-dscp maps
```

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

```
S2700 cos-dscp dscp-cos
```

## show mls qos rate-limit

```
show mls qos rate-limit [interface interface-id]
```

```
interface interface-id rate-limit
```

```
Ruijie# show mls qos rate-limit
```

# RLDP

RLDP

- ' **rldp enable**
- ' **rldp detect-interval**
- ' **rldp detect-max**
  
- ' **rldp port {unidirection-detect | bidirection-detect | loop-detect}**  
**{warning | shutdown-svi | shutdown-port | block}**
  
- ' **rldp reset**

## rldp enable

RLDP

- rldp enable**
- no rldp enable**

RLDP

RLDP

:

Ruijie(config)# **rldp enable**

<b>rldp port</b>	RLDP

## rldp detect-interval

RLDP

**rldp detect-interval** *interval*

**no rldp detect-interval**

*interval* 2-15

3

stp ×  
stp

5s :

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

<b>rldp detect-max</b>	

## rldp detect-max

RLDP

**rldp detect-max** *num*

**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



# TPP

## topology guard

```
                topology guard
                no
[no] topology guard
```

## cpu topology-limit

```
Ruijie(config)# topology guard
Ruijie(config)# no topology guard
```

**tp-guard port enable**

**cpu topology-limit**      CPU

## tp-guard port enable

no

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

CPU

tpp

Ruijie# **show tpp**

**topology guard**

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

## **cat**

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

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

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



---

## cp

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

*DESTINE\_FILE*

*DIRECTORY*

*SOURCE\_FILE* ( )

---

r 注意:

**cp**

---

log.txt :

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

## ls

**ls** *PATHNAME*

---

*PATHNAME*

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

## **makefs**

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

```
DEVNAME          (          )
FSNAME
```

a

---

b

jffs2

dev/mtdblock/1

```
Ruijie# makefs dev /dev/mtdblock/1 fs jffs2
```

## mkdir

```
mkdir DIRECTORY
```

```
DIRECTORY
```

( )

test

```
Ruijie# mkdir test
```

## mv

```
mv sour SOURCE_FILE dest {DESTINE_FILE | DIRECTORY}
```



---

Ruijie# **pwd**

**rm**

**rm** *FILE*

*FILE* ( )

,

log.txt

Ruijie# **rm** *log.txt*

<b>rmdir</b>	, rm ,

---

## **rmdir**

**rmdir** *DIRECTORY*

*DIRECTORY* ,

**rm** ,

tmp

Ruijie# **rmdir** tmp

Ruijie# **ls**

---

## logging on

no

**logging on**

**no logging on**

RGOS Console VTU  
Server FLASH Syslog  
1 Log

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

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

---

<b>logging console</b>	
------------------------	--

---

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

**no logging buffered**

*buffer-size* 4K 128K Bytes

*level* 0 7

4k Bytes

7

**show logging**

clear logging

FLASH

Syslog Server

RGOS

8

1

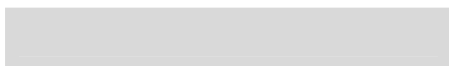
Emergencies	0	
Alerts	1	
Critical	2	
Errors	3	
warnings	4	
Notifications	5	
informational	6	
Debugging	7	

0

---

6 6 10000

Ruijie(config)# **logging buffered 10000 6**



---

---

FLASH

trace.txt

64K,

6

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

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

---

**more flash**

FLASH

6

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

## logging monitor

```

VTY telnet SSH
no VTY

```

**logging monitor level**

**no logging monitor**

*level*

1

Debugging (7)

```

VTY terminal
monitor VTY
logging monitor

```

**Logging monitor** VTY

VTY 6

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

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

---

## logging trap

Syslog Server  
no

Syslog Server

**logging trap** *level*

**no logging trap**

*level*

---

**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



---

1	user-level messages
2	mail system
3	system daemons
4	security/authorization messages
5	messages generated internally by syslogd
6	line printer subsystem
7	network news subsystem
8	UUCP subsystem
9	clock daemon
10	security/authorization messages
11	FTP daemon
12	NTP subsystem
13	log audit

---

<b>logging console</b>	

## logging count

no

**logging count**

**no logging count**

**no**

**logging count**

Ruijie(config)# **logging count**

---

**no service sequence-numbers**

1

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

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

## **service timestamps**

no

default

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

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

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

*message-type*  
0 6

Log Debug Log  
Debug 7

*uptime*

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

---

*datetime*  
16:53:07

Jul 27

---

```
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 S3250 %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

<b>logging file flash:</b>	<b>FLASH</b>

## clear logging

**clear logging**

Ruijie# **clear logging**


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

--

## show logging

---

## show logging

### show logging

```
Ruijie# show logging
Syslog logging: enabled
Console logging: level debugging, 4 messages logged
Monitor logging: level informational, 0 messages logged
Buffer logging: level debugging, 6 messages logged
Timestamp debug messages: datetime
Timestamp log messages: disabled
Sequence log messages: enable
Trap logging: level debugging, 2 message lines logged, 0
reserved, 0 fail
logging to 202.101.11.22
logging to 192.168.200.112
Log Buffer (Total 4096 Bytes) : have written 680
00001 2004-11-17 10:20:59 Ruijie: %7:%LINK CHANGED:
Interface FastEthernet 0/0, changed state to up
00002 2004-11-17 10:20:59 Ruijie: %7:%LINE PROTOCOL
CHANGE: Interface FastEthernet 0/0, changed state to UP
00003 2004-11-17 10:57:18 Ruijie: %7:%LINK CHANGED:
Interface FastEthernet 0/1, changed state to
administratively down
00004 2004-11-17 10:57:21 Ruijie: %7:%LINK CHANGED:
Interface FastEthernet 0/1, changed state to down
00005 2004-11-17 10:57:41 Ruijie: %7:%LINK CHANGED:
Interface FastEthernet 0/1, changed state to
administratively down
00006 2004-11-17 10:57:43 Ruijie: %7:%LINK CHANGED:
Interface FastEthernet 0/1, changed state to down
```

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

---

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

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

**show logging count**

---

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

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