OFF
SATA
Bypass

WIS ᵽ ᴤ Æ ɪ ᵢ ̈A ʌ ɪ ̈A ч ᶜ ώ ᵽ ɯ ̈ ώ ᶉ ᴣ ʒ Ս ̍ ώ ᶂ ᾰ Ç ᶠ ᵝ ᵐ ˡ | ᾰ Ç ˡ ΐ ʰ ʌ ʳ Ă ч Ԍ Ԋ ϭ ᵢ ̈A ʌ ɪ ̈A ч ᶜ ώ ᵽ ɯ ̈ ώ ᶉ ᴣ ʒ Ս ˡ Ԩ % ʒ Ս ̀ | ᶜ ‰ ˡ ˢ ύ

ˡ WIS ᵽ ᴤ ώ ᶉ ᾰ ʌ ᶜ ˡ WIS ˡ ˢ ˡ ᴣ ʒ Ս ᵽ ʌ ʃ ᶂ Φ ᵉ Ч ᵐ ʃ ᴣ ᵇ ' | ẽ ˡ ∂ ᾰ Ç ᶨ ᵢ % ʒ Ս ˡ ᾰ ᾰ ˢ ˢ ˢ Ɑ ˡ ο ˡ ᴣ ᵽ Ẓ Φ ᶜ ˡ WIS ᵽ ᴤ ˡ ΐ ʰ ʌ ᶨ ᵢ % ʒ Ս χ (a) ʔ ḟ | ẽ | ᶆ ᾰ ʔ ḟ WIS ᶠ ᵝ ˡ ᶜ ᶜ ᴣ | ẽ ˡ ʔ ẓ ψ (b) ʒ ˡ ᾰ ʌ ˡ WIS ᵽ ᴤ ʒ Ʊ ʌ ˚ ᶠ ᵝ ᴣ ˍ ᾰ ᶜ ᶠ ψ ᾰ (c) ᵽ ʌ Ó ᶜ ̀ ˡ ᶜ ᵖ ᵐ Φ ᵘ ˡ ʒ ˡ WIS ᵽ ᴤ ᾰ ˆ WIS ᶠ ᵝ ᾰ ̀ O ᵐ ᴣ ᵢ ̈A ᾰ ʒ ʌ ᴣ Ԛ ʒ Ԍ Ḡ ʔ WIS ᵽ ᴤ ᶉ ̀ H ʰ ᶨ ᶠ ᴣ Ʊ Ԍ ʒ ᴺ Ꝑ ˊ Ę ώ ᵉ ᶉ ᴣ ᵢ O ᵐ ˡ ᵇ ώ ᵉ ᵢ ̈A ̃ ̀ Y ˡ ˢ ˡ ' ᵐ ᾰ ̈ E Φ ˡ ˊ ᴣ ʌ ɯ ' ' WIS ᵽ ᴤ Ṅ ᶜ ᶜ ᵽ Ꝑ ʒ ᴺ ώ ᵉ Ԍ Ç ʌ ᶜ ̀ O ᵐ ̀ H ̈A ᵢ ᴣ ʒ Ս ᾰ Ç ˡ ∂ ᵽ Ꝑ ʒ ᴺ ʌ ˡ ΐ ʒ Ս ᴣ ʒ Ḷ ό ˡ Ẋ ʰ ̃ Ꝑ Ṅ ΐ ʒ Ս ˢ ˢ ˢ γ Ɱ Ʊ Ԍ ́ ᴣ ḟ ʔ

WIS ᵽ ᴤ ̀ H ᶜ ̀ w ˡ ʒ ˡ ᾰ Ç ̈A ώ ᶉ ̀ ᴣ ʒ Ս ᴣ Ḡ ʔ ɪ ̈A ʌ ɪ ̈A ч ᶜ ώ ᵽ ɯ ̈ Æ ɪ ᴿ ˡ Ḡ ʔ ̀ H ˢ ˡ ẓ ˡ ̀ ᶜ Ꝑ ˡ ˢ ˡ ' ʌ ά ᴣ ᴤ ᶨ Æ ɪ ᾰ ⌠ ◖ æ ᵇ ᵢ ᾰ Ç Ṅ ύ ώ ᵉ ᴣ Ս ᵉ ̀ Ч ᵽ ɯ ˢ ˢ ˢ ᵖ í Φ ˢ ˡ ᵢ ᵇ ̈ O ᾶ ᾶ ᶨ ᶨ ᴣ ɯ ˡ ̀ O ᵐ ʰ ˡ

3.

ė q ǯ æب ˝ մh՝ ⌧ৎ Æ ɿ ʒ ª ɳ ڭ ˡ ǐ j ৎ ı ɳ ڭ ̈Ḥ Ă ₳ ₰ ₺ ̃Y Ł ᴿ ƒ β ̈A ̃Ḥ ̇Y ⌧ৎ Æ ɿ ʒ ڤ Φ ب ɹ

ė q մh՝ ǯ æ⌧ Ĭ ̃ ʒ Ụ ₳ ˡ ǐ ᵍ ω̃ Ʊ Ę ƒ β ৲ ̊ ⌧ɲ ḳ ε ḅ ƒ β ʒ ᴺ ὼ ڭ ৎ ζ ı ʊ ɥ Ĭ ̃ ʒ Ụ ت Ɋ ɳ ڭ Æ ɾ ⌧Φ ᵗ ʒ Ụ ₦ ՛

ė q ₳ ≟ ʒ ⌧ت ˡ ʰ ʒ ت ˡ ʰ ƒ β g ‰ ı Ɗ ՛ ՝ ՞ Ỵ Θ ï ⌧ت ˡ ʰ ı Ɋ ʒ ظ Φ՝ ت ˡ ʙ ɲ ⌧ s Ṗ Ґ ̈Ω

-

1.
2.
3. MCU
4. LINE
5. RMON
6. File System
7. SNMP
8. HTTP
9.
10. CWMP
11. LED
12. USB
13. PKG_MGMT
14. SYS
15. NTP
16. SNTP
17. TIME RANGE

1

1.1 alias

alias *mode command-alias original-command*

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

default

default alias *mode* [*command-alias*]

mode	
command-alias	
original-command	

14

h p s u un **help ping show undebug**

undebug

no alias exec

alias ?

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

a ʁ ' ɐ ɹ ɹ ɹ ʃ *

```
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

1 ”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)#end
Ruijie#show aliases config
globle configure mode alias:
def-route            ip route 0.0.0.0 0.0.0.0 192.168.1.1
```

19

```
% Overly long alias name truncated after 19 characters.
```

255

```
% Command alias string too long.
```

100

```
% Can't add more than 100 command aliases in single mode.
```

```
% Adding command alias fail.
```

-

-

1.2 privilege

privilege *mode* [**all**] {**level** *level* **| reset**} *command-string*

no privilege *mode* [**all**] [**level** *level*] *command-string*


```
Ruijie(config)#privilege exec level 1 reload
```

1 CLI **reload**

```
Ruijie>reload ?
LINE    Reason for reload
<cr>
```

reload 1 **all**

```
Ruijie(config)#privilege exec all level 1 reload
```

1 CLI **reload**

```
Ruijie>reload ?
LINE    Reason for reload
at                      reload at a specific time/date
cancel                  cancel pending reload scheme
```

14 1

p	ping
s	show
u	undebug
un	undebug

-

-

2

2.1 <1-99>

Telnet Client

<1-99>

-	-

-

1

Telnet Client **telnet** Telnet Client

ctrl+shift+6 x **<1-99>**

show session

1 Telnet Client

```
Ruijie# 1
```

-

-

ppÐzð3šÀ‘Ye ‡ œ┬ N ’ Dp-À

c	
message	

MOTD **banner motd** LOGIN **banner login** EXEC **banner exec** incoming **banner incoming** Telnet incoming EXEC

1

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

-

-

-

2.5 banner motd

MOTD message of the day

banner [**motd**] *c message c*

no banner [**motd**]

c	
message	

-

14

MOTD **banner motd** LOGIN **banner login** EXEC **banner exec** incoming **banner incoming** Telnet incoming EXEC line MOTD line **no motd-banner**

1

```
Ruijie(config)# banner motd $ hello,world $
```

-

-

-

2.6 banner privilege-mode

banner privilege-mode *c message c*

no banner privilege-mode

c	
message	

-

14

privilege-mode **banner privilege-mode**

1

```
Ruijie(config)# banner privilege-mode $ Entering privilege mode! $
```

-

-

-

2.7 banner prompt-timeout

banner prompt-timeout *c message c*

no banner prompt-timeout

c	
message	

-

14

prompt-timeout **banner prompt-timeout**

1

```
Ruijie(config)# banner exec $              $
```

line

-

-

-

2.8 banner slip-ppp

SLIP/PPP

banner slip-ppp *c message c*

SLIP/PPP

no banner slip-pp

c	
message	

-

14

SLIP/PPP slip-ppp **banner slip-ppp**

1 SLIP/PPP

```
Ruijie(config)# banner slip-ppp $ $
```

-

-

-

-

2.9 boot config

boot config { flash:*filename* | **usb0:***filename* **}**

no boot config

flash	FLASH
usb0	USB0 1 USB USB

flash:/config.text

14

’/’ flash:/ruijie.text usb0:/ruijie.text

write

flash:/ruijie/ruijie.text usb0:/ruijie/ruijie.text flash:/ruijie usb0:/ruijie

usb USB USB write

USB

1 flash:/ruijie.text

```
Ruijie(config)#boot config flash:/ruijie.text
```

show boot config

-

-

-

2.10 checkpoint

checkpoint [*cp-name*] [**description** *description*]

no checkpoint *cp-name*

cp-name	1-80
description *description*	80

-

-

-

2.12 configure

configure [**terminal**]

-	-

-

14

-

1

```
Ruijie# configure
Ruijie(config)#
```

-

-

-

-

2.13 debug support

debug support

-	-

-

15

1 debug support

```
Ruijie# debug support
%Warning: Enter debug support mode, all commands in this mode are used to diagnose system hardware and software.
          Misuse of these commands will affect system performance. Therefore, use these commands under the guidance of Ruijie Networks engineers.

Ruijie(support)#
```

-

-

-

-

2.14 disable

disable [*privilege-level*]

privilege-level	

-

0

disable

1 10

```
Ruijie# disable 10
```

show privilege

-

-

-

2.15 disconnect

Telnet Client

disconnect *session-id*

session-id	Telnet Client

-

1

Telnet Client Telnet Client

1 Telnet Client Telnet Client

```
Ruijie# disconnect 1
```

1 **show sessions** Telnet Client

-

-

-

2.16 do telnet

Telnet

do telnet *host* [*port*] [**/source** { **ip** *A.B.C.D* **| ipv6** *X:X:X:X::X* **| interface** *interface-name* }]

host	Telnet IPV4 IPV6
port	Telnet TCP 23
/source	Telnet IP
ip *A.B.C.D*	Telnet IPV4
ipv6 *X:X:X:X::X*	Telnet IPV6
interface *interface-name*	Telnet

-

| |

1

-

IPV4Gi 0/ 1 Tf 1.1.1.2 88 Tc 0 1 6 F c 7 .
1

-

2.17 enable

enable [*privilege-level*]

privilege-level	

-

0

1 14

```
Ruijie> enable 14

Password:
```

show privilege

-

-

-

2.18 enable password

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

no enable password [**level** *level*]

level	
0	
password	EXEC 1~126
7 encrypted-password	

-

15

1 26

EXEC

1 pw10

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

-

-

-

-

2.19 enable secret

enable secret [**level** *level*] { [**0**] *password* | **5** *encrypted-secret* }

no enable secret [**level** *level*]

level	
0	
password	EXEC 1~126
5 *encrypted-password*	MD5

-

15

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

1 pw10

```
Ruijie(config)# enable secret 0 pw10
```

-

-

-

-

2.20 enable service

SSH Server/Telnet Server/Web Server/Snmp Agent

enable service { **ssh-server** | **telnet-server** | **web-server** [**http | https | all**] | **snmp-agent** }

ssh-server	SSH Server IPv4 IPv6
telnet-server	Telnet Server IPv4 IPv6
web-server [**http	https	all**]	Web Server IPv4 IPv6
snmp-agent	Snmp Agent IPv4 IPv6

telnet-server snmp-agent web-server ssh-server

14

no enable service

enable service web-server 3 [http | https | all]
all http https http
http https https

1 **enable service ssh-server** SSH Server

```
Ruijie(Config  # enable service ssh-server
```

show service

-

-

-

2.21 end

end

-	-

-

0

end

1 **end**

```
Ruijie#con
```

```
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#line vty 0
Ruijie(config-line)#end
*May 20 09:49:38: %SYS-5-CONFIG_I: Configured from console by console
Ruijie#
```

-

-

-

-

2.22 exec-banner

line EXEC

exec-banner

line EXEC

no exec-banner

-	-

EXEC

LINE

14

banner exec

2.25 exit

CLI

exit

-	-

-

0

-

1 **exit**

```
Ruijie#con
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#line vty 0
Ruijie(config-line)#end
*May 20 09:49:38: %SYS-5-CONFIG_I: Configured from console by console
Ruijie#con
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#line vty 0
Ruijie(config-line)#exit
Ruijie(config)#exit
*May 20 09:51:48: %SYS-5-CONFIG_I: Configured from console by console
Ruijie#exit

Press RETURN to get started
```

-

-

-

-

2.26 help

help

-	-

-

1

”?”

1

```
Ruijie#help
Help may be requested at any point in a command by entering
a question mark '?'.  If nothing matches, the help list will
be empty and you must backup until entering a '?' shows the
available options.
Two styles of help are provided:
1. Full help is available when you are ready to enter a
   command argument (e.g. 'show ?') and describes each possible
   argument.
2. Partial help is provided when an abbreviated argument is entered
   and you want to know what arguments match the input
   (e.g. 'show pr?'.)
```

2

```
Ruijie(config-if-GigabitEthernet 0/0)#?
Interface configuration commands:
  arp             ARP interface subcommands
  bandwidth       Set bandwidth informational parameter
  carrier-delay   Specify delay for interface transitions
```

```
dampening        Enable event dampening
default          Set a command to its defaults
description      Interface specific description
dldp             Exec data link detection command
duplex           Configure duplex operation
efm              Config efm for an interface
end              Exit from interface configuration mode
exit             Exit from interface configuration mode
expert           Expert extended ACL
flowcontrol      Set the flow-control value for an interface
full-duplex      Force full duplex operation
global           Global ACL
gvrp             GVRP configure command
half-duplex      Force half duplex operation
help             Description of the interactive help system
ip               Interface Internet Protocol config commands
ipv6             Internet Protocol Version 6
isis             Intermediate System - Intermediate System (IS-IS)
l2               Config L2 attribute
label-switching  Enable interface process mpls packet
lacp             LACP interface subcommands
lldp             Link Layer Discovery Protocol
load-interval    Specify interval for load calculation for an interface
mac              Mac extended ACL
mac-address      Set mac-address
mpls             Multi-Protocol Label Switching
mtu              Set the interface Maximum Transmission Unit (MTU)
no               Negate a command or set its defaults
ntp              Configure NTP
port-group       Aggregateport/port bundling configuration
redirect         Redirect packets
rmon             Rmon command
security         Configure the Security
show             Show running system information
shutdown         Shutdown the selected interface
snmp             Modify SNMP interface parameters
speed            Configure speed operation
switchport       Set switching mode characteristics
vrf              Multi-af VPN Routing/Forwarding parameters on the interface
vrrp             VRRP interface subcommands
xconnect         Xconnect commands
```

3

```
Ruijie(config)#access-list 1 permit ?
  A.B.C.D  Source address
  any      Any source host
  host     A single source host
```

-

-

-

-

2.27 hostname

hostname *name*

name	63

Ruijie

14

CHAP

1 BeiJing_Ruijie

```
Ruijie(config)# hostname BeiJing_Ruijie
BeiJing_Ruijie(config)#
```

-

-

-

-

2.28 ip telnet source-interface

IP Telnet

ip telnet source-interface *interface-name*

interface-name	IP Telnet AP Gi Loopback null Tunnel VLAN

-

14

IP Telnet telnet Telnet

no ip telnet source-interface

1 Loopback 1 IP Telnet

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

-

-

-

-

2.29 language character-set

language character-set { **UTF-8** | **GBK** | **default** }

UTF-8	UTF-8
GBK	GBK

default	

default

14

1

```
Ruijie(config)#language character-set UTF-8
This may take some time to build configuration, Continue? (yes[no]): y
Ruijie(config)#
```

-

-

-

-

2.30 lock

lock

-	-

-

1

1

EXEC **lock**

lock **lockable**

1

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

-

-

-

- **lx2lé¥pê**60Ack

o©Þ gi(-E)n ŕ ŕ ŕ

AAA VTY console

1 VTY

```
Ruijie(config-line)# login authentication default
```

-

-

-

-

2.34 login local

AAA LINE

login local

no login local

-	-

-

LINE

14

AAA LINE

username

1 VTY

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

-

-

-

3

```
Ruijie>enable 10


Password:

Ruijie#

*Sep 10 11:34:20: %SYS-5-PRIV_AUTH_SUCCESS: Authentication to privilege level 10 from console success
```

-

-

-

-

2.36 motd-banner

line MOTD

motd-banner

line MOTD

no motd-banner

-	-

MOTD

LINE

14

banner exec **banner motd** line EXEC MOTD line EXEC MOTD **no** EXEC MOTD

banner incoming **banner incoming** Telnet incoming incoming

1 Vty1 MOTD

```
Ruijie(config)# line vty 1
Ruijie(config-line)no motd-banner
```

-

-

-

2.37 password

line

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

line

no password

0	
password	line 1~25
7 *encrypted-password*	

-

LINE

14

-

1 line red

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

-

-

-

-

2.38 prompt

CLI

prompt *string*

CLI

no prompt

string	32

-

14

CLI

CLI EXEC

1 RGOS

```
Ruijie(config)# prompt RGOS
Ruijie(config)# end
RGOS
```

-

-

-

-

2.39 rollback

rollback running-config checkpoint *cp-name* [**display-differences** | **ignore-results**]

cp-name	1-80
display-differences	
ignore-results	

-

14

Increased configuration:

Decreased configuration:

1 user-1

```
Ruijie# rollback running-config checkpoint user-checkpoint-1 ignore-results
...

Rollback configuration successfully.
```

show running-config **show running-config**

1

```
...

Rollback configuration successfully.
```

2

```
..


Rollback configuration completed.
----------------------------------------------------------------
Increased configuration:
+ spanning-tree mode rstp            //


Decreased configuration:
- username admin password admin      //
----------------------------------------------------------------
```

3

```
...


Rollback configuration failed.
```

-

-

2.40 secret

line MD5

secret { [**0**] *password* | **5** *encrypted-secret* }

line MD5

no secret

14

line MD5

5 24 1 3 8 ”$”

5

5

line password secret password secret

secret secret password

line MD5 vty0

```
Ruijie(config)# line vty 0
Ruijie(config-line)# secret vty0
```

vty0 MD5 show

```
secret 5 $1$X834$wvx6y794uAD8svzD
```

-

-

-

-

2.41 session-timeout

LINE

session-timeout *minutes* [**output**]

LINE

no session-timeout

minutes	
output	

0 min

LINE

14

LINE

LINE

1 line vty 0 5

```
Ruijie(config-line)# session-timeout 5 output
```

-

-

-

-

2.42 show boot config

show boot config

-	-

14

-

1 **show boot config**

```
Ruijie#show boot config
Boot config file: [flash:/ruijie.text]
```

flash:/ruijie.text	

-

-

2.43 show checkpoint

show checkpoint { *cp-name* [**all**] | **summary** }

cp-name	1-80
all	
summary	

Ô Ó ï% ” þ UÂ„S 9Ü w=o¬ YÞ . ´ ð-

-

2.44 show debugging

show debugging

-	-

15

-

1 **show debugging**

```
Ruijie#show debugging


debug fw-group detect intf-state
```

-

-

2.45 show hostname

show hostname

1 **show hostname** Ruijie

```
Ruijie#show hostname

Ruijie

Ruijie#
```

-

-

2.46 show language character-set

show language character-set

-	-

1

-

1 ÔõUyuP7—UyuP7—UVõH.6Ud "ÈxfC@PÈ7sÈRZKRVWQPH"*RZ¥6CDB"ZhUp$4d "Ît6#xfC@PÈ

console	
vty	
line-num	line

yyyyy

vtyvtyvty

stop rx interrupt	RX

-

-

2.48 show reload

show reload

-	-

1

1

```
Ruijie# show reload
System reload state: Warm
```

System reload state	

-

-

2.49 show running-config

show running-config [**interface** *interface*]

-	-

14

-

-

-

-

2.50 show service

show service

-	-

1

-

1

```
Ruijie# show service
web-server   : disabled
web-server(https): disabled
snmp-agent    : enabled
ssh-server    : enabled
telnet-server : disabled
```

-

-

2.51 show sessions

Telnet Client

-	-

1

Telnet Client VTY

1 Telnet Client

```
Ruijie#show sessions
Conn  Address
*1    127.0.0.1
*2    192.168.21.122
```

-

-

2.52 show startup-config

NVRAM

show startup-config

-	-

14

NVRAM startup-config

startup-config Flash “ /config.text ”

-

-

-

2.53 show this

show this

-	-

14

range

1. **line** *first-line last-line* LINE
2. **vlan range** VLAN vlan range
3. **interface range** interface range

1 interface fastEthernet 0/1

```
Ruijie (config)#interface fastEthernet 0/1
Ruijie (config-if-FastEthernet 0/1)#show this
Building configuration...
 !
 spanning-tree link-type point-to-point
 spanning-tree mst 0 port-priority 0
 !
end
Ruijie (config-if-FastEthernet 0/1)#
```

-

-

2.54 speed

speed *speed*

no speed

speed	bps 9600 19200 38400 57600 115200 9600

9600

LINE

14

speed

1: 57600 bps

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

show line LINE

-

-

-

2.55 telnet

Telnet

telnet *host* [*port*] [**/source** { **ip** *A.B.C.D* **| ipv6** *X:X:X:X::X* **| interface** *interface-name* }]

host	Telnet IPV4 IPV6
port	Telnet TCP 23
/source	Telnet IP
ip *A.B.C.D*	Telnet IPV4
ipv6 *X:X:X:X::X*	Telnet IPV6
interface *interface-name*	Telnet

-

1

-

1	telnet	IPV4	192.168.1.1	Gi 0/1

```
Ruijie# telnet 192.168.1.1 /source interface gigabitEthernet 0/1
```

2	telnet	IPV6	2AAA:BBBB::CCCC

```
Ruijie# telnet 2AAA:BBBB::CCCC
```

-

-

-

-

2.56 username

reject remote-login	
web-auth	web
pwd-modify	web **web-auth**
nopassword	
password [**0** | **7**] *text-string*	0 7

-

15

7

7

7

1 15

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

2 web

```
Ruijie(config)# username user1 web-auth password 0 pw
```

3 test

```
Ruijie(config)# username test permission rw /
```

4 test config.text

```
Ruijie(config)# username test permission n /config.text
Ruijie(config)# username test permission rwx /
```

-

-

-

-

2.57 username import

username import *filename*

filename	

-

1 :

```
Ruijie# username export user.csv
```

-

-

-

-

2.59 write

running-config

write [**memory** | **terminal**]

-

-

3 MCU

3.1 show gps info

AP GPS

show gps info

-	-

4 LINE

4.1 access-class

ACL IPv4

access-class { *access-list-number* | *access-list-name* } { **in** | **out** }

ACL IPV4

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

access-list-number	ACL IP ACL(1-99 1300-1999) IP ACL(100-199 2000-2699)
access-list-name	ACL
in	
out	

-

LINE

14

-

4.2 accounting commands

line

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

no accounting commands *level*

accounting exec { **default** | *list-name* }

Exec

no accounting exec

default	
list-name	

LINE

14

AAA AAA Exec Exec

1 Vty 1

```
Ruijie(config)# aaa new-model
Ruijie(config)# aaa accounting exec default start-stop group radius
Ruijie(config)# line vty 1
Ruijie(config-line)# accounting exec default
```

-

-

-

-

4.4 authorization commands

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

no authorization commands *level*

level	0~15

default	
list-name	

LINE

14

AAA AAA

1 Vty 1 15

```
Ruijie(config)# aaa new-model
Ruijie(config)# aaa authorization commands 15 default group tacacs+
Ruijie(config)# line vty 1
Ruijie(config-line)# authorization commands 15 default
```

-

-

-

-

4.5 authorization exec

Exec

authorization exec { **default** | *list-name* }

Exec

no authorization exec

default	
list-name	

Exec

LINE

14

AAA AAA Exc Exec

1 Vty 1 Exec

```
Ruijie(config)# aaa new-model
Ruijie(config)# aaa authorization exec default group radius
Ruijie(config)# line vty 1
Ruijie(config-line)# authorization exec default
```

-

-

-

-

4.6 clear line

clear line { **console** *line-num* | **vty** *line-num* **|** *line-num* }

console	
vty	
line-num	line

14

clear line

1 LINE VTY 13 VTY Telnet SSH

```
Ruijie# clear line vty 13
```

-

-

-

-

4.7 disconnect-character

disconnect-character *ascii-value*

no disconnect-character

ascii-value	ASCII 0-255

Ctrl+D 0x04

LINE

14

ASCII (‘ a ’ ~ ‘ z ’ ‘ A ’ ~ ‘ Z ’ ‘ 0 ’ ~ ‘ 9 ’)

1 Vty0-5 Ctrl+E(ASCII 0x05)

```
Ruijie(config)# line vty 0 5
Ruijie(config-line)# disconnect-character 5
```

-

-

-

-

-	-

LINE

14

line no exec

1 1

```
Ruijie(config)# line vty 1
Ruijie(config-line)# no exec
Ruijie# show users
Line             User         Host(s)              Idle       Location
---------------- ------------ -------------------- ---------- ------------------
*  0 con 0       ---          idle                 00:00:00   ---
   1 vty 0       ---          idle                 00:01:03   20.1.1.2
   3 vty 2       ---          idle                 00:00:13   20.1.1.2
```

-

-

-

-

4.10 history

size *size*	0~256

10

LINE

14

-

1 0-5 line 20

```
Ruijie(config)# line vty 0 5
Ruijie(config-line)# history size 20
```

2 0-5 line

```
Ruijie(config)# line vty 0 5
Ruijie(config-line)# no history
```

-

-

-

-

4.11 ipv6 access-class

ACL IPv6

ipv6 access-class *access-list-name* { **in | out** }

ACL IPv6

no ipv6 access-class *access-list-name* { **in | out** }

access-list-name	ACL
in	
out	

-

LINE

14

-

1 0-4 VTY IPv6 ACL test ACL

```
Ruijie(config)# line vty 0 4
Ruijie(config-line)#ipv6 access-class test out
```

-

-

-

-

4.12 length

length *screen-length*

no length

screen-ength	0-512

24

LINE

14

-

1 10

```
Ruijie(config-line)# length 10
```

-

-

-

-

4.13 line

LINE

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

console	
vty	Telnet SSH
first-line	first-line
last-line	last-line

-

14

-

1 LINE VTY 1 3 LINE

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

-

-

-

-

location	

-

LINE

14

-

1 Swtich’s Line Vty 0

-

-

4.18 refuse-message

line

refuse-message

-	-

14

-

line

```
Ruijie# show history
exec:
sh privilege
sh run
show user
sh user all
show history
```

-

-

-

-

4.20 show line

show line { **console** *line-num* | **vty** *line-num* **|** *line-num* }

console	
vty	
line-num	line

14

-

1 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
```

CON	CON 0 *
Type	CON AUX TTY VTY
speed	
Overruns	overrun
Line 0	
Location: ""	location
Type: "vt100"	
Special Chars	Escape Disconnect Activation
Timeouts	never
History	
Total input	
Total output	
Data overflow	
stop rx interrupt	RX

-

-

4.21 show privilege

line

show privilege

-	-

1

-

line

```
Ruijie# show privilege
Current privilege level is 10
```

-

-

4.22 show users

show users [**all**]

all	

14

-

1

```
Ruijie# show users
Line             User         Host(s)              Idle       Location
---------------- ------------ -------------------- ---------- ------------------
```

```
   0 con 0       ---          idle                 00:00:46   ---
   1 vty 0       ---          idle                 00:00:29   20.1.1.2
*  2 vty 1       ---          idle                 00:00:00   20.1.1.2
```

2

```
Ruijie(config)# show users all
Line             User         Host(s)              Idle       Location
---------------- ------------ -------------------- ---------- -----------------
   0 con 0       ---          idle                 00:00:49   ---
   1 vty 0       ---          idle                 00:00:32   20.1.1.2
*  2 vty 1       ---          idle                 00:00:00   20.1.1.2
   3 vty 2       ---                               00:00:00   ---
   4 vty 3       ---                               00:00:00   ---
   5 vty 4       ---                               00:00:00   ---
   6 vty 5       ---                               00:00:00   ---
```

-

-

4.23 speed

speed *baudrate*

no speed

baudrate	9600-115200

9600

LINE

14

-

1 115200

```
Ruijie(config-line)# speed 115200
```

-

-

-

-

4.24 terminal escape-character

terminal escape-character *escape-value*

terminal no escape-character

escape-value	ASCII 0-255

escape-value 30 **Ctrl+^**(**Ctrl+Shift+6**)

14

escape-character *escape-value* *escape-value*
“ **x** ”

1 23((**Ctrl+w**))

```
Ruijie# terminal escape-character 23
```

-

-

-

-

4.25 terminal history

line line

terminal history [**size** *size*]

line

terminal no history

line

terminal no history size

size *size*	0~256

10

14

-

1 line 20

```
Ruijie# terminal history size 20
```

2 line

```
Ruijie# terminal no history
```

-

-

-

-

4.26 terminal length

terminal length *screen-length*

terminal no length

screen-ength	0-512

24

14 1 4 r m l l

14

-

1 Swtich’s Line Vty 0

```
Ruijie# terminal location Swtich’s Line Vty 0
```

-

-

-

-

4.28 terminal speed

terminal speed *baudrate*

terminal no speed

baudrate	9600-115200

9600

14

-

1 115200

```
Ruijie# terminal speed ﻫ N Ò · Ä
```

-

-

-

4.29 terminal width

terminal width *screen-width*

terminal no width

screen-width	0-256

79

14

-

1 10

```
Ruijie# terminal width 10
```

-

-

-

-

4.30 timeout login

line

timeout login response *seconds*

line

no timeout login response

response	Line
seconds	1-300

30

LINE

14

-

0-5 line Vty 300

```
Ruijie(config)# line vty 0 5
Ruijie(config-line)#timeout login response 300
```

-

-

-

-

4.31 transport input

line

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

line

no transport input { **all** | **ssh** | **telnet** | **none** }

all	
ssh	ssh
telenet	telnet
none	

all ssh telnet

LINE

14

-

0-4 VTY line telnet

```
Ruijie(config)# line vty 0 5
Ruijie(config-line)#transport input ssh
```

-

-

-

-

4.32 vacant-message

line

vacant-message [*c message c*]

line

no vacant-message

c	
message	

-

LINE

14

1 line

```
Ruijie(config-line)#vacant-message @              @
```

-

-

-

-

4.33 width

width *screen-width*

no width

screen-width	0-256

79

LINE

14

-

1 10

```
Ruijie(config-line)# width 10
```

-

-

-

-

5 RMON

5.1 rmon alarm

RMON

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

no rmon alarm *number*


```
10 1 owner UserA
```

1 **show run**

2 **show rmon alarm** **show rmon** alarm

1

2

3 OID

4

5

1 OID OID

2

-

5.2 rmon collection history

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

1 GigabitEthernet 0/1 5 60s

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#interface gigabitEthernet 0/1
Ruijie(config-GigabitEthernet0/1)#rmon history 1 owner UserA buckets 5 interval 60
```

1 **show run**

2 **show rmon history** **show rmon**

1

2

3

4

1

-

5.3 rmon collection stats

rmon collection stats *index* [**owner** *ownername*]

no rmon collection stats *index*

index	1~65535
owner *ownername*	*ownername* *ownername* 1~63

-

14

1 GigabitEthernet 0/1

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#interface gigabitEthernet 0/1
Ruijie(config-GigabitEthernet0/1)# rmon stats 1 owner UserA
```

1 **show run**

2 **show rmon statistics** **show rmon**

1

2

3

4

1

-

5.4 rmon event

RMON

rmon event *number* [**log**] [**trap** *community*] [**description** *description-string*] [**owner** *ownername*]

no rmon event *number*

number	1~65535
log	10 10
trap *community*	Trap *community* Trap
description *description-string*	*description-string* *description-string* 1~127
owner *ownername*	*ownername* *ownername* 1~63

-

14

1 trap trap public

```
Ruijie#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#rmon event 1 log trap public description "ifInNUcastPkts is abnormal" owner UserA
```

1 **show run**

2 **show rmon event** **show rmon**

1

2

3

-

-

5.5 show rmon

RMON

show rmon

	)@7B[u[45,AP—s,u@=)@7[ET

```
                    collisions = 0
                    utilization = 0
//     4

rmon alarm table:
                    index: 1
                    interval: 60
                    oid = 1.3.6.1.2.1.2.2.1.12.6
                    sampleType: 2
                    alarmValue: 0
                    startupAlarm: 3
                    risingThreshold: 20
                    fallingThreshold: 10
                    risingEventIndex: 1
                    fallingEventIndex: 1
                    owner: UserA
                    status: 1

rmon event table:
                    index = 1
                    description = ifInNUcastPkts is abnormal
                    type = 4
                    community = public
                    lastTimeSent = 0d:0h:0m:0s
                    owner =UserA
                    status = 1

rmon log table:
                    eventIndex = 1
                    index = 1
                    logTime = 6 d:19 h:21 m:48 s
                    logDescription = ifInNUcastPkts is abnormal
```

-

-

5.6 show rmon alarm

show rmon alarm

-	-

14

-

1

```
Ruijie#show rmon alarm
rmon alarm table:
                    index: 1
                    interval: 60
                    oid = 1.3.6.1.2.1.2.2.1.12.6
                    sampleType: 2
                    alarmValue: 0
                    startupAlarm: 3
                    risingThreshold: 20
                    fallingThreshold: 10
                    risingEventIndex: 1
                    fallingEventIndex: 1
                    owner: UserA
                    status: 1
```

-

-

5.7 show rmon event

show rmon event

-	-

14

```
                    index = 1
                    interface = GigabitEthernet 0/1
                    bucketsRequested = 5
                    bucketsGranted = 5
                    interval = 60
                    owner = UserA
                    stats = 1

rmon history table:
                    index = 1
                    sampleIndex = 2485
                    intervalStart = 7d:22h:56m:38s
                    dropEvents = 0
                    octets = 5840
                    pkts = 27
                    broadcastPkts = 0
                    multiPkts = 0
                    crcAlignErrors = 0
                    underSizePkts = 0
                    overSizePkts = 0
                    fragments = 0
                    jabbers = 0
                    collisions = 0
                    utilization = 0
```

// 4

-

-

5.9 show rmon statistics

show rmon statistics

-	-

14

-

1

```
Ruijie#show rmon statistics
ether statistic table:
                  index = 1
                  interface = GigabitEthernet 0/1
                  owner = admin
                  status = 0
                  dropEvents = 61
                  octets = 170647461
                  pkts = 580375
                  broadcastPkts = 2135
                  multiPkts = 3615
                  crcAlignErrors = 0
                  underSizePkts = 0
                  overSizePkts = 0
                  fragments = 0
                  jabbers = 0
                  collisions = 0
                  packets64Octets = 3254668
                  packets65To127Octets = 1833370
                  packets128To255Octets = 2098146
                  packets256To511Octets = 126716
                  packets512To1023Octets = 363621
                  packets1024To1518Octets = 1077865
```

6 File System

6.1 cd

cd [*filesystem*:] [*directory*]

filesystem:	url **flash:**, **tmp:**
directory	“ / ”

flash:

1

-

1 **cd** sata

```
Ruijie#pwd
flash:/
Ruijie#cd sata:
Ruijie#pwd
sata:/
```

cd **pwd**

-

-

-

6.2 copy

copy *src-url dst-url*

src-url	URL
dst-url	URL

-

1

URL

url

running-config	
startup-config	
flash:	f ash
tftp:	TFTP URL **tftp**:[[//location]/directory]**/filename**

1 192.168.64.2 netconfig flash netconfig netconfig

```
Ruijie#copy tftp://192.168.64.2/netconfig flash:/netconfig
Do you want to overwrite [/data/netconfig]? [Y/N Ý figB u¿22ad3 tcc
```

delete [*filesystem***:**] *file-url*

filesystem:	url **flash:**, **tmp:**
file-url	“ / ”

flash:

1

-

1 flash fstab

```
Ruijie#pwd
flash:/
Ruijie#dir
Directory of flash:/
1   -rw-        336   Jan 03 2012 18:53:42  fstab
2   -rw-       4096   Jan 03 2012 12:32:09  rc.d
3   -rw-   10485760   Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,192 bytes total (13,192,656 bytes free)
Ruijie#delete flash:/fstab
Do you want to delete [flash:/fstab]? [Y/N]:y
Delete success.
Ruijie#dir
Directory of flash:/
1   -rw-       4096   Jan 03 2012 12:32:09  rc.d
2   -rw-   10485760   Jan 03 2012 18:13:37  rpmdb
2 files, 0 directories
10,489,856 bytes total (13,192,992 bytes free)
```

delete **dir**

-

-

-

-

-

-

-

6.5 mkdir

mkdir [*filesystem*:] *directory*


```
# The <device> and <nametoaddr_libs> fields are always empty in this
# implementation.
#
udp        tpi_clts      v     inet     udp     -       -
tcp        tpi_cots_ord  v     inet     tcp     -       -
udp6       tpi_clts      v     inet6    udp     -       -
tcp6       tpi_cots_ord  v     inet6    tcp     -       -
rawip      tpi_raw       -     inet      -      -       -
local      tpi_cots_ord  -     loopback  -      -       -
```

-

-

-

-

6.7 pwd

pwd

```
10,490,192 bytes total (13,192,656 bytes free)
```

-

-

-

-

6.9 rmdir

rmdir [*filesystem***:**] *directory*

filesystem:	url **flash:**, **tmp:**
directory	

flash:

1

-

1 **rmdir** test

```
Ruijie#mkdir newdir
Ruijie#dir
Directory of flash:/
1   -rw-        336   Jan 03 2012 18:53:42  fstab
2   -rw-       4096   Jan 03 2012 12:32:09  rc.d
3   -rw-   10485760   Jan 03 2012 18:13:37  rpmdb
4   drw-       4096   Jan 03 2012 18:13:37  newdir
3 files, 1 directories
10,494,228 bytes total (13,188,560 bytes free)
Ruijie#rmdir newdir
removed dir flash:/newdir
Ruijie#dir
Directory of flash:/
```

```
1   -rw-        336   Jan 03 2012 18:53:42  fstab
2   -rw-       4096   Jan 03 2012 12:32:09  rc.d
3   -rw-   10485760   Jan 03 2012 18:13:37  rpmdb
3 files, 0 directories
10,490,132 bytes total (13,192,656 bytes free)
```

-

-

-

-

6.10 show file systems

show file systems

-	-

1

-

1

```
Ruijie#show file systems
  Size(KB)       Free(KB)    Type   Flags  Prefixes
        NA             NA     ram      rw  tmp:
        NA             NA  network     rw  tftp:
      8192           2416    disk      rw  flash:
 167772160      147772160    disk      rw  sata0:
   1048576         548576    disk      rw  usb0:
    262144         152144    disk      rw  sd0:
```

Size(KB)	KB
Free(KB)	KB

Type	
Flags	ro : wo: rw:
Prefixes	

-

-

6.11 show mount

show mount

-	-

1

-

1

```
Ruijie#show mount
/dev/sda1 on / type ext4 (rw,errors=remount-ro,commit=0)
proc on /proc type proc (rw,noexec,nosuid,nodev)
sysfs on /sys type sysfs (rw,noexec,nosuid,nodev)
fusectl on /sys/fs/fuse/connections type fusectl (rw)
none on /sys/kernel/debug type debugfs (rw)
none on /sys/kernel/security type securityfs (rw)
udev on /dev type devtmpfs (rw,mode=0755)
devpts on /dev/pts type devpts (rw,noexec,nosuid,gid=5,mode=0620)
tmpfs on /run type tmpfs (rw,noexec,nosuid,size=10%,mode=0755)
none on /run/lock type tmpfs (rw,noexec,nosuid,nodev,size=5242880)
none on /run/shm type tmpfs (rw,nosuid,nodev)
/dev/sda3 on /hao-share type ext3 (rw,commit=0)
binfmt_misc on /proc/sys/fs/binfmt_misc type binfmt_misc (rw,noexec,nosuid,nodev)
```

proc	
on	-
/proc	
type	-
proc	
(rw,noexec,nosuid,nodev)	

-

-

6.12 tree

tree [*filesystem*:] [*directory*]

filesystem:	url **flash:**, **tmp:**
directory	“ / ”

- **flash:**

1

-

1 flash:/echo

```
Ruijie#tree flash:/echo
+-- client_module
+-- client_userspace
+-- echo_cli.c
+-- echo_client.c
+-- echo_client.h
+-- echo_client.o
+-- echo_cli.o
+-- echo_flag.h
+-- echo.h
```

```
+-- echo.ko
+-- echo_server.h
+-- exec_set_echo.h
+-- exec_show_echo.h
+-- Makefile
+-- module
¦  +-- echo.ko
¦  +-- echo.mod.c
¦  +-- echo.mod.o
¦  +-- echo_module.c
¦  +-- echo_module.o
¦  +-- echo.o
¦  +-- echo_server.c
¦  +-- echo_server.o
¦  +-- echo_sysfs.c
¦  +-- echo_sysfs.h
¦  +-- echo_sysfs.o
¦  +-- Makefile
¦  +-- modules.order
¦  +-- Module.symvers
¦  +-- msg_fd.c
¦  +-- msg_fd.o
+-- readme
+-- server_module
+-- server_userspace
+-- sys_rgos.ko
+-- user_space
    +-- echo_server.c
    +-- echo_server.o
    +-- Makefile
    +-- msg_fd.c
    +-- msg_fd.o 10,490,132 bytes total (13,192,656 bytes free)
```

-

-

-

-

6.13 verify

md5

verify [**/md5** *md5-value*] *filesystem***:** [*file-url*]

/md5	MD5
md5-value	md5 md5
filesystem:	url **flash:**, **tmp:**
file-url	“ / ”

flash:

1

-

1 flash:/gcc md5

```
Ruijie#verify flash:/gcc
8b072de7db7affd8b2ef824e7e4d716c
```

2 flash:/gcc md5

```
Ruijie#verify /md5 8b072de7db7affd8b2ef824e7e4d716c flash:/gcc
%SUCCESS verifying flash:/gcc = 8b072de7db7affd8b2ef824e7e4d716c
Ruijie#verify /md5 8b072de7db7affd8b2ef824e7e4d71 flash:/gcc
%Error verifying flash:/gcc
Computed signature = 8b072de7db7affd8b2ef824e7e4d716c
Submitted signature = 8b072de7db7affd8b2ef824e7e4d71
```

-

-

-

-

6.14 show disk

usb flash

show disk [**usb** | **flash**]

usb	usb
flash	flash

1

1 usb

```
Ruijie#show disk usb
Disk /dev/sdb: 8159 MB, 8159477760 bytes
252 heads, 62 sectors/track, 1020 cylinders
Units = cylinders of 15624 * 512 = 7999488 bytes
```

2 flash

```
Ruijie#show disk flash
Nand flash size: 512MB
Nor flash size: 1MB
```

-

-

-

-

7 SNMP

7.1 clear snmp locked-ip

SNMP IP **clear snmp locked-ip**

clear snmp locked-ip [**ipv4** *ipv4-address* | **ipv6** *ipv6-address*]

ipv4 *ipv4-address*	IPv4
ipv6 *ipv6-address*	IPv6

14

SNMP IP IP

IP

IP IP SNMP

SNMP IP

```
Ruijie# clear snmp locked-ip
```

-

-

7.2 no snmp-server

SNMP

no snmp-server

-	-

SNMP

14

SNMP SNMP NMS

SNMP SNMP

enable service snmp-agent SNMP

SNMP

SNMP **show running-config**

SNMP ʊ eable servmp-agent ᴝ ɞ

```
Ruijie# show snmp
Chassis: 60FF60
0 SNMP packets input
```

-

-

-

-

7.5 snmp-server authentication attempt

SNMP **no**

snmp-server authentication attempt *times* **exceed** { **lock** | **lock-time** *minutes* | **unlock** }

no snmp-server authentication attempt *times* **exceed** { **lock** | **lock-time** *minutes* | **unlock** }

times	SNMP 1~10
exceed	SNMP
lock	IP
lock-time *minutes*	IP *minutes* IP 1 65535
unlock	

SNMP

14

SNMP SNMP IP

IP IP

IP IP

IP community SNMPv1 SNMPv2c

username SNMPv3

1 SNMP 4 4 30 :

```
Ruijie(config)# snmp-server authentication attempt 4 exceed lock-time 30
```

SNMP

IP log IP show snmp locked-ip

IP

-

-

-

7.6 snmp-server chassis-id

snmp-server chassis-id *text*

no snmp-server chassis-id

text	

60FF60

14

SNMP **show snmp**

1 SNMP 123456

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

-

-

-

-

-

-

7.8 snmp-server contact

snmp-server contact *text*

no snmp-server contact

text	

14

-

1 SNMP i-net800@i-net.com.cn

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

-

-

-

-

7.9 snmp-server enable secret-dictionary-check

community user

snmp-server enable secret-dictionary-check

community user

no snmp-server enable secret-dictionary-check

-	-

community user

count	SNMP <50-65535>

count 150

14

-

1 200 SNMP

```
Ruijie(config)# snmp-server flow-control pps 200
```

-

-

-

-

7.12 snmp-server group

SNMP

snmp-server group *groupname* { **v1** | **v2c** | **v3** { **auth** | **noauth** | **priv** } } [**read** *readview*] [**write** *writeview*] [**access** { **ipv6** *ipv6-aclname* | *aclnum* | *aclname* }]

no snmp-server group *groupname* { **v1** | **v2c** | **v3** {**auth** | **noauth** | **priv**} }

v1 | **v2c** |**v3**	SNMP
auth	v3
noauth	v3
priv	v3
readview	
writeview	
aclnum	MIB ipv4 NMS

-

1 trap

```
Ruijie(config)# no snmp-server heartbeat on
```

-

-

-

-

7.14 snmp-server heartbeat period

Trap

snmp-server heartbeat period *seconds*

trap

no snmp-server heartbeat period

seconds	Trap <60~3000>

seconds 300s

14

-

1 trap 60s

```
Ruijie(config)# snmp-server heartbeat period 60
```

-

-

-

-

7.15 snmp-server host

Agent NMS

snmp-server host { *host-addr* | **ipv6** *ipv6-addr* } [**traps | informs**] [**version** { **1** | **2c** | **3** { **auth** | **noauth** | **priv** }] *community-string* [**udp-port** *port-num*] [*notification-type*]

SNMP

no snmp-server host { *host-addr* | **ipv6** *ipv6-addr* } [**traps | informs**] [**version** { **1** | **2c** | **3** { **auth** | **noauth** | **priv** }] *community-string* [**udp-port** *port-num*]

host-addr	SNMP
ipv6-addr	SNMP ipv6
traps | informs	trap inform
version	snmp V1 V2C V3
auth | **noauth** | **priv**	V3
community-string	V3
port-num	snmp
notification-type	Trap snmp ● Trap Trap

SNMP

14

snmp-server enable traps NMS Trap

SNMP Trap Trap

-

-

-

7.16 snmp-server inform

inform

snmp-server inform [retries *retry-num* | timeout *time*]

inform

no snmp-server inform

retry-num	Inform	<0-255>
time	Inform	<0-21474836>

retry-num *3* *time* *15s*

14

-

1 inform 5

```
Ruijie(config)# snmp-server inform retries 5
```

1 inform 20s

```
Ruijie(config)# snmp-server inform timeout 20
```

-

-

-

-

set-operation	SET

SNMP

14

NMS SNMP Agent GET GET-NEXT SET GET GET-NEXT Agent NMS IP OID SET Agent NMS IP OID

SNMP

1 get set

```
ruijie(config)#snmp-server logging get-operation
ruijie(config)#snmp-server logging set-operation
```

NMS sysname .1.3.6.1.2.1.1.5.0 GET GET-NEXT SET

```
ruijie#*Feb  7 15:31:16: %SNMP-6-GET_OPER: NMS source-ip(13.12.11.7) operation(GET)
object(id=1.3.6.1.2.1.1.5.0)

ruijie#*Feb  7 15:32:16:%SNMP-6-GETN_OPER: NMS source-ip(13.12.11.7) operation(GET-NEXT)
object(id=1.3.6.1.2.1.1.5.0)

ruijie#*Feb  7 15:33:23: %SNMP-6-SET_OPER: NMS source-ip(13.12.11.7) operation(SET)
object(id=1.3.6.1.2.1.1.5.0, value=ruijie)
```

2 get set

```
ruijie(config)#no snmp-server logging get-operation
ruijie(config)#no snmp-server logging set-operation
```

-

-

-

-

7.19 snmp-server net-id

snmp-server net-id *text*

no snmp-server net-id

byte-count	484 17876

1472

14

-

1 SNMP 1492

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

-

-

-

-

7.21 snmp-server queue-length

Trap

snmp-server queue-length *length*

no snmp-server queue-length

length	1 1000 100

100

14

4

1 Trap 4

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

-

-

-

-

7.22 snmp-server system-shutdown

SNMP

snmp-server system-shutdown

SNMP

no snmp-server system-shutdown

-	-

SNMP

14

SNMP RGOS **reload/reboot** NMS Trap

1 SNMP

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

-

-

-

-

7.23 snmp-server trap-format private

SNMP Trap

snmp-server trap-format private

no snmp-server trap-format private

-	-

14

Trap

RUIJIE-TRAP-FORMAT-MIB.mib

SNMP v1 Trap

1 Trap

```
Ruijie(config)# snmp-server trap-format private
```

-

-

-

-

7.24 snmp-server trap-source

Trap

snmp-server trap-source *interface*

no snmp-server trap-source

interface	SNMP

SNMP IP

14

SNMP IP
IP SNMP

1 0/1 IP Trap

```
Ruijie(config)# snmp-server trap-source fastethernet 0/1
```

-

-

-

-

7.25 snmp-server trap-timeout

Trap

snmp-server trap-timeout *seconds*

no snmp-server trap-timeout

seconds	1 – 1000

30

14

-

1 Trap 60

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

-

-

-

-

7.26 snmp-server udp-port

SNMP

snmp-server udp-port *port-num*

no snmp-server udp-port

	SNMP					

-

7.27 snmp-server user

SNMP

snmp-server user *username groupname* {**v1** | **v2c** | **v3** [**encrypted**] [**auth** {**md5** | **sha**} *auth-password*] [**priv des56** *priv-password*]} [**access** {**ipv6** *ipv6-aclname* | *aclnum* | *aclname*}]

SNMP

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

username	
groupname	
v1 | **v2c** | **v3**	SNMP v3
encrypted	16 MD5 16 SHA 20
auth	
md5	MD5 **sha** SHA
auth-password	32
priv	**des56** 56 DES
priv-password	32
aclnum	MIB ipv4 NMS
aclname	MIB ipv4 NMS
Ipv6-aclname	ipv6 MIB ipv6 NMS

14

-

1 SNMPv3 MD5 DES

```
Ruijie(config)# snmp-server user user-2 mib2user v3 auth md5 authpassstr priv des56 despassstr
```

-

-

-

-

7.28 snmp-server view

SNMP

snmp-server view *view-name oid-tree* {**include** | **exclude**}

SNMP

no snmp-server view *view-name* [*oid-tree*]

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

default MIB

14

-

1 MIB-2 oid 1.3.6.1

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

-

-

-

-

8 HTTP

8.1 enable service web-server

HTTP

enable service web-server [**http** | **https** | **all**]

HTTP

{ no | **default } enable service web-server** [**http** | **https** | **all**]

http server status	HTTP
http server port	HTTP
https server status	HTTPS
https server port	HTTPS

-

-

8.5 upgrade web

WEB WEB

upgrade web *uri*

uri	*uri* WEB WEB

-

14

WEB **copy** WEB

1 copy web

```
Ruijie#copy tftp://192.168.23.24/web.upd flash:/web.upd
Ruijie#upgrade web flash:/web.upd
```

-

1 cli

```
The filename format is invalid, please input correct filename.
```

2

```
Get usb prefix path failed.
```

3

```
The file [/data/xxxx] do not exist.
```

4 WEB

```
Web package format invalid.
```

5 WEB

```
Web package version uncompatible.
```

6

```
Web package install fail for have no enough memory.
```

7

```
Web package upgrade successfully.
```

-

-

8.6 upgrade web download

tftp WEB

Upgrade web download tftp: */path*

tftp: *path*	*path* tftp WEB WEB

-

14

tftp server WEB

1 tftp WEB

```
Ruijie#upgrade web download tftp://192.168.23.24/web.upd
```

-

1 cli

```
The filename format is invalid, please input correct filename.
```

2

```
Open tftp://192.168.23.24/web.upd failed...
```

3 WEB

```
Web package format invalid.
```

4 WEB

```
Web package version uncompatible.
```

5

```
Web package install fail for have no enough memory.
```

6

```
Web package upgrade successfully.
```

-

-

8.7 webmaster level

Web

webmaster level *privilege-level* **username** *name* **password** { *password* | [**0 | 7**] *encrypted-password* }

no webmaster level *privilege-level* [**username** *name*]

privilege-level	
name	
password	
0 | 7	0 7 0
encrypted-password	

0 admin

2 guest guest

14

¶ B % ”

Web 0 ruijie admin

```
Ruijie(config)# webmaster level 0 username ruijie password admin
```

-

1 admin guest

```
%notice: Cannot cancel the default user configure!
```

2 10

```
%notice: configure webmaster level %d server reached max 10, add failed.
```

3 32

```
%notice: Username too long. Please enter less than 32 characters.
```

-

-

8.8 web-server http redirect-to-https

HTTP HTTPS

web-server http redirect-to-https

no web-server http redirect-to-https

-	-

HTTP HTTPS

14

HTTP HTTPS HTTP Web

HTTPS

no web-server http redirect-to-https **default web-server http redirect-to-https** HTTP

HTTPS

HTTP HTTPS HTTP HTTPS

no web-server https certificate HTTPS HTTPS

running-config

HTTPS Web

Web

flash: usercert.pfx, 123456

```
Ruijie#configure terminal
Ruijie(config)# web-server https certificate pfx usercert.pfx password 123456
*Feb 28 14:38:37: %HTTPD-4-CERT_CHANGE: HTTPS certificate changed.
% The certificate was successfully installed.
```

show web-server https certificate information HTTPS

1

```
% The certificate was successfully installed.
```

2 64

```
% Operation failed: filename too long, should be less than 64 bytes.
```

3

```
% Operation failed: certificate does not matched with private key.
```

4

```
% Operation failed: certificate file not found or is empty.
```

5

```
% Operation failed: private key file not found or is empty.
```

6

```
% Operation failed: please input correct password.
```

7

```
% Operation failed: verify file failed.
```

8

```
% Operation failed: no certificate installed.
```

9

```
% The installed certificate was successfully deleted.
```

-

-

8.10 web-server https generate self-signed-certificate

HTTPS

	4K 128K Bytes

-

9.4 logging console

logging console [*level*]

no logging console

1

-

-

-

9.5 logging count

logging count oxKyTÊtMqÈb6-o-

no logging count

-	-

14

logging delay-send file flash:*filename*

no logging delay-send file

9.7 logging delay-send interval

logging delay-send interval *seconds*

no logging delay-send interval

seconds	

3600 1

14

600 ~ 65535

1 600 1

```
Ruijie(config)# logging delay-send interval 600
```

1 **show logging**

-

-

-

9.8 logging delay-send server

logging delay-send server {*ip-address* | **ipv6** *ipv6-address* } **mode** { **ftp user** *username* **password** [**0** | **7**] *password* | **tftp** }

no

ip-address	IP
ipv6 *ipv6-address*	IPV6
username	ftp
password	ftp
0	*password*
7	*password*

FTP TFTP Server

14

FTP TFTP Server 5 FTP TFTP Server FTP TFTP FTP TFTP Server

1 192.168.23.12 admin admin FTP Server

```
Ruijie(config)# logging delay-send server 192.168.23.12 mode ftp user admin password admin
```

2 IPV6 2000::1 TFTP Server

```
Ruijie(config)# logging delay-send server ipv6 2000::1 mode tftp
```

1 **show logging**

-

-

-

9.9 logging delay-send terminal

logging delay-send terminal

no logging delay-send terminal

-	-

14

1

```
Ruijie(config)# logging delay-send terminal
```

1 **show logging**

-

-

-

9.10 logging facility

logging facility *facility-type*

Syslog

Numerical Code	Facility
0 (kern)	Kernel messages
1 (user)	User-level messages
2 (mail)	Mail system
3 (daemon)	System daemons
4 (auth1)	security/authorization message
5 (syslog)	Messages generated internally by syslogd
6 (lpr)	Line printer system
7 (news)	USENET news
8 (uucp)	Unix-to-Unix copy system
9 (clock1)	Clock daemon
10 (auth2)	security/authorization message
11 (ftp)	FTP daemon
12 (ntp)	NTP daemon
13 (logaudit)	Log audit
14 (logalert)	

9.11 logging file

FLASH

logging file flash:*filename* [*max-file-size*] [

1 FLASH syslog.txt 128K 6

```
Ruijie(config)# logging file flash:syslog
```

1 **show logging** FLASH

1 20 21

```
%Error: The file length must not be longer then 20, Current file length 21.
```

-

-

9.12 logging file numbers

FLASH

logging file numbers *numbers*

no logging file numbers

numbers	2~16

16

14

no logging file numbers

16

FLASH

tftp # # ﺳﻪ

1 **show run**

-

-

-

9.13 logging flash flush

FLASH

logging flash flush

-	-

-

14

FLASH

FLASH

FLASH

▲ **logging flash flush**

FLASH

1 FLASH

```
Ruijie(config)# logging flash flush
```

1 **dir** FLASH

-

-

-

9.14 logging flash interval

FLASH

logging flash interval *seconds*

FLASH

no logging flash interval

interval *seconds*	FLASH 1~51840

FLASH 3600s 1

14

FLASH no logging flash interval FLASH 3600s

▲ FALSH

1 FLASH 5 300s

```
Ruijie(config)# logging flash interval 300
```

1 **show logging**

-

-

-

9.15 logging filter direction

logging filter direction { **all** | **buffer** | **file** | **server** | **terminal** }

no logging filter direction { **all** | **buffer** | **file** | **server** | **terminal** }

all	Console VTY
buffer	show logging
file	
server	
terminal	VTY Telnet/SSH

all

14

Console VTY

terminal

1 **terminal** console VTY

```
Ruijie(config)# logging filter direction terminal
```

-

-

-

-

9.16 logging filter type

logging filter type { **contains-only** | **filter-only** }

no logging filter type

contains-only	“ ”
filter-only	“ ”

“ ”

14

1.

“ ”

2. “ ”

1 “ ”

```
Ruijie(config)# logging filter type contains-only
```

-

-

-

-

9.17 logging filter rule

logging filter rule { **exact-match module** *module-name* **mnemonic** *mnemonic-name* **level** *level* | **single-match** [**level** *level* | **mnemonic** *mnemonic-name* | **module** *module-name*] }

“ ”

no logging filter rule exact-match [**module** *module-name* **mnemonic** *mnemonic-name* **level** *level*]

“ ”

no logging filter rule single-match [**level** *level* |

9.18 logging life-time

FLASH

logging life-time level *level days*

no logging life-time level *level*

level	
days	

14

FLASH

FLASH syslog/

1 6 10

```
Ruijie(config)# logging life-time level 6 10
```

-

-

-

-

9.19 logging monitor

VTY Telnet SSH

logging monitor [*level*]

VTY

no logging monitor

level	

VTY 7 Debugging

14

VTY **terminal monitor** VTY

logging monitor VTY

8

Emergencies	0	
Alerts	1	
Critical	2	
Errors	3	
Warnings	4	
Notifications	5	
Informational	6	
Debugging	7	

1 VTY 6

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

-

-

-

-

9.20 logging on

module-name	
not-lesser-than	
level	
all	
server	
file	
console	
monitor	
buffer	

14

1 SYS 5 3

```
Ruijie(config)# logging policy module SYS not-lesser-than 5 direction console
Ruijie(config)# logging policy module SYS 3 direction buffer
```

-

-

-

-

9.22 logging rate-limit

logging rate-limit { *number* | **all** *number* | **console** { *number* | **all** *number* } } [**except** [*severity*]]

no logging rate-limit

number	1~10000
all	0~7
console	
except	error(3) error
severity	0~7

14

1 debug 10 warning

```
Ruijie(config)#logging rate-limit all 10 except warnings
```

-

-

-

-

9.23 logging server

Syslog Server

ip-address	IP
ipv6-address	IPV6
udp-port *port*	514

Syslog Server

14

Syslog server 5 Syslog Server
Syslog Server

1 202.101.11.1 syslog server

```
Ruijie(config)# logging server 202.101.11.1
```

2 10.1.1.100 8099 syslog server

```
Ruijie(config)# logging server 202.101.11.1 udp-port 8099
```

3 IPV6 AAAA:BBBB::FFFF

```
Ruijie(config)# logging server ipv6 AAAA:BBBB::FFFF
```

1 **show logging**

1 Syslog Server 5

```
%%Warning: Can not configure more than 5 syslog servers!
```

-

-

9.24 logging source interface

logging source [**interface**] *interface-type interface-number*

no logging source [**interface**]

interface-type	
interface-number	

14

Syslog Server IP IP
IP IP
IP IP
IP

1 Loopback 0 Syslog

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

-

-

-

-

9.25 logging source ip | ipv6

IP

logging source { **ip** *ip-address* | **ipv6** *ipv6-address* }

IP

no logging source { **ip** | **ipv6** }

ip-address	IPV4	IPV4
ipv6-address	IPV6	IPV6

14

Syslog Server IP IP
IP IP
IP IP IP

1 192.168.1.1 Syslog

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

-

-

-

-

9.26 logging statistic enable

logging statistic enable

no logging statistic enable

-	-

14

1

```
Ruijie(config)# logging statistic enable
```

1 **show logging**

-

-

-

9.27 logging statistic interval

logging statistic mnemonic *mnemonic* **interval** *minutes*

no logging statistic mnemonic *mnemonic*

mnemonic	
minutes	

15

14

0 15 30 60 120 0

1 TUNNEL_STAT 30

```
Ruijie(config)# logging statistic mnemonic TUNNEL_STAT interval 30
```

9.28 logging statistic terminal

logging statistic terminal

no logging statistic terminal

-	-

14

1

```
Ruijie(config)# logging statistic terminal
```

1 **show logging**

-

-

-

9.29 logging synchronous

logging synchronous

no logging synchronous

-	-

14

UP-DOWN

```
Ruijie# configure terminal
Oct  9 23:40:55 %LINK-5-CHANGED: Interface GigabitEthernet 0/1, changed state to down
Oct  9 23:40:55 %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet 0/1, changed state
to DOWN
Ruijie# configure terminal          //
```

1

```
Ruijie(config)#line console 0
Ruijie(config-line)#logging synchronous
```

-

-

-

-

9.30 logging trap

Syslog Server

logging trap [*level*]

Syslog Server

no logging trap

level	

6 Informational

/ Log

14

/ Log Log

```
Mar 22 14:05:45 %LOGIN-5-LOGIN_SUCCESS: User login from vty0 (192.168.23.68) OK.
```

```
Mar 22 14:10:40 %CLI-5-EXEC_CMD: Configured from vty0 (192.168.23.68) command-log: logging server 192.168.23.68.
```

1 Log

```
Ruijie(config)# logging user-info command-log
```

-

-

-

-

9.33 service log-format rfc5424

RFC5424

service log-format rfc5424

no service log-format rfc5424

-	-

RFC3164

14

RFC5424 **service sequence-numbers** **service sysname** **service timestamps** **service private-syslog** **service standard-syslog**

RFC5424 **logging delay-send** **logging policy** **logging statistic**

show logging

-

-

-

-

9.34 service private-syslog

1 **show logging**

-

-

-

9.35 service sequence-numbers

service sequence-numbers

no service sequence-numbers

9.36 service standard-syslog

RFC3164

service standard-syslog

RFC3164

no service standard-syslog

-	-

14

*timestamp: %facility-severity-mnemonic: description

* : % - - :

9.37 service sysname

service sysname

no service sysname

no service timestamps [**message-type**]

default service timestamps [**message-type**]

message-type	log debug log 0 6 debug 7
uptime	* * * * 07:00:10:41
datetime	Jul 27 16:53:07
msec	: : . Jul 27 16:53:07.299
year	2007 Jul 27 16:53:07

RTC

14

Uptime Datetime

1 Log Debug Datetime

```
Ruijie(config)# service timestamps debug datetime msec
Ruijie(config)# service timestamps log datetime msec
Ruijie(config)# end
Oct 8 23:04:58.301 %SYS-5-CONFIG_I: Configured from console by console
```

1 **show logging**

-

-

-

9.39 show logging

show logging

-	-

1

-

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Standard format	
Timestamp debug messages	Debug
Timestamp log messages	Log
Sequence-number log messages	
Sysname log messages	
Count log messages	
Trap logging	Syslog Server
Log Buffer	

2 RFC5424 **show logging**

```
Ruijie# show logging
Syslog logging: enabled
  Console logging: level debugging, 4740 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 4745 messages logged
  Statistic log messages: disable
  Statistic log messages to terminal: disable
  Delay-send file name:syslog_ftp_server, Current write index:3, Current send index:3, Cycle:10 seconds
```

```
<134>1 2013-07-24T12:29:33.410123Z ruijie SYS 6 SHELL_LOGIN [USER@4881 name="" type="" from="console"] user login success.
<134>1 2013-07-24T12:29:34.343763Z ruijie SYS 6 SHELL_CMD [USER@4881 name=""][CMD@4881 task="rl_con" cmd="enable"]
```

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Count log messages	
Statistic log messages	
Statistic log messages to terminal	
Delay-send file name	
Trap logging	Syslog Server
Delay-send logging	
Log Buffer	

-

-

9.40 show logging config

show logging config

-	-

1

-

1 RFC5424 **show logging config**

```
Ruijie# show logging config
Syslog logging: enabled
  Console logging: level debugging, 15495 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 15496 messages logged
  Standard format: false
  Timestamp debug messages: datetime
  Timestamp log messages: datetime
  Sequence-number log messages: enable
  Sysname log messages: enable
  Count log messages: enable
  Trap logging: level informational, 15242 message lines logged,0 fail
    logging to  202.101.11.22
    logging to  192.168.200.112
```

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Standard format	
Timestamp debug messages	Debug
Timestamp log messages	Log
Sequence-number log messages	
Sysname log messages	
Count log messages	
Trap logging	Syslog Server

2 RFC5424 **show logging config**

```
Ruijie# show logging
Syslog logging: enabled
  Console logging: level debugging, 4740 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 4745 messages logged
  Statistic log messages: disable
  Statistic log messages to terminal: disable
  Delay-send file name:syslog_ftp_server, Current write index:3, Current send index:3, Cycle:10
seconds
```

```
Count log messages: enable
Trap logging: level informational, 2641 message lines logged,4155 fail
  logging to  192.168.23.89
  logging to  2000::1
Delay-send logging: 2641 message lines logged
  logging to  192.168.23.89  by tftp
```

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Count log messages	
Statistic log messages	
Statistic log messages to terminal	
Delay-send file name	
Trap logging	Syslog Server
Delay-send logging	

-

-

9.41 show logging count

show logging count

-	-

1

logging count

show logging count

1 **show logging count**

```
Ruijie# show logging count
Module Name   Message Name Sev Occur      Last Time
=====================================================SYS           CONFIG_I         5   1
Jul 6 10:29:57
-----------------------------------------SYS       TOTAL      1
```

Module Name	
Message Name	
Sev	
Occur	logging count
Last Time	

-

-

9.42 show logging reverse

show logging reverse

-	-

1

-

1 RFC5424 **show logging reverse**

```
Ruijie# show logging reverse
Syslog logging: enabled
  Console logging: level debugging, 15495 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 15496 messages logged
  Standard format: false
```

```
  Timestamp debug messages: datetime
  Timestamp log messages: datetime
  Sequence-number log messages: enable
  Sysname log messages: enable
  Count log messages: enable
  Trap logging: level informational, 15242 message lines logged,0 fail
    logging to  202.101.11.22
    logging to  192.168.200.112
Log Buffer (Total 131072 Bytes): have written 1336,
015492: *Sep 19 02:46:28: Ruijie %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet 0/24,
changed state to up.
015491: *Sep 19 02:46:28: Ruijie %LINK-3-UPDOWN: Interface FastEthernet 0/24, changed state to up.
015490: *Sep 19 02:46:26: Ruijie %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet 0/24,
changed state to down.
015489: *Sep 19 02:46:26: Ruijie %LINK-3-UPDOWN: Interface FastEthernet 0/24, changed state to down.
015488: *Sep 19 02:46:13: Ruijie %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet 0/24,
changed state to up.
015487: *Sep 19 02:46:13: Ruijie %LINK-3-UPDOWN: Interface FastEthernet 0/24, changed state to up.
```

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Standard format	
Timestamp debug messages	Debug
Timestamp log messages	Log
Sequence-number log messages	
Sysname log messages	
Count log messages	
Trap logging	Syslog Server
Log Buffer	

2 RFC5424 **show logging reverse**

```
Ruijie# show logging reverse
Syslog logging: enabled
  Console logging: level debugging, 4740 messages logged
  Monitor logging: level debugging, 0 messages logged
  Buffer logging: level debugging, 4745 messages logged
```

```
  Statistic log messages: disable
  Statistic log messages to terminal: disable
  Delay-send file name:syslog_ftp_server, Current write index:3, Current send index:3, Cycle:10 seconds
  Count log messages: enable
  Trap logging: level informational, 2641 message lines logged,4155 fail
    logging to  192.168.23.89
    logging to  2000::1
  Delay-send logging: 2641 message lines logged
    logging to  192.168.23.89  by tftp
Log Buffer (Total 4096 Bytes): have written 4096, Overwritten 3292
<134>1 2013-07-24T12:29:34.343763Z ruijie SYS 6 SHELL_CMD [USER@4881 name=""][CMD@4881 task="rl_con" cmd="enable"]
<134>1 2013-07-24T12:29:33.410123Z ruijie SYS 6 SHELL_LOGIN [USER@4881 name="" type="" from="console"] user login success.
<132>1 2013-07-24T12:20:32.250265Z ruijie CAPWAP 4 NO_IP_ADDR - No ip address for capwap.
<135>1 2013-07-24T12:20:02.80343Z ruijie - 7 - - Please config the IP address for capwap.
<132>1 2013-07-24T12:20:02.80313Z ruijie CAPWAP 4 NO_IP_ADDR - No ip address for capwap.
<135>1 2013-07-24T12:19:33.130290Z ruijie - 7 - - Please config the IP address for capwap.
```

Syslog logging	enabled, disabled
Console logging	
Monitor logging	VTY
Buffer logging	
Count log messages	
Statistic log messages	
Statistic log messages to terminal	
Delay-send file name	
Trap logging	Syslog Server
Delay-send logging	
Log Buffer	

-

-

9.43 terminal monitor

VTY

terminal monitor

VTY

terminal no monitor

-	-

VTY

14

VTY VTY

1 VTY

```
Ruijie# terminal monitor
```

-

-

-

-

10 CWMP

10.1 acs password

CPE ACS

acs password {*password* | *encryption-type encrypted-password*}

no acs password

password	CPE ACS
encryption-type	0 7 0 7
encrypted-password	

encryption-type 0 encrypted-password

cwmp

1

CPE ACS

1 CPE ACS “ 123 ”

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#acs password 123
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

1: 254

```
%%Error: Invalid Encrypted Password
```

2: 100, .

```
%%Error: The Length of ACS's Password is Too Long
```

3: ,

```
%%Error: Password String Include Invalid Characters!
```

254

100

-

10.2 acs url

CPE ACS URL

S

1 ACS URL NULL

```
input acs attribute parameter is null
```

ACS URL

ACS URL 256

-

10.3 acs username

CPE ACS

acs username *username*

no acs username

- *username*	CPE ACS

cwmp

1

CPE ACS

1 CPE ACS “ admin ”

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#acs username admin
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

1 NULL

```
input acs attribute parameter is null
```

-

-

10.4 cpe back-up

CPE /

cpe back-up [**delay-time** *seconds*]

CPE /

no cpe back-up

seconds	CPE / 30~10000

60

cwmp

1

CPE / CPE / ACS

ACS CPE

1 CPE /

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#no cpe back-up
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

-

-

-

10.5 cpe inform

CPE INFORM

cpe inform [**interval** *seconds*] [**starttime** *time*]

no cpe inform

seconds	CPE INFORM 30 3600
time	INFORM yyyy-mm-ddThh:mm:ss

600

cwmp

1

CPE INFORM

INFORM INFORM INFORM

INFORM INFORM INFORM

60 12 INFORM 12

60 INFORM

INF2RM F å F å

10.6 cpe password

ACS CPE , no

cpe password {*password* **|** *encryption-type encrypted-password***}**

no cpe password

254

100

0~9 a~f A~F

-

10.7 cpe url

ACS CPE URL

cpe url *url*

no cpe url

url	CPE URL

cwmp

-

1

ACS CPE URL CPE ACS URL CPE URL CPE URL

CPE URL http://ip [: port]/ ”

CPE URL 256

1 ACS CPE URL “ http://10.10.10.1:7547/ ”

```
Ruijie#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#cpe url http://10.10.10.1:7547/
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

1 CPE URL NULL

```
input CPE attribute parameter is null
```

CPE URL

CPE URL 256

-

10.8 cpe username

ACS CPE

cpe username *username*

no cpe username

username	ACS CPE

cwmp

-

1

ACS CPE

1 ACS CPE “ admin ”

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#cpe username admin
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

1 NULL

```
input acs attribute parameter is null
```

-

-

10.9 cwmp

/ CWMP

cwmp

CWMP

no cwmp

1

cwmp

1

CPE **no disable download**

ACS

disable

1 ACS

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#disable download
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

-

-

-

10.11 disable upload

ACS

disable upload

no disable upload

1 ACS

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#cwmp
Ruijie(config-cwmp)#disable upload
Ruijie(config-cwmp)#
```

CPE **show cwmp configuration**

-

-

-

10.12 show cwmp configuration

CWMP

show cwmp configuration

1

1 CWMP

```
Ruijie(config-cwmp)#show cwmp configuration
CWMP Status                    : enable
ACS URL                        : http://www.ruijie.com.cn/acs
ACS username                   : admin
ACS password                   : ******
CPE URL                        : http://10.10.10.2:7547/
CPE username                   : ruijie
CPE password                   : ******
CPE inform status              : disable
CPE inform interval            : 60s
```

```
CPE inform start time          : 0:0:0 0 0 0
CPE wait timeout               : 50s
CPE download status            : enable
CPE upload status              : enable
CPE back up status             : enable
CPE back up delay time         : 60s
```

CWMP Status	CWMP
ACS URL	CPE ACS URL
ACS username	CPE ACS
ACS password	CPE ACS
CPE URL	ACS CPE URL
CPE username	ACS CPE
CPE password	ACS CPE
CPE inform status	CPE INFORM
CPE inform interval	CPE INFORM
CPE wait timeout	CPE
CPE inform start time	CPE INFORM
CPE download status	ACS
CPE upload status	ACS
CPE back up status	/
CPE back up delay time	/

-

-

10.13 show cwmp status

CWMP

show cwmp status

1

-

1 CWMP

```
Ruijie(config-cwmp)#show cwmp status
CWMP Status                    : enable
Session status                 : Close
Last success session           : Unknown
Last success session time      : Thu Jan  1 00:00:00 1970
Last fail session              : Unknown
Last fail session time         : Thu Jan  1 00:00:00 1970
Session retry times            : 0
```

CWMP Status	CWMP
Session status	CPE ACS
Last success session	
Last success session time	
Last fail session	
Last fail session time	
Session retry times	

-

-

10.14 timer cpe-timeout

ACS CPE

timer cpe- timeout *seconds*

no timer cpe-timeout

seconds	5 600

cwmp

5

1

11 LED

11.1 led on

AP

led on [**slot** *slot-id* [**secondary**]]

-

11.2 quiet-mode session

LED

quiet-mode session *session-num*

LED

no quiet-mode session *session-num*

session-num	Session id

AP

14

AP LED

1 LED 23:00 7:00

```
Ruijie(config)#schedule session 1
Ruijie(config)#schedule session 1 time-range 1 period Mon time 23:00 to 7:00
Ruijie(config)#ap-config 00d0.f822.33bc
Ruijie(config-ap)#quiet-mode session 1
```

2 LED

```
Ruijie(config)#ap-config 00d0.f822.33bc
Ruijie(config-ap)#no quiet-mode session 1
```

LED

-

Session id

```
Ruijie(config-ap)#quiet-mode session 1
```

```
invalid session!
```

-

11.3 super-light

SuperLight LED

super-light enable

SuperLight LED

no super-light

enable	SuperLight LED

AP AP config

14

AP SuperLight LED

AC

1 superlight led

```
Ruijie(config)#ap-config ap830-i
Ruijie(config-ap)#super-light enable
```

2 superlight led

```
Ruijie(config)#ap-config ap830-i
Ruijie(config-ap)#no super-light
```

AP

1 superlight led

```
Ruijie(config)#super-light enable
```

2 superlight led

```
Ruijie(config)#no super-light
```

Show run

-

-

AC/AP SuperLight LED AP AP830-I

Size	U
Available size	U

2 U HUB HUB USB USB

```
Ruijie# show usb
```

2

USB

USB

1 USB

```
Ruijie# usb remove 0
OK, now you can pull out the device 0.
```

USB

show usb usb show usb usb

1.

```
OK, now you can pull out the device 0
```

2.

```
Device is busy now, try again few minutes later.
```

Device is busy now, try again few minutes later.

cd usb0:/ usb remove 0 cd flash:/

flash usb remove 0

-

13 PKG_MGMT

13.1 show component

show component [*component _name*]

component _name	

2

component_name

show component

show component

show component

1

```
Ruijie# show component
Package   :sysmonit
     Version:1.0.1.23cd34aa      Build time: Wed Dec  7 00:58:56 2013
     Size:12877    Install time :Wed  Mar 5 14:23:12 2012
     Description: this is a system monit package
     Required packages: None
-------------------------------------------------------------------
Package:bridge
     Version:2.0.1.37cd5cda      Build time: Wed Dec  7 00:54:56 2013
     Size:23245    Install time :Wed  Mar 5 14:30:12 2012
```

```
    Description: this is a bridge package
    Required packages: None
-------------------------------------------------------------------
```

Package	
Version	
Build time	
Size	
Install time	
Description	
Required packages	

2

```
Ruijie#show component slot 8
Ruijie#*
[Slot 8]:
Package : utils-system
     Version: 1.0.0.433ef8d         Build time: Sun May 19 19:22:54 2013
     Size: 823936   Install time: Sun May 19 19:27:04 2013
     Description: utils system compile
     Required packages: None
-----------------------------------
Package : tcl-expect
     Version: 1.0.0.433ef8d         Build time: Sun May 19 19:19:18 2013
     Size: 3474153          Install time: Sun May 19 19:27:04 2013
     Description: tcl & expect packages
     Required packages: None
-----------------------------------
```

3

```
Ruijie# show component bridge
package:bridge
     Version: 2.3.1.1252ea       Build time: Wed Dec  7 00:54:56 2013
     Size:26945    Install time : Wed Mar 19:23:15 2012
     Description:this is a bridge package
     Required packages: None
     Package files:
        /lib64
        /lib64/libbridge.so
```

```
    /sbin
    /sbin/bridge

Package file validate: [OK]
Required relationship verify: [OK]
```

Package file validate	[OK] [ERR]

Required package

2

1

```
Ruijie# show upgrade file flash://bridge_eg1000m_2.3.1.1252ea-1.mips.rpm
Name : bridge
Version:1.0.1.23cd34aa
Package type      : common component
Support target    : eg1000m
Size              : 26945
Build time        : Wed Dec  7 00:54:56 2013
Install date      : (not installed)
Description       : this is a bridge package
Package files :
    Package files:
        /lib64
        /lib64/libbridge.so
        /sbin
        /sbin/bridge
```

Name	
Version	
Package type	
Support target	
Size	
Build time	
Install date	
Description	
Package files	

```
Name : bridge
Version:1.0.1.23cd34aa
```

```
Package type      : common component
Support target    : eg1000m
Size              : 26945
Build time        : Wed Dec  7 00:54:56 2013
Install date      : (not installed)
Description       : this is a bridge package
Package files :
    Package files:
        /lib64
        /lib64/libbridge.so
        /sbin
        /sbin/bridge
```

-

13.3 upgrade

upgrade*url* [**force**]

url	*url*
force	**force**

2

copy

1 main

```
Ruijie#upgrade usb0:/eg1000m_main_1.0.0.0f328e91.bin
 Upgrade processing is 10%
 Upgrade processing is 60%
 Upgrade processing is 90%
 Upgrade info [OK]
```

```
    Kernel version[2.6.32.91f9d21->2.6.32.9f8b56f]
    Rootfs version[1.0.0.2ad02537->1.0.0.1bcc12e8]
Upgrade processing is 100%
Reload system to take effect!
```

2

```
Ruijie# upgrade usb0:/ca-octeon_11.0(1B2)_20131106_main_install.bin
[Slot M1]:Upgrade processing is 10%

 [Slot 1]:Upgrade processing is 10%

 [Slot M1]:Upgrade processing is 60%

 [Slot 1]:Upgrade processing is 60%

 [Slot M1]:Upgrade processing is 90%

 [Slot M1]:
 Upgrade info [OK]
   Kernel version[2.6.32.abb2b41f170c81->2.6.32.abb2b415749f40]
   Rootfs version[1.0.0.d5f0de03->1.0.0.660e0085]

 [Slot M1]:Restart to take effect !

 [Slot M1]:Upgrade processing is 100%
 [Slot 1]:Upgrade processing is 90%

 [Slot 1]:
 Upgrade info [OK]
   Kernel version[2.6.32.9f8b56f1d45ab2 ->2.6.32.0f48cb9f170c81]
   Rootfs version[1.0.0.2ad02537->1.0.0.1bcc12e8]

 [Slot 1]:Restart to take effect !

 [Slot 1]:Upgrade processing is 100%
 [slot: M1]
   device_name: ca-octeon-cm
   status:      SUCCESS
 [slot: 1]
   device_name: ca-octeon-lc
   Status:      SUCCESS
```

6.13 verify

md5

verify [**/md5** *md5-value*] *filesystem***:** [*file-url*]

/md5	MD5
md5-value	md5 md5
filesystem:	url **flash:**, **tmp:**
file-url	“ / ”

flash:

1

-

1 flash:/gcc md5

```
Ruijie#verify flash:/gcc
8b072de7db7affd8b2ef824e7e4d716c
```

2 flash:/gcc md5

```
Ruijie#verify /md5 8b072de7db7affd8b2ef824e7e4d716c flash:/gcc
%SUCCESS verifying flash:/gcc = 8b072de7db7affd8b2ef824e7e4d716c
Ruijie#verify /md5 8b072de7db7affd8b2ef824e7e4d71 flash:/gcc
%Error verifying flash:/gcc
Computed signature = 8b072de7db7affd8b2ef824e7e4d716c
Submitted signature = 8b072de7db7affd8b2ef824e7e4d71
```

-

-

-

-

6.14 show disk

usb flash

show disk [**usb** | **flash**]

usb	usb
flash	flash

1

1 usb

```
Ruijie#show disk usb
Disk /dev/sdb: 8159 MB, 8159477760 bytes
252 heads, 62 sectors/track, 1020 cylinders
Units = cylinders of 15624 * 512 = 7999488 bytes
```

2 flash

```
Ruijie#show disk flash
Nand flash size: 512MB
Nor flash size: 1MB
```

-

-

-

-

7 SNMP

7.1 clear snmp locked-ip

SNMP IP **clear snmp locked-ip**

clear snmp locked-ip [**ipv4** *ipv4-address* | **ipv6** *ipv6-address*]

ipv4 *ipv4-address*	IPv4
ipv6 *ipv6-address*	IPv6

14

SNMP IP IP

IP

IP IP SNMP

SNMP IP

```
Ruijie# clear snmp locked-ip
```

-

-

7.2 no snmp-server

SNMP

no snmp-server

-	-

SNMP

14

SNMP SNMP NMS

SNMP SNMP

enable service snmp-agent SNMP

SNMP

SNMP **show running-config**

SNMP ʊ eable servmp-agent ᴝ ɞ

```
Ruijie# show snmp
Chassis: 60FF60
0 SNMP packets input
```

```
6      dhcp6.elf       DGRAM  UDP      :::547          :::0            *
7      rg-sshd         STREAM TCP      :::22           :::0            LISTEN
8      rg-telnetd      STREAM TCP      :::23           :::0            LISTEN
Total: 8
```

È ᵻ ᶨ ᵽ ᵪ

È ᵻ	ᵇ ᵐ
Number	ẑ ᴺ
Process name	ᶠ ᶩ ᵊ ᶩ
Type	ᵐ ì È ᶩ ᶚ ᵢ RAW ᶜ ᶝ Ḋᵐ ì È ᵢ DGRAM ᶜ ᶝ ᶜᶚᶚ ᶩ ᶚ ᵢ STREAM ᶜ ᶝ ᶫ ᶩ ᶚ
Protocol	ᵽ ᴺ
LocalIP:Port	ᵴ IPv6 ᵴ ᵪ ᵓ ᶩ ᴱ
ForeignIP:Port	Ḿ ᶩ IPv6 ᵴ ᵪ ᵓ ᶩ ᴱ
State	ᵗ õ ᵢ ᴱ Ḿ IPv6 TCPᵐ ì È ᾶ Ỵ Θ
Total	ᵐ ì È Ở ᶜᶚ

ώ˜ Ụ -

Ẓ ᴶ ᵇ ᵐ -

5.39 show ipv6 udp

Ǐ ˜ ᶜA ᾶ IPv6 UDPᵐ ì È ᵢ ᵎ ᶫ˜ ᶜ ᵘ UDP ᶩ ᴱ Ḿ ᵘ ώ ᶜO ᴝ

show ipv6 udp [**local-port** *num*] [**peer-port** *num*]

Ǐ ˜ IPv6 UDPᵐ ì È ᶜ ᶩ ᶬ

show ipv6 udp statistics

ᶜᶚᵇ ᵐ

ᶜᶚ	ᶜ ᶝ
local-port *num*	ᵴ ᶩ ᴱ ᴺ
peer-port *num*	Ḿ ᶩ ᶩ ᴱ ᴺ

ᵘ ᴝ ₩ Ã ᵉ ₩ Ã

ᶩ ᶩ 14

ᵗ ᶜ Ỵ Ṁ -

ﺑ ﻟ 1 χ ̇ ̃ ̈A ω̃ IPv6 UDP ̆ ì È

```
Ruijie# show ipv6 udp
Number Local Address   Peer Address   Process name
1      :::161           :::0          rg-snmpd
2      :::162           :::0          rg-snmpd
3      :::547           :::0          dhcp6.elf
```

È ﻻ ﺟ ﺑ χ

È ﻻ	ﺑ ″
Number	ẑ ᴺ
Local Address	ş IPv6 ş χ ⊃ ﺃ Æ
Peer Address	Ḿ ﺃ IPv6 ş χ ⊃ ﺃ Æ
Process name	ﻗ ﺍ ﻫ ﻳ

ώ˜ Ụ -

Ẇ ﺟ ﺑ ″ -

6 DHCP

6.1 address range

ᶩ ᵽ DHCP ᶊ ᶍ − ᾖ CLASS ᾖ ᾖ CLASS ᾖ ᾖ ᾖ ᶊ ᶍ ᶩ ᶫ ᵽ ᾖ ᾖ ᶊ ᶍ − class ᶩ ₩ ᾖ ᾖ
address range ᵘ ᖘ
address range *low-ip-address high-ip-address*

ᾖ ᵘ ᖘ **no** ᾖ ᾖ ᾖ

bootfile *file-name*

no ė Ã̃ ˈ ɑ ɲ ╦ ḧ Θ
no bootfile

Ṏ ʰ ɯ ɲ
default bootfile

̈Ω ب ̈	̈Ω	ώ ك
	file-name	ḧ Θ ɾ ᵏ ʊ ǎ ᵃ

ǐ ب ل ǐ ≡ ω̃ ḧ Θ ᵏ ʊ ǎ ᵃ

ᵘ ɲ ₩ Ã̃ DHCP ş χ − ب ل ₩ Ã̃

ǐ ˄ 14

ɾ ̈YṀ Ĩ ᵘ ɲ R̲ Server ب ل ψ ω̃ DHCP j̲ ̈A ˄ ɡ ᵏ ʊ ص ˄ ء ل ï ɔ ̈Ḥ ˄ ˄ ب ل ǎ ˄ ı DHCP ̀O ɲ ʰ ọ ء ώ ᵏ ʊ ̀H ء ل ī ǎ ᵃ ı DHCP j̲ ̈A ˄ ɛ́ ˈ ɑ ص ̣ Z̲ ̀O ɲ ʰ ε ḅ TFTP ζ ï ɔ ǎ Ʊ Ę̆ ̀O ɲ ʰ ص **next-server** ᵘ ɲ ڤ Φ ḧ Θ

ب ل 1 χ ϕ ᵗ ᵏ ɾ DHCP ̀O ɲ ʰ ⊃ ˄ ˏ ό

```
Ruijie(dhcp-config)# bootfile router.conf
```

ˢ ج ́A | ص **show run** ˈ ȣ ب ل ǎ ı

ώ˜ ̣U -

Ẃ ȣ ج ئ -

Ẇ ʲ ب ̈ -

6.3 class

ˈ ɡ DHCP ş χ − ب ل ỉ̈ CLASS ı ɾ DHCP ş χ − ب ل ₩ Ã̃ ï̈ class ᵘ ɲ
class *class-name*

no ė Ã̃ ˈ ɑ ɲ ╦ ḧ Θ
no class *class-name*

̈Ω ب ̈	̈Ω	ώ ك

class-name	ژ CLASS ᵉ ᔭ ᵢ ᑊ ᑫ ᵢ ᑊ ᑫ ᵢ ᑊ ᑫ

ᾷ ᾳ	14
ᾶ ᾸYṀ	Ỉ ᵘ ᶆ Ṛ Server ᶜ ᾳ ψ Ỉ ᵘ ᶆ ᴱ ỉ ▌ᶜ DHCP⁵ ᴗ ᾳ ḧ ᵢ DHCP ᾺᾺ ᾳ ḧ ᶜ ᵢ ᾷ ᶜ **no ip dhcp pool** ᵘ ᶆ
ᶜ ᾳ	1 χ ▌ᶜ IP ᶊ χ ᵢᵣ 192.168.12.100 DHCP ᾳ ḧ `Ruijie# clear ip dhcp binding 192.168.12.100`
ώ˜ Ụ	-
Ẓ ᴶ ᶜ ˝	-

6.5 clear ip dhcp conflict

ᾳ ▌ᶜ DHCP˙ ᾳ ᾳ ᾳ ᾳ ᾳ ᾶ ᾶ ᾶ ᾶ ᾶ

ᐤ ᒣ ᐦ

ᐤ	ᐦ
*	ᑎ ᐦ ᕹ DCHP ᕹ ᕹ ᴷ ᒪ ᕹ
mac-address	ᑎ ᐦ ᕹ mac ᕹ ᕹ ᴷ ᒪ ᕹ

ᵘ ᑎ ᕹ ᕹ ᕹ ᕹ ᕹ ᕹ

ᕹ ᕹ 14

ᕹ ᕹ ᕹ ᕹ ᕹ Server ᕹ ᑎ ᕹ Server ᕹ ᕹ ᕹ ᕹ ᕹ ᕹ

Ẓ ᴶ ب ˝ -

6.8 clear ip dhcp server rate

ᴸ ᴴ ᵸ DHCP ̀Ο ᴝ ᴴ ̈ ĭ ᾶ ᵽ ᴿ̀ ₩ ᵉ ̨ ᴶ ᴝ ̈ ' ᴬ ᶣ

clear ip dhcp server rate

ᴝ ب ˝

ᴝ	ώ ك
-	-

ᵘ ᴝ ₩ Ã ᵉ ᵀ ̈ A ₩ Ã

ᴶ ᴬ 14

ᵀ ˝ Y Ṁ Ỉ ᵘ ᴝ R̲ Server ب ᴶ ψ ᵀ ▌ ش dhcp ̀Ο ᴝ ᴴ ᴬ ᶣ ⅛ ĭ ᾶ ᵽ j ᵃ ₩ ᵉ ̨ ᴶ ᴝ ̈ ' ᵢ ᵇ arp ♬ ᵗ lsm socket ᵛ

ب ᴶ 1 χ ᴸ ᴴ ᵸ DHCP ̀Ο ᴝ ᴴ ̈ ĭ ᾶ ᵽ ᴿ̀ ₩ ᵉ ̨ ᴶ ᴝ ̈ ' ᴬ ᶣ

```
Ruijie# clear ip dhcp server rate
```

ώ ̃ Ụ -

Ẓ ᴶ ب ˝ -

6.9 clear ip dhcp server statistics

ᴸ ᴴ ᵸ DHCP ̀Ο ᴝ ᴴ ᶣ ̈ ᴝ ᴴ

clear ip dhcp server statistics

ᴝ ب ˝

ᴝ	ώ ك
-	-

ᵘ ᴝ ₩ Ã ᵉ ᵀ ̈ A ₩ Ã

ᴶ ᴬ 14

ᵀ ˝ Y Ṁ Ỉ ᵘ ᴝ R̲ Server ب ᴶ ψ DHCP ̀Ο ᴝ ᴴ ĭ ᾶ ᴬ ᶣ ᵢ ᴸ ᵉ DHCP ᵴ ᵡ – ᵶ ᵁ ᴶ ḧ ᵉ̀ Ṫ ᴶ ḧ ᵌ ص ᴝ ᴶ ḧ ̈ ᴝ ´ ᵢ Ẋ Ṁ DHCP ̀Ο ᴝ ᴴ ì ώ ᵌ ᴬ گ ̈ ᴿ ᴬ ĭ ᾶ ف Φ ᴬ ᶣ **clear ip dhcp server statistics** ᵘ ᴝ ᴵ ᴝ ش ᴷ ᶣ ̈ ᴝ ᴸ ᵉ ᵢ ي ̀ A Ã Ḋ ᴬ ᶣ

ᵇ ɻ 1 χ ▌ ڼ DHCP ̀O ɲ ʰ ⸨OBJ⸩ ʌ ɯ ʟ ę

```
Ruijie# clear ip dhcp server statistics
```

ώ˜ Ụ -

Ẓ ᴶ ᵇ ˝ -

6.10 clear ip dhcp relay statistics

ʰ ɥ DHCP ʌ ⸨OBJ⸩ɯ ̈Ą ʰ

clear ip dhcp relay statistics

̈Ą ᵇ ˝	̈Ą	ώ ڭ
	-	-

ᵘ ɲ₩Ã ˻ ɨ ̈A₩Ã

ʎ ʌ 14

ɨ ̈YṀ Ǐ ᵘ ɲ Ṛ Relay ᵇ ɻ ψDHCP ʌ ĭ ą̆ ʌ ɯ ı Ḿ DHCP ʌ ì ώ ⸦ ʌ ڭ⸨OBJ⸩ʳ ʌ ĭ ą̆ ڤ Φ ʌ ɯ **clear ip dhcp relay statistics** ᵘ ɲ ˡ Ɑ ڼ ᴷ ɯ ̈Ą ʟ ę ı ᵖ ̀A Ã Ḋ ʌ ɯ

ᵇ ɻ 1 χ ▌ ڼ DHCP ʌ ⸨OBJ⸩ʌ ɯ ʟ ę

```
Ruijie# clear ip dhcp relay statistics
```

ώ˜ Ụ -

Ẓ ᴶ ᵇ ˝ -

6.11 client-identifier

ʟ ḧ Θ DHCP ị ̈A ʌ⸨OBJ⸩ χ ‰ ̀ε Ɑ ᵖ ڭ Ã⸨OBJ⸩ ʌ ڤ ̈Ą ˊ ˜ ζ ı ɨ DHCP ş χ − ᵇ ɻ ᵘ ɲ **client-identifier**

client-identifier *unique-identifier*

no ė Ã ˡ Ɑ ڼ ị ̈A ʌ ‰ ̀

no client-identifier

Õ ʰ ɯ ɲ

default client-identifier

̈Ρ ب ̈	̈Ρ	ѡ ك
	unique-identifier	DHCP ̱ ̈A ۱ ‰ ̀ ۱ Ρ ᵖ ك Ã ̱ ᴸ ق ̈ ̀ ̃ ḃ χ 0100.d0f8.2233.b467.6967.6162.6974.4574.6865.726e.6574.302f.31

ǰ ب ل ≡ ѿ ǰ

ᵘ ᴨ ₩ Ã DHCP ş χ − ب ل ₩ Ã

ǰ ۱ 14

ᵗ ̈YṀ Ĩ ᵘ ᴨ R̲ Server ب ل ψ ѿ DHCP ̱ ̈A ۱ ت ∂ DHCP ̀O ᴨ ᴴ ̀ ب IP ş χ ̀H ۱ ᵗ ̱ ̈A ۱ ‰ ̀ ̃ ̊. ş χ ᵗ ̈ ᴨ ̀ ̱ ̈A ۱ ̱ ̈A ۱ ‰ ̀ ۱ Ḍ ۱ ʒ MAC ş χ ⊃ ì Æ ᵉ ۱ ل ̃ ۱ ḃ MAC ş χ ᵢᵣ 00d0.f822.33b4 ì Æ ᵉ ۱ ᵢᵣ GigabitEthernet 0/1 Ḿ Ẕ ̱ ̈A ۱ ‰ ̀ ᵢᵣ
0100.d0f8.2233.b467.6967.6162.6974.4574.6865.726e.6574.302f.31 ۱ Ʊ 01 ᴨ ̀ Ρ ᶿ ل Ḍ ۱ ʒ ۱
67.6967.6162.6974.4574.6865.726e.6574.302f.31 ᵢᵣ GigabitEthernet0/1 ̱ ق ̈ . Ḍ ᴨ ̱ ̈ ḣ
Θ ۱ ᶾ Ρ ȯ RFC1700 ̃ ᶶ ̱ ḇ Address Resolution Protocol Parameters ḃ ۱ ̀
ᴱ ѿ ḡ ڤ Φ DHCP ̇ ̇T ل ḣ ḣ Θ ̀H ۱ ̇ ᶾ Ρ ᵗ Ĩ ᵘ ᴨ

ب ل 1 χ ḣ Θ MAC ş χ ᵢᵣ 00d0.f822.33b4 ̱ Ρ ᶿ ل DHCP ̱ ̈A ۱ ̱ ̈A ۱ ‰ ̀

```
Ruijie(dhcp-config)# client-identifier
0100.d0f8.2233.b467.6967.6162.6974.4574.6865.726e.6574.302f.31
```

ᵢ ج ̀A | ص ن **show run** ᶾ ȯ ب ل ̃ ۱

ѡ ̃ Ụ -

Ẃ ȯ ج ئ -

Ẇ ᴶ ب ̈ -

6.12 client-name

ᶾ ḣ Θ DHCP ̱ ̈A ۱ ̱ ᵉ È ۱ ᵗ DHCP

̈Ρ ب ̈	̈Ρ	ὼ ك
	client-name	ḧ Θ DHCP ḭ ̈A ˥ ⸨ ᵉ È ˡ Ρ ɾ ‰ ⸨ASCII È ˥ ᵩ ᵉ È j Ẓ ὺ ᵃ ˊ ³ ᵉ ˡ ⅝ ḃ ḧ Θ river ⱱ DHCP ḭ ̈A ˥ ᵉ È ˡ j ̈Ĩ ḧ Θ ⱱ river.i-net.com.cn

ˊ̌ ب ̈ ˊ̌ ≡ ὼ ḧ Θ ḭ ̈A ˥ ᵉ È

ᵘ ᴨ ₩ Ã DHCP ᵮ ᵪ − ب ₩ Ã

ˊ̌ ˥ 14

ɾ ̈YṀ Ĩ ᵘ ᴨ Ṛ Server ب ψ ᴱ ὼ ᵭ ڤ Φ DHCP ἐ Ṫ ˩ ḧ ḧ Θ ̀H ˡ ἐ ˡ Ρ ɾ Ĩ ᵘ ᴨ ḧ Θ DHCP ḭ ̈A ˥ ⸨ ᵉ È Ĩ ᵉ È j Ẓ Ĩ ὺ ᵃ ˊ ³ ᵉ

ب 1 χ ḧ Θ È ˥ river ⱱ ḭ ̈A ˥ ⸨ ᵉ È

```
Ruijie(dhcp-config)# client-name river
```

ᵊ ج ̈A | ص **show run** ˡ ὸ ب ˩ ᾶ ˡ

ὼ ̃ Ṵ -

Ẃ ὸ ج ئ -

Ẇ ᴶ ب ̈ -

6.13 default-router

ḧ Θ DHCP ḭ ̈A ˥ ˊ̌ ˩ ˡ ɾ DHCP ᵮ ᵪ − ب ˩ ᵘ ᴨ **default-router**

default-router *ip-address* [*ip-address2…ip-address8*]

no ė Ã ˡ Ρ ن ˊ̌ ˩ ⸨ ḧ Θ

no default-router

Õ ᵸ ᵴ ᵯ

defaut default-router

̈Ρ ب ̈	̈Ρ	ὼ ك
	ip-address	ḧ Θ WINS ̀O ᵯ ᵸ ⸨ IP ᵮ ᵪ ˩ ∂ᵊ Ṇ ب ˩
	ip-address2…ip-address8	ε ˡ ǰ ζ ᵠ ^ ˡ Ρ ب ˩ 8 ˩ ˊ̌ ὺ ᴱ ὼ IP ᵮ ᵪ

ˊ̌ ب ˩ ˊ̌ ≡ ὼ ḧ Θ ˊ̌ ˩

ŧ ˝YṀ Ǐ ᵘ ɲ Ŗ Server ب ɻ ψ ħ ϴ ^ DNS ̀O n ʰ ̀H ı ƥ ̦ ⌫ ⍱ ı DHCP ị ̈A ⍱ ᴱ ɷ ɲ ŋ ƥ ̆ ⌫
DNS ̀O n ʰ ڼ g ̦ م ı ع ǰ ̈O ï DNS ̀O n ʰ
RGOS ڑ ª ̀HĈ DHCP ị ̈A ⍱ ̀H ı ˡ ɷ Ń ڼ ص ị ̈A ⍱ n ę ⌫ DNS

6.17 hardware-address

ᵢ ḧ Θ DHCP ᵢ ̈A ᵛ ̈ ̈ ̈

6.18 host

ᶫ ḧ Θ DHCP ᵢ ̈A ᵑ ᶚ ᶚ IP ᶊ ᶍ ᵐ ᶫ ᶰ ᵒ ̣ ᵢ ᵣ DHCP ᶊ ᶍ − ᵇ ᶫ ᵘ ᶇ **host**

host *ip-address* [*netmask*]

no ᵉ ̇ Ã ᵢ ᶬ ᶜ DHCP ᵢ ̈A ᵑ IP ᶊ ᶍ ᵐ ᶫ ᶰ ᵒ ̣ ḧ Θ

no host

Õ ̈ ʰ ˢ ᶇ

defaut host

̈Ọ ᵇ ̈	̈Ọ	ᶜ ᶝ
	ip-address	ḧ Θ DHCP ᵢ ̈A ᵑ ᶚ ᶚ IP ᶊ ᶍ
	netmask	ḧ Θ DHCP ᵢ ̈A ᵑ ᶚ ᶚ ᶫ ᶰ ᵒ ̣

ᶫ ᵇ ᶫ ≡ ᶜ ḧ Θ ᶚ ᶚ IP ᶊ ᶍ ᵐ ᶫ ᶰ ᵒ ̣

ᵘ ᶇ ₩ Ã DHCP ᶊ ᶍ − ᵇ ᶫ ₩ Ã

ᶫ ᵑ 14

ᵣ ̈YṀ Ỉ ᵘ ᶇ R̲ Server ᵇ ᶫ ᵠ ᵇ ' ᶫ ᶰ ᵒ ̣ ≡ ᶜ ̈. ḧ Θ ᵢ DHCP ̀O ᶇ ʰ Ṅ ᵣ Ỉ IP ᶊ ᶍ ᶚ ᵇ ᶫ ᶰ ᵒ ̣ A ᵑ ᶊ ᶍ ᶫ ᶰ ᵒ ̣ ᶚ 255.0.0.0 ᵠ B ᵑ ᶊ ᶍ ᶫ ᶰ ᵒ ̣ ᶚ 255.255.0 ᵠ C ᵑ ᶊ ᶍ ᶫ ᶰ ᵒ ̣ ᶚ 255.255.255.0 ᴱ ᶜ ᵽ ᶠ ᶲ DHCP ᵉ ̇ ̇T ᶫ ḧ ḧ Θ ̀H ᵢ ᵉ ̇ ᶬ ᵣ Ỉ ᵘ ᶇ

ᵇ ᶫ 1 ᶍ Ṅ ᵢ ̈A ᵑ IP ᶊ ᶍ ᶲ ᶚ 192.168.12.91 ᵢ ᵒ ̣ ᶚ 255.255.255.240

```
Ruijie(dhcp-config)# host 192.168.12.91 255.255.255.240
```

ˢ ᶜ ̈A | ᶜ ᶝ **show run** ᵢ ᵒ ᵇ ᶫ ᶜ ̈ ᵢ

ᶜ ̃ Ụ 1 ᶍ ᵇ ᶫ ᵒ | ᶊ ᶍ

```
Ruijie(dhcp-config)# host 225.2.2.2 255.0.0.0
% Error: ip address 225.2.2.2 is not valid!
```

Ẃ ᵒ ᶜ ᶜ ᶝ 1.ᵇ ᶫ ᵒ | ᶊ ᶍ

6.19 ip address dhcp

ᶫ ᵉ ̇ ᶬ ᶿ ᶫ ᶜ ̃ ᶜ ̈ PPP HDLC FR Ṃ Ṭ ᶚ ᵢ ̈ Æ ̈ ̈ ᶻ ᶜ ᶝ DHCP ᶇ ᵉ ̇ IP ᶊ ᶍ Ụ ᵢ ᵣ ᵢ ̈ Æ ᵇ ᶫ ᵘ ᶇ **ip address dhcp**

ip address dhcp

no ė Ã ˈ Ɑ ᶆ ╥ ǎ ـل

no ip address dhcp

Õ ʰ ـس ᶆ

defaut ip address dhcp

˜Ω ـب ˜	˜Ω	ώ ك
	-	-

ǐ ـل ǐ ì Æ j ǎ ن ص DHCP ᶆ ę IP ş ϰ

ᵘ ᶆ ₩ Ã ì Æ ـل ₩ Ã

ǐ ˥ 14

ŧ ˜YṀ Ǐ ᵘ ᶆ R̲ Client ـب ـل ψRGOS ϰ DHCP ị ˜A ˥ ˈ ę ت ∂ IP ş ϰ ˋH ˈ ف ˛ ∂ DHCP ˋO ᶆ ʰ ώ ـب ـل ˜Ω Ụ χ1 ζDHCP ǰ ° 1 ˈ ị ˜A ˥ Ḍ ـل ǫ ψ2 ζDHCP ǰ ° 3 ˈ ª Ḍ ـل i ـل Ụ ψ3 ζDHCP ǰ ° 6 ˈ DNS ˋO ᶆ ʰ Ụ ψ4 ζ DHCP ǰ ° 15 ˈ ǯ ª ˥ ³ ᵉ ψDHCP ǰ ° 44 ˈ WINS ˋO ᶆ ʰ Ụ ε ˈ ǰ ـب ـل ζ RGOS ϰ ị ˜A ˥ ę ę PPP FR HDLC ج ث i ص ن dhcp ᶆ ę ş ϰ ˈ ف ـ ˛ ˋO ᶆ ʰ ˜Ḥ ˈY ˈ ´ ǎ ˋO ᶆ ʰ ˜Ḥ ˈY Ǐ ˈ ǐ

ـب ـل 1 χ ę FastEthernet 0 ˥ Æ₅ ʊ ᶆ ę IP ş ϰ

```
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1) ip address dhcp
```

₅ ج ˊA | ن ص **show run** ˈ ȯ ـب ـل ǎ ˈ

ώ˜ Ụ -

Ẃ ȯ ج ئ 1. ę Ṗ Æ i Ã ˜A ị ᵏ ˥ ˈ ǐ

6.20 ip dhcp class

˛ ḧ Θ CLASS ẋ ڤ ṕ CLASS ـب ـل ₩ Ã ˈ ŧ ṕ ـب ـل ₩ Ã ï ˜ **ip dhcp class** ᵘ ᶆ

ip dhcp class *class-name*

no ė Ã ˈ Ɑ ڽ ṕ ˜ CLASS

no ip dhcp class *class-name*

ˈˈQ ب ˈ

ˈˈQ	ώ ك
class-name	ژ CLASS ۿ ۶ ۱ ۱ Ɑ ĩ È ۱ ǎ ˈˈQ È ۱ ḃ myclass ǎ ǎ 1

ǰ ب ل ǰ ' ب ل class

ᵘ ɲ ₩ Ã ṕ ب ل ₩ Ã

ǰ ۱ 14

ŧ ˈYṀ Ĵ ᵘ ɲ Ṟ Server ب ل ψ ˈE Φ Ĵ ᵘ ɲ ۱ ŏ ف ṕ CLASS ب ل ₩ Ã ۱ ḡ ف ب ل ₩ Ã ۱ ۱ Ɑ ب ل CLASS ש ب Option82 Ụ CLASS ‰ Ụ

ب ل 1 χ ب ل ṕ CLASS

```
Ruijie(config)# ip dhcp class myclass
```

ˢ ج Ä | ص ن **show run** ۱ ŏ ب ل ǎ ۱

ώ˜ Ụ -

Ẃ ŏ ج ئ -

Ẓ ˢ ب ˈ -

6.21 ip dhcp client class-id

ˢ ḧ Θ DHCP ị ˈA ۱ ۸ ¸ ت ∂ ĭ ǎ class-id È ɟ ḳ

ip dhcp client class-id { ascii | hex } *string*

no ė Ã ۱ Ɑ Õ ۿ ۳ ɲ ب ل

no ip dhcp client class-id

Õ ۿ ۳ ɲ

default ip dhcp client class-id

ˈˈQ ب ˈ

ˈˈQ	ώ ك
hex	۱ ḳ Ã ۳ Ʌ ف ˈˈQ
ascii	۱ ḳ Ã ۳ asciị
string	class-id ˢ ḧ Θ ḳ

ǰ ب ل ǰ ب ل ۳ ƀ ‰ Ụ

ᵘ ᴨ₩Ã̈ ì ᴱ ᵇ ˩ ₩Ã̈

ǰ ˥ 14

ᵵ ˝YṀ Ǐ ᵘ ᴨ R̲ Client ᵇ ˩ ψ⁵ ḧ Θ ت ∂ ï ᵅ̈ class-id ⃞ ḳ

ᵇ ˩ ì ᴱ GigabitEthernet 0/1 ï ᵇ ˩ class-id ᵮ RUIJIE-EG1000C

```
Ruijie(config-if-GigabitEthernet 0/1)#ip dhcp client class-id ascii RUIJIE-EG1000C
```

⁵ ج Ǎ | ص **show run** ˡ ȣ ᵇ ˩ ᵅ̈ ˡ

ώ˜ Ụ -

Ẃ ȣ ج ئ -

6.22 ip dhcp client client-id

⁵ ḧ Θ DHCP ị ˝A ˥ ∧ ⃞ت ∂ ï ᵅ̈ client-id È ˩ ⃞ ḳ

ip dhcp client client-id { ascii *string* **| hex** *string* **| exclude interface-name }**

no ẻ Ã̈ ˡ ᴍ Õ ʰ ᵇ ˩

no ip dhcp client client-id

Õ ʰ ᵴ ᴨ

default ip dhcp client client-id

˝Ọ ᵇ ˝

˝Ọ	ὼ ك
hex	˩ ḳ ⃞ Ã̈ ᵮ ᴸᴺ ˝Ọ
ascii	˩ ḳ ⃞ Ã̈ ᵮ asciị
string	client-id⁵ ḧ Θ ⃞ ḳ
exclude interface-name	client-id È ˩ j ᵍ ì ᴱ ᵉ

ǰ ᵇ ˩ ǰ ᵇ ˩ ᵮ ì ᴱ ˥ ᴝ +MAC ᵴ ᵪ + ì ᴱ ᵉ

ᵘ ᴨ₩Ã̈ ì ᴱ ᵇ ˩ ₩Ã̈

ǰ ˥ 14

ᵵ ˝YṀ Ǐ ᵘ ᴨ R̲ Client ᵇ ˩ ψ⁵ ḧ Θ ت ∂ ï ᵅ̈ client-id ⃞ ḳ

ب ـ ì Æ GigabitEthernet 0/1 ï ب ـ client-id ᵮ 0102.0304.0506

```
Ruijie(config-if-GigabitEthernet 0/1)#ip dhcp client client-id hex 0102.0304.0506
```

ᵢ ج Á | ص ن **show run** ˈ ð ب ـ ă ˈ

ώ˜ Ụ -

Ẃ ð ج ئ -

6.23 ip dhcp client hostname

ᵢ ḧ Θ DHCP ị ̈A ˡ ∧ ̣ ⃞ت ∂ ï ă hostname È ـ ⃞ ḳ

ip dhcp client hostname *string*

no ė Ã̃ ˈ Ɋ Ṏ ʰ ب ـ

no ip dhcp client hostname

Ṏ ʰ ᵮ ɲ

default ip dhcp client hostname

̈Ɋ ب ̈

̈Ɋ	ώ ك
string	hostnameᵢ ḧ Θ⃞ ḳ

ỉ ب ـ ỉ ب ـ ᵮ ǯ ᵊ

ᵘ ɲ ₩ Ã̃ ì Æ ب ـ ₩ Ã̃

ỉ ˡ 14

ŕ ̈YṀ Ỉ ᵘ ɲ Ṟ Client ب ـ ψᵢ ḧ Θ ت ∂ ï ă hostname ⃞ ḳ

ب ـ ì Æ GigabitEthernet 0/1 ï ب ـ hostname ᵮ ruijie

```
Ruijie(config-if-GigabitEthernet 0/1)#ip dhcp client hostname ruijie
```

ᵢ ج Á | ص ن **show run** ˈ ð ب ـ ă ˈ

ώ˜ Ụ -

Ẃ ð ج ئ -

6.24 ip dhcp client lease

ˢ ḧ Θ DHCP ᵢ̣ ̈A ˡ ∧ ̣ ⃞ت ∂ ï ă lease È ˩⃞ ḳ

ip dhcp client lease *days* [*hours*] [*minutes*]

no ė Ã ˡ Ɑ Õ ʰ ب ل

no ip dhcp client lease

Õ ʰ س ɲ

default ip dhcp client lease

̈Ω ب ̈

̈Ω	ώ ك
days	ḧ Θ ˡ Ω⃞ ̀H ژ ا Ɑ ³ ⃞ ɥ
hours	ε ˡ ǰ ζ ḧ Θ ˡ Ω⃞ ̀H ژ ا Ɑ ṇ ̀H⃞ ɥ ḧ Θ ṇ ̀H ̈Ω ọ ء ḧ Θ ³ ̈Ω ل ̣ ⃞ 0
minutes	ε ˡ ǰ ζ ḧ Θ ˡ Ω⃞ ̀H ژ ا Ɑ ˋ ث⃞ ɥ ḧ Θ ˋ ث ọ ء ḧ Θ ³ ̈Ω ⁼ ṇ ̀H ̈Ω , ǰ ⃞ 0

ǰ ب ل ǰ ب ل ̀H ت ∂ ï ă j ᵍ lease È ˩

ᵘ ɲ ₩ Ã ì Æ ب ل ₩ Ã

ǰ ˡ 14

ᵗ ̈YṀ Í ᵘ ɲ R̲ Client ب ل ψ⁵ ḧ Θ ت ∂ ï ă lease ⃞ ḳ

ب ل ì Æ GigabitEthernet 0/1 ï ب ل lease ⃞ 1 ṇ ̀H

```
Ruijie(config-if-GigabitEthernet 0/1)#ip dhcp client lease 0 1
```

ˢ ج ́A | ص ن **show run** ˡ ȯ ب ل ă ا

ώ˜ Ụ -

Ẃ ȯ ج ئ -

6.25 ip dhcp client option-list include

ˢ ḧ Θ DHCP ᵢ̣ ̈A ˡ ∧ ̣ ⃞ت ∂ ï ă option-list È ˩⃞ ḳ

ip dhcp client option-list include *string*

no ė Ã ˈ Ɑ Õ ʰ ب ل

no ip dhcp client option-list include

Õ ʰ س ɲ

default ip dhcp client option-list include

ˮ Ɑ ب ˮ

ˮ Ɑ	ώ ك
string	ḧ Θ option-list È ɟ ء ˩ ˩ ᵍ ᵘ È ɟ

ǰ ب ل ǰ ب ل ˋH option-list ᵍ ọ ˩ È ɟ

ᵘ ɲ ₩ Ã ì Æ ب ل ₩ Ã

ǰ ˥ 14

ŧ ˝ Y Ṁ Ỉ ᵘ ɲ Ṛ Client ب ل ψ₅ ḧ Θ ت ∂ ï ă **option-list** ḳ

ب ل ì Æ GigabitEthernet 0/1 ï ب ل option-list ᵍ 66,67,43

```
Ruijie(config-if-GigabitEthernet 0/1)#ip dhcp client option-list include 66-67,43
```

₅ ج Ȧ ص **show run** ˈ ȯ ب ل ă ı

ώ˜ Ụ -

Ẃ ȯ ج ئ -

6.26 ip dhcp excluded-address

˩ ḧ Θ • IP ş χ ı ệ DHCP ˋO n ʰ j Ṅ Ʊ ب ل DHCP ị ˝A ˥ ı ŧ ṕ ب ل ᵘ ɲ

ip dhcp excluded-address *low-ip-address* [*high-ip-address*]

Ỉ ᵘ ɲ no ė Ã ˈ Ɑ n ╦ ف ˥ ḧ Θ

no ip dhcp excluded-address *low-ip-address* [*high-ip-address*]

Õ ʰ ǰ ب ل

default ip dhcp excluded-address *low-ip-address* [*high-ip-address*]

ˮ Ɑ ب ˮ

ˮ Ɑ	ώ ك
low-ip-address	ṇ ã IP ş χ ı ẽ ã̈ ṇ ã IP ş χ₋₁₁ ḡ ˋ ˅ Ḋ IP ş χ
high-ip-address	ṇ ã ş χ₋₁₁ ḡ ˩ IP ş χ ǰ ừ Ʊ ₩ low-ip-address

ǰ ᵇ ˡ ǰ DHCP ˋO ᴨ ᴴ ˋ ᵇ ̃Ω ᵍ ˣ – ⃞ IP ᵍ ˣ

ᵘ ᴨ ᵇ ₩ Ã ᵖ ᵇ ˡ ₩ Ã

ǰ ˡ 14

ᵗ ˝ Y ̇M Ǐ ᵘ ᴨ ᵇ R Server ᵇ ˡ ψ ᵇ ' ≡ ω ᵇ ˡ ᵗ ã IP ᵍ ˣ ˡ DHCP ˋO ᴨ ᴴ ; g ˋ ᵇ DHCP ᵍ ˣ – ⃞ ˝A ω IP ᵍ ˣ Ǐ ᵘ ᴨ ˡ Ω ᴴ ᵉ ̈ ᵍ ̈ ᴩ IP ᵍ ˣ ˡ ᴳ ᶠ ᵍ ˣ ᵠ ˋ ᵇ ˡ DHCP ̣ ˝A ˡ ˡ. ᵍ ̈ Θ ᵗ ã IP ᵍ ˣ ˡ ̂ ˡ Ω Ṇ DHCP ˋO ᴨ ᴴ ˋ ᵇ ᵍ ˣ ˋH ⃞ ˡ ˡ ₅ ˡˡ ˋH ᵣ

ᵇ ˡ

1 χ DHCP ˋO ᴨ ᴴ Ṅ j ; g ˋ ᵇ 192.168.12.100~150 ᵇ ⃞ IP ᵍ ˣ

```
Ruijie(config)#ip dhcp excluded-address 192.168.12.100 192.168.12.150
```

2 χ ᵗ 1 ᵗ ᵗ ᵍ ˣ ᵇ

```
Ruijie(config)#no ip dhcp excluded-address 192.168.12.100 192.168.12.150
```

₅ ᵣ A | ᵖ ᵐ **show run** ˡ Ω ᵏ ˡ ᵇ ˡ ᾶ ˡ

ώ˜ ᵛ

1 χ ᵇ ˡ ᵒ | ᵗ ᵗ ᵍ ˣ

```
Ruijie(config)#ip dh excluded-address 225.1.1.1
% Error: Ip address 225.1.1.1 or 225.1.1.1 is not valid!
```

2 χ ᵗ j è ᵖ ⃞ ᵗ ᵗ ᵍ ˣ

```
Ruijie(config)#no ip dhcp excluded-address 20.1.1.1
% Range [20.1.1.1, 20.1.1.1] is not in the database.
```

Ẃ ȯ ᵣ ᵍ

1. ᵇ ˡ ᵒ | ᵗ ᵗ ᵍ ˣ
2. ᵗ j è ᵖ ⃞ ᵗ ᵗ ᵍ ˣ

Ẇ ᴶ ᵇ ˝ -

6.27 ip dhcp force-send-nak

ˡ ᵇ ˡ Ą ˙ ˡ ᴳ NAK ˡ ˡ ᾶ ˡ ˡ

ip dhcp force-send-nak

ᴨ ˡ Ą ˙ ˡ ᴳ NAK ˡ ˡ ᾶ ˡ ˡ

	-	-

NAK

14

DHCP Server IP DHCP DHCPREQUEST DHCPDISCOVER NAK DHCPREQUEST DHCPDISCOVER NAK

NAK

```
Ruijie(config)# ip dhcp force-send-nak
```

show run

-

-

6.28 ip dhcp monitor-vrrp-state

VRRP DHCP Server Master vrrp

ip dhcp monitor-vrrp-state

vrrp Master Backup VRRP

no ip dhcp monitor-vrrp-state

default ip dhcp monitor-vrrp-state

	-	-

14

ǰ ب ل ǰ ب ل ï j Ḿ ì Æ VRRP ↑ õ ڤ Φ ˘ í

ŧ ˝ Y Ṁ Í ᵘ ɲ ƃ Ṛ Server ب ل ψ ḅ ' ì Æ ï ب ل VRRP ş χ ı DHCP ˋO ɲ ʰ ʃ ɲ ʃ ƷƵ ŧ ε Master ζ ↑ õ ì Æ ت ∂ ï ă ı Ã ʃ ˚ ε Master ζ ↑ õ ì Æ ت ∂ ï ă Ḿ ' ب ل VRRP ş χ ì Æ ı DHCP ˋO ɲ ʰ j W ˘ í VRRP ↑ õ ı ˝A ã DHCP ت ∂ ï ă ŧu Ṅ q ʃ ɲ

ب ل 1 χ DHCP ˋO ɲ ʰ Ḿ Ẹ s Ṗ ì Æ VRRP ↑ õ ڤ Φ ˘ í

```
Ruijie(config-if)# ip dhcp monitor-vrrp-state
```

ˢ ج A | -

ώ˜ Ụ 1 χ ḡ Ṗ ì Æ ب ل VRRP ↑ õ ˘ í

```
Ruijie(config-if-GigabitEthernet 0/2)#ip dhcp monitor-vrrp-state
% Invalid input detected at '^' marker.
```

Ẃ ȯ ج ئ 1 χ ḡ Ṗ ì Æ ب ل VRRP ↑ õ ˘ í

Ẓ ʲ ب ˝ -

6.29 ip dhcp ping packets

ı ب ل DHCP ˋO ɲ ʰ ˢ ⅄ ş χ˙ ⅃ ˋH ı ping Í ş χ Ꝁ ˝Ꝏ

ip dhcp ping packets [*number*]

no ė Ã Õ ʰ ǰ ب ل

no ip dhcp ping packets

Õ ʰ ǰ ب ل

default ip dhcp ping packets

˝Ꝏ ب ˝

˝Ꝏ	ώ ك
number	ε ˡ ǰ ζ ̤ ḡ ʁ 0 10 ı 0 ˊ ˜ ƺ ping ˝Ḥ ǰ ping ƀ

ǰ ب ل ǰ ping ʳ ˝Ꝏ ʁ 2

ᵘ ɲ ƃ ₩ Ã ṕ ب ل ₩ Ã

ǰ ˥ 14

ŧ ˝ Y Ṁ Í ᵘ ɲ ƃ Ṛ Server ب ل ψ DHCP ˋO ɲ ʰ ʁ DHCP ş χ – ˡ g ̤ ب IP ş χ ˋH ı ŧ ping ˝Ḥ ˡ ˢ ⅄ Í ş χ ĩ ᵉ Ṭ q Ʊ Ḕ ƷƵ ı ŧ ı ḅ ' ı ŧ ȍ ʟ ẹ ï ˡ ı ḅ ' ≡ ı ŧ ȍ ˚ ب ˥ DHCP ị ˝A ˥ Ping ˝Ḥ ǰ ʁ ʌ ڭ ƀ

ˈQ̃Ω ı ω ^ ˈ ɑ ∧ ڳ 10

ᵖ ɹ 1 χ Ṅ ping ˈḤ ∧ ڳˈQ̃Ω ˈQ ϕ ᵡ 3

```
Ruijie(config)# ip dhcp ping packets 3
```

ˢ ج Ȧ | ص **show run** ˈ ˜ ᵖ ɹ ᾰ ı

ώ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ˢ ب ˝ -

6.30 ip dhcp ping timeout

ˡ ᵖ ɹ DHCP ˋO ɲ ʰ ɾ ping ˈḤ ˢ ˩ ş ẋ˙ ˥ ˋH ı ˥ ể Ẓ ˥ ⸨ ∧ ˋH ˋH ژ

ip dhcp ping timeout *milli-seconds*

no ė Ã ˈ ɑ Õ ʰ ỉ ᵖ ɹ

no ip dhcp ping timeout

Õ ʰ ỉ ᵖ ɹ

default ip dhcp ping timeout

ˈQ ب ˝	ˈQ	ώ ك
	milli-seconds	DHCP ˋO ɲ ʰ ˥ ể ping Ẓ ˥ ⸨ˈH ژ ε ɑ ← ˥ ɥ ζ ɲ ˛ ḫ ᵡ 100 10000

ỉ ᵖ ɹ ỉ ∧ ˋH ˋH ژ ᵡ 500 ← ˥

ᵘ ɲ ₩ Ã ṕ ᵖ ɹ ₩ Ã

ỉ ˥ 14

ɾ ˝ YṀ Ỉ ᵘ ɲ Ṟ Server ᵖ ɹ ψ ḧ Θ ϕ ể i n g

Ẃ ȯ ج ئ -

Ẓ ᴶ ب ˝ -

6.31 ip dhcp pool

ᵢ ḧ Θ DHCP ş ẋ − ᵉ Ẋ ف DHCP ş ẋ − ⊞ ب ᵢ ₩ Ã

ip dhcp pool *pool-name*

no ė Ã ˡ Ɑ ڭ DHCP ş ẋ −

no ip dhcp pool *pool-name*

Õ ʰ ᵴ ɲ ڭ ş ẋ −

default ip dhcp pool *pool-name*

˝Ɑ ب ˝	˝Ɑ	ѡ ك
	pool-name	ş ẋ − ᵉ ϟ

ỉ ب ᵢ ỉ ≡ ѿ ḧ Θ DHCP ş ẋ −

ᵘ ᴨ ₩ Ã ṕ ب ᵢ ₩ Ã

ỉ ˥ 14

ŧ ˝Y Ṁ Ỉ ᵘ ᴨ Ṟ Server ب ᵢ ψ

1 χ ˝E Φ Ỉ ᵘ ᴨ ˡ ȯ ف DHCP ş ẋ − ب ᵢ ₩ Ã ˡ Ĭ ˜ ⊞

```
Ruijie(dhcp-config)#
```

ᵽ ف ب ᵢ ₩ Ã ˡ ˡ Ɑ ب ᵢ IP ş ẋ ᵽ DNS ˝O ᴨ ʰ ỉ ᵢ ϟ ˝Ɑ

ب ᵢ 1 χ ḧ Θ ᵉ ⊞ mypool0 ⊞ DHCP ş ẋ −

```
Ruijie(config)#ip dhcp pool mypool0
Ruijie(dhcp-config)#
```

ᵋ ج Ȧ | ڻ ص **show ip dhcp pool** *mypool0* ˡ ϟ ỉ ب ᵢ ᵅ̈ ˡ

ѡ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ᴶ ب ˝ -

6.32 ip dhcp refresh arp

ᾶ ï ∧ ˡ ARP

ip dhcp refresh arp

˝Ω ب ˝	˝Ω	ك ω
	-	-

ǰ ب ـ -

ᵘ ɲ ₩ Ã ṕ ب ـ ₩ Ã

ǰ ⁴ 14

ŕ ˝Y Ṁ Ǐ ᵘ ɲ Ṟ Server ب ـ ψ

˝E Φ Ǐ ᵘ ɲ ı ŏ ⁞ ˝Ω ĸ ب ـ **update arp** ⊞ ş χ – ˋ ب ⊞ ⁴ ⁴ ي ᾶ ï ∧ ˡ ARP

ب ـ 1 χ ي ᾶ ï ∧ ˡ ARP

```
Ruijie(config)#ip dhcp refresh arp
```

ˢ ج ᾶ | ن ص **show arp trusted** ˡ ϖ˜ ي ᾶ ï ∧ ⊞ ˡ ARP

ώ˜ ṟ -

Ẃ ŏ ج ئ -

Ẇ ˢ ب ˝ -

6.33 ip dhcp relay check server-id

ᵏ ŕ DHCP relay check server-di ı ǐ

ip dhcp relay check server-id

ŏ DHCP relay check server-id ı ǐ

no ip dhcp relay check server-id

˝Ω ب ˝	˝Ω	ك ω
	-	-

ǰ ب ـ ŏ DHCP relay check server-id ı ǐ

ᵘ ɲ₩Ã́ ṕ₩Ã́

ǰ ⁄ -

ɨ ˝YṀ Ĵ ᵘ ɲ Ṟ Server ᵽ ɻ ψ Ḕ ᵽ ɻ ᵘ ɲ **ip dhcp relay check server-id** ᵃ ı DHCP Relay Ṅ DHCP ت ∂ ĭ ă ج ∧ option server-id ˝Y ḧ ⊞ ̀O ⊓ ʰ ḃ ' ≡ õ ᵽ ɻ Ĵ ᵘ ɲ ı ̤ ᵇ ̈A õ ᵽ ɻ ⊞ DHCP ̀O ⊓ ʰ ج ∧ DHCP ت ∂ ĭ ă

ᵽ ɻ χ ᵏ ɨ DHCP relay check server-di ı ḟ

```
Ruijie(config)# ip dhcp relay check server-id
```

2 χ ʒ DHCP relay check server-id ı ḟ

```
Ruijie(config)# no ip dhcp relay check server-id
```

ₛ ج Ȧ | 1 χ ɨ **show running-config** ᵘ ɲ ı ˡ ⓠ ˜ ĩ ᵉ ᵽ ɻ ă ı

ώ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ˡ ب ˝ -

6.34 ip dhcp relay information option82

ᵏ ɨ DHCP option82 ı ḟ

ip dhcp relay information option82

ʒ DHCP option82 ı ḟ

no ip dhcp relay information option82

˝Ọ ب ˝

˝Ọ	ώ ك
-	-

ǰ ᵽ ɻ ʒ DHCP option82 ı ḟ

ᵘ ɲ₩Ã́ ṕ₩Ã́

ǰ ⁄ -

ɨ ˝YṀ Ĵ ᵘ ɲ Ṟ Relay ᵽ ɻ ψ Ḕ ᵽ ɻ ᵘ ɲ **ip dhcp relay information option82** ᵘ ɲ ̀H ı ⊕ ˢ ⊞ DHCP ⁄ ı ḡ ج ∧ DHCP ت ∂ ĭ ă ص ⁄ ı ḡ DHCP ت ∂ ĭ ă ▌ ɨ option Ụ

ᵣ ᵇ 1 χ ᵏ ᵣ DHCP option82 ᵢ ᾶ

```
Ruijie(config)# ip dhcp relay information option82
```

2 χ ᵡ ɣ Ï ` ɣ !

o¬ à • co- 1 χ ᵣ

6.35

Ẃ ȯ ج ئ

Ẓ ʲ ب ˝ -

6.36 ip dhcp server detect

ᵏ ɨ DHCP ̀O ɲ ʰ ₅ ⅃ ı ΄

ip dhcp server detect

ȝ DHCP ̀O ɲ ʰ ₅ ⅃ ı ΄

no ip dhcp server detect

Ȍ ʰ ـ ɲ ȝ DHCP ̀O ɲ ʰ ₅ ⅃ ı ΄

default ip dhcp server detect

˝Ϙ ب ˝

˝Ϙ	ώ ك
-	-

ʎ ب ـ ȝ DHCP ̀O ɲ ʰ ı ΄

ᵘ ɲ ₩ Ã ṕ ₩ Ã

ʎ ۱ 14

ɨ ˝YṀ Ĩ ᵘ ɲ R̄ Server ب ـ ψ ب ـ DHCP ̀O ɲ ʰ ₅ ⅃ ı ΄ ᵃ ı ḃ ' ـ ۸ è ḡ ̀O ɲ ʰ ı ʟ ẹ ḡ ḿ Ố

ب ـ 1 χ ᵏ ɨ DHCP ̀O ɲ ʰ ı ΄

```
Ruijie(config)# ip dhcp server detect
```

₅ ج Ȧ | 1 χ ɨ **show running-config** ᵘ ɲ ı ı ⓠ ˜ ĩ ᵉ ب ـ ᾰ ı

ώ˜ Ụ -

Ẃ ȯ ج ئ

Ẓ ʲ ب ˝ -

6.37 ip dhcp use class

ᒪ ᒣ ᵏ ᵀ CLASS ᑊ Φ ᑊ ᑊ ᒣ ᒣ ᒣ

ᵘ ᶇ₩Ã ṕ₩Ã

ᾳ ᾳ -

ᵵ ˝YṀ Ỉ ᵘ ᶇR Relay ᵽ ᵽ ψ ᵽ ᵽ DHCP ᾶO ᶇ ᵸ IP ᶊ ᶍ ᵃ ᵢ ᶋ ᵗ Ṅ ṷ DHCP ᵗ ᵭ ᵢ ᾰ Ṅ ᶜ ᵽ ᾳ ᾳ Ḕ ψ ᵃ
ᾶH ᵢ Ṅ ṷ DHCP ᾶO ᶇ ᵸ ᵠ Ẓ ᵢ ᾰ ᶜ ᵽ ᾳ ᾳ DHCP ᵢ ˝A ᵠ
DHCP ᾶO ᶇ ᵸ ᶊ ᶍ ṕ ᵽ ᵽ ω ᵃ ᵢ ᾳ ᵽ 20 DHCP ᾶO ᶇ ᵸ ᶊ ᶍ
ṕ ᵽ ᵽ₩Ã ᵢ ᵢ Ḿ dhcp relay cycle-mode ˝ᾳ ᶋ Φ ᵽ ᵽ ᵢ Ẹ ᵏ ᵵ cycle-mode ᾶH ˊ ˜ dhcp relay ᵽ

Õ ʰ ꜱ ɲ

defaut lease

ˇ Ω ب ˇ

ˇ Ω	ὼ ك
days	ḧ Θ ˥ Ω ̊ ˋH ژ ˥ Ω ³ ⸗ ɥ
hours	ε ˥ ǰ ζ ḧ Θ ˥ Ω ̊ ˋH ژ ˥ Ω ṇ ˋH⸗ ɥ ḧ Θ ṇ ˋH ˇΩ ọ ɛ ḧ Θ ³ ˇΩ ˎ ˎ ⸗ 0
minutes	ε ˥ ǰ ζ ḧ Θ ˥ Ω ̊ ˋH ژ ˥ Ω ˋ ت⸗ ɥ ḧ Θ ˋ ت ọ ɛ ḧ Θ ³ ˇΩ ⁼ ṇ ˋH ˇΩ , ˎ ⸗ 0
infinite	ḧ Θ ≡ ὼ ˎ ˥ Ω

ˎ ب ˎ ̄ ὼ ꜱ ɣ − ˎ ˥ Ω⸗ infinite Ʊ Ḕ ꜱ ɣ − ˎ ˥ Ω⸗ ³

ᵘ ɲ ₩ Ã DHCP ꜱ ɣ − ب ˎ ₩ Ã

ˎ ˥ 14

ᵗ ˇ Y Ṁ Ỉ ᵘ ɲ Ṟ Server ب ˎ ψ Ẹ ˥ Ω ὼ ˋH ˥ DHCP ị ˇA ˥ ∧ گ ˎ ˥ ت ∂ DHCP ˋO ɲ ʰ ˇ ḇ ˎ ˥ ˥ ˎ
˥ ꜱ ɣ ˋY j ψ

ب ˎ 1 χ Ṅ DHCP ˥ Ω ϕ⸗ 1 ṇ ˋH

```
Ruijie(dhcp-config)# lease 0 1
```

2 χ Ṅ DHCP ˥ Ω ϕ⸗ 1 ˋ ت

```
Ruijie(dhcp-config)# lease 0 0 1
```

⁵ ج A | ص ن **show run** ˥ ὸ ب ˎ ᾶ ˥

ώ ˜ Ụ -

Ẃ ὸ ج ئ -

6.40 lease-threshold

ˌ ḧ Θ DHCP ꜱ ɣ − ˃ ɛ ˜ ˋ ⅝ ˥ ᵗ DHCP ꜱ ɣ − ب ˎ ᵘ ɲ **lease-threshold**
lease-threshold *percentage*

no ḕ Ã ὶ ˃ ɛ ˥ ἶ
no lease-threshold

Õ ʰ ꜱ ɲ

defaut lease-threshold

ᐤ ب ˝

ᐤ	ᐤ	ᐤ ك
	percentage	ḧ Θ ş χ − ᵓ ع ⃞ ˋ ⅝ ı ᑎ ˷ ḫ ᠷ 60 100

ǐ ب ل ǐ ᠷ 90%

ᵘ ᑎ ₩ Ã DHCP ş χ − ب ل ₩ Ã

ǐ ᑊ 14

ᵗ ˝ Y Ṁ Ǐ ᵘ ᑎ Ṛ Server ب ل ψ ḃ ' ş χ − ⃞ ω ᵊ IP ᵗ ' ز ڈ ں ı DHCP ˋ O ᑎ ᵸ Ṅ ᵢ SYSLOG ᵓ ع Ụ IP ᵗ ' ˊ ˜ Ẹ Ṭ ˋ ب ⃞ ş χ ˝ Ω ᑎ Ẹ ş χ − ˋ ب ş χ Ở ˝ Ω ⃞ ⅝ ḃ ˋ ب ⃞ ş χ ˝ Ω ˊ ˊ ʃ ᵓ ع Ω i ı ᑎ ψ ⅛ 5 ˋ ت Ṅ ᵢ ᵸ ᵓ ع Ụ

ب ل 1 χ Ṅ ş χ − ᵓ ع ⃞ ᠷ 80% χ

```
Ruijie(dhcp-config)# lease-threshold 80
```

2 χ ڈ ş χ − ᵓ ع ı ǐ

```
Ruijie(dhcp-config)# no lease-threshold
```

ᵊ ج Ȧ | ص ن **show run** ˋ ᑎ ب ل ᾶ ı

ώ˜ Ụ -

Ẃ ᑎ ج ئ -

6.41 netbios-name-server

ı ب ل ǐ ᵲ DHCP ᵢ ˝ A ᑊ NETBIOS ⃞ WINS ᵊ È ˋ O ᑎ ᵸ

netbios-name-server *ip-address* [*ip-address2…ip-address8*]

ᑎ WINS ˋ O ᑎ ᵸ

no netbios-name-server

Ỡ ᵸ ᠷ ᑎ

defaut netbios-name-server

ᐤ ب ˝

ᐤ	ᐤ	ᐤ ك
	ip-address	ḧ Θ WINS ˋ O ᑎ ᵸ ⃞ IP ş χ ı ∂ᵊ Ṇ ب ل
	ip-address2…ip-address8	ε ˋ ǰ ζ ω ᵃ ˋ Ω ب ل 8 WINS ˋ O ᑎ ᵸ

	b-node ı ẍ Ḥ ʒ ` ᵉ p-node ı Ḿ ϟ ʒ ` ᵉ m-node ı ▉ ᵀ ʒ ` ᵉ h-node ı ᵸ ᵀ ʒ ` ᵉ

defaut network

̈Ρ ب ̈	̈Ρ	۸ ك

Õ ᵸ ɯ ɲ

ˮQ ب ˮ

ˮQ	ڡ ك
code	ḧ Θ DHCP Ľ ˚ ПЪ
ascii *string*	ḧ Θ ASCII È ۱
hex *string*	ḧ Θ Лںقّ È ۱
ip *ip-address*	ḧ Θ IP ş ẋ ˎ

6.46 pool-status

ᵽ ᶜ ᶀ ᶇ ᶁ ᶃ ᶀ ᶄ ᶅ DHCP ᶊ ᶍ − ᶋ ᶉ ᶏ ᶈ ᶇ ᶆ ᶁ ᶅ ᶇ ᶆ ᶁ ᶅ ᶇ ᶆ ᶁ ᶅ

ŕ ˝YṀ Ĵ ᵘ ᴨ Ṟ Server ب ل ψ

˝EΦ Ĵ ᵘ ᴨ ا ŏ ڤ Option82 ش ب Ụ ب ل ₩Ã ا Ĭ ˜ ᴨ χ

```
Ruijie (config-dhcp-class-relayinfo)#
```

ᵽ ف ب ل ₩Ã ا ᴵ ⓠ ب ل class ش ب ^ Option82 Ụ

ب ل 1 χ ب ل ṕ CLASS Ẋ ڤ Option82 ش ب Ụ ب ل ₩Ã

```
Ruijie(config)# ip dhcp class myclass
Ruijie(config-dhcp-class)# relay agent information
Ruijie(config-dhcp-class-relayinfo)#
```

ₛ ج Ấ | ص ڽ **show run** ᴵ ȯ ب ل ᾷ ا

ώ˜ Ụ -

Ẃ ȯ ج ئ -

6.48 relay-information hex

ᵽ ṕ CLASS ï Option82 Ụ ب ل ₩Ã ï ا ب ل option82 ش ب Ụ ا ذ ŕ **relay-information hex** ᵘ ᴨ ا Ĵ ᵘ ᴨ **no** ė Ã ᴵ ⓠ ڽ ĵ ش ب Ụ

relay-information hex *aabb.ccdd.eeff…* [*]

no relay-information hex *aabb.ccdd.eeff…* [*]

˝Ọ ب ˝

˝Ọ	ώ ك
aabb.ccdd.eeff… [*]	16 ڤ Option82 ش ب Ụ ا *Ꞩ ˊ j Ḣ ش ب ا ᴱ ء ا ل ش ب ً ⓗ ˋ o ا ˊ ˜ ڽ ص ش ب ا j Ṿ *Ꞩ ˊ ء ا ل Ḣ ش ب

ǰ ب ل -

ᵘ ᴨ ₩Ã ṕ CLASS ب ل ₩Ã

ŕ ˝YṀ Ĵ ᵘ ᴨ Ṟ Server ب ل ψ

ب ل 1 χ ب ل ṕ CLASS ᴵ ⓠ ش ب ^ option82 Ụ

```
Ruijie(config)# ip dhcp class myclass
Ruijie(config-dhcp-class)# relay agent information
Ruijie(config-dhcp-class-relayinfo)# relay-information hex 0102256535
Ruijie(config-dhcp-class-relayinfo)# relay-information hex 010225654565
Ruijie(config-dhcp-class-relayinfo)# relay-information hex 060225654565
```

ˮQ ب ˮ

ˮQ	ώ ك
class-remark	‰ ⅋ Ĩ CLASS ⊞ Ụ ı ˈ Ɑ ĩ È ۱ ı ژ ˈ Ɑ V ۷۱†

ǰ ب ل -

ᵘ ɲ ₩ Ã ṕ CLASS ب ل ₩ Ã

ǰ ۱ 14

ŕ ˝YṀ Ĩ ᵘ ɲ R̄ Server ب ل ψ

ب ل 1 χ ب ل ṕ ⊞ CLASS ⊞ ‰ ⅋ Ụ

```
Ruijie(config)# ip dhcp class myclass
Ruijie(config-dhcp-class)# remark used in #1 build
```

₅ ج Ȧ | ص ن **show run** ˈ ȯ ب ل ă ı

ώ˜ Ụ -

Ẃ ȯ ج ئ -

6.51 renew-dhcp

ب ل DHCP Client ڈ ʊ ˜ Ȧ ʊ ȫ ˥ ت ⊞ IP ş χ

renew-dhcp *type number*

ˮQ ب ˮ

ˮQ	ώ ك
type	ì Æ ۱ ڎ
number	ì Æ ۷ N

ǰ ب ل -

ᵘ ɲ ₩ Ã ˢ ŕ ˝Ȧ ₩ Ã

ǰ ۱ 14

ŕ ˝YṀ Ĩ ᵘ ɲ R̄ Client ب ل ψ Ĩ ᵘ ɲ ŕ ˜ Ȧ ì Æ ï ʊ ȫ n ɲ ⊞ IP ş χ

ب ل 1 χ ˜ Ȧ ì Æ vlan 100 n ɲ ⊞ ʊ ȫ ş χ

```
Ruijie# renew-dhcp vlan 100
```

ώ˜ Ụ -

Ẃ ȯ ج ئ -

6.52 service dhcp

ɩ ɱ ϕ ᵗ i ᵏ ɾ DHCP ̀O n ʰ ⊃ ʌ Ɱ ɲ ≠ ȯ ı ɾ ṕ ب ɹ ᵘ ɲ **service dhcp**

ɩ ڼ ᵓ AP i ᵏ ɾ DHCP ̀O n ʰ ⊃ ʌ Ɱ ɲ ≠ ȯ ı ˈ ɱ AC ap-config/ ẽ ã̈ ap-group ₩ Ã ï ب ɹ service dhcp ᵘ ɲ

service dhcp

no ẻ Ã ˈ Ɑ ɔ̌ DHCP ̀O n ʰ ⊃ ʌ Ɱ ɲ ≠ ȯ

ẽ ã̈ ɱ AC ap-config/ ẽ ã̈ ap-group ₩ Ã ï ɔ̌ AP DHCP ̀O n ⊃ ʌ Ɱ ≠ ȯ

no service dhcp

Õ ʰ ⅿ n ı AC ap-config ẽ ã̈ ap-group j ̃Ḥ'Y

defaut service dhcp

̃Ọ ب ̃	̃Ọ	ώ ك
	-	-

ỉ ب ɹ Ỉ ᵘ ɲ R̲ Server ب ɹ ψ ỉ ɔ̌ DHCP ̀O n ʰ ⊃ ʌ Ɱ ɲ ≠ ȯ

ᵘ ɲ ₩ Ã ṕ ب ɹ ₩ Ã ap-config/ap-group ₩ Ã

ỉ ʌ 14

ɾ ̃YṀ DHCP ̀O n ʰ ˈ Ɑ₅ ʊ ʌ ị ̃A ˡ ˋ ب IP ş ẋ ı Ẋ ώ DNS ̀O n ʰ ş ẋ ỉ ɹ ş ẋ ˡ ɹ ʌ ب ɹ Ụ

DHCP ʌ ≠ ȯ ˈ Ɑ Ṅ DHCP ت ∂ ج ∧ ʌ Ʊ Ḕ ̀O n ʰ ı Ẋ Ṅ ف ɨ DHCP Ẓ ˡ ɱ ج ∧ ʌ DHCP ị ̃A ˡ ı ∨

´ DHCP ï ă ج ɾ

ɱ • β i ˈ ỉ ̣ א DHCP ı ỉ ⊃ Ʊ ı ỉ ˙ ˡ ̀ א ع ı Ʊ ڈ ئ ت ̃ ˜ ̀ β ɹ ̀ ب ̃ ı Ɑ ʒ ب

ɹ ̣ م ώ˜ Ụ

ب ɹ 1 χ ϕ ᵗ ᵏ ɾ DHCP ̀O n ʰ ⊃ ʌ ≠ ȯ

```
Ruijie(config)# service dhcp
```

2 χ AC ڼ ᵓ AP ᵏ ɾ DHCP ̀O n ʰ ⊃ ʌ ≠ ȯ

```
Ruijie(config)# ap-group default
Ruijie(config-group) # service dhcp
```

₅ ج ̃A | ڼ ص **show run** ˈ ȯ ب ɹ ă ı

ώ˜ Ụ -

Ẃ ȣ ڇ ئ -

6.53 show dhcp lease

Ĭ ˜ DHCP ¡ ̈A n ę ̇ ١ ١ Ụ

show dhcp lease

̈Ρ ب ̈

̈Ρ	ۏ ك
-	-

ỉ ب ل ṇ ỉ Φ ᾳ

ᵘ ᖘ ₩ Ã ₹ ŕ ̈A ₩ Ã

ỉ ١ 14

ŕ ̈Y Ṁ Ỉ ᵘ ᖘ Ṟ Client ب ل ψ Ĭ ˜ ᾳ ¡ ̈A ٩ ٦ ت ̇ ip ş χ ̇ Ụ

ب ل 1 χ Ĭ ˜ DHCP ¡ ̈A n ę ̇ ١ ١ Ụ

6.54 show ip dhcp binding

Ĭ ˜ DHCP ş ϰ ˩ ḣ ὺ

show ip dhcp binding [*ip-address*]

Ῑ ب ˝	Ῑ	ὼ ك
	ip-address	ε ˈ ǰ ζ ᴱ Ĭ ˜ ˝Y ḣ IP ş ϰ ⸨OBJ⸩ ˩ ḣ ὺ ỉ ὺ Ĭ ˜ ˝A ὼ ˩ ḣ Ụ

ỉ ب ˩ ṇ ỉ Φ ⸗

ᵘ ɲ ₩ Ã ⸗ ɨ ˝A ₩ Ã

ỉ ˥ 14

ɨ ˝Y Ṁ Ỉ ᵘ ɲ Ṛ Server ب ˩ ψ ḃ ˈ ≡ ὼ ḣ Θ IP ş ϰ ı Ṅ Ĭ ˜ ˝A ὼ ş ϰ ⸨OBJ⸩ ˩ ḣ ὺ ḃ ˈ ḣ Θ IP ş ϰ ı Ṅ ᴱ Ĭ ˜ Ỉ IP ş ϰ ⸨OBJ⸩ ˩ ḣ ὺ

ب ˩ 1 ϰ Ĭ ˜ DHCP ş ϰ ˩ ḣ ὺ

```
Ruijie# show ip dhcp binding
Total number of clients   : 4
Expired clients           : 3
Running clients           : 1

IP address        Hardware address        Lease expiration            Type
20.1.1.1          2000.0000.2011          000 days 23 hours 59 mins   Automatic
```

Ĭ ˜ ˩ ˈ ⸨OBJ⸩ ᴿ Ḕ ᵩ ᵍ Θ ك ḃ ï χ

IP address	ˋ ب ˥ DHCP ị ˝A ˥ ⸨OBJ⸩ IP ş ϰ
Hardware address	DHCP ị ˝A ˥ ⸨OBJ⸩ ş ϰ
Lease expiration	˝ ˥ Ω Ω ˋH ژ Infinite ˊ ˜ ≡ ὼ ˋH ژ ں ˙ ψ IDLE ˊ ˜ Ẹ ˥ ژ ⸨OBJ⸩ ş ϰ ı ˥ ˥ ˈ ˊ ˊ ص Ω ≡ ˥ ˜ ᾶ ᾶ DHCP ị ˝A ˥ ᾷ ᴗ ᾷ
Type	ş ϰ ˩ ḣ ˥ ᾷ Automatic ˊ ˜ ˢ ᴗ ˋ ب ψ Manual ˊ ˜ ė Ṫ ˋ ب

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6.55 show ip dhcp conflict

Ĭ ~ DHCP ̀O ᑎ ᵸ ̀ ̀ ̀

[illegible]	[illegible]
[illegible]	14
[illegible]	[illegible] Server [illegible] DHCP [illegible]
[illegible]	1 [illegible] DHCP [illegible]

```
Ruijie#show ip dhcp history
Expired clients          : 3
IP address       Hardware address      Lease expiration          Vlan/Relay
10.1.1.5         2222.abcd.47ac        IDLE                      4097
10.1.1.4         2222.abcd.47ae        IDLE                      4097
10.1.1.3         2222.abcd.47ad        IDLE                      4097
Running clients          : 0
```

[illegible]

IP address	[illegible] DHCP [illegible] IP [illegible]
Hardware address	DHCP [illegible] MAC [illegible]
Lease expiration	[illegible] Infinite [illegible] IDLE [illegible] DHCP [illegible]
Vlan/Relay	DHCP [illegible] DHCP Relay DHCP Server [illegible] DHCP Relay [illegible] DHCP [illegible] ifindex

[illegible]	-
[illegible]	-
[illegible]	-

6.57 show ip dhcp identifier

[illegible] DHCP [illegible] ID [illegible]

show ip dhcp identifier

[illegible]	[illegible]	[illegible]

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₹ ̈Y ̇M Ǐ ᵘ ɲ ƀ R̄ Server ب ل ψ Ǐ ᵘ ɲ ƀ ˈ Ɑ Ǐ ˜ DHCP ̀O ɲ ᵂ ş ẋ − ID ⁼ ş ẋ ₹ ̀ư ̈A Ǐ ˜ ş ẋ − ID ˈ Ɑ ₹ ǰ ̄ ǎ MIB OID ˈ Ɑ ᴌ ᴅ ₋ ₋ ₋

ɨ ˝YṀ Í ᵘ ɲ Ṟ Server ب ɻ ψ Í ᵘ ɲ ˈ Ɑ Ĭ ˜ DHCP ̀O ɲ ʰ ş ẋ – ɨ ừ Ɑ ɜ ş ẋ ɨ ' ˥ Ụ

ب ɻ 1 χ Ĭ ˜ DHCP ̀O ɲ ʰ ş ẋ – ɨ ừ ɜ Ʊ ɨ ' ˥ Ụ

```
Ruijie# show ip dhcp pool
Ruijie#sh ip dh pool
Pool  name       Total     Distributed  Remained   Percentage
------------  -----------  -----------  --------   -----------
```

```
Ruijie#show ip dhcp relay-statistics
Cycle mode              0

Message                 Count
Discover                0
Offer                   0
Request                 0
Ack                     0
Nak                     0
Decline                 0
Release                 0
Info                    0
Bad                     0

Direction               Count
Rx client               0
Rx client uni           0
Rx client bro           0
Tx client               0
Tx client uni           0
Tx client bro           0
Rx server               0
```

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6.60 show ip dhcp server detect

Ĭ ˜ DHCP ₅ ⅏ ̀O ɲ ʰ ´

show ip dhcp server detect

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ỉ ب ـ ṇ ỉ Φ ⅏

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ᾗ ᾳ 14

ᾗ ᾷ Ǐ ᵘ ᖘ Ṟ Server ᾗ

ᾗ 1. Ǐ ˜ DHCP Server ₅ ᾗ ⸨OBJ⸩ ᾗ ᾗ ᾗ

```
Ruijie#show ip dhcp server detect

The DHCP Server information:

Server IP = 10.1.10.40, DHCP server interface = GigabitEthernet 0/1
```

₅ ᾗ Ǎ | -

ᾗ ˜ ᾗ -

ᾗ ᾗ ᾗ -

6.61 show ip dhcp server statistics

Ǐ ˜ DHCP ᾗ ᾗ ⸨OBJ⸩ ᾗ ᾗ ᾗ ᾗ

show ip dhcp server statistics

ᾗ	ᾗ	ᾗ
-	-

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ᾗ ᾳ 14

ᾗ ᾷ Ǐ ᵘ ᖘ Ṟ Server ᾗ ᾗ Ǐ ᵘ ᖘ ᾗ ᾗ Ǐ ˜ DHCP ᾗ ᾗ ᾗ ⸨OBJ⸩ ᾗ ᾗ ᾗ ᾗ

ᾗ 1. Ǐ ˜ DHCP ᾗ ᾗ ⸨OBJ⸩ ᾗ ᾗ ᾗ ᾗ

```
Ruijie# show ip dhcp server statistics
Address pools            2
Lease counter            4
Active  Lease Counter    0
Expired Lease Counter    4
Malformed messages       0
Dropped messages         0
```

```
Message                    Received
BOOTREQUEST              216
DHCPDISCOVER             33
DHCPREQUEST              25
DHCPDECLINE               0
DHCPRELEASE               1
DHCPINFORM                150

Message                      Sent
BOOTREPLY                  16
DHCPOFFER                  9
DHCPACK                     7
DHCPNAK                     0
DHCPREQTIMES               0
DHCPREQSUCTIMES          0
DISCOVER-PROCESS-ERROR 0
LEASE-IN-PINGSTATE         0
NO-LEASE-RESOURCE        0
SERVERID-NO-MATCH         0
-------------------------------------------
recv                           0
send                          0
```

Ǐ ~ ⌋ ' ⃞ ᴿ È ᶠ ᵍ Θ ⌫ ᵇ ⌋ ï

Address pools	ş ϰ − ̈Ω
Automatic bindings	⁵ ʊ ş ϰ ⌋ ḧ ⃞ ̈Ω´
Manual bindings	ė Ṫ ş ϰ ⌋ ḧ ⃞ ̈Ω´
Expired bindings	ص Ω ş ϰ ⌋ ḧ ⃞ ̈Ω´
Malformed messages	DHCP ì ᴩ j* Ẃ ǐ ă ⃞ ̈Ω´
Message Received or Sent	DHCP ̀O ᴨ ᴴ ì ᵠ ᵌ ∧ ⌫ ⅛ ˥ ǐ ă ⃞ ̈Ω´
DHCPREQTIMES	DHCP ᵠ ⃞ ت ∂ ǐ ă Ở ⃞ ̈Ω´
DHCPREQSUCTIMES	DHCP ᵠ ⃞ ت ∂ ą ǎ ı ∫ ᴨ ⃞ ǐ ă ̈Ω´
DISCOVER-PROCESS-ERROR	DHCP ᵠ ⃞ DISCOVER ǐ ă ∫ ᴨ ˸ ⌫ ⃞ ̈Ω´
LEASE-IN-PINGSTATE	Ẹ ∫ ᵽ PING ₅ ⅃ ↑ ỗ ⃞ ˥ ∧ ̈Ω´
NO-LEASE-RESOURCE	ḿ ş ϰ ˈ ˋ ⃞ ◗ ş ϰ − ⃞ ̈Ω´
recv	ᵠ ⃞ DISCOVER ı REQUEST ı INFORM ǐ ă Δ Ở ̈Ω´
send	Ẓ ∧ ⌫ ⃞ ᵠ Ẓ ǐ ă ̈Ω´ ∧ ɯ

ˢ ج Ǎ | -

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6.62 show ip dhcp socket

Ĭ ˜ DHCP ̀O ɲ ʰ ɾ ̀ì È ɻ Ậ

show ip dhcp socket

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	-	-

ᵘ ɲ ƀ ₩ Ã ˢ ɾ ̈A ₩ Ã

ỉ ˥ 14

ɾ ̈YṀ -

ب ɻ 1 χ Ĭ ˜ DHCP ̀O ɲ ʰ ɾ ̀ì È ɻ Ậ

```
ruijie#show ip dhcp socket
dhcp socket = 47.
```

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Ẓ ʲ ب ̈ -

6.63 update arp

ı ɥ DHCP ˋ ب ş χ ̀H ▌ ɾ ˡ ARP ı ɾ DHCP ş χ – ب ɻ ᵘ ɲ ƀ update arp

update arp

no ẻ Ã ˊ ˜ DHCP ˋ ب ş χ ̀H j ▌ ɾ ˡ ARP

no update arp

Õ ̈ ʰ ɯ ɲ

defaut update arp

Ϊ̈Ϙ ب ̈	Ϊ̈Ϙ	ϣ ك
	-	-

ǰ ب ـ ǰ ϋ ї DHCP ˋ ب ـ ş ϰ ̀H j ▌ ɪ ˈ ARP

ᵘ ɲЪ₩Ã DHCP ş ϰ − ب ـ ₩Ã

ǰ ˀ 14

ɪ ̈YṀ Ĵ ᵘ ɲЪ R̲ Server ب ـ ş ϰ − ب ـ **update arp** ᵃ ˈ DHCP ϰ ş ϰ −ˋ ب ş ϰ ̀H ▌ ɪ ˈ ARP ˈ ˈ ARP
⸨ ˀ ⅝ ʊ õ ARP ⸩ ˀ ح ˈ j ɑ ʊ õ ARP ϩu ̋

ب ـ 1 χ ɥ DHCP ˋ ب ş ϰ ̀H▌ ɪ ˈ ARP

```
Ruijie(dhcp-config)# update arp
```

ˢ ج Ά │ ص ن **show run** ˈ ȣ ب ـ ᾶ̈ ˈ

ώ˜ Ụ -

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ᵘ ɲ₩Ã́ ṕ ب ـ ل₩Ã́

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ŧ ˝YṀ Í ᵘ ɲ ㎞ ĕ Ã DNS ³ ª ɿ ‘ ı ĩ ⊞Ã ı ˝EΦ Í ᵘ ɲ ı ¨ ᵏ ʊ DNS ڤΦ ³ ª ɿ ‘

ب ـ ل 1 χ ڈ DNS ³ ª ɿ ‘ ı ĩ

```
Ruijie(config)# no ip domain-lookup
```

⁵ ج Ά | ص ن **show run**¶ ˜ ب ـ ل ı j è ɡ **ip domain-lookup** ب ـ ل

ώ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ᴶ ب ˝ -

7.3 ip host

ė Ṫ ب ـ ل ڎ ª ⁼ IP ş χ ⊞ ī ṃ

ip host *host-name ip-address*

ȯ ڎ ˊ

no ip host *host-name ip-address*

˝Ẓ ب ˝

˝Ẓ	ώ ك
host-name	ȶ ⁱ ⊞ ڎ ª
ip-address	ȶ ⁱ ⊞ IP ş χ

ǰ ب ـ ل -

ᵘ ɲ₩Ã́ ṕ ب ـ ل₩Ã́

ǰ ⁴ 14

ŧ ˝YṀ

ب ـ ل 1 χ ˜ ˜ ب ـ ل www .test.com ³ ª ㎞ 192.168.5.243

```
Ruijie(config)# ip host www.test.com 192.168.5.243
```

⁵ ج Ά | **show run**¶ ˜ ب ـ ل ı è ɡ ˝Aب ـ ل⊞ ᵘ ɲ

show hosts¶ ˜ Ę ³ ᵉ ⊃ IP Ḿ Ẓ ˡ ı è ƥ ̈A ب ɹ ³ ᵉ ⊃ IP Ḿ Ẓ ´ °

ώ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ʲ ب ̈ -

7.4 ip name-server

ب ɹ ³ ᵉ ̀O ɲ ʰ IP/IPv6 ş ẋ

ip name-server{ *ip-address* | *ipv6-address* }

ڻ ب ɹ ³ ᵉ ̀O ɲ ʰ

no ip name-server [*ip-address* | *ipv6-address*]

̈Ọ ب ̈

̈Ọ	ώ ك
ip-address	³ ᵉ ̀O ɲ ʰ IP ş ẋ
ipv6-address	³ ᵉ ̀O ɲ ʰ IPv6 ş ẋ

ỉ ب ɹ ỉ ≡ ω̃ ب ɹ ³ ᵉ ̀O ɲ ʰ

ᵘ ɲ ₩ Ã́ ṕ ب ɹ ₩ Ã́

ỉ ˡ 14

ŕ ̈YṀ ᴱ ω̃ ب ɹ ³ ᵉ ̀O ɲ ʰ ἐ ἴ ف Φ ʊ ȍ ³ ᵉ ɹ ‘

▌ŕ DNS Server IP/IPv6 ş ẋ ⅛ Ḱ ̈EΦ ف ᵘ ɲ ı Φ ᵗ ʊ̃ ▌ŕ DNS Server Ę ṇ | ʁ ˡ Server ɲ ɲ ³ ᵉ ̀H ı Φ ᵗ ȍ ˸ ᵇ ᵃ ˡ Server ʌ گ DNS ت ∂ ı ´ * ̣ ώ ᵗ Ẓ ʁ ₿ ˡ ˡ ω ^ ̃Ḥ ̀Y 6 ̀O ɲ ʰ ڻ DNS Server ̀H ı ḃ ' ύ ̈Y ḧ *ip-address* ỉ *ipv6-address* ̈Ọ ı ̣ ᴱ ڻ ̈Y ḧ ̀O ɲ ʰ ı ᵋ ̣ ڻ ̈A ω̃ DNS ̀O ɲ ʰ ş ẋ

ب ɹ 1 χ ب ɹ IPv4 ³ ᵉ ̀O ɲ ʰ ⊃ IPv6 ³ ᵉ ̀O ɲ ʰ

```
Ruijie(config)# ip name-server 192.168.5.134
Ruijie(config)# ip name-server2001:0DB8::250:8bff:fee8:f800 2001:0DB8:0:f004::1
```

₅ ج ́A | **show run**¶ ˜ ب ɹ ı è ƥ ̈A ب ɹ ᵘ ɲ

ώ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ᴶ ب ˝ -

7.5 ipv6 host

ė Ṫ ب ل ڎ ᵉ ᵊ IPv6 ş ẋ ī ṃ

ipv6 host *host-name ipv6-address*

ڻ ڎ ˊ

no ipv6 host *host-name ipv6-addres*

Ṇ ب ˝

Ṇ	ڡ ك
host-name	ڦ ᵗ ڎ ᵉ
Ipv6-address	ڦ ᵗ IPV6 ş ẋ

ỉ ب ل -

ᵘ ɲ ₩ Ã ṕ ب ل ₩ Ã

ỉ ᵃ 14

ᵗ ˝ Y Ṁ -

ب ل 1 χ ̄ õ ب ل ᵓ ᵉ Ḿ Ẕ ipv6 ş ẋ

```
Ruijie(config)# ipv6 host www.test6.com 2001:0DB8:700:20:1::12
```

ᵋ ج Ǎ | **show run** ˜ ب ل ı è ḡ ˝A ب ل ᵘ ɲ

show hosts ˜ Ẹ ᵓ ᵉ ᵊ IP Ḿ Ẕ ᵃ ı è ḡ ˝A ب ل ᵓ ᵉ ᵊ ip Ḿ Ẕ ˊ °

ڡ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ᴶ ب ˝ -

7.6 show hosts

Ĭ ˜ DNS ب ل Ụ

show hosts [*hostname*]

˝Ϙ ب ˝	˝Ϙ	ὼ ك
	hostname	¶ ˜ ˝Y ḧ ³ ª ⅄ ὺ ¶ ˜ ˝A ὼ ³ ª Ụ

ᵘ ПЪ₩ Ã́ ṕ ₩ Ã́

⅄ ⅃ 14

ŕ ˝Y Ṁ Ĭ ˜ DNS ب ⅃ Ụ

ب ⅃ 1 χ¶ ˜ ˝A ὼ ³ ª Ụ

```
Ruijie# show hosts
Name servers are:
192.168.5.134 static

Host                type          Address                TTL(sec)
switch              static       192.168.5.243           ---
www.ruijie.cos  MT                    192.168.5  243         5      ي   كج        Ĭ
```

8 DNS-CACHE

8.1 dns-cache enable

Ã ᵏ DNS ˎ è ı ˆ

dns-cache enable

ȝ DNS ˎ è ı ˆ

no dns-cache enable

˝Ą ب ˝	˝Ą	ѡ ك
-	-

ǰ ب ـ ǰ ȣ ï ı DNS ˎ è ı ˆ ɛ̆ Ã

ᵘ ᴨ ₩ Ã ṕ ب ـ ₩ Ã

ǰ ˀ 14

ŧ ˝YṀ ڼ ص ب ـ ᵘ ᴨ ᵏ ʊ DNS ˎ è ı ˆ

ب ـ 1 χ Ã ᵏ ₱ ᵗ ⊞ DNS ˎ è ı ˆ

```
Ruijie#config
Ruijie(config)# dns-cache enable
```

2 χ ȝ ₱ ᵗ DNS ˎ è ı ˆ

```
Ruijie#config
Ruijie(config)#no dns-cache enable
```

ˢ ج Ȧ | 1 χ ŧ **show run** ᵘ ᴨ ı ˈ ₠ ˜ DNS

8.2 dns-cache old-time

ᵇ ˡ ˡ ᵉ ˡ è ̀H ژ

dns-cache old-time *time*

ᵇ ˡ ᵉ ˡ è ̀H ژ̂ ᵇ ˡ

no dns-cache old-time

̈Ρ ᵇ ̈	̈Ρ	ώ ك
	time	ǎ̈ ̀H ژ ˡ ˡ ᵇ ˡ ̱ ɥ 1-600 ˥ ˡ no ᵘ ɲ Ö ̈ ʰ ˢ ɲ 300 ˥

ǐ ᵇ ˡ ǐ ù ̈ ˡ ˢ ɲ ˡ è 300 ˥

ᵘ ɲ ₩ Ã ́ ᵇ ˡ ₩ Ã

ǐ ˥ 14

ᵗ ̈YṀ ص ᵘ ɲ ᵇ ˡ ˡ Ρ ώ ˡ ᵉ ˡ è ̀H ژ

ᵇ ˡ 1 χ Φ ˢ ˡ ᵉ ˡ è ̀H ژ Φ ˡ ˢ 500 ˥

```
Ruijie#config
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# dns-cache old-time 500
```

ˢ ج ́A | 1 χ ᵗ **show run** ᵘ ɲ ˡ ˡ Ρ ̈ ̃ ˡ ᵉ ˡ è ̀H ژ ˡ ˢ ɲ ̀H ژ j ǐ ̃

ώ ̃ ̣U -

Ẃ ȯ ج ئ -

Ẇ ʲ ᵇ ̈ -

8.3 dns-cache static domain

ᵇ ˡ ᵗ ̈Aˢ ḧ Θ ̄ ̃ ˡ è

dns-cache static domain *domain* **ip** “ *ip1 ip2 …* ”

ᵇ̂ ᵇ ˡ

no dns-cache static domain *domain*

Ϊ̈Ϙ ب ˝

Ϊ̈Ϙ	ѡ ك
domain	³ ª ا ѡ ذ ذ ѡ ا ỷ j ۸ ص 64 È `
ip	ip ا ѡ ^ ا Ϙ ب ل 8 ip ا ip ژ Ϙ ۷† ك Ã

ǰ ب ل -

ᵘ ɲЪ₩Ã ǵ ب ل₩Ã

ǰ ۱ 14

ŕ ˝YṀ ڭ ص ᵘ ɲЪ ب ل ŕ Ϊ̈Ａ ḧ Θ ̄ ̃ ȯ ۱ è

ب ل 1 χ ŕ Ϊ̈A ỳ ц

ب ـ Ĭ ~ DNS ـ ـ è ı ĭ ĭ ᵋ Ã ᵏ

```
Ruijie#show dns-cache enable
dns-cache is on
```

ώ~ Ụ -

Ẇ ᴶ ب ˝ -

8.5 show dns-cache state

Ĭ ~ DNS ـ ـ è ı ĭ ظ Φ ↑ õ

show dns-cache state

˝Ọ ب ˝	˝Ọ	ώ ك
	-	-

ـ ب ـ ṇ

ᵘ ɲ ₩ Ã ᵉ ₩ Ã

ـ ۱ 14

ŕ ˝ Y Ṁ Ĭ ~ DNS ـ ـ è ı ĭ ظ Φ ↑ õ

ᴿ ˝Ọ ᵍ Θ ب ˝ χ

dns-cache-enable χ DNS ـ ـ è ı ĭ ĭ ᵋ Ã ᵏ ı on Ã ᵏ ı off ڈ

old-time χ ` ᴾ ǎ ̀H ژ ı ɥ ɯ ۱

capacity χ ` ᴾ ḳ ۍ

free_node χ Ẹ ۱ ژ ` ᴾ ḳ ۍ

dns-question χ dns ت ∂ Ꝁ ˝Ọ

hit-cache χ dns ت ∂ ᵘ ـ ـ è Ꝁ ˝Ọ

ب ـ Ĭ ~ DNS ـ ـ è ı ĭ ĭ ᵋ Ã ᵏ

```
Ruijie#show dns state
dns-cache-enable:on
old-time:300
capacity:10000
```

```
free_node:10000
dns-question:0
hit-cache:0
Ruijie#
```

ώ˜ Ụ -

Ẇ ᴶ ب ˝ -

9

9.1 clear rping table all

▌ڽ Rping ″A ũ ´ °

clear rping table [**all |** [**ping-object** *owner test-name*] | [**trace-object** *owner test-name*]]

″Ọ ب ″

″Ọ	ὼ ك
owner	۶ ″A ۷ Ậ
test-name	۱ ؛ ۷ Ậ

ᵘ ɲ ₩ Ẽ ᵉ ₩ Ẽ

ỉ ۸ -

۶ ″Ẏ Ṁ % ᵘ ɲ ۶ ۱ ڽ ₱ ؛ i Rping ۸ ɲ ۶ ″A ″A ũ ή ۱ ´ ´ °

ب ۷ 1 χ ▌ڽ Rping ″A ũ ´ ° Ụ

```
Ruijie# clear rping table all
```

2: ▌ڽ ۶ ″A ₩ user ۱ ή ۱ ᵉ ruijie ₩ ₦ Ổ Φ

```
Ruijie# clear rping table user ruijie
```

ώ˜ Ụ 1 χ ḅ ' ₱ ؛ i ≡ ũ″Y ḧ ₦ Ổ Φ ۱ ώ˜ ˀ Ẓ Ụ

Ẇ ᴶ ب ″ -

9.2 ping

₅ ۱ ″Y ḧ IPv4 ş χ ĩ ᵋ ۱ ۲ ۱ Ẋ ژ ˀ Ụ

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

″Ọ ب ″

″Ọ	ὼ ك
address	″Y ḧ ´ IPv4 ş χ ã̃ ³ ᵉ
length	″Y ḧ ۸ گ″Ọ̃Ω ″Ọ̃Ω ۱ ۶ ۲ ỷ ۱ ḧ χ36~18024 ۱ ɲ ۱ ۲ ỷ ₩ 100
times	″Y ḧ ۸ گ″Ọ̃Ω ″Ọ ۱ ḧ χ 1~ 4294967295
seconds	″Y ḧ ۸ ″H″H ژ ۱ ḧ χ 1~10 ε ۷ ζ

ᵘ ᑎ ᗷ ᕹ ᕼ ᕼ ᕼ

ᵘ ᑎ ᕹ ᕹ ᕹ

ᵘ ᴨ ᾶ ᴊ ᴸ ᶠ ᵠ ᶰ ᴊ ᴸ ᶠ ᵠ ᶰ ᴊ ᴸ ᶠ ᵠ ᶰ

ώ ˜ -
Ụ

Ẃ ȣ -
ج ئ

Ẓ ᴶ -
ب ˝

9.4 show rping detail

ᾶ ˜ Rping Ụ

show rping detail

˝ ب Ą	Ą	ώ ك
	-	-

ᵘ ҂ ₩ Ã ₩ Ã ṕ ₩ Ã ì Æ ₩ Ã

ỉ ۷ -

ŕ ˝ Ẏ Ṁ ŕ Ỉ ᵘ ҂ ˡ Ɯ ˜ Φ ˢ i Rping ۷ ת Ḿ ع Ở ˝ Ą ı ŕ ˝ Ą ۷ Ụ

ب ۷ 1 χ ˜ Rping ؤ ۷ Ụ

```
Ruijie#show rping detail
Total owner number: 2
Total test number: 4
owner: user1
   test name: taget_1        storage type: volatile
   test name: taget_2        storage type: nonVolatile
owner: user2
   test name: taget_1        storage type: permanent
   test name: taget_2        storage type: readOnly
```

χ ᵖ J ᵊ È

È ᵊ	ب ˝
Total owner number	ŕ ˝ A Ở ˝ Ą
Total test number	ˡˡ ؛ Ở ˝ Ą
owner	ŕ ˝ A ᵃ
test name	ˡˡ ؛ ᵃ
storage type	₦ Ổ Φ è ۷ ڭ

ώ˜ Ṷ

Ẓ ᑉ ب ˝ -

9.5 traceroute

Ĭ ˜ IPv4 ˝Ẓ̃Ω ᵡ ◊ ş χ ´ ş χ ˝A ᑊ ص ᑊ

traceroute [**ip**] [*adress* [**probe** *number*] [**source** *source*] [**timeout** *seconds*] [**ttl** *minimum maximum*]]

˝Ẓ ب ˝

˝Ẓ	ώ ك
address	˝Y ḧ ´ IPv4 ş χ ᾷ ³ ᵉ
number	˝Y ḧ ∧ گ ή ᒧ ˝Ẓ ᾟ ᵢ ḫ χ 1~255
source	˝Y ḧ ĭ ᾰ ◊ IPv4 ş χ ᾷ ◊ ì Æ Ʊ ᵢ ᴙ ᵢ ì Æ ş χ ε ḃ 127.0.0.1 ζ j ḫ ᵡ ◊ ş χ
seconds	˝Y ḧ ∧ ˋH ˋH ژ ᵢ ḫ χ 1~10 ε ᑊ ζ
minimum maximum	˝Y ḧ ѡ ṇ ᐧ ѡ ᶻ TTL ᵢ ḫ χ 1~255

ᾷ ب ᑊ ᾷ ∧ ˋH ˋH ژ ᵡ 3 ᑊ ᵢ ∧ گ ή ᒧ ˝Ẓ ᾟ ᵡ 3 ᵢ ѡ ṇ ᐧ ѡ ᶻ TTL ˋ ᵡ 1 ᐧ 255

ᵘ ᖘ ₩ Ã̃ ḫ ˝ ᑎ ᵊ ˝A ₩ Ã̃ ï ᵢ ᴱ ᾟ ظ Φ ᵍ **traceroute** ᵢ ᾟ ψ ḫ ᵉ ᵊ ˝A ₩ Ã̃ ï ᵢ ف ᵢ ᾟ ظ Φ **traceroute** ˝E ᾟ ᵢ ᾟ

ᾷ ᑊ 0

ᵊ ˝YṀ **Traceroute** ᵘ ᖘ ᾷ ᵢ ᵊ ₅ᵀ ᑊ ᑊ ف ᑎ ᓂ ᵢ Ẋ ḫ ᑊ ᑊ ᾟ ᾷ ∧ ᵢ ˋH ᵢ . ḧ ᵸ ᾟ ᾷ ∧ ᵢ ᵸ ᑊ ᵢ ᵊ ³ ᵉ ᵢ ᾟ ᵢ ᵢ ب ᑊ ³ ᵉ ˋO n ᴴ ᵢ ᵡ ب ᑊ ت ᾷ DNS ب ᑊ ᾟ ˋ

ب ᑊ 1 χ ᑊ ᑊ ᵡ ᑎ traceroute Ḍ

```
Ruijie# traceroute 61.154.22.36
< press Ctrl+C to break >
Tracing the route to 61.154.22.36
1       192.168.12.1      0 msec  0 msec  0 msec
2       192.168.9.2       4 msec  4 msec 4 msec
3       192.168.9.1       8 msec  8 msec  4 msec
4       192.168.0.10      4 msec  28 msec  12 msec
5       202.101.143.130      4 msec  16 msec  8 msec
6       202.101.143.154     12 msec  8 msec  24 msec
7       61.154.22.36      12 msec  8 msec  22 msec
```

ᴷ i ᵉ ᴼᴮᴶ ᴶ ' ᴵ ᴱ ˜ ᵢ ᴷ ◊ ᵍ ᵡ ᵢ ᴸᴴᴷ IP ᵍ ᵡ ᴷᴷ 61.154.22.36 ᴼᴮᴶ ᴶ ᴸ ᴸ ᴵ ᴱ ᴼ ᴼ ᴼ

```
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
```

⁵ ج Ä ⎹	-
ώ˜ Ụ	-
Ẃ ȯ ج ئ	-
Ẓ ʲ ب ˝	-

9.6 traceroute ipv6

ǐ ˜ IPv6 ˝Ą̃Ω ᵏ ◊ ᵍ ˣ ´ ᵍ ˣ ˝A ᵎ ص ᵎ

traceroute [**ipv6**] [*address* [**probe** *number*] [**timeout** *seconds*] [**ttl** *minimum maximum*]]

˝Ą ب ˝

˝Ą	ώ ك
address	˝Y ḧ ´ IPv6 ᵍ ˣ ᾶ ³ ᵃ
number	˝Y ḧ ∧ گ ή ᑊ ˝Ą ᵢ ᵢ ᵍ ˣ 1~255
seconds	˝Y ḧ ∧ ʿH ʿH ژ ᵢ ᵍ ˣ 1~10 ε ᑊ ζ
minimum maximum	˝Y ḧ ω ṇ ⁻ ω ᶻ TTL ᵢ ᵍ ˣ 1~255

ǐ ب ᵎ

ǐ ∧ ʿH ʿH ژ ᵢᵢᵢ 3 ᑊ ᵢ ∧ گ ή ᑊ ˝Ą ᵢ ᵢᵢᵢ 3 ᵢ ω ṇ ⁻ ω ᶻ TTL ʿ ᵢᵢᵢ 1 ⁻ 255

ᵘ ᑎ ₩ Ã

ᵍ ˝ ᑊ ᵗ ˝A ₩ Ã ᵢ ᵢ ᵉ ή ظ Φ ᵍ **traceroute ipv6** ᵢ ή ψ ᵍ ᵉ ᵗ ˝A ₩ Ã ᵢ ᵢ ف ᵢ Ω ظ Φ **traceroute ipv6** ˝E ᵢ ᵢ ή

ǐ ᵢ

0

ᵗ ˝Y Ṁ

Traceroute ipv6 ᵘ ᑎ ᾷ ᵢ ᵗ ⁵ ᑊ ᵢ ᑊ ف ᑊ ᵒ ᑊ ᵢ Ẋ ᵍ ᵢ ᑊ ᵢ ᵢ ᵢ ∧ ᵢ ʿH ᵢ ḧ ᵍ ᵢ ᵢ ∧ ᵢ ᵍ ᵢ ᵢ ᵗ ᵃ ᵢ ή ᵢ ᵢ ᵢ ᵃ ʿO ᑎ ʰ ᵢ ᵗ ᵢ ت ᾶ DNS ᵢ ᵢ ᵢ ʿh

ᵢ

1 ˣ ᵢ ᑊ ᵗ ᑊ **traceroute ipv6** Ḍ

```
Ruijie# traceroute ipv6 3004::1
  < press Ctrl+C to break >
```

```
Tracing the route to 3004::1
1       3000::1          0 msec  0 msec  0 msec
2       3001::1          4 msec  4 msec 4 msec
3       3002::1          8 msec  8 msec  4 msec
4       3004::1          4 msec  28 msec  12 msec
```

ᵢ ᵢ ᵢ

10 TCP

10.1 ip tcp adjust-mss

ᵽ ᆯ ᶜ ᵃ TCPv4 SYN ᾽ ᾷ MSS ᶜ ᵒ

ip tcp adjust-mss *max-segment-size*

Ꝏ ᵘ ᶜ ᵇ ᆯ

no ip tcp adjust-mss

ᶜ ᵇ ᶜ

ᶜ	ᶜ	ᵒ
max-segment-size	ᵒ ᶻ ᶜ ᶜ ᶠ ᶻ ᶜ ᶜ ᶠ ᶻ ᶜ ᶜ ᶠ

10.2 ip tcp keepalive

Ĩ ᵘ ɲ ɤ ʃ Ã ᵏ TCP ╗ ı ĩ

ip tcp keepalive [**interval** *num1*] [**times** *num2*] [**idle-period** *num3*]

Ϊ ب ˝

Ϊ	ώ ك
interval *num1*	∧ گ ╗ ĭ ă ⸨OBJ⸩ H ژ ڭ ı ɥ ĩ ↖ ı ɲ ˵˵ ɡ ĩ 1 120 ı ǵ ĩ 75 ↖
times *num2*	∧ گ ╗ ĭ ă ⸨OBJ⸩ ⱪ Ϊ ı ɲ ˵˵ ɡ ĩ 1 10 ı ǵ ĩ 6
idle-period *num3*	↖ ژ H ژ ı o Ḿ ↖ ≡ ω ᵇ ↖ ∧ گ ص ĭ ă ⸨OBJ⸩ H ژ ذ ỷ ı ɥ ĩ ↖ ı ɲ ˵˵ ɡ ĩ 60 1800 ı ǵ ĩ 15 ˋ ت

ǵ ب ɹ ڈ

ᵘ ɲ ₩ Ã ṕ ₩ Ã

ǵ ↑ 2

ɤ ˝ Y Ṁ ḃ ˈ TCP Ű Ω˜ ئ Ḿ ↖ ĩ ᵉ ف ɡ* Ẃ Ṫ ı ˈ Ϣ Ã ᵏ ╗ ı ĩ
ϕ ɤ ˝ A Ã ᵏ ╗ ı ĩ ı H ژ ڭ ı ⱪ Ϊ ⸨OBJ⸩ H ژ ϟu ɤ ǵ ı TCP ɡ 15 ˋ ت ≡ ω ώ ص Ḿ ↖ ∧ گ ⸨OBJ⸩
ĭ ă ı Ã Ḋ ∧ گ ╗ ĭ ă ı ⅛ ڭ 75 ↖ ∧ گ ⱪ ı ف ↗ ∧ گ 6 ⱪ ı ḃ ˈ ≡ ω ώ Ḿ A ∧ گ ⸨OBJ⸩ TCP ĭ ă ı ŏ
ɲ ⸨OBJ⸩ TCP ف ì ṇ ᾷ ı ₅ ʊ ᾷ TCP ف ì
Ĩ ᵘ ɲ j W ɲ ˋ Ο ɲ ᵂ ↖ ⊃ ḭ ˝ A ↖ ı Ḿ ˝ A ω ⸨OBJ⸩ TCP ف ì ϟu ı ᾷ

ب ɹ 1 χ ɡ ϕ ᵗ i Ã ᵏ TCP ╗ ı ĩ ı ↖ ژ H ژ ĩ 3 ˋ ت ı ∧ گ ╗ ĭ ă ⸨OBJ⸩ H ژ ڭ ĩ 60 ↖ ı ḃ ˈ ف ↗ ∧ گ 4 ⱪ
╗ ĭ ă ı ≡ ω ώ Ḿ A ∧ گ ⸨OBJ⸩ TCP ĭ ă ı ŏ ɲ ⸨OBJ⸩ TCP ف ì ṇ ᾷ

```
Ruijie(config)# ip tcp keepalive interval 60 times 4 idle-period 180
```

₅ ج A | -

ώ˜ Ụ -

Ẃ ŏ ج ئ -

Ẉ ᴶ ب ˝ 11.0 v Â Ĩ ᵘ ɲ ı ɲ Ɲ 10.x v ⸨OBJ⸩ ب ɹ ᵘ ɲ service tcp-keepalives-in ɓ ⊃ service tcp-keepalives-out ɓ

10.3 ip tcp mss

ϕ ɹ TCP ف ì ⸨OBJ⸩ MSS ⸨OBJ⸩ ω ᶻ

ip tcp mss *max-segment-size*

Õ ᵸ ǰ ب ر

no ip tcp mss

˝Ω ب ˝	˝Ω	ώ ك
	max-segment-size	MSS ᵢ ں ᵸ ᵸ È ` ᵢ ᵢ ᵢ ᵢ 68-10000 ᵮ ᵮ ᵮ ⋮ ˜Ω MTU ᵮ ᵮ ê ᵢ MSS

ǰ ب ر -

ᵘ ɲ ₩ Ã ó ₩ Ã

ǰ ᵮ 14

ᵮ ˝YṀ **ip tcp mss** ᵢ ᵮ ŏ ĩ ں o Ṅ ã ᵮ ᵢ TCP ف ì ᵢ MSS ᵢ ᵮ ᵮ Ȁ ã ᵮ ᵢ ف ì ᵢ ƀ ᵢ MSS j ĩ ᵮ ص ب ر ᵢ ᵢ ᵢ ᵢ ṇ ف ì ᵢ ᵮ ᵮ MSS ᵢ ᵢ Ɑ ب ر أ ᵘ ɲ ᵢ ˘ ᵮ ᵮ ᵮ j ᵮ ᵮ ب ر ᵮ ᵮ ᵮ ⋮ ˜Ω MTU ᵮ ᵮ ê ᵢ MSS ᵢ ᵢ ᵮ ˜A˜ χ

IPv4 TCP χ MSS = Ḿ ᵮ IP ᵮ χ Ḿ Ẓ ᵢ Æ ᵢ IP MTU - 20 È ` IP ᵮ - 20 È ` TCP ᵮ

IPv6 TCP χ MSS = Ḿ ᵮ IPv6 ᵮ χ Ḿ Ẓ ᵢ ت Ể MTU - 40 È ` IPv6 ᵮ - 20 È ` TCP ᵮ

ᵢ ᵮ أ ف ì ˜Ḥ˙Y • ǰ ° ᵢ ᵮ ᵮ MSS ف ᵮ ǰ ° 4 È ` Ḿ ᵮ ᵮ ᵢ ᵮ ᵮ ᵮ MD5 ǰ ° ᵮ 20 È ` ᵢMD5 ǰ ° ᵮ ᵮ 18 È ` ᵢ Ḿ ᵮ ᵮ 20 È `

ᵢ ᵮ ᵮ ˜A ب ر MSS ᵢ ᵮ ᵮ ᵮ ᵢ MSS ĩ ᵮ ⋮ ˜Ω MTU ᵮ ᵮ ê ᵢ MSS ᵮ ᵮ ˜A ب ر ᵢ MSS ᵮ ᵮ ᵮ

ب ر 1 χ ᵮ ر TCP ف ì ᵢ MSS ᵢ ᵢ ں ᵮ 1300 È `

```
Ruijie(config)# ip tcp mss 1300
```

ᵮ ᵮ A | -

ώ˜ ᵮ -

Ẃ ð ᵮ ᵮ -

Ẇ ᵮ ب ˝ 10.x ᵮ ĩ ᵘ ɲ Ḿ IPv4 TCP ᵮ ᵮ ᵮ ᵮ 11.0 ᵮ Ḿ IPv4 TCP ᵮ IPv6 TCP ᵮ ᵮ ᵮ

10.4 ip tcp path-mtu-discovery

ᵮ È TCP ᵢ ت Ể MTU ᵮ ᵮ ᵮ ĩ

ip tcp path-mtu-discovery [**age-timer** *minutes* **| age-timer infinite**]

ᵮ TCP ᵢ ت Ể MTU ᵮ ᵮ ᵮ ĩ

no ip tcp path-mtu-discovery

ᾪᵇ ᾷ

ᾪᵇ	ᾪᵇ	ᾦᵏ
	age-timer *minutes*	TCP ᵦ ᵃ ᵃ PMTU ᵃ ᵃᵖᵉᵉᵈ ᵃᵈᵈᵉᵈ ᵃᵈᵈᵉᵈ ᵃᵈᵈ

ỉ ب ɹ	ώ ۱ Æ j ˈ ز TCP ĭ ă `H ∧ گ reset ĭ ă
ᵘ ɲ ₩ Ã	ṕ ₩ Ã
ỉ ۱	14
ŧ ˝ Y Ṁ	ˆ ὺ ĭ ı TCP ₩ ę ɲ ˋ ∧ TCP ĭ ă `H ı ḅ ' ñ j Ĺ ĭ ă ˝A Ṟ TCP ف ì ۵ ψ ڎ ʊ ɨ ᵸ reset ĭ ă ŧ Ɑ ۷ ฿ Ḿ ۱ TCP ف ì ĩ ف ̃ ă ㎞ ώ` ă̈ ώ` ´ ‰ ı ̣ ۱ Æ j ˈ ز TCP ĭ ă Ḿ ɸ ᵗ ڄ ă ώ` ı ˈ Ɑ ص ن Ɑ ĭ ᵘ ɲ ˆ ฿ Ḿ ۱ Æ j ˈ ز ĭ ă ∧ گ reset ĭ ă
ب ɹ	1 χ ˆ ฿ ɲ ώ ۱ Æ j ˈ ز TCP ĭ ă `H ∧ گ reset ĭ ă `Ruijie(config)# no ip tcp send-reset`
₅ ڄ Ά |	-
ώ ˜ Ụ	-
Ẃ ȯ ڄ ئ	-
Ẇ ᴶ ب ˝	11.0 v ẘ Ẩ 10.x v ب ɹ ᵘ ɲ ɒ ip tcp not-send-rst ɒ ı Ẋ ħ ḳ 10.x v ı ḅ ' ˝E Φ 10.x v ب ɹ ᵘ ɲ ı Ṅ₅ ʊ ڄ ˝Ω ă 11.0 v ب ɹ ᵘ ɲ 10.x v Ĺ ᵘ ɲ Ḿ IPv4 TCP ɨ ᾧ ı ϰ 11.0 v Ḿ IPv4 TCP ⁼ IPv6 TCP ɸu ɨ ᾧ

10.6 ip tcp synwait-time

ɸ ɹ ã ۱ ف ì SYN ĭ ă ∧ `H `H ژ

ip tcp synwait-time *seconds*

Õ ᵸ ỉ

no ip tcp synwait-time

˝Ω ب ˝	˝Ω	ώ ك
	seconds	SYN ĭ ă ∧ `H `H ژ ɥ ㎞ ۱ ı ɲ ˵ ḅ 5-300 ı ỉ 20

ỉ ب ɹ	ỉ ∧ `H `H ژ ㎞ 20 ۱
ᵘ ɲ ₩ Ã	ṕ ₩ Ã
ỉ ۱	14

ŧ ˝YḾ ḅ ' ᴊ ᴨ è ᵽ SYN ᾠ` ı Ṉ SYN ᴧ `H`H ᴊ ' ᾳ ᴳ ฿ ° ◊ ╦ ᾷ ı Ḿ ف ᴨ ⚛ SYN ᾠ` ᴊ j ᾤ '
ᵽ ᶲ ᵢ ᶾ ᴗ ᴓ ᵘ ᵐ ᵗ ᵭ ã ᵛ ف ì `H ı Ṉ SYN ᴧ `H`H ᴊ ' ᾳ Ṉ ŧ ̈A ᵛ ể `H ᴊ ı ḅ telnet ḅ ' ᴊ ᴨ ⅝ ᵈ Ṯ ̂

ᵽ ᵲ 1 χ ᵽ ᵲ ᵀ Æ ᶻ ᵰ ᵡ 16386 È `

```
Ruijie(config)# ip tcp window-size 16386
```

ᵢ ᶜ Ä | -

ώ˜ Ụ -

Ẃ ȯ ᶜ ᶢ -

Ẓ ᴶ ᵇ ˝ 10.x ᵛ Ỉ ᵘ ᵽ Ḿ IPv4 TCP ᵢ ᾷ ᵢ ᵡ 11.0 ᵛ Ḿ IPv4 TCP ᵐ IPv6 TCP ᵠu ᵢ ᾷ

10.8 ipv6 tcp adjust-mss

ᵽ ᵲ ᶜ ᵃ TCPv6 SYN ᵢ ᾶ MSS ᵲ °

ipv6 tcp adjust-mss *max-segment-size*

Ỡ ᵸ ᵲ ᵽ ᵲ

no ipv6 tcp adjust-mss

ᵀᵠ ᵇ ˝

ᵀᵠ	ώ ᶜ
max-segment-size	ᵠ ᶻ ᵀᵠ ᵀ ᵠ ᶻ ᵰ ᵢ ᵸ ᵡ È ` ᵢ ᵣ ᵽ ᵢ 1220-1440

ᵲ ᵽ ᵲ j ᾷ TCPv6 SYN ᵢ ᾶ MSS ᵲ °

ᵘ ᵽ ₩ Ä ì Æ ₩ Ä

ᵲ ᵢ 14

ᵵ ᵀ Y Ṁ TCP ᵽ ᵽ ᾶ ᵢ ᵠ ì H ᵽ MSS ᵢ o ᵠ ᶻ ᵀᵠ ᵀ ᵠ ᵈ ᵀ ᵠ ᵽ ' TCPv6 ᵢ ᾶ ᵽ ᵢ ᵽ • ᵠ ᵢ IPv6 MTU ⅝ ᵠ ᵰ ᵢ ᾶ IPv6 ᵢ ᾶ ᵽ ᵽ ᵲ ᵢ j ᵽ ᵢ ᵡ ᵽ TCPv6 ᵲ ᵠ ᵲ ᵠ ᵲ ᵽ MTU ᵢ ᾶ ᵢ ᵢ ᵠ ᵽ ᵢ ᵸ ᾷ TCPv6 SYN ᵢ ᾶ MSS ᵲ °

Ỉ ᵽ ᵲ Ḿ Ṭ ᵲ ᾶ ᵢ TCPv6 ᵠ ì j ᵸ ᾷ ᵢ ᴱ Ḿ ᵈ ᵲ ᾶ ᵢ TCPv6 ᵠ ì ᵸ ᾷ

ᵽ ᵲ 1 χ ᵽ ì Æ GigabitEthernet 0/0 ᵢ ᵽ ᵲ H ᵽ ᵲ TCPv6 SYN ᵢ ᾶ MSS ᵲ ° ᾷ 1300 È `

```
Ruijie(config-if-GigabitEthernet 0/0)# ipv6 tcp adjust-mss 1300
```

ᵢ ᶜ Ä | -

ώ˜ Ụ -

Ẃ ŏ ج ئ -

Ẇ ᴶ ب ˝ -

10.9 show ipv6 tcp connect

Ĭ ˜ ˡ ˡ Ę IPv6 TCP ف ì ⸨OBJ⸩ ᵍ Ụ

show ipv6 tcp connect [local-ipv6 *X:X:X:X::X*] **[local-port** *num*] **[peer-ipv6** *X:X:X:X::X*] **[peer-port** *num*]

Ĭ ˜ ˡ ˡ Ę IPv6 TCP ف ì ⸨OBJ⸩ ˡ щ Ụ

show ipv6 tcp connect statistics

Ґ ب ˝

Ґ	ش ه
local-ipv6 *X:X:X:X::X*	ş IPv6 ş ϰ
local-port *num*	ş ˡ Æ
peer-ipv6 *X:X:X:X::X*	Ḿ ˡ IPv6 ş ϰ
peer-port *num*	Ḿ ˡ ˡ Æ
statistics	ˡ ˜ IPv6 TCP ف ì ⸨OBJ⸩ ˡ щ Ụ

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ỉ ˡ 2

ŕ ˝ Y Ṁ -

ب ـ 1 χ ˡ ˜ ˡ ˡ Ę IPv6 TCP ف ì ⸨OBJ⸩ ᵍ Ụ

```
Ruijie#show ipv6 tcp connect
Number Local Address     Foreign Address         State        Process name
1      :::22             :::0                    LISTEN       rg-sshd
2      :::23             :::0                    LISTEN       rg-telnetd
3      1000::1:23        1000::2:64201           ESTABLISHED  rg-telnetd
```

È ᵻ ᴶ ᵖ χ

È ᵻ	ب ˝
Number	ẑ ᴺ
Local Address	ş ş χ ЛЪ ˡ Æ ᴺ ı ω ᵃ ᴺ ᵃ ₋ ⸨OBJ⸩ Ґ È ĩ ˡ Æ ᴺ
Foreign Address	ف ˡ ş χ ЛЪ ˡ Æ ᴺ ı ω ᵃ ᴺ ᵃ ₋ ⸨OBJ⸩ Ґ È ĩ ˡ Æ ᴺ

State	TCP ف ì Ẹ ⊠ ↑ õ ı ũ 11 ϒ ı ΐ ↑ õ χ CLOSED χ ف ì Ţ Ă Ã LISTEN χ ˘ ! ↑ õ SYNSENT χ SYN ĭ ă Ţ ∧ ı s Ϟ ά ἐ ᾷ ᵮ SYNRCVD χ SYN ĭ ă Ţ ì ώ ı s Ϟ ά ἐ ᾷ ᵮ ESTABLISHED χ ف ì Ţ ã ϒ FINWAIT1 χ ϒ Ţ ⅄ ∧ FIN ĭ ă FINWAIT2 χ ϒ ∧ ⊠ FIN ĭ ă Ţ ⅄ ą ɲ CLOSEWAIT χ ϒ ώ Ḿ ϒ ⊠ FIN ĭ ă LASTACK χ ϒ ώ Ḿ ϒ ⊠ FIN ĭ ă ı ɨ ᵃ ϒ ∧ ᵶ ţ ⊠ FIN ĭ ă CLOSING χ ϒ ∧ FIN ĭ ă ı ᵽ Ḿ ϒ ɨ Ẕ Ỉ FIN ĭ ă ⊠ ACK ĭ ă ᵖ ώ Ḿ ϒ ⊠ FIN ĭ ă TIMEWAIT χ ϒ ∧ ⊠ FIN ĭ ă ą ɲ ı Ẋ ħ ϒ Ĉ Ţ ⅄ ɲ ì ώ ⊠ FIN ĭ ă
Process name	ف ϒ ᵉ ϒ

2 χ ˙ ˜ ⅄ ∧ Ẹ IPv6 TCP ف ì ⊠ ∧ ɯ Ụ

```
Ruijie#show ipv6 tcp connect statistics
State        Count
-----        -----
ESTABLISHED 1
SYN_SENT     0
SYN_RECV     0
FIN_WAIT1    0
FIN_WAIT2    0
TIME_WAIT    0
CLOSED       0
CLOSE_WAIT   0
LAST_ACK     0
LISTEN       1
CLOSING      0
Total: 2
```

ώ˜ Ụ -

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10.10 show ipv6 tcp pmtu

Ĭ ˜ IPv6 TCP ف ì ⊠ ت Ẽ MTU

show ipv6 tcp pmtu [local-ipv6 *X:X:X:X::X***] [local-port** *num***] [peer-ipv6** *X:X:X:X::X***] [peer-port** *num***]**

Ϊ Ω ب ˝

Ϊ Ω	ش ك
local-ipv6 *X:X:X:X::X*	ş IPv6 ş χ
local-port *num*	ş ۱ Æ
peer-ipv6 *X:X:X:X::X*	Ḿ ۱ IPv6 ş χ
peer-port *num*	Ḿ ۱ ۱ Æ

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ب ـ 1 χ¶ ˜ IPv6 TCP ف ì ت Ề MTU

```
Ruijie# show ipv6 tcp pmtu
Number  Local Address          Foreign Address        PMTU
1       1000::1:23             1000::2.13560          1440
```

Ề ـ J ِ χ

Ề ـ	ب ˝
Number	ẑ ᴺ
Local Address	ş ş χ ЛЬ ۱ Æ ᴺ ı ω ᵃ ᴺ ᵃ ˭ Ϊ Ω Ề ĩ ۱ Æ ᴺ
Foreign Address	ف ۱ ş χ ЛЬ ۱ Æ ᴺ ı ω ᵃ ᴺ ᵃ ˭ Ϊ Ω Ề ĩ ۱ Æ ᴺ
PMTU	ت Ề MTU

ώ˜ Ụ -

Ẇ ᴶ ب ˝ -

10.11 show ipv6 tcp port

Ĭ ˜ ۱ ۱ Ẹ IPv6 TCP ۱ Æ ŧ ὺ

show ipv6 tcp port [*num***]**

Ϊ Ω ب ˝ Ϊ Ω

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ᵲ ˝YṀ -

ᵇ ᵲ 1 χ¶ ˜ ᾳ ᾳ Ḛ IPv6 TCP ᾳ Æ ᵲ ᵲ ᾺᾺ

```
Ruijie#show ipv6 tcp port
TCP connections on port 23:
Number  Local Address Foreign Address    State
1       1000::1:23    1000::2:64571      ESTABLISHED
Total: 1

TCP connections on port 2650:
Number  Local Address Foreign Address    State
Total: 0
```

Ḕ ᵻ ᵲ ᵻ χ

10.12 show tcp connect

Ĭ ˜ ৲ ৲ Ẹ IPv4 TCP ف ì ⊞ ᵍ Ụ

show tcp connect [local-ip *a.b.c.d***] [local-port** *num***] [peer-ip** *a.b.c.d***] [peer-port** *num***]**

Ĭ ˜ ৲ ৲ Ẹ IPv4 TCP ف ì ⊞ ৲ ɯ Ụ

show tcp connect statistics

ˮQ ب ˮ

ˮQ	ὼ ك
local-ip *a.b.c.d*	ş IP ş ϰ
local-port *num*	ş ৻ Æ
peer-ip *a.b.c.d*	Ḿ ৻ IP ş ϰ
peer-port *num*	Ḿ ৻ ৻ Æ
statistics	˹ ˜ IPv4 TCP ف ì ⊞ ৲ ɯ Ụ

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ỉ ৲ 2

ŕ ˝YṀ -

ب ـل 1 χ˹ ˜ ৲ ৲ Ẹ IPv4 TCP ف ì ⊞ ᵍ Ụ

```
Ruijie#show tcp connect
Number Local Address     Foreign Address          State       Process name
1      0.0.0.0:22        0.0.0.0:0                LISTEN      rg-sshd
```

ŕ ˝YṀ

Number

Local Address

Foreign Address

State	TCP ف ì Ẹ ⊠ ↑ õ ı ũ 11 ϒ ı ĩ ↑ õ χ CLOSED χ ف ì Ţ Ă Ã LISTEN χ ˘ ! ↑ õ SYNSENT χ SYN ĭ ă Ţ ∧ ı s Ꝁ ȧ ȩ ڳ ɟ SYNRCVD χ SYN ĭ ă Ţ ì ȧ ı s Ꝁ ȧ ȩ ڳ ɟ ESTABLISHED χ ف ì Ţ ã ϒ FINWAIT1 χ ϒ Ţ ⊿ ∧ FIN ĭ ă FINWAIT2 χ ϒ ∧ ⊠ FIN ĭ ă Ţ ⊿ ą ɲ CLOSEWAIT χ ϒ ȧ Ḿ ϒ ⊠ FIN ĭ ă LASTACK χ ϒ ȧ Ḿ ϒ ⊠ FIN ĭ ă ı ɨ ᵃ ϒ ∧ ˢ ţ ⊠ FIN ĭ ă CLOSING χ ϒ ∧ FIN ĭ ă ı ᵽ Ḿ ϒ ɨ Ẕ Ỉ FIN ĭ ă ⊠ ACK ĭ ă ᵖ ȧ Ḿ ϒ ⊠ FIN ĭ ă TIMEWAIT χ ϒ ∧ ڳ ⊠ FIN ĭ ă ą ɲ ı Ẋ ħ ϒ Ĉ Ţ ⊿ ɲ ì ȧ ⊠ FIN ĭ ă
Process name	ڤ ϒ ᵉ ϒ

2 χ ˢ ˜ ⊿ ∧ Ẹ IPv4 TCP ف ì ⊠ ∧ ɯ Ụ

```
Ruijie#show tcp connect statistics
State        Count
-----        -----
ESTABLISHED 1
SYN_SENT     0
SYN_RECV     0
FIN_WAIT1    0
FIN_WAIT2    0
TIME_WAIT    0
CLOSED       0
CLOSE_WAIT   0
LAST_ACK     0
LISTEN       1
CLOSING      0
Total: 2
```

ȧ˜ Ụ -

Ẇ ᴶ ب ˝ -

10.13 show tcp parameter

Ĭ ˜ ⊿ ∧ Ẹ TCP Ẓ Ụ

show tcp parameter

```
  Interval: 75 seconds
  Max probes: 6
MTU probing:
  Enable mtu probing: 0
FIN specific information:
  FIN_WAIT_2 timeout: 60 seconds
Orphan socket information:
  Max orphans: 16384
  Max orphan retries: 0
  Current orphans: 0
```

È ᵻ ᵽ ᵻ ᵪ

È ᵻ	ᵇ ᵐ
Hash table information	TCP ف ì ᵟ Ů ˊ ˝Ọ Ụ
Memory information	TCP ف ì ᶣ ᵃ ᵻ è ˝Ọ Ụ
SYN specific information	TCP ˋO ᴨ ᵸ ف ì ˮ ˝Ọ Ụ
Timewait specific information	TIMEWAIT ˆ õ ï ⌧ TCP ف ì ˝Ọ Ụ

```
1        1.1.1.1:23     1.1.1.2:64571     ESTABLISHED
Total: 1

TCP connections on port 2650:
Number  Local Address Foreign Address    State
Total: 0
```

È ᵻ ᴶ ᵽ χ

È ᵻ	ب ˝
Number	ẑ ᴺ
Local Address	ʂ ʂ ϰ ᴌᵦ ᴹ Æ ᴺ
Foreign Address	ᵩ ᴹ ʂ ϰ ᴌᵦ ᴹ Æ ᴺ
State	TCP ف ì Ẹ ⁦OBJ⁩ ↑ õ ı ũ 11 ᴹ ı ĩ ↑ õ χ CLOSED: ف ì Ţ Ă Ầ LISTEN χ ˘ ! ↑ õ SYNSENT χ SYN ĭ ă Ţ ʌ˳ ı s Ꝁ ᵠ ᵉ ᵍ ᵻ SYNRCVD χ SYN ĭ ă Ţ ì ᵠ ı s Ꝁ ᵠ ᵉ ᵍ ᵻ ESTABLISHED χ ف ì Ţ ấ ᴹ FINWAIT1 χ ᴹ Ţ ᴶ ʌ˳ FIN ĭ ă FINWAIT2 χ ᴹ ʌ˳ ⁦OBJ⁩ FIN ĭ ă Ţ ᴶ ą ɲ CLOSEWAIT χ ᴹ ᵠ Ḿ ᴹ ⁦OBJ⁩ FIN ĭ ă LASTACK χ ᴹ ᵠ Ḿ ᴹ ⁦OBJ⁩ FIN ĭ ă ı ɨ ᵃ ᴹ ʌ˳ ˢ ṯ ⁦OBJ⁩ FIN ĭ ă CLOSING χ ᴹ ʌ˳ FIN ĭ ă ı ᵽ Ḿ ᴹ ɨ Ẓ Ỉ FIN ĭ ă ⁦OBJ⁩ ACK ĭ ă ᵖ ᵠ Ḿ ᴹ ⁦OBJ⁩ FIN ĭ ă TIMEWAIT χ ᴹ ʌ ᴳ ⁦OBJ⁩ FIN ĭ ă ą ɲ ı Ẋ ħ ᴹ ᶜ Ţ ᴶ ˍ ɲ ì ᵠ ⁦OBJ⁩ FIN ĭ ă

ώ˜ Ụ -

Ẇ ᴶ ب ˝ -

10.16 show tcp statistics

Ĭ ˜ ᴶ ᴸ Ẹ TCP ᴸ ɯ Ụ ı ᵍ ĭ ă ì ᵠ Ụ ı s Ꝁ ᵠ ᵉ Ụ ı time-wait ف ì Ụ

show tcp statistics

˝Ꝑ ب ˝	˝Ꝑ	ᵠ ك

	-	-

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ŧ ˝YṀ -

ب ـ 1 χ† ˜ ⅄ ⅄ Ẹ tcp ⅄ щ Ụ

11 IPv4/v6

11.1 clear ip ref packet statistics

IPv4

clear ip ref packet statistics

-	-

14

-

1 IPv4

```
Ruijie #clear ip ref packet statistics
```

-

-

11.2 clear ipv6 ref packet statistics

IPv6

clear ipv6 ref packet statistics

-	-

14

-

1 IPv6

```
Ruijie #clear ipv6 ref packet statistics
```

ώ˜ Ụ -

Ẓ ᴶ ب ˝ -

11.3 ip ref load-sharing original

ب ᴶ IPv4 ȍ ᶜ ق ᵡ ᵡ ‘ ᴵ | ᶣ ᵍ ´ IP ᵡ ᵡ ᵓ ◊ IP ᵡ ᵡ ق ᵡ ᵡ ‘
ip ref load-sharing original

˝H IPv4 ȍ ᶜ ق ᵡ ᵡ ‘ ᴵ | Ȍ ᵘ ᾷ ᾷ
no ip ref load-sharing original

˝Ọ ب ˝

˝Ọ	ώ ᶜ
-	-

ᾷ ب ᴶ ᵍ ´ IP ᵡ ᵡ ق ᵡ ᵡ ‘

ᵘ ᖘ₩Ã ṕ₩Ã

ᾷ ᴵ 14

ᵲ ˝YṀ ᵲ ȍ ᶜ ق ᴶ˝Ọ˝Ω ᶜ ∧ ᵢ Ẋ˝Ḥ˝Y ᵇ ᴶ ق ᵡ ᵡ ‘ ᴵ | ᵢ ᴶ ᾷ´ IP ق ᵡ ᵡ ‘ ᵢ ᴰ ᴶ ᶣ´ IP ᵓ ◊ IP ᴶ ᵀ
ق ᵡ ᵡ ‘ ᴵ | ᵦ ^ ث Ẽ ᶜ ∧ IP ᾷ ᾷ ᾷ ᵢ ᵇ Ẹ ᶲ ᴶ ᶣ´ IP ق ᵡ ᵡ ‘ ᵢ REF Ṅ Ọ ᾷ ᾷ´ IP ᵖ ᴣ ب ᵀ
ᵀ ث Ẽ ᶠ Φ ᶜ ∧ ᾷ ᾷ ᶣ´ IP ق ᵡ ᵡ ‘

ب ᴶ

1 ᾷ ب ᴶ ◊ IP+´ IP ᵡ ᵡ ‘ ᴶ ث ᴵ |

```
Ruijie(config)# ip ref load-sharing original
```

2 ᾷ ᵲ ᵍ ᾷ ᾷ´ ᵡ ᵡ ᵡ ‘ ᴶ ث ᴵ |

```
Ruijie(ᵓ ᵡ ᵡ ‘ ᴶ ث ᴵ |
```

ᵓ

11.4 ipv6 ref load-sharing original

ᵇ ᵣ IPv6 ȍ ᶜ ᵍ ᶜ ᶜ ˡ ˡ ˡ

ip-address	ʌ ì ï ب IP
interface_type	˝Y ḧ ì Æ ɿ ʒ
interface_number	˝Y ḧ ì Æ ɿ N
discard	Ǐ ˜ Ấ ʌ ì ` ᵖ
statistics	ʎ ɯ Ụ

ᵘ ᖘ₩Ã ˻ ₩Ã

ɿ ʎ 14

ŧ ˝YṀ Ỉ ᵘ ᖘ ˡ Ɑ Ǐ ˜ Ẹ IPv4 ȍ ج ʌ ì ˊ Ụ ı ˡ Ɑ˝Y ḧ Ǐ ˜ ᵍ ᵀ ʌ ì ş ʌ ì ˝Y ḧ IP Ḿ Ẓ ʌ ì ˝Y ḧ ì Æ ỉ ʌ ì ʒ ˝A ɷ ʌ ì ` ᵖ ˀ Ụ

ب ɿ 1 χ Ǐ ˜ ˝A ʌ ì ˊ ˝A ɷ ʌ ì Ụ

```
Ruijie#show ip ref adjacency
id state      type    rfct chg  ip            interface         linklayer(header data)
1  unresolved mcast   1    0   224.0.0.0
9  resolved   forward 1    0   192.168.50.78   GigabitEthernet 0/0  00 25 64 C5 9D 6A 00 D0 F8 98
76 54 08 00
7  resolved   forward 1    0   192.168.50.200  GigabitEthernet 0/0  00 04 5F 87 69 66 00 D0 F8 98
76 54 08 00
6  unresolved  glean  1    0   0.0.0.0         GigabitEthernet 0/0
4  unresolved  local  3    0   0.0.0.0         Local 1
```

Ǐ ˜ ɿ ˈ ᴿ È ɟ ώ ك χ

È ɟ	ب ˝
id	ʌ ì ‰ ⅋
	ʌ ì ↑ ȭ
state	unresolve

linklayer	Ṗ˘

ώ˜ Ụ -

Ẓ ᴶ ب ˝ -

11.6 show ip ref exact-route

Ĭ ˜ IP ĭ ă⃞ ˊ ج ∧ ث Ḗ

show ip ref exact-route *source_ipaddress dest_ipaddress*

˝Ρ ب ˝

˝Ρ	ώ ك
source_ipaddress	ĭ ă⃞◊ IP ş ϰ
dest_ipaddress	ĭ ă⃞˝ ⃞IP ş ϰ

ᵘ ПЪ₩Ã ˻ ₩Ã

ϧ ∧ 14

ŧ ˝YṀ ن ص أ ᵘ ПЪ ı ˝Y ḧ IP ĭ ă⃞◊ IP ş ϰ ЛЪ´ ⃞IP ş ϰ ı ˈ Ϣ Ĭ ˜ ˸ ˻ ḧ ĭ ă⃞ج ∧ ث Ḗ

ب ـ 1 χ↑ ˜ ϰ 192.168.217.74 192.168.13.1 ⃞ج ∧ ث Ḗ

```
Ruijie# show ip ref exact-route 192.168.217.74 192.168.13.1
192.168.217.74  --> 192.168.13.1 (vrf index: 0):
id state    type    rfct chg  ip            interface          linklayer(header data)
9  resolved forward 1     0   192.168.17.1  GigabitEthernet 0/0 00 25 64 C5 9D 6A 00 D0 F8 98 76
54 08 00
```

Ĭ ˜ ˩ ' ᴿ Ḗ ᵊ ώ ك χ

Ḗ ᵊ	ب ˝
id	∧ ì ‰ ⅋
state	∧ ì ↑ ẽ unresolve χ ' ˩ ' resolved χ Ṭ ˩ '

rfct	
chg	
ip	IP
interface	
linklayer	

-

-

11.7 show ip ref packet statistics

IPv4

show ip ref packet statistics

-	-

-

14

-

1 IPv4

```
Ruijie #show ip ref packet statistic
ref packet statistic:
    bad head        : 0
    lookup fib fail : 0
    local adj       : 0
    glean adj       : 0
    forward         : 0
    redirect        : 0
    ttl expiration  : 0
    no ip routing   : 0
```

bad head	

lookup fib fail	ȍ ج لّ ث م ĭ ă ̈Ǫ´
local adj	ש ب ş ۸ ì ĭ ă ̈Ǫ´
glean adj	ש ب Δ ĭً ۸ ì ĭ ă ̈Ǫ´
for ar	ש ب ج ۸ ۸ ì ĭ ă ̈Ǫ´
redirect	ب ḣ ᵇ ∫ ת ĭ ă ̈Ǫ´
ttl expiration	ĭ ă TTL ۸ ̀H ĭ ă ̈Ǫ´
no ip routing	j ḇ ج ۸ گ ş ĭ ă ̈Ǫ´

ώ˜ Ụ -

Ẇ ᴶ ب ˝ -

11.8 show ip ref resolve-list

Ĭ ˜ IPv4 ȍ ج ڎ ט ر ‘ Ụ

show ip ref resolve-list

̈Ǫ ب ˝	̈Ǫ	ك ώ
	-	-

ᵘ ПЪ₩Ã ˻ ₩Ã

ᾶ ۱ 14

ŧ ˝YṀ -

ب ـ 1 χ Ĭ ˜ IPv4 ȍ ج ڎ ט ر ‘ Ụ

Ẓ ᴶ ب ˝ -

11.9 show ip ref route

Ĭ ˜ Ẹ IPv4 ȍ ج ˝A ȭ ث ˢ Ụ

show ip ref route [**default** | *ip mask* | **statistics**]

˝Ọ ب ˝

˝Ọ	ȭ ك
default	˝Y ḧ ـس ɲ ث ˢ
ip	˝Y ḧ ث ˢ ´ IP
mask	˝Y ḧ ث ˢ ȯ
statistics	ʌ ɯ Ụ

ᵘ ɲ ₩ Ã ˢ ₩ Ã

ʎ ʌ 14

ɨ ˝Y Ṁ ˡ Ɑ Ĭ ˜ Ẹ IPv4 ȍ ج ث ˢ Ụ ˡ ˡ Ɑ ˝Y ḧ Ĭ ˜ ـس ɲ ث ˢ ˝Y ḧ IP/MASK ʍ ب ث ˢ ˝A ȭ ث ˢ Ụ

ب ـل 1 χ Ĭ ˜ ṕ ȍ ج ´ ˝A ȭ ث ˢ Ụ

```
Ruijie#show ip ref route
Codes: * - default route
       # - zero route
 ip/mask            weight  path-id     next-hop        interface
 255.255.255.255/32 1       4           0.0.0.0         Local 1
 224.0.0.0/24       1       4           0.0.0.0         Local 1
 192.168.50.0/24    1       6           0.0.0.0         GigabitEthernet 0/0
 192.168.50.200/32  1       7           192.168.50.200  GigabitEthernet 0/0
 192.168.50.122/32  1       4           0.0.0.0         Local 1
 192.168.50.78/32   1       9           192.168.50.78   GigabitEthernet 0/0
```

Ĭ ˜ ـل ˡ ʳ È ـغ ȭ ك χ

È ـغ	ب ˝
ip/mask	´ IP ş χ ⊃ ȯ ـذ ỷ
path-id	ʌ ì ـل Ậ ‰ ˡ˚
weight	ث ˢ ي

ώ˜ Ụ -

Ẓ ᴶ ب ˝ -

11.10 show ipv6 ref adjacency

Ĭ ˜ IPv6 ȍ ج ʌ ì˾ Ụ

show ipv6 ref adjacency [**glean | local |** *ipv6-address* **| interface** *interface_type interface_number* | **discard | statistics**]

˝Ọ ب ˝

˝Ọ	ώ ك
glean	Ĭ ˜ ط ᵀ ʌ ì ` ᴾ
local	Ĭ ˜ ş ʌ ì ` ᴾ
ipv6-address	Ĭ ˜ ⸗ ḧ ş ẋ (x:x:x:x::x)⃞ ʌ ì Ụ
interface_type	˝Y ḧ ì Æ ˡ ʒ
interface_number	˝Y ḧ ì Æ ˡ ᴺ
discard	Ĭ ˜ Ấ ʌ ì ` ᴾ
statistics	Ĭ ˜ ˝A ω̃ ˡ ʒ ʌ ì ⃞ ʌ ɯ Ụ

ᵘ ɲ ₩ Ã

type	local forward discard glean mcast
rfct	
chg	0 1
ip	IPv6
interface	
linklayer(header data)	

-

-

11.11 show ipv6 ref exact-route

show ipv6 ref exact-route *source-ipv6-address destination-ipv6-address*

source-ipv6-address	IPv6
destination-ipv6-address	IPv6

14

-

1 2001:db8:1::1 3001:db8:2::2

```
Ruijie#show ipv6 exact-route 2001:db8:1::1 3001:db8:2::2
2001:db8:1::1 --> 3001:db8:2::2 (vrf index: 0):
ID  state      type    rfct chg ip interface            linklayer(header data)
3   unresolve  glean   1    0   :: GigabitEthernet 0/0
```

id	

state	
type	local forward discard glean mcast
rfct	
chg	0 1
ip	IPv6
interface	
linklayer(header data)	

-

-

11.12 show ipv6 ref packet statistics

show ipv6 ref packet statistics

-	-

14

-

1

```
Ruijie#show ipv6 ref packet statistics
ref packet statistic:
    bad head        : 0
    lookup fib fail : 0
    local adj       : 0
    glean adj       : 0
    forward         : 0
```

```
redirect          : 0
hop-limit expiration  : 0
no ipv6 unicast-routing   : 0
```

χ ك ۺ ـ È ʳ ' ـ ˜ ǐ

È ـ	ب ˝
bad head	ǐ˘ ج ئ ǐ ă ˝Ǫ´
lookup fib fail	ȍ ج ل ث م ǐ ă ˝Ǫ´
local adj	ش ب ş ∧ ì ǐ ă ˝Ǫ´
glean adj	ش ب Δ ǐ ∧ ì ǐ ă ˝Ǫ´
forward	ش ب ج ∧ ∧ ì ǐ ă ˝Ǫ´
redirect	ي ḣ ᵇ ∫ ת ǐ ă ˝Ǫ´
hop-limit expiration	ǐ ă TTL ∧ ˋH ǐ ă ˝Ǫ´
no ipv6 unicast-routing	j ƿ ج ∧ ⊃ گ ş ǐ ă ˝Ǫ´

ώ˜ Ụ -

Ẇ ˩ ب ˝ -

11.13 show ipv6 ref resolve-list

ǐ˜ IPv6 ȍ ج ڇ ں ˩ ‘ Ụ

show ipv6 ref resolve-list

IP	ì Æ IPv6 ş χ
res_state	unres χ ' ɹ ' ı res χ ɹ '
flags	0 χ лъ ʌ ì ṇ ı 1 χ лъ ʌ ì ̓
interface	ì Æ ᵃ ч

ώ˜ Ụ -

Ẇ ᴶ ب ˝ -

11.14 show ipv6 ref route

Ĭ ˜ IPv6 ȍ ج ث ᵊ Ụ

show ipv6 ref route [**default | statistics | prefix/len**]

˝Ǫ ب ˝

˝Ǫ	ώ ك
default	Ĭ ˜ ѕ ɲ ث ᵊ Ụ
statistics	Ĭ ˜ ث ᵊ ʌ ɯ Ụ
prefix/len	Ĭ ˜ ˝Y ḧ ʌ ε X:X:X:X::X/<0-128> ζ ث ᵊ Ụ

ᵘ ɲ ₩ Ã ᵉ ₩ Ã

ǰ ʌ 14

ŕ ˝Y ṁ ᵃ ̀H ف ᵎ Ꞷ ˝ Ĭ ˜ ѕ ɲ ث ᵊ ǎ ä ˝Y ḧ ʌ ث ᵊ Ụ ı ʒ ˝A ũ ʌ ʒ ث ᵊ ʌ ɯ Ụ

ب ـل 1 χ ˜ IPv6 ȍ ج ṕ ث ᵊ ˊ Ụ

```
Ruijie#show ipv6 ref route
Codes: * - default route
 prefix/len                    weight path_id  next_hop interface
 2001:da8:ffe:2::/64           1       3       ::       GigabitEthernet 0/0
 2001:da8:ffe:2::3/128         1       2       ::1      Local 1
 fe80::/10                     1       6       ::       Null 0
 fe80::21a:a9ff:fe3b:fa41/128  1       2       ::1      Local 1
```

Ê ɟ	ب ˝
prefix/len	IPv6 ʌ ʒ ʌ ذ ỷ

ώ˜ Ụ -

Ẓ ᴶ ب ˝ -

12 NAT

12.1 address

ب ـ NAT ᴹ ᵍ ˣ − ᵒᵇ ᵍ ˣ ᵐ ᵇ

address *start-ip end-ip* [**match interface** *interface*

12.2 ip nat

ı Ḿ ì Æ ὼ ∧ ⌧ ̓Ω ̓Ω ╚ ᾷ ف Φ NAT ج ̓Ω

ip nat { **inside** | **outside** }

ì Æ j W Ẓ ϯ NAT

no ip nat { **inside** | **outside** }

3 χ Ę ϱ ب ل ip nat inside ⊞ ì Æ ı ”EΦ no ip nat outside, ب ل، م ı ώ˜ χ

```
% Interface is outside enabled, try <no ip nat outside>
```

4 χ Ę ϱ ب ل ip nat outside ⊞ ì Æ ı ”EΦ no ip nat inside, ب ل، م ı ώ˜ χ

```
% Interface is inside enabled, try <no ip nat inside>
```

Ẃ ȣ ج ئ -

Ẇ ᴶ ب ˝ -

12.3 ip nat application

ı ḫ ᾰ NAT ⊞ ⸗ e Ẓ ϟ

ip nat application source list *list-num* **destination** *dest-ip* { **dest-change** *ip-addr* | **src-change** *ip-addr* }

ip nat application source list *list-num* **destination** { **tcp** *dest-ip port-num* | **udp** *dest-ip port-num*} { **dest-change** *ip-addr port-num* | **src-change** *ip-addr port-num* }

ᴨ ╦ Ǐ ⸗ e Ẓ ϟ

no ip nat application source list *list-num* **destination** *dest-ip* { **dest-change** *ip-addr* | **src-change** *ip-addr* }

no ip nat application source list *list-num* **destination** { **tcp** *dest-ip port-num* | **udp** *dest-ip port-num* } { **dest-change** *ip-addr port-num* | **src-change** *ip-addr port-num* }

˝Ρ ب ˝

˝Ρ	ك ώ
list-num	

ᵘ ᴨЪ₩Ã̃ ṕ ب ɹ ₩Ã̃

ƛ̀ ᐧ 14

ŕ ˝YṀ ᵽ NAT ⊠ح ᐧ Ẓ ŕ ʃ̧ ᵀ ı ᵢ ı �ₒ ⁼ ḧ ⊠ IP

Ẇ ᴶ ب ˝ -

12.4 ip nat inside destination

ᵢ ᵏ ᵢ NAT ᶆ´ ‰ ᵴ ᵪ ᶜ ˝Ω

ip nat inside destination list *access-list-number* **pool** *pool-name*

ᵇ NAT ᶆ´ ‰ ᶜ ˝Ω

no ip nat inside destination list *access-list-number*

˝Ω ب ˝

˝Ω	ὼ ᶜ
list *access-list-number*	ևᵤ ´ ḧ Θ ĩ ᶆ ṕ ᵴ ᵪ ᵢ ḃ ' ᵘ ᶆ ᶫ ᶰ ևᵤ ´ ᵴ ᵪ ᵢ ᶆ ṕ ᵴ ᵪ Ṅ ᶜ ˝Ω ᾰ pool ḧ Θ ᶆ ᵴ ᵴ ᵪ ├ Ỵ ف ᵽ Ẓ ᶺ ᵢ ᶟ ب ´ ‰ IP ᶣ ᶷ ˝O IP 100-199 ف ᵤ ḡ ˝E ᵢ̄ ACL
pool *pool-name*	ᵴ ᵪ – ḧ Θ ᶆ ᵴ ᵴ ᵪ ᶰ ᶻ ᵢ ᶠ Φ´ ‰ ᵴ ᵪ ᶜ ˝Ω ˋH ᵢ Ṅ ᶟ ˋ ب ᶆ ᵴ ᵴ ᵪ

ᶩ ب ᶫ ≡ ὼ ᵏ ᵢ ᶆ ◊ ᵴ ᵪ ᶜ ˝Ω 9.756064557.453<04EB068-m(9>Tj5AD6F9E>493<68F( )T25B2E035.A0B4627.41F07D18759

```
Ruijie(config-if-GigabitEthernet 0/1)# ip nat outside
Ruijie(config-if-GigabitEthernet 0/1)# exit
Ruijie(config)# ip nat pool net10 10.10.10.1 10.10.10.2 prefix-length 24 type rotary
Ruijie(config)# ip nat inside destination list 100 pool net10
Ruijie(config)# access-list 100 permit ip any host 10.10.10.100
```

ώ˜ Ụ 1χ ḃ ' ب ل ⊠h„ Ţ ل è ḡ ا„ ب ل¸ م ا ώ˜ χ

```
Translation with list xxx exist,please delete and recreate
```

2χ ḃ ' ب ل أ ᵘ ɲ ̀H ا¸ א è j ' ا ب ل¸ م ا ώ˜ χ

```
% create nat rule fail
```

no ip nat inside source static *local-ip* **interface** *interface-type interface-number*

no ip nat inside source static { **tcp** *local-ip local-port* | **udp** *local-ip local-port* } *global-ip global-port*

no ip nat inside source static { **tcp** *local-ip local-port* | **udp** *local-ip local-port* } **interface** *interface-type interface-number global-port*

ˮ ب ˮ

ˮ	ك
list *access-list-number*	ş ş χ ևڈ ˊ ᴱ õ ◊ ş χ ש ب أ ևڈ ˊ ˡˡ ˌ ı ˡ ¨ ã NAT ج ˮ ι ę
interface *interface-type interface-number*	ŕ outside ì Æ ŕ ş χ NAPT ε ل ʌ ş χ ˥ Æ ج ˮ ζ ı ˆ ᴴ ˮ E ī NAT
pool *pool-name*	ŕ ş χ – ŕ ş χ NAT
overload	pool ŕ ⅛ ŕ ş χ ďu ˡ ɑ ʰ ŕ ج ˮ ι ŏ ĩ NAPT ˊ ≡ õ ب ل ف ˮ ι ŕ ş χ ˆ ĩ ʰ ŕ ˮ A ɑ ▌ ŕ ف ˮ ĩ ŕ ˢ cisco ŕ ᵘ ᑎ ḳ
static *local-ip global-ip*	ḧ Θ ˥ ˍ õ NAT local-ip ŕ ş ş χ ı global-ip ŕ ŕ ş χ
static *protocol*	ḧ Θ ˮ E ī ˍ õ NAT protocol ˡ ɑ ŕ TCP ᾶ UDP
local-port	ş ş χ ŕ O ᑎ ˥ Æ ᴺ TCP ᾶ UDP ŕ ˥ Æ ᴺ ı ⅛ ˥ ˋ O ᑎ ďu ˇ Ḿ Ẓ ˋ O ᑎ ˥ Æ
global-port	ŕ ş χ ŕ ˋ O ᑎ ˥ Æ ᴺ ᵘ ďh ل ʌ ص ن أ ˥ Æ ևڈ ďh ل ʌ ڇ ŕ ˋ O ᑎ أ ˥ Æ ᴺ ˡ ɑ ль local-port j ª
permit-inside	ᴱ ˍ ʎ ᵽ ip nat inside source static ᵘ ᑎ ı ŕ ᵽ ل ŕ ˮ A ɑ global-ip ևڈ local-ip ŕ ڇ
match *interface-type interface-number*	ˮ Y ḧ ˍ ì Æ ε ύ ΐ DNS ŕ ζ
netmask *mask*	ل ᴴ ل ᴴ ş χ

ڵ ب ل ≡ õ ďh ◊ ş χ NAT ʌ ı

ᵘ ᑎ ₩ ᾶ ŕ ب ل ₩ ᾶ

ڵ ˥ 14

ŕ ˮ Y Ṁ

Ẹ ďh ل ʌ ŕ IP ş χ ŕ ˥ õ ş χ ı ˍ ı ль ᵘ ďh ل ʌ ن g ˋ H ı ˍ ı ب ل NAT ı Ṅ ďh ˥ õ IP ş χ ج ˮ Ω ᾰ ŕ χ IP ş χ

Ḿ ل ³ ᾶ ɥ ı ḃ ˈ ŕ i ل ևڈ ᵘ ďh ل ʌ ŕ ° ◊ ı ḃ ⊨ η ل ˝ ώ ʌ ∨ ï ɔ ᾰ ˥ ı ᾶ ج j Ḿ ᵘ ďh ل ʌ ώ ل ʌ ˋ O ᑎ ı ˡ ɑ ´ ì ŕ outside ì Æ ŕ IP ş χ ŕ ş χ ı ɑ NAPT ˊ A Ã ḥ ʎ ş χ ج ˮ Ω ḃ ˈ j NAT ı ˋ ب ˥ õ ş χ ŕ ďh ل ʌ o ŕ ᴛ i ль ᵘ ďh ل ʌ ḥ ʎ ĩ ı ˀ ژ ɔ ن j ı ŕ

ᴨᴨ ᵘ ᴨ ᴊ ᴨ ≡ ᾶ ᾶ ᾶ ᵴ ᵪ ᴊ ᴨ ᵗ

ᴭ ᾶ ᾶᴏᴎ ᴨ ᴊ ᾶ ᵢ ᵢ ᵢ ᴊ ᴊ ᴊ

7χ ḅ ' ɨ ǎ ̈ Ḗ h ̈ ̀H ɪ ̣ ʌ è j ' ɪ ̀ ̣ م ɪ ώ ̃ χ

```
% create attach rule fail
```

8χ ḅ ' Ḿ ̀ permit-inside ᵘ ɲ ɨ ǎ ̈ Ḗ h ̈ ̀H ɪ ̣ ʌ è j ' ɪ ̀ ̣ م ɪ ώ ̃ χ

```
% create permit_inside attach rule fail
```

9χ ḅ ' ɲ ' ̀ ɨ ǎ ɪ ̈ ᵘ ɲ ɪ ̈ ɲ ̣ م ɪ ώ ̃ χ

```
% Translation not found
```

Ẃ ȯ ج ئ -

Ẓ ʲ ب ̃ -

12.6 ip nat outside source

ɩ ᵏ ɨ ᵘ ɱh ◊ ş χ NAT

ip nat outside source list *access-list-number* **pool** *pool-name*

ip nat outside source static *global-ip local-ip*

ip nat outside source static { **tcp** *global-ip global-port* | **udp** *global-ip global-port* } *local-ip local-port*

ɲ ᵘ ɱh ◊ ş χ NAT

no ip nat outside source list *access-list-number*

no ip nat outside source static *global-ip local-ip*

no ip nat outside source static { **tcp** *global-ip global-port* | **udp** *global-ip global-port* } *local-ip local-port*

̃Ω ب ̃

̃Ω	ώ ك
list *access-list-number*	ş ş χ ɩ ɲ ̀ ᴱ ω̃ ◊ ş χ ш ب أ ɩ ɲ ̀ ̈ ɱ ɪ ̣ ɪ ɛ ̈ ǎ NAT ج ̃Ω ɩ ę
pool *pool-name*	ɨ ş χ – ̈ ṕ ş χ NAT
static *local-ip global-ip*	ḧ Θ ɴ ̄ õ NAT local-ip ʜ ş ş χ ɪ global-ip ʜ ṕ ş χ
static *protocol*	ḧ Θ ̃E ṛ ̄ õ NAT protocol ˈ Ω ʜ TCP ǎ UDP
local-port	ş ş χ ̈ ̀O n ɴ Æ N TCP ǎ UDP ̈ ɴ Æ N ɪ ⅛ ɴ ̀O n ɱu ̃ Ḿ Ẓ ̀O n ɴ Æ
global-port	ṕ ş χ ̈ ̀O n ɴ Æ N ᵘ ɱh ɻ ʎ ڼ أ ɴ Æ ɩ ɲ ̀ ɱh ɻ ʎ ڎ ̈ ̀O n أ ɴ Æ N ˈ Ω ль local-port j ª

ǰ ب ل	≡ ũ ᵘ մh ◊ ş χ NAT ∧ ɨ
ᵘ ɲЪ₩Ã	ṕ ب ل ₩Ã
ǰ ۱	14
ŧ ˝YṀ	ᵘ մh ◊ ş χ NAT ج ̈Ω ǯ ǀ Ƶ ŧ ɲ ي ᴬ ş χ ۷ ژ ş χ ج ̈Ω ь ۰ ǀ ĭ ۹ ۱ ũ ل ۸ ʿ ب ª ¯ IP ş χ ı ã̆ ã̈ ۱ ũ ل ۸ = ʒ ũ ل ۸ ʿ ب ª ¯ ṕ IP ş χ ı ف ۱ ŭ ۱ ۳ ş χ ي ᴬ ь ي ᴬ ş χ ل ۸ ǯ ژ ĩ j ˡ í ۹ ı ۱ ۳ Ḕ ˀ ɲ ۳ Ḿ Ǎ ǯ ɲ ş ل ۸ ي ᴬ ş χ NAT ŏ ĩ ь ذ ز Ḿ ي ᴬ ş χ ل ۸ ژ ۹ ı ئ ڈ ب ل ي ᴬ ş χ NAT ı ᵘ մh ل ۸ ǯ ş χ ɲ մh ل ۸ ʿ ۳ ᴰ ل ۸ ǯ ş χ ı ɾ ¯ ي ᴬ ş χ NAT ب ل ı Ъ ḫ ʿ ۳ ь մh ʿ ḳ χ 1 ζ մh ◊ ş χ NAT ب ل ψ 2 ζ ᵘ մh ◊ ş χ NAT ب ل ı ᴱ ũ ɲ ف ۱ ŭ Θ ک ۱ ل ۸ ɖ Ú ɣ ʀ ˆ ˇ n

3χ Ę ب ل acl Ţ ل ī ṃ ص ا ب ل م ا ώ˜ χ

```
Translation with list 1 exist,please delete and recreate
```

4χ ḅ ' ب ل ǎ ᵘ ɲ ʼH ا ء ȁ è j ' ا ب ل م ا ώ˜ χ

```
% create nat rule fail
```

5χ ḅ ' ن ' ب ل ǎ ا ᵘ ɲ ا ن م ا ώ˜ χ

```
% Translation not found
```

Ẃ ȯ ج ئ -

Ẇ ᵓ ب ˜ -

12.7 ip nat pool

ţ ḧ Θ NAT ş χ −

ip nat pool *pool-name start-ip end-ip* { **netmask** *netmask* | **prefix-length** *prefix-length* } [**type rotary**]

ip nat pool *pool-name* { **netmask** *netmask* | **prefix-length** *prefix-length* } [**type rotary**]

ip nat pool *pool-name* { **netmask** *netmask* | **prefix-length***prefix-length* } [**type rotary**]

ن ş χ −

no ip nat pool *pool-name*

ˆQ ب ˜

ˆQ	ώ ك
pool-name	NAT ş χ − ᵃ È
start-ip	NAT ş χ − ∨ Ḋ IP ş χ
end-ip	NAT ş χ − ⌋ IP ş χ
netmask *netmask*	NAT ş χ − ş χ ⌋ ∧ ȯ
type	NAT ş χ − ⁱ ʒ rotary ⅛ ڎ ج ʒ ا ⅛ ş χ ˋ ب ₦ ˋ ˋ ˋ ˋ ≡ ω̃ ب rotary ţu ĩ ڎ ج ʒ ˆA Ω Ą rotary ˆQ ĩ ль cisco ᵘ ɲ ḳ

ǰ ب ل ≡ ω̃ ş χ − ą ḧ Θ

ᴎᴌ 1χ Ɑ ï ᴎᴌ Ḍ ı ᵃ È ᴍ net192 ᴓ ş χ − ı ∨ Ḋ ş χ ᴍ 192.168.12.1 ı ᴌ ş χ ᴍ 192.168.12.254 ı ᴌ ᴎ ȯ ᴝ ỷ ᴍ 24 ⅝ ⁼ ᴙ

```
Ruijie#configure terminal
Ruijie(config)# ip nat pool net192 192.168.12.1 192.168.12.254 prefix-length 24
```

ώ˜ Ṵ 1χ ḃ ' ᴎᴌᴓ ş χ − ᴓ ȯ ĩ 0.0.0.0 ı ᴎᴌ, م ı ώ˜

```
% netmask can not be 0
```

2χ ḃ ' Ĺ ᵘ ᴨᴎᴌᴓ ᴌ IP ş χ ṇ ∨ Ḋ IP ş χ ı ᴎᴌ, م ı ώ˜ χ

```
% End address less than start address
```

3χ ḃ ' Ĺ ᵘ ᴨᴎᴌᴓ ∨ Ḋ IP ş χ ⁼ ᴌ IP ş χ j ʃ ª ᴌ ∃ ı ᴎᴌ, م ı ώ˜ χ

```
% Start and end addresses on different subnets
```

4χ ḃ ' Ĺ ᵘ ᴨᴎᴌᴓ ∨ Ḋ IP ş χ ⁼ ᴌ IP ş χ ɖu ĩ 0.0.0.0 ı ᴎᴌ, م ı ώ˜ χ

```
% Ip address 0.0.0.0 ~ 0.0.0.0 are invalid.
```

5χ ḃ ' ƒ ˀ Ẓ ş χ − ₩ Ã ᴓ pool ı ʒ ⁼ Ţ ᴎᴌ pool ı ʒ j ª ı ᴎᴌ, م ı ώ˜ χ

```
%Cannot redefine pool type, please delete and recreate.
```

6χ ḃ ' ᴎᴌᴓ ş χ − ᴓ Ω ᵢ ˄ ص 100 ı ᴎᴌ, م ı ώ˜ χ

```
% Exceed the max pool count
```

7χ ḃ ' ᴎᴌᴓ ş χ − ᴓ ª È ˄ ص 32 ı ᴎᴌ, م ı ώ˜

```
% Length of pool name must be no more than 32 charceters
```

8χ ḃ ' ᴎᴌ Ĺ ᵘ ᴨ ̀H ı è j ' ı ᴎᴌ, م ı ώ˜ χ

```
%create pool fail
```

9χ ḃ ' ᴎᴌ Ĺ ᵘ ᴨ ̀H ı è j ' ı ᴎᴌ, م ı ώ˜ χ

```
% create pool fail for alloc range mem
```

10χ ḃ ' ể ᴓ ş χ − j è ᵽ ı ᴓ, م ı ώ˜ χ

```
% pool xxx not exist
```

Ẃ ȯ ج ئ -

Ẇ ᴶ ب ˝ -

12.10 show ip nat translations

Ĭ ˜ NAT ج ̈Ω ʟ ẹ

show ip nat translations [*dev_id*] [*slot_id*] [*acl_num*] [**icmp** | **tcp** | **udp**] [**verbose**]

̈Ω ب ̈

ɻ ˜ è ˜ ᵀ ỉ ِ نجي ˙ ˜ ¶ l ŵ -

Inside global	ʊʃh ṕ ş ϰ ʒ ˡ ˡ Æ ᴺ
Inside local	ʊʃh ş ş ϰ ʒ ˡ ˡ Æ ᴺ
Outside local	ᵘ ʊʃh ş ş ϰ ʒ ˡ ˡ Æ ᴺ
Outside global	ᵘ ʊʃh ṕ ş ϰ ʒ ˡ ˡ Æ ᴺ
timeout	ˊ ˜ Ǐ NAT ج ̋Ω ʟ ẹ ̎ ʌ ̀Hوَ̃ ^ ذ ̀H ژ ا ᵸ ˥

ώ˜ Ụ -

Ẃ ȯ ج ئ -

Ẓ ᴶ ب ̋ -

1 NSM

1.1 clear ip route

} Ž q è n Ù k U Y ¨ Ô Ó ï % ” ü g **clear ip route** x Xož

clear ip route { *** |** network [netmask] | }

o¬ @ ƒ ª ¢o-

@ ƒ	T
*	Ž q ¶ B è Ù
network	} Ž q Ù à Ì ê ÿ à ª -
netmask	g U # h à Ì Q A k 6 Q A ž k n P … network Â x F è n è k Ž q Ù

o¬ x X % ”o- Ô Ó ï % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- Ž q è Ù k í ” + • è k À e ‡ G è # ‘ M • .ož · À h Þ ò ç Ž q … è n Ù k 1 - è … à Ì ? ¶ * ’ •ož

o¬ F å †o- Ž q 192.168.12.0 Â x F ñ è n ¾ Ù ož

```
F O H D U L S U R X W H
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

1.2 ip default-network

F å Þ . à Ìož

ip default-network network

í ” Þ . à Ìož

no ip default-network network

Ê Ö Þ . F å

default ip default-network network

o¬ @ ƒ ª ¢o-

@ ƒ	T

network	Þ . à Ì à Ì Zož

o¬ Þ . F åo- Þ . 0.0.0.0/0ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- F å Þ . à Ì) © 4 D ÿ Þ . è k * **default-network** D ÿ Þ . è ¬ } á Y Ú ^ y ¥ Þ . à Ì © + N M à Ì k x ¨ è n U ñ ož
Þ . à Ì È © Y“*” Z • ã k n P © Þ . è ˜ # ñož ò ç Þ . à Ì Ä connected è y Z Ä %² é è k é Þ . è } L © ² Á è ož

o¬ F å †o- 1 y 1 192.168.100.0 à Ì — Þ . à Ì k 9 F å 4 ñ ¥ à Ì ² Á è k ñ Y — Õ 1 D ÿ%² Ú Þ . è ož

```
5 X L M L H F R Q I L J L S U R X W H V H U L D O
5 X L M L H F R Q I L J L S G H I D X O W Q H W Z R U N
```

2 y 1 200.200.200.0 à Ì — Þ . à Ì k Q } ¢ 200.200.200.0 ß ë ¨ è n k ¥ è è Þ . è ož

```
5 X L M L H F R Q I L J L S G H I D X O W Q H W Z R U N
```

o¬ à • co- U … show ip route ò 0 Þ . è ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.3 ip route

F å ² Á è ož

ip route network net-mask { ip-address | interface [ip-address] } [distance] [**tag** tag] [**permanent**] [**weight** number] [**description** description-text] [**disabled** | **enabled**] [**global**]

í ”] F å ² Á è ož

no ip route network net-mask { ip-address | interface [ip-address] } [distance]

í ” ñ Ä] F å ² Á è

no ip route all

Ê Ö Þ . F å

default ip route network net-mask { ip-address | interface [ip-address] } [distance]

default ip route all

o¬ @ ƒ ª ¢o-

@ ƒ	T
network	) ö à Ì à Ì ª -
net-mask	) ö à Ì Q A
ip-address	g U # h² Á è %² é ª -ožip-address y interface 5 } 6 %² k ê ñ ñ C 6 ož ¢ Ì 6 ip-address ž k n P F å ² Á + è ož
interface	g U # h² Á è %² é ß Možip-address y interface 5 } 6 %² k ê ñ ñ C 6 ož ¢ Ì 6 interface ž k n P F å ² Á ' ¡ è k ß M %² é ¨ è n # è B ±ož
distance	g U # h ² Á è ' ò å Y k Þ . 1ož
tag	g U # h ² Á è Tag › k Þ . 0ož
permanent	g U # h K ! è ö œ k Þ . ³ K ! è ož
weight number	g U # h ² Á è Ó M › k Þ . 1ož
description description-text	g U # h² Á è T ' Î k Þ . — T ' Î kdescription-text 1 ½60 … … ož
disabled/enabled	g U # h ² Á è … ö œ k Þ . enabledož
global	g U # h ª P 6 %² é K 9 ¶ B è n k Þ . %² é - © K 9 ¶ B è nož
all	g U # h í " ¶ B è n ñ Ä ² Á è ož

o¬ Þ . F åo- — ² Á è ož

o¬ x X % "o- ¶ B F å % "ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ² Á è Þ . ' ò å Y 1 k * — å ' ò å Y k U Y ª • Á è ñ è ~ $ ² Á è k Q Ä ¢ Á è ñ ž k õ … ² Á è ož * — å ² Á è ' ò å Y U Y ë ¿ è Õ a k 4 ž ² Á è k%² " A f • è ož A ò OSPF è # ' ' ò å Y 110 k U Y 1 ² Á è ' ò å Y — å 125 k ý ¢ ä OSPF ¿ è { ž ž k ƒ G v O À < U Y ä E ñ ² Á è ¿ è ož
² Á è ó • Ó M 1 k U Y … **show ip route weight** x X ò 0 ³ ó • Ó M ² Á è ož Ó M @ ƒ weight 9 ë WCMP k ¢ ¨ ¿ ú ® k è U ñ î ª - ž k à Ì — Õ k ÿ G _ Ú è Ó M › ã F ƒ G v O k weight û Ý è k ã û Ú ƒ G † k û 4 ñ k ã û 5 ƒ G †ož
² Á è … ö º O ò ² Á è © k Ä | k ò ç — | é k 9 ô Gož K ! è F å ô G n k " ³ * à ' Û í " J k k é 1%² + ¨ož
} * Y ß à N M F å ² Á è ž k @ O 9 ² %² é + N N M g ò ip route 0.0.0.0 0.0.0.0 GigabitEthernet 0/0 hož ý k • — Õ „ ± ñ Ä Ì =) ö à Ì k C © + ¨ GigabitEthernet 0/0 N M k œ 4 + ?) ö Ñ C

G %² ARP ¬ L k k) • Ú CPU y Ä Ï ›ož ñ Y%² " • ‘ 1 ² Á è + N 6 g Y ß à N Mož

o¬ F å †o- 1 y Í 4%² Ú ñ 172.16.100.0/24) ö à Ì ² Á è k %² é 192.168.12.1 k ’ ò å Y 115ož

L S U R X W H

2 y ò ç ² Á è Z Ä 6 N M k ¢ 3 o G N M { ž ž k U k … ± ƒ G v O R ¿ N M G ož } 9 ² ¥ Õ Ñ G ÿ k < ¬ } 6 N Mož Y F å † ÿ k ñ) ö à Ì 172.16.100.0/24 ƒ G v O Q R GigabitEthernet 0/0 N M ô Gož

5 X L M L H F R Q I L J L S U R X W H * L J D E L W (W K H U Q H W

o¬ à • co- U … show ip route ò 0 è nož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.4 ip routing

o RGOS ÷ ^ IP è ož

ip routing

¼ { IP è ož

no ip routing

Ê Ö Þ . F å

default ip routing

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- o IP è ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¢ — Õ Q • N — Õ k ê ñ Q • VOIP à ¼ — Õ ž k U Y ¬ } RGOS ÷ ^ IP è ô G ož ž U Y ¼ { RGOS IP è ož

¼ { IP è e k — Õ ¯ * Ñ n ë%² ý k U Y Î Ñ v G k x Ÿ ô Gož ñ Ä è , ¼ F å C t

í ”ož ² Á è F å © † Ù k 9 ² Á è U F å û Ú k 3 ï — Þ • F å 4 no ip routing U - Ý
O ² Á è F å âož 9 ² _ Õ Ñ k ¢ ü g no ip routing ž k ² Á è F å 1 k ¶ ž › W k 3 ï M •
ü g ip routing k ² Á è F å U Y Ê Öož
h Þ k 3 ¨ no ip routing Õ Ñ k i M o ê ñ … Ñ © Ï M o k ² Á è F å 1 k ‘ ož

o¬ F å †o- ¼ { 4 RGOS ÷ ^ IP è ož

5 X L M L H F R Q I L J Q R L S U R X W L Q J

o¬ à • co- -

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.5 ip static route-limit

F å ² Á è Ú ƒ ’ož
ip static route-limit number

F å ó • è Ú ƒož
no ip static route-limit

Ê Ö Þ . F å
default ip static route-limit

o¬ @ ƒ ª ¢o-

@ ƒ	T
number	è ’ k 8 1-10000

o¬ Þ . F åo- Þ . 1024ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- F å ² Á è ƒ ’) © 4 O ò ² Á è Ú ƒ k * **ip static route-limit** F å ² Á è ƒ ’ e k
D ÿ ò | ç k F å ² Á è ƒ k Ý — å ’ož * **show running-config** U Y ò 0) ù F å ³
ó • ² Á è ƒ ’ož

o¬ F å †o- — å ² Á è ƒ ’ 900 Ú k À e Ê Ö ó • ›ož

	y1-8 k%² Ú è ñ Ä ˆ _ è ¬ Ó M $ y Ý ¥ Ú è ñ F å Â Ý ˆ _ è ¬ Ú) ƒ k c%² Ú è ˆ _ è ¬ $ • Ó M A 6 ¢ 4 ? è ¬ $ • v O A ä ¼ ©ož Þ . 1ož
description description-text	g U # h² Á è T ' Î k Þ . — T ' Î kdescription-text 1 ½60 … … ož
all	g U # h í " ¶ B è n ñ Ä ² Á IPv6 è ož

o¬ Þ . F åo- —ipv6 ² Á è ož

o¬ x X % "o- ¶ B F å % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ² Á è Þ . ' ò å Y 1 k * — å ' ò å Y k U Y ª • Á è ñ è ~ $ ² Á è k Q Ä ¢ Á è ñ ž k õ … ² Á è ož * — å ² Á è ' ò å Y U Y ë ¿ è Õ a k 4 ž ² Á è k%² " A f • è ož A ò OSPF è # ' ' ò å Y 110 k U Y 1 ² Á è ' ò å Y — å 125 k ý ¢ ä OSPF ¿ è { ž ž k ƒ G v O À < U Y ä E ñ ² Á è ¿ è ož

o¬ F å †o- 1 y Í 4%² Ú ñ 2001::/64) ö à Ì ² Á è k %² é 2002::2 k ' ò å Y 115ož

```
Ruijie(config)#
```

Ê Ö Þ . F å

default ipv6 static route-limit

o¬ @ ƒ ª ¢o-

@ ƒ	T
number	è ' k 8 1-10000ož

o¬ Þ . F åo- Þ . 1000

o¬ x X % "o- ¶ B F å % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- F å ² Á è ƒ ') © 4 O ò ² Á è Ú ƒ k * k D ÿ ò | ç k F å ² Á è ƒ k Ý — å 'ož * ³ ó • ² Á è ƒ 'ož

ipv6 static route-limit F å ² Á è ƒ ' e **show running config** U Y ò 0) ù F å

o¬ F å †o- — åipv6 ² Á è ƒ ' 900 Ú k À e Ê Ö ó • ›ož

```
Ruijie(config)#ipv6 static route-limit ?
 o¤1-10000o¥ Value(default value: 1000)
5 X L M L H F R Q I L J L S Y V W D W L F U R X W H O L P L W
5 X L M L H F R Q I L J Q R L S Y V W D W L F U R X W H O L P L W
```

o¬ à • co- -

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.8 ipv6 unicast-routing

o RGOS ÷ ^ IPv6 è ož

ipv6 unicast-routing

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- o IPv6 è

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¢ — Õ Q • N — Õ k ê ñ Q • VOIP à ¼ — Õ ž k U Y ¬ } RGOS ÷ ^ IPv6 è ô G ož ž U Y ¼ { RGOS IPv6 è ož

o¬ F å †o- ¼ { 4 RGOS ÷ ^ IPv6 è ož
5 X L M L H(confQ)R L S Y X Q L F D V W U R X W L Q J

o¬ à • co- -

o¬ U P ’ Îo-

Y P ’ Îo-

a x i m u m - p a

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- F å ˆ _ è Ú ƒ) © 4 O ò ˆ _ è Ú ƒ k * **maximum-paths** F å ˆ _ è Ú ƒ e k D ÿ ò | ç k ¨ ¿ ú ® k % ” k ¿ ú ® k ã è ƒ k Ý F å ˆ _ è ƒož * **show running config** U Y ò 0) ù F å ˆ _ è ƒož
¥ x X F å + ipv4 y ipv6 c ý ÿ | k - < © ª k F å 4 ¥ x X k ñ î%² ipv4) ª Â Ý ˆ _ è ¬ Ú) ƒ © ¥ F å › k ñ î%² ipv6) ª Â Ý ˆ _ è ¬ Ú) ƒ - © ¥ F å ›ož

o¬ F å †o- — å ˆ _ è Â Ú 10 Ú k À e Ê Ö ó • ›ož

```
5 X L M L H F R Q I L J P D [ L P X P S D W K V
5 X L M L H F R Q I L J Q R P D [ L P X P S D W K V
```

o¬ à • co- * show ip route ò 0 À } ecmp è Õ Ñož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.10 show ip route

ò 0 IP è n ’ Îož
show ip route [[network [mask [**longer-prefix**]] | **count** | protocol [process-id] | **weight**]]

ÿ G è ecmp K Å ˆ ò 0 IP è n ’ Îož
show ip route [[**normal** | **ecmp**] [network [mask]]]

o¬ @ ƒ ª ¢o-

@ ƒ	T
network	g U # h Q ª P ñ ¥) ö à Ì è ’ Î k Þ . ª P ñ Ä è
mask	g U # h Q ª P ¥ Q A) ö à Ì è k Þ . ª P Â x F ù Ö è ož
longer-prefix	(U #) ª P F 6 ù Ö 8 Ä ñ Ä ¢ Â è
count	g U # h ª P ¢ ù è Ú ƒ g + 9 ECMP/WCMP è k 7%² Ú è ‹ ‘ h k Þ . ª P è Ú ƒ Ï ‹ ’ Îož
protocol	g U # hè # ‘ ê ñ ¼ p Ÿ y**connected** , **static** z ¢ ª P Ô # ‘ è ž k … ¼ p Ÿ y **ospf**, **rip**ož Þ . ª P ñ Ä # ‘ož
process-id	g U # h è # ‘ i Z k Þ . ª P ñ Ä iož
weight	g U # h Q ª P ³ ó • Ó M è k Þ . ª P ñ Ä Ó M è ož

normal	g U # h ª P ¯ * è k ª P ˆ _ è k Þ . ª P ñ Ä • º è ož
ecmp	g U # h Q ª P ˆ _ è k Þ . ª P ñ Ä • º è ož

o¬ x X % ”o- Ô Ó ï % ”o• ¶ B F å % ”o• N M F å % ”o• è # ‘ F å % ”o• è £ F å % ” ˆož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

show ip route 9 ª P Ž U Y 9 ô G n ¾ k ò ç } 0 _ • K Å n ¾ k ¬ 6 **normal** | **ecmp** | **fast-reroute** @ ƒož

o¬ F å †o- 1 y Y **show ip route** x X ª P È ç y

4 y Y **show ip route weight** x X ª P È ç y

```
5XLMLH  VKRZ LS URXWH ZHLJKW
        >GLVWDQFH PHWULF ZHLJKW@
6           >    @ YLD
6             >    @ YLD
```

5 y**show ip route normal** x X ª P È ç y

```
5XLMLH VKRZ LS URXWH QRUPDO

&RGHV  &  &RQQHFWHG  /  /RFDO  6  6WDWLF
      5  5,3  2  263)  %  %*3  ,  ,6 ,6  9  2YHUIORZ URXWH
      1  263) 166$ H[WHUQDO W\SH  1  263) 166$ H[WHUQDO W\SH
      (  263) H[WHUQDO W\SH  (  263) H[WHUQDO W\SH
      68  ,6 ,6 VXPPDU\  /  ,6 ,6 OHYHO  /  ,6 ,6 OHYHO
      ,$  ,QWHU DUHD  FDQGLGDWH GHIDXOW
*DWHZD\ RI ODVW UHVRUW LV QR VHW
6           LV GLUHFWO\ FRQQHFWHG  9/$1
6           >  @ YLD
2 (         >    @ YLD              9/$1
5           >    @ YLD              9/$1
%           >    @ YLD
&             LV GLUHFWO\ FRQQHFWHG  9/$1
&               LV ORFDO KRVW
```

6 y**show ip route ecmp** x X ª P È ç y

```
5XLMLH VKRZ LS URXWH HFPS

&RGHV  &  &RQQHFWHG  /  /RFDO  6  6WDWLF
      5  5,3  2  263)  %  %*3  ,  ,6 ,6  9  2YHUIORZ URXWH
      1  263) 166$ H[WHUQDO W\SH  1  263) 166$ H[WHUQDO W\SH
      (  263) H[WHUQDO W\SH  (  263) H[WHUQDO W\SH
      68  ,6 ,6 VXPPDU\  /  ,6 ,6 OHYHO  /  ,6 ,6 OHYHO
      ,$  ,QWHU DUHD  FDQGLGDWH GHIDXOW
*DWHZD\ RI ODVW UHVRUW LV          WR QHWZRUN
6           >  @ YLD
            >  @ YLD
2 ,$          >    @ YLD              9/$1
                >    @ YLD              9/$1
```

7 y**show ip route fast-reroute** x X ª P È ç y

```
5XLMLH VKRZ LS URXWH IDVW UHURXWH
```

```
&RGHV   &   &RQQHFWHG   /   /RFDO  6   6WDWLF
      5   5,3  2   263)  %   %*3  ,   ,6 ,6  9   2YHUIORZ URXWH
      1    263) 166$ H[WHUQDO W\SH    1    263) 166$ H[WHUQDO W\SH
      (    263) H[WHUQDO W\SH    (    263) H[WHUQDO W\SH
      68   ,6 ,6 VXPPDU\  /    ,6 ,6 OHYHO    /    ,6 ,6 OHYHO
      ,$   ,QWHU DUHD      FDQGLGDWH GHIDXOW
6WDWXV FRGHV  P   PDLQ HQWU\  EDFNXS HQWU\  D –

*DWHZD\ RI ODVW UHVRUW LV          WR QHWZRUN
6            >PD@ YLD
            >E@ YLD
2 ,$              >P@ YLD                  9/$1
                 >ED@  YLD                  9/$1
```

8 y**show ip route fast-reroute** network x X ª P È ç y

```
5XLMLH  VKRZ LS URXWH IDVW UHURXWH
5RXWLQJ HQWU\ IRU
'LVWDQFH      PHWULF
5RXWLQJ 'HVFULSWRU %ORFNV
>P@                  DJR  YLD 9/$1   JHQHUDWHG E\ 263)  H[WHUQ
>ED@                 DJR  YLD 9/$1   JHQHUDWHG E\ 263)  H[WHUQ
```

< † K y

<	ª ¢
O	ª ¢ ¥ è › è # ‘ož ¥ < U H › y C y + è z L y Î ª è zS y ² Á è z R yRIP è z B yBGP è z O yOSPF è z I yIS-IS è ož
E2	è • ºož ¥ < U H › y E1 yOSPF Ù B è • º p z E2 yOSPF Ù B è • º q z N1 yOSPF NSSA Ù B è • º 1 z N2 yOSPF NSSA Ù B è • º 2 z SU yIS-IS M È è z L1 yIS-IS 1 ´ è z L2 yIS-IS 2 ´ è z IA y è ¿ Ä B è ož

20.0.0.0/8	) ö à Ì à Ì ª - y Q A x †
[1/0]	' ò å Y n † O ›
Via 20.0.0.1	%² é IP ª -
00:00:06	# ' è t ž •
VLAN 1	%² é ô G N M
Routing Descriptor Blocks	ª P è ' Î %² é IP ª -o• è Û ›o• ¾ • ž •o• Æ „ N Mo• › è # 'o• • ºo• BGP • } K Å › ˆož

o¬ U P ' Îo- -

o¬ u V ª ¢o- -

1.11 show ip route summary

ò 0 % ™ è n Ï ‹ ' Îož

show ip route summary

ò 0 ñ Ä è n Ï ‹ ' Îož

show ip route summary all

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % "o- Ô Ó ï % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- * ¥ x X U Y ò 0 è n Ï ‹ ' Îož

o¬ F å †o- 1 y ò 0 ¶ B è n Ï ‹ ' Îož

```
5XLMLH  VKRZ LS URXWH VXPPDU\
&RGHV  1250$/ (&03 )55 – 5HURXWH URXWH
                                  &RQQHFWHG
                                  6WDWLF
                                  5,3
                                  263)
```

```
        ,6,6
        %*3
        727$/
```

2 y ò 0 ñ Ä è n Ï ‹ ’ Îož

```
 5XLMLH  VKRZ LS URXWH VXPPDU\ DOO
&RGHV   125$/ &03 URXWH &03 URXWH )55 )55 5HURXWH URXWH

,3 URXWLQJ WDEOH FRXQW
7RWDO
   0HPRU\      E\WHV
   (QWULHV   kEDVHG RQ URXWH SUHIL[HV
                        1250$/ (&03   )55    727$/
      &RQQHFWHG
      6WDWLF
      5,3
      263)
      ,6,6
      %*3
      727$/
*OREDO
   0HPRU\      E\WHV
   (QWULHV   kEDVHG RQ URXWH SUHIL[HV
                        1250$/ (&03   )55    727$/
      &RQQHFWHG
      6WDWLF
      5,3
      263)
      ,6,6
      %*3
      727$/
```

< † K y

<	ª ¢
NORMAL	ª ¢ ã • n ¾ • ºož ¥ < U H › y NORMAL y ¯ * è n ¾ g ³ ECMP ê FRR è hz ECMP y ˆ _ Ú è ¬ è n ¾ z FRR y ½ , M è n ¾ z TOTAL y ñ Ä • º n ¾ Ú) ` ‹ož
Memory	¢ ù è n) Ä Ý 4ož

Entries	¢ ù è n m n ¾ Ú) g Â 9 n ¾ ù Ö Ú) k ò ³ %² é Ú) hož
Connected	ª ¢ ¥ g n ¾ # ‘ • ºož ¥ < U H › y Connected y + è n ¾ Static y ² Á è n ¾ RIP yRIP è n ¾ OSPF yOSPF è n ¾ ISIS yISIS è n ¾ BGP yBGP è n ¾ TOTAL y ñ Ä # ‘ n ¾ Ú) ` ‹
IP routing table count	è n *ƒ*
Global	ª ¢ ¢ ù è n d fož ¥ < U H › y Global y ¶ B TOTAL y ¶ B è n ` ‹ ’ Î

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

1.12 show ipv6 route

ª P IPv6 è ’ Îož

show ipv6 route [[ipv6-prefix / prefix-length [**longer-prefixes**] | protocol [process-id] | **weight**]]

o¬ @ *ƒ* ª ¢o-

@ *ƒ*	T
ipv6-prefix/prefix-length	g U # h ª P ¶ F 6 ù Ö v6 è k Þ . ª P ñ Ä è
longer-prefixes	g U # h ª P Â x F 6 ù Ö v6 è k Þ . ª P ñ Ä è
protocol	g U # h è # ‘ ê ñ ¼ p Ÿ y**connected** , **local, static** z ¢ ª P Ô # ‘ è ž k … ¼ p Ÿ y**ospf** , **rip** k Þ . ª P ñ Ä # ‘ è
process-id	g U # h è # ‘ i Z k Þ . ª P ñ Ä i Z è
weight	g U # h Q ª P ³ ó • Ó M è k Þ . ª P ñ Ä Ó M è

o¬ x X % ”o- Ô Ó ï % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- * ¥ x X U Y ò 0 IPv6 è n ’ Îož

o¬ F å †o- ª P ¶ B VRF ipv6 è n

```
,3YURXWHUQHOHIDXOWHQWULHV
&RGHV   &   &RQQHFWHG   /   /RFDO   6   6WDWLF
      5   5,3   2   263)   %   %*3   ,   ,6 ,6   9   2YHUIORZ URXWH
      1   263) 166$ H[WHUQDO W\SH   1   263) 166$ H[WHUQDO W\SH
      (   263) H[WHUQDO W\SH   (   263) H[WHUQDO W\SH
      68   ,6 ,6 VXPPDU\   /   ,6 ,6 OHYHO   /   ,6 ,6 OHYHO
      ,$   ,QWHU DUHD

&            YLD /RRSEDFN   GLUHFWO\ FRQQHFWHG
/            YLD /RRSEDFN   ORFDO KRVW
6            >   @ YLD      /RRSEDFN  &
&     )(      YLD 1XOO   GLUHFWO\ FRQQHFWHG
&     )(      YLD /RRSEDFN   GLUHFWO\ FRQQHFWHG
/     )(    '  ) )) )(    $%     YLD /RRSEDFN   ORFDO KRVW
```

< † K y

<	ª ¢
S	ª ¢ ¥ è › è # ‘ož ¥ < U H › y C y + è z L y Î ª è S y ² Á è z R yRIP è z B yBGP è z O yOSPF è z I yISIS è
E2	è • ºož ¥ < U H › y E1 yOSPF Ù B è • º p z E2 yOSPF Ù B è • º q z N1 yOSPF NSSA Ù B è • º 1 z N2 yOSPF NSSA Ù B è • º 2 z SU yIS-IS M È è z L1 yIS-IS 1 ´ è z L2 yIS-IS 2 ´ è z IA y è ¿ Ä B è ož
20::/64	) ö à Ì à Ì ª - y Q A x †
[20/0]	' ò å Y n † O ›
via 10::4	%² é IPv6 ª -
Loopback 1	%² é ô G N M

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

1.13 show ipv6 route summary

ò 0 % ™ IPv6 è n Ï ‹ ’ Îož
show ipv6 route summary

ò 0 ñ Ä IPv6 è n Ï ‹ ’ Îož
show ipv6 route summary all

o¬ @ *ƒ* ª ¢o-

@ *ƒ*	T
-	-

o¬ x X % ”o- Ô Ó ï % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- * ¥ x X U Y ò 0 IPv6 è n Ï ‹ ’ Îož

o¬ F å †o- 1 y ò 0 ¶ B è n Ï ‹ ’ Îož

```
5XLMLH VKRZ LSY URXWH VXPPDU\
,3Y URXWLQJ WDEOH QDPH LV 'HIDXOW JOREDO VFRSH HQWULH
,3Y URXWLQJ WDEOH GHIDXOW PD[LPXP SDWKV LV
/RFDO
&RQQHFWHG
6WDWLF
3,3
263)
%*3

7RWDO
```

2 y ò 0 ñ Ä IPv6 è n Ï ‹ ’ Îož

```
5XLMLH VKRZ LSY URXWH VXPPDU\ DOO

,3Y URXWLQJ WDEOH FRXQW
7RWDO
  0HPRU\ E\WHV
```

```
  (QWULHV
    /RFDO   &RQQHFWHG   6WDWLF   5,3   263)   ,6,6   %*3

*OREDO
  0HPRU\      E\WHV
  (QWULHV
    /RFDO   &RQQHFWHG   6WDWLF   5,3   263)   ,6,6   %*3
```

```
  <
```

2 FPM

2.1 clear ip fpm counters

Ž ” FPM Ô ò ipv4 † ‹ ƒ

clear ip fpm counters

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- -

o¬ F å †o- 1 y Ž ” — Õ FPM Ô ò ipv4 † ‹ ƒ

```
5XLMLH FOHDU LS ISP FRXQWHUV
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.2 clear ip v6fpm counters

Ž ” FPM Ô ò ipv6 † ‹ ƒ

clear ip v6fpm counters

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- -

o¬ F å †o- 1 y Ž ” — Õ µ FPM Ô ò ipv6 † ‹ ƒ

```
5XLMLH FOHDU LS Y ISP FRXQWHUV
```

o¬ U P ’ Îo- 1 o• — U P ’ Î

o¬ u V ª ¢o- -

2.3 ip session direct-trans-disable

F å ª • ¨ v ž U Y • v + N % n †

ip session direct-trans-disable

Ê Ö ó • — å

no ip session direct-trans-disable

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- AC kAP D } Þ . ¨ v n ž k U Y ü g + • N • v k + N % n Ÿ , Ô ò Œ ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- -

o¬ F å †o- — å — Õ ¨ v ž ª • • v + N % n †

5 X L M L H F R Q I L J L S V H V V L R Q G L U H F W W U D Q V G L V D E O H

o¬ à • co- -

o¬ U P ’ Îo- -

o¬ o • j ¨o-

o¬ u V ª ¢o- -

2.4 ip session tcp-loose

F å ! à tcp Ù Á J ò

ip session tcp-loose

Ê Ö ó • — å

no ip session tcp-loose

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Þ . ü g ! à tcp Ù Á J ò

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- -

o¬ F å †o- — å — Õ µ Ÿ ! à tcp Ù Á ò

5 X L M L H F R Q I L J L S V H V V L R Q W F S O R R V H

o¬ à • co- -

o¬ U P ’ Îo- -

o¬ o • j ¨o-

o¬ u V ª ¢o- -

2.5 ip session tcp-state-inspection-enable

F å Ÿ tcp Ù Á J ò

ip session tcp-state-inspection- enable

Ê Ö ó • — å

no ip session tcp-state-inspection- enable

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . F åo- AC o•AP D } Þ . Ÿ tcp Ù Á æ í

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- -

o¬ F å †o- — å ¨ — Õ • o tcp Ù Á æ í ò

5 X L M L H F R Q I L J L S V H V V L R Q W F S V W D W H L Q V S H F W L R Q H Q D E O H

o¬ à • co- -

o¬ U P ’ Îo- -

o¬ o • j ¨o-

o¬ u V ª ¢o- -

2.6 ip session threshold

F å v ª • N v † ƒ

ip session threshold {**icmp-closed** | **icmp-started** | **rawip-closed** | **tcp-syn-sent | tcp-syn-receive** | **tcp-closed | udp-closed**} { num }

Ê Ö ó • — å

no ip session threshold {**icmp-closed | icmp-started** | **rawip-closed | tcp-syn-sent | tcp-syn-receive** | **tcp-closed | udp-closed**}

o¬ @ ƒ ª ¢o-

@ ƒ	T
icmp-closed	— å # ‘ ICMP Ù Á ¼ { v † * ƒ k ó • 10 g1 - 2000000000 h
icmp-started	— å # ‘ ICMP Ù Á • ÷ v † * ƒ k ó • 300 g5 - 2000000000 h
rawip-closed	— å # ‘ ¿ ip # ‘ Ù Á ¼ { v † * ƒ k ó • 10 g 1 - 2000000000 h
tcp-syn-sent	— å # ‘ TCP Ù Á syn-send v † * ƒ k10 g5 - 2000000000 h
tcp-syn-receive	— å # ‘ TCP Ù Á syn-receive v † * ƒ k ó • 20 g 5 - 2000000000 h
tcp-closed	— å # ‘ TCP Ù Á closed v † * ƒ k ó • 20 g5 - 2000000000 h
udp-closed	— å # ‘ UDP Ù Á ¼ { v † * ƒ k ó • 10 g1 - 2000000000 h
num	— å † * ƒ

o¬ F å †o- — å — Õ µ tcp closed Ù Á † * ƒ 100ož

5 X L M L H F R Q I L J L S V H V V L R Q W K U H V K R O G W F S F O R V H G

o¬ à • co-

o¬ U P ’ Îo- -

o¬ o • j ¨o-

o¬ u V ª ¢o- -

2.7 ip session timeout

F å ï ž •

ip session timeout {**icmp-closed** | **icmp-connected** | **icmp-started** | **rawip-closed** | **rawip-connected** | **rawip-established** | **rawip-started** | **tcp-close-wait** | **tcp-closed** | **tcp-established** | **tcp-fin-wait1** | **tcp-fin-wait2** | **tcp-syn-receive** | **tcp-syn-sent** | **tcp-syn-sent2** | **tcp-time-wait** | **udp-closed** | **udp-started** | **udp-connected** | **udp-established**} { num }

Ê Ö ó • ž •

no ip session timeout {**icmp-closed** | **icmp-connected** | **icmp-started** | **rawip-closed** | **rawip-connected** | **rawip-established** | **rawip-started** | **tcp-close-wait** | **tcp-closed** | **tcp-established** | **tcp-fin-wait1** | **tcp-fin-wait2** | **tcp-syn-receive** | **tcp-syn-sent** | **tcp-syn-sent2** | **tcp-time-wait** | **udp-closed** | **udp-started** | **udp-connected** | **udp-established**}

o¬ @ ƒ ª ¢o-

@ ƒ	T
icmp-closed	— å # ‘ ICMP Ù Á ¼ { v ƒ @ ž • k ó • 10s g5 – 60 h
icmp-connected	— å # ‘ ICMP Ù Á N v ƒ @ ž • k ó • 10s g5 – 120 h
icmp-started	— å # ‘ ICMP Ù Á • ÷ v ƒ @ ž • k ó • 10s g5 - 120 h
rawip-closed	— å # ‘ ¿ U ip # ‘ Ù Á N v ƒ @ ž • k ó • 10s g 5 - 60 h
rawip-connected	— å # ‘ ¿ U ip # ‘ Ù Á N v ƒ @ ž • k ó • 300s g10 - 300 h
rawip-established	— å # ‘ ¿ U ip # ‘ Ù Á • y v ƒ @ ž • k ó • 300s g10 - 600 h
rawip-started	— å # ‘ ¿ U ip # ‘ Ù Á • ÷ v ƒ @ ž • k ó • 300s g10 - 300 h
tcp-close-wait	— å # ‘ TCP Ù Á tcp-close-wait v ƒ @ ž • k ó • 60s g 10 - 120 h
tcp-closed	— å # ‘ TCP Ù Á tcp-closed v ƒ @ ž • k ó • 10s g5 - 20 h
tcp-established	— å # ‘ TCP Ù Á tcp-established v ƒ @ ž • k ó • 1800s g 300 - 604800 h
tcp-fin-wait1	— å # ‘ TCP Ù Á tcp-fin-wait1 v ƒ @ ž • k ó • 60s g 10 - 120 h
tcp-fin-wait2	— å # ‘ TCP Ù Á tcp-fin-wait2 v ƒ @ ž • k ó • 60s g 10 - 120 h
tcp-syn-receive	— å # ‘ TCP Ù Á tcp-syn-receive v ƒ @ ž • k ó • 10s g 5 - 30 h

tcp-syn-sent	— å # ‘	TCP	Ù Á	tcp-syn-sent	v ƒ @ ž • k ó •	10s g 5 - 30 h
tc	— å # ‘	TCP	Ù Á	tcp-sy7(n)-4(_)3ise6-4(nt2-P)3T-/C2_TC1	TCP TÙÁ	9-4793-0-Tal[<09190879>-7-

osc	— å # ‘	P
dp-connectedt	— å # ‘	P
ac	— å # ‘	P
acte6midt	— å # ‘	P

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- -

o¬ F å †o- — å — Õ µ Ÿ v Ù Á † J ¿ ò

```
5XLMLH FRQILJ LS VHVVLRQ WUDFN VWDWH VWULFWO\
```

o¬ à • co-

o¬ U P ’ Îo- -

o¬ o • j ¨o-

o¬ u V ª ¢o- -

2.9 show ip fpm counters

ò 0 FPM Ô ò ipv4 † ‹ ƒ

show ip fpm counters

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 FPM Ô ò ipv4 † ž ‹ ƒ ’ Î k ! B ã © S + † ’ Î k ! B ã © S + v ’ Î

o¬ F å †o- 1 y ò 0 FPM Ô ò ipv4 † ‹ ƒ

```
5XLMLH VK LS ISP FRXQWHUV
'URSSHG SDFNHW FRXQWHUV
&RXQW 5HDVRQ
1RQ ,3Y SDFNHW
%DG ,3Y KHDGHU OHQJWK
%DG ,3Y WRWDO OHQJWK
)UDJPHQW SNW
```

```
        FKDQJH IORZ VWDWH QRWLI\ ): UHIXVH
        %DG ,3Y  FKHFNVXP
        ,QYDOLG ,3Y  DGGUHVV
        ,QYDOLG 7&3 IODJV
        ,QYDOLG 7&3 VHTXHQFH
        ,QYDOLG ,&03 PHVVDJH W\SH
        ,QYDOLG LFPS LQLWLDO PHVVDJH W\SH
        ,QYDOLG WFS LQLW IODJV
```

o¬ … 6 -o- … ¥ x X U Y ò 0 ipv4 † v ' Î

o¬ F å †o- 1 y ò 0 ipv4 † v ' Î

```
5 X L M L H  V K R Z  L S  I S P  I O R Z V
3 U  6 U F $ G G U                    ' V W $ G G U                    6 U F 3 R U W
9 U I        6 H Q G % \ W H V  5 H F Y % \ W H V  6 W  V U F L I                G V W L I
F W U O B I O D J
```

< † K y

<	ª ¢
Pr	# '
SrcAddr	› ª -
DstAddr	) ª -
SrcPort	› € M
DstPort	) € M
Vrf	› N M ñ K vrf
SendBytes	¬ L • g N v † - ƒ
RecvBytes	• ‹ • g N v † - ƒ
St	v ¢ ù Ù Á
srcif	› N M Z
dstif	) N M Z
ctrl_flag	v O ò <

o¬ U P ' Îo- -

o¬ u V ª ¢o- -

2.11 show ip fpm flows filter

• # ò 0 ipv4 † v ' Î

show ip fpm flows filter protocol saddr smask daddr dmask

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y • # ò 0 ipv4 † v ' Î

o¬ F å †o- 1 y ò 0 ipv4 † v ' Î

```
5 X L M L H V K R Z L S I S P I O R Z V I L O W H U
3 U 6 U F $ G G U 'V W $ G G U 6 U F 3 R U W
9 U I 6 H Q G % \ W H V 5 H F Y % \ W H V 6 W V U F L I G V W L I
F W U O B I O D J
```

< † K y

<	ª ¢
Pr	# '
SrcAddr	› ª -
DstAddr	) ª -
SrcPort	› € M
DstPort	) € M
Vrf	› N M ñ K vrf
SendBytes	¬ L • g N v † - ƒ
RecvBytes	• ‹ • g N v † - ƒ
St	v ¢ ù Ù Á
srcif	› N M Z
dstif	) N M Z
ctrl_flag	v O ò <

o¬ U P ' Îo- -

o¬ u V ª ¢o- -

2.12 show ip fpm statistics

ò 0 ipv4 v n Ï ‹ ' Î

show ip fpm statistics

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 ipv4 v n Ï ‹ ’ Î

o¬ F å †o- 1 y ¨ eg — Õ µ ò 0 ipv4 v Ï ‹ ’ Î

```
5 X L M L H  V K R Z  L S  I S P  V W D W L V W L F V
7 K H  F D S D F L W \  R I  W K H  I O R Z  W D E O H
$ F W L Y H  I O R Z V  Q X P
H Y H Q W  F R X Q W
) S P  V W D W H  L Q V S H F W L R Q  H Q D E O H
```

< † K y

The capacity of the flow table	È v n ƒ
Active flows num	t ã v n ƒ
event count:65,	¢ ù 7 ^ ‹ ƒ
Fpm state inspection enable	Ù Á æ í n

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.13 show ip v6fpm counters

ò 0 FPM Ô ò ipv6 † ‹ ƒ

show ip v6fpm counters

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 FPM Ô ò ipv6 † ž ‹ ƒ ’ Î k ! B ã © S + † ’ Î k ! B ã © S + v ’ Î

o¬ F å †o- 1 y ò 0 FPM Ô ò ipv6 † ‹ ƒ

```
5 X L M L H  V K  L S  Y  I S P  F R X Q W H U V
' U R S H G  S D F N H W  F R X Q W H U V
& R X Q W  5 H D V R Q
```

```
        1RQ ,3Y  SDFNHW
        (UU OHQJWK
        )UDJPHQW SDFNHW
        (UU DGGUHVV
        ,QYDOLG 7&3 IODJV
        ,QYDOLG 7&3 VHTXHQFH
        ,QYDOLG ,&039  PHVVDJH W\SH
        ,QYDOLG ,&039  LQLWLDO PHVVDJH W\SH
        ,QYDOLG WFS LQLW IODJ
        ,QYDOLG WFS IORZ VWDWH
        ,QYDOLG SNW ILG
        &RQQ 7HUPLQDWHG
        2XW RI YIZ VHVVLRQ OLPLW
        2XW RI FDSDELOLW\
 HQG!
5HMHFWHG RU WHUPLQDWHG FRQQHFWLRQ FRXQWHUV
&RXQW     5HDVRQ
        2XW RI OLIH WLPH
        )ORZ 7HUPLQDWHG
        5HMHFWHG E\ SROLF\
 HQG!
```

<†Ky

<	ª ¢ < ƒ¢

o¬ … 6 -o- … ¥ x X U Y ò 0 ipv6 † v ’ Î

o¬ F å †o- 1 y ò 0 ipv6 † v ’ Î

```
5XLMLH  VKRZ LS Y ISP IORZV
3U  6DGGU                                  'DGGU                                  6
'SRUW  6HGE\      5HFE\      9UI    VW    VUFBLI     GVWBLG     FWUOB
```

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y • # ò 0 ipv6 † v ' Î

o¬ F å †o- 1 y ò 0 ipv6 † v ' Î

5 X L M L H V K R Z L S Y I S P I O R Z V

3 U 6 D G G U ' D G G U 6

Q ¸ `-]<

Ú ` Ÿ4¡ ] < Q ¸ `,Ì G Y • È Ù À ¹ ß0´8V Ö

1. Web AxA•G!5B Q ¸
2. AAA
3. RADIUD
4. 802.1x
5. ARP Check
6. L 5% GAPR ! Pk
7. < IP+MAC 4¥ n
8. DHCP Snooping
9. IP Source Guard
10. DNS SNOOPING
11. IGMP Snooping
12. ACL
13. SCC
14. SSH
15. IPSEC-IKE

1 Web \ i ´ w W

1.1 accounting

— å % á “ Ã • což

accounting { method-list }

M å ó • “ Ã • což

no accounting

o¬ @ ƒ ª ¢o-

@ ƒ	T
method-list	• c ç n dož

o¬ Þ . F åo- Þ . … default • což

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

M å ó • • š • což

no authentication

o¬ @ ƒ ª ¢o-

@ ƒ	T
method-list	• c ç n dož

o¬ Þ . F åo- Þ . … default • což

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

‡ a — / º ¥ y ¶ ` ‘ ä AAA / " web º ¥ y ¶ ` K l [¢ ! d

¢ Ý â [º ¥ y ¶ "

o¬ F å †o- 1 y 6 eportalv2 % á … mlist1 • š • což

```
Ruijie(config.tmplt.eportalv2)#authentication mlist1
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.3 bindmode

— å % á Ç % ”ož

bindmode { ip-mac-mode | ip-only-mode }

M å % á Ç % ”ož

no bindmode

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-mac-mode	IP+MAC % ” k 1 IP+MAC ’ Î c ž G ñ ô G n ¾
ip-only-mode	N IP % ” k N 1 IP ’ Î G ñ ô G n ¾ z C à Ì kMAC ’ Î Õ G k • ‘ J Î % ”

o¬ Þ . F åo- ip-mac-mode ož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y 6 eportalv2 % á Ç % ” N IP % ”ož

```
Ruijie(config.tmplt.eportalv2)# bindmode ip-only-mode
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.4 clear web-auth acl

¨ — Õ í ” ñ Ä web ò d % F å

clear web-auth acl [white-url | black-url | black-ip | black-port]

o¬ @ ƒ ª ¢o-

@ ƒ	T
white-url	6 N í ” ñ Ä d % URL
black-url	6 N í ” ñ Ä ò d % URL
black-ip	6 N í ” ñ Ä ò d % IP
black-port	6 N í ” ñ Ä ò d % Port

o¬ x X % ”o- Ô Ó % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y 1 ñ Ä ò d % F å í ”

```
Ruijie# clear web-auth acl
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o-

o¬ u V ª ¢o- -

1.7 clear web-auth user

¨ — Õ ò ï ¿ož

clear web-auth user { all | ip ip-address | mac mac-address

o¬ Þ . F åo- Þ . — F åož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å ! ÿ

```
Ruijie(config.tmplt.wechat)# escape interval 5 online-time 10
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.9 escape user-try-auth

— å ³ ’ wifi • š 3.0 Í Î % } ! ÿ ož
escape user-try-auth counts online-time minutes

¼ { ³ ’ wifi • š % } ! ÿ ož
no escape user-try-auth

o¬ @ ƒ ª ¢o-

@ ƒ	T
counts	F å ï : ¡ µ à ³ ’ • š) ƒ k ñ F å) ƒ Q Ì ¿ < • ï ! ÿož % y y) k • ‘ › 4)
minutes	F å ! ÿ ï U ž xož % y y ã U

o¬ Þ . F åo- Þ . — F åož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å ! ÿ

```
Ruijie(config.tmplt.wechat)#escape user-try-auth 4 online-time 15
```

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.10 fmt

2 W % á F å % ” k — å M g † url ”ož

fmt { cmcc-ext1 | cmcc-ext2 | cmcc-mtx | cmcc-normal | cmcc-ext3 | ct-jc | cucc| ruijie| custom }

1 W % á F å % ” k — å M g † url ”ož

fmt { ace | ruijie| custom }

ñ URL á “ g 1 V x 2 V Â f ´ URL á “ož

fmt custom [encry { md5 | des | d es_ecb | des_ecb3 | none }] [user-ip userip-str] [user-mac usermac-str mac-format [dot | line | none]] [user-vid uservid-str] [user-id userid-str] [nas-ip nasip-str] [nas-id nasid-str] [nas-id2 nasid2-str] [ac-name acname-str] [ap-mac apmac-str mac-format [dot | line | none]] [url url-str] [ssid ssid-str] [port port-str] [ac-serialno ac-sno-str] [ap-serialno ap-sno-str] [additional extern-str]

í ” F åož

no fmt custom [user-ip] [user-mac] [u ser-vid] [user-id] [nas-ip] [nas-id] [nas-id2] [ac-name] [ap-mac] [url] [ssid] [port] [ac-serialno] [ap-serialno] [additional]

o¬ @ ƒ ª ¢o-

@ ƒ	T
cmcc-ext1	g ý J url ”ož
cmcc-ext2	`k g url ”ož
cmcc-ext3	f/ ,' ½ g AC 4 Œ URL ”ož
cmcc-mtx	g AC 4 Œ url ”ož
cmcc-normal	g ö Õ url ”ož
ct-jc	' ¤ J url ”ož
cucc	L û * url ”ož
ace	u 4 ACE û ož
ruijie	i H url ”ož

custom	ò ”ož
userip-str	ï ip + • @ ƒ d f
usermac-str	ï mac + • @ ƒ d f
uservid-str	ï vid + • @ ƒ d f
userid-str	ï id + • @ ƒ d f
nasip-str	— Õip + • @ ƒ d f
nasid-str	NAS — ÕID + • @ ƒ d f
nasid2-str	NAS — ÕID + • @ ƒ d f(u 4 ò nasid @ ƒ)
ac-name	— Õ d f + • @ ƒ d f
apmac-str	¼ û AP MAC ª - + • @ ƒ d f
url-str	ï = ÷ ˜ | url + • @ ƒ d f
ssid-str	SSID + • @ ƒ d f
port-str	ï • š € M + • @ ƒ d f
ac-sno-str	ac — Õ ~ ç Z + • @ ƒ d f
ap-sno-str	ap — Õ ~ ç Z + • @ ƒ d f
extern-str	¡ … k î ? portal ¬ }%² ? Ô … ö œ
md5	ñ F å @ ƒ J md5 %
des	ñ F å @ ƒ J des %
des_ecb	ñ F å @ ƒ J des_ecb %
des_ecb3	ñ F å @ ƒ J des_ecb3 %
none	ñ F å @ ƒ % k ¢ † n ÿ

o¬ Þ . F åo- ó • ruijie ”ož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

ÿ G portal Æ ˜ + N • 8 k — å c url • ºož

10.x n ï e Q ‡ ¾ ° æ e a — http redirect url-fmt {cmcc-normal | cmcc-ext1 | cmcc-ext2} ÿ • " url + ø d 11.x Ì y a — ³ N å ÿ d " ´ û a — Ü g f P • fmt " a — l É d

o¬ F å †o- 1 y — å M g url g ý J • ºož

```
Ruijie(config.tmplt.eportalv2)#fmt cmcc-ext1
```

o¬ à • co- … show web-auth template ò 0 F å % á

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.11 free-auth

— å ³ ’ wifi • š ² • š ož
free-auth pc

í ” ³ ’ wifi • š — Õ ipož
no free-auth

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Þ . — F åož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

[pc 4 j G

o¬ F å †o- 1 y F å pc Ä € ² • š

```
Ruijie(config.tmplt.wechat)#free-auth pc
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.12 gateway-id

— å wifidog • š — Õ y Æ ˜ A ; wifidog ö Õ # ‘ gw_id ›ož
gateway-id string

í ” wifidog • š — Õ y Æ ˜ A ; wifidog ö Õ # ‘ gw_id ›ož

no gateway-id

o¬ @ ƒ ª ¢o-

@ ƒ	T
string	F å — Õ y Æ ˜ … wifidog # ‘ < gw_id ›

o¬ Þ .. F åo- %8` Þ •aPåEÙÀ@Ô# ‘9ÔçZozs•|`PpY€HP•

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

ì ˜ " ‡ • • y Ü " M ‹ Ù s Ð ¶ â ¡ Í N "

%Error: Invalid IP address.

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.15 http redirect direct-site

— å ² • š à Ì Ï › 8 ož

http redirect direct-site { ipv6-address | ipv4-address [ip-mask] [arp] }

í ” ² • š à Ì Ï › 8 ož

no http redirect direct-site { ipv6-address | ipv4-address [ip-mask] }

o¬ @ ƒ ª ¢o-

@ ƒ	T
Ipv6-address	² • š à Ì Ï › Ipv6 ª -ož
Ipv4-address	² • š à Ì Ï › Ipv4 ª -ož
ip-mask	g U # h ² • š à Ì Ï › IPv4 ª - Q Aož
arp	g U # hò ç — Õ o 4 ARP CHECK k ; " ¬ } + ² • š à Ì Ï › 8 g ARP Ç k¬ } F å arp ¼ p ožN ¨ — å IPv4 à Ì Ï › ž ¬ }ož

o¬ Þ . F åo- Þ . Z Ä — å ² • š à Ì Ï ›ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- o Web • š e k ñ Ä ï ¬ ¯ * Web • š k õ ˜ | à Ì Ï ›ož 3 } • y î ? à Ì Ï › k Ì • š ï - U Y ˜ | ? • y à Ì Ï › k … 4 x Xož ¢ î à { K 9 ² • š à Ì Ï › k ; " ñ Ä ï C U Y ˜ | à {ož

Â Ú ª • F å 50 ² • š à Ì Ï › 8

o¬ F å †o- 1 y — å IP ª - 172.16.0.1 à { ² • š ˜ | à Ì Ï ›ož

Ruijie(config)# http redirect direct-site 172.16.0.1

o¬ à • co- … show web-auth direct-site ò 0 F å ² • š à Ì Ï › 8

o¬ U P ’ Îo- 1 y ³ c IP/ Q A ”ož

%Error: Invalid IP address.

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.16 http redirect port

— å + ï G ß Ô) € M Z HTTP WEB ¬ L g M gož
http redirect port port-num

í ” + Ô) € M Z HTTP WEB ¬ L g M gož
no http redirect port port-num

o¬ @ ƒ ª ¢o-

@ ƒ	T
port-num	HTTP WEB ¬ L) € M Zož

o¬ Þ . F åo- Þ .) ì ï G ß € M 80 HTTP †ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

1o• ¢ ï ˜ | à Ì Ï › ž k 4 ž ï k G ß HTTP † k — Õ *) ì Û ï HTTP † k Û î • ï
© k ¨ ˜ | à Ì Ï › z ¢ — Õ y ñ Ì • š ï ¨ ˜ | à Ì Ï › ž k 1 Š 2 ï ˜ | à Ì Ï › k w g ï Ÿ
ß • š ¼ µož
2o• Þ . Õ Ñ k — Õ *) ì ï G ß € M Z 80 HTTP † k Û y ï © k ¨ ˜ | à Ì Ï ›ož
3o• } ¾ w — Õ) ì ï G ß Ô € M Z HTTP † k … 4 x Xož
4o• Â Ý ª • F å 10 c) € M Z k € M Z 80 - m ¨ ¥ È ƒ O 8 Äož

o¬ F å †o- 1 y + ï G ß € M Z 8080 HTTP WEB ¬ L g M gož

```
Ruijie(config)# http redirect port 8080
```

2 y + ï G ß € M Z 80 HTTP WEB ¬ L g M gož

```
Ruijie(config)# no http redirect port 80
```

o¬ à • co- … show web-auth rdpor t ò 0 ¢ ù € M Š n Õ Ñ

o¬ U P ’ Îo- 1 y ª •) ì = d # ‘ € M k A ò 23ož

```
%Error: Can't set local reserved port(23) as redirection port.
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.17 http redirect session-limit

— å ¶ B c%² Ì • š ï æºÐ ‘BNk’ ðÂ0Øn`F²o• 06²n ƒðA¶ "M æš ï à rN` t 0Øn`F²o•l• 6ùà .` "É#,Äw Mwâk><33 2Ì@

http redirect timeout seconds

Ê Ö Ó 4 M g N Ý ž ž • 3 aož
no http redirect timeout

o¬ @ ƒ ª ¢o-

@ ƒ	T
seconds	— å Ó 4 M g N Ý ž ž • zseconds k H › 8 1-10ož

o¬ Þ . F åo- Þ . Ó 4 M g N Ý ž ž • 3 aož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- — å Ó 4 M g N Ý ž ž •ož œ) W ô è e k ¬ } ˆ - ï G ß HTTP GET/HEAD † k À e › Ö HTTP M g † e õ ¼ { Nož— å ’ ò U Y … 2 ï G GET/HEAD † kò A x ž •) TCP Nož

o¬ F å †o- 1 y — å Ó 4 M g N Ý ž ž • 4ož

```
Ruijie(config)# http redirect timeout 4
```

o¬ à • co- … show web-auth parameter x X ò 0 F å @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.19 ip

} F å portal Æ ˜ IP ª - k ¬ ü g % á F å % ” x X ipož
ip { ip-address }

Ž ” HTTP M g IP ª -ož
no ip

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-address	portal Æ ˜ IPv4 ª -ož

o¬ Þ . F åo- Þ . Z Ä — å portal Æ ˜ IP ª -ož

o¬ x X % ”o- % á F å % ”

o¬ Þ . ´ ðo- 14

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y … ü ` M ¢ • portal * ' € Mož

```
Ruijie (config)# ip portal source-interface Aggregateport 1
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.21 iportal nat enable

F å Ä å web • š u 4 NAT ož

iportal nat enable

Ê Ö ó • F åož

no iportal nat enable

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.22 iportal retransmit

F å Ä å web • š http N M n) ƒ ož
iportal retransmit times

Ê Ö ó • F åož
no iportal retransmit

o¬ @ ƒ ª ¢o-

@ ƒ	T
times	M n) ƒ

o¬ Þ . F åo- ó • 3)ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å http N M n) ƒ 5)ož

```
Ruijie (config)# iportal retransmit 5
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.23 iportal service

F å Ä å web • š … Æ % áož
iportal service [internet internet-name] [local local-name]

Ê Ö ó • F åož

1.27 online-popup

— å ï ¿ Ÿ z s ª -ož
online-popup url-string

í ” ï ¿ Ÿ z s ª -ož
no online-popup

o¬ @ ƒ ª ¢o-

@ ƒ	T
url-string	z s ª - e Nož

o¬ Þ . F åo- Þ . — F åož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

-- » http:// g https:// — È d

o¬ F å †o- 1 y F å • š e z s ¼ µ
Ruijie(config.tmplt.iportal)#online-popup http://www.ruijie.com.cn

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.28 page-suite

— å Ä å • š ¼ µ ož
page-suite filename

í ” 6 ¼ µ ož
no page-suite

o¬ @ ƒ ª ¢o-

@ ƒ	T
Filename	¼ µ † ^ dož

o¬ Þ . F åo- Þ . … — Õ k ¼ µ ož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

š K g ‘ ” • • { þ FLASH portal/zip , Ã d

o¬ F å †o- 1 y 6 Ä å ¼ µ

Ruijie(config.tmplt.iportal)#page-suite ruijiepage

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.29 port

— å portal Æ ˜ A ; € Mož

port { port-num }

M å Æ ˜ € M ó • € M Zož

no port

o¬ @ ƒ ª ¢o-

@ ƒ	T
port	portal Æ ˜ * ’ € M Z kò ç © Ä å • š k¥ € M © Î Ñ ! n http € Mož

o¬ Þ . F åo- Þ . € M Z 50100 k Â 9 UDP # ‘ož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y 6 eportalv2 Æ ˜ € M Z 10000ož

```
Ruijie(config.tmplt.eportalv2)#port 10000
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.30 redirect

— å M g † ”ož

redirect { http | js }

Ê Ö ó • M g • ”ož

no redirect

o¬ @ ƒ ª ¢o-

@ ƒ	T
http	J HTTP 302 # ‘ Ÿ url é ôož
js	J HTTP 200 † k • k js Î Ÿ url é ôož

o¬ Þ . F åo- Þ . i H ” J js kcmcc , ¼ ” J jsož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y 6 M g † ” httpož

```
Ruijie(config.tmplt.eportalv2)#http-redirect http
```

1.34 show web-auth control

ª P • š I O F åož

show web-auth control

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ª P N M • š F å y Ï ‹ ’ Îož

```
Ruijie(config)#show web-auth control
 Port                          Control   Server Name                Online User Count Vlan Control List
 -------------------------- -------- ---------------------- ------------------ ------------------
 GigabitEthernet 0/1          On        <not configured>        0                        2-17,19
Ruijie(config)#
```

<	ª ¢
Port	I O M d fož
Control	¥ € M © k ø • Web • šož
Server Name	€ M # Æ ˜ d k

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ª P + * à { F åož

```
Ruijie(config)#show web-auth direct-arp
Direct arps:
  Address          Mask
  --------------- ---------------
  1.1.1.1          255.255.255.255
  2.2.2.2          255.255.255.255
Ruijie(config)#
```

<	ª ¢
Address	IP ª -ož
Mask	IP ª - Q Aož

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

1.36 show web-auth direct-host

ª P ² web • š ï 8 ož

show web-auth direct-host

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … Î x X ò 0 ² • š ï F å ’ Î

o¬ F å †o- 1 y ª P — ¬ • š ïož

```
Ruijie# show web-auth direct-host
```

Direct hosts:

<	ª ¢
Address	IP ª -ož
Mask	IP ª - Q Aož
ARP Binding	© g ARP Ç ož

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

1.38 show web-auth noise

ª P F å ‘ ™ @ ƒ ’ Î
show web-auth noise

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . F åo- — F åož

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

o¬ F å †o- 1 y ª P ‘ ™ :

```
Ruijie#show web-auth noise
Noise Enable:      On
  Aging Timer:      1min
  Hit  Counts:      3
```

o¬ à • co-

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.39 show web-auth parameter

ª P HTTP M g F åož

show web-auth parameter

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 9 ò 0 web • š Â Î @ ƒ F å Õ Ñož

o¬ F å †o- 1 y ª P HTTP M g F åož

```
Ruijie# show web-auth parameter
  session-limit: 10
  timeout:       5
```

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

o¬ F å †o- 1 y F å portal-check :

```
Ruijie#sh web portal-check
Check:          Enable
  Interval:     3s
  Timeout:      5s
  Retransmit:   3
Escape:         Enable
Nokick:         Disable
```

o¬ à • co-

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.41 show web-auth rdport

ª P TCP) ì € Mož
show web-auth rdport

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	- -

```
Ruijie#show web-auth    rdport
Rd-Port:
80 443
Ruijie#
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

1.42 show web-auth template

ª P portal Æ ˜ F åož

show web-auth template

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … Î x X ò 0 Æ ˜ F å ’ Î

o¬ F å †o- 1 y ª P — ¬ • š ïož

```
Ruijie#show web-auth template
Webauth Template Settings:
-------------------------------------------------------------
   Name:          eportalv1
   Url:           http://17.17.1.21:8080/eportal/index.jsp
   Ip:            17.17.1.21
   BindMode:    ip-mac-mode
   Type:          v1
-------------------------------------------------------------
   Name:          eportalv2
   Url:           http://17.17.1.21:8080/eportal/index.jsp
   Ip:            17.17.1.21
   BindMode:    ip-only-mode
   Type:          v2
   Port:          50100
   Acctmlist:
   Authmlist:
```

```
Ruijie#
```

<	ª ¢
Name	% á d f
Url	Æ ˜ ¼ ª -
Ip	Æ ˜ IP ª -
Type	Æ ˜ • ºož%² W portal Æ ˜ v1 k 8 W v2 k Ä å intra
Port	Æ ˜ # ‘ † * ’ € M k N 8 W portal Æ ˜ ¨
Acctmlist	“ Ã • c ç n d k N 8 W y Ä å • š ¨
Authmlist	• š • c ç n d k N 8 W y Ä å • š ¨

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

1.43 show web-auth user

ª P ñ Ä ï ê © 6 ï ¨ ¿ ’ Î k , ï IP ª -o• N Mo• ¨ ¿ ž • ˆ ’ Îož

show web-auth user { all | ip ip-address | mac mac-address | name name-string | session-id num | escape }

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-address	6 ï IPv4 ª -ož
mac-address	6 ï MAC ª -
name-string	6 ï d
num	6 ï AAA k ¢ ID

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

escape } ð U wifi ° & ? [¡ µ † “ ¶ »

o¬ F å †o- 1 y ª P web • š ¶ B F å y Ï ‹ ’ Îož

```
Ruijie# show web-auth user all
Current user num :   4, online 2
```

```
Address              Online     Time Limit        Time Used       Status    Name
--------------- -------    ------------- -------------- -------- ---------
192.168.0.11       On            0d 01:00:00     0d 00:15:10       Active
192.168.0.13       On            0d 01:00:00     0d 00:00:59       Active     111
192.168.0.25       Off           0d 01:00:00     0d 00:00:59       Create
192.168.0.46       Off           0d 01:00:00     0d 01:00:00       Destroy    222

Ruijie# show web-auth user ip 192.168.0.11
Address            :     192.168.0.11
 Mac                  :     00d0.f800.2233
 Port                 :     Gi0/2
 Online               :     On
 Time Limit     :     0d 01:00:00
 Time Used      :     0d 00:15:10
 Time Start     :     2009-02-22 20:05:10
 Status               :     Active
```

<	ª ¢
Address	ï IP ª -ož
Mac	ï MAC ª -ož
Port	ï N — Õ € Mož
Online	ï © k ¨ ¿ož
Time Limit	ï U ž x ' ò k0 n P — ' òož
Time Used	ï] Æ ¨ ¿ ž •ož
Time Start	ï • š * o• • ÷ ¿ ž •ož
Status	ï Ù Á kActive n P ï 3 o ¨ ¿ kCreate n P ï ê t ë •o• Ì è — å kDestroy n P ï ê t í "o• ¶ Ì è Ž " — åož
Name	ï d k%² W • š ï — Õ — c ª P ï d k ¥ ç q

o¬ U P ' Îo- -

o¬ u V ª ¢o- -

1.44 temporary-permit

— å ³ ' wifi

¼ { ³ ’ wifi • š ž y g ož

no temporary-permit

o¬ @ ƒ ª ¢o-

@ ƒ	T
seconds	F å ž y g ž xož % y y a k • ‘ › 30s ~ 60s

o¬ Þ . F åo- Þ . — F åož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å ž y g

```
Ruijie(config.tmplt.wechat)# temporary-permit 30
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.45 time-interval

— å Ä å • š z s Ÿ ß ž • • œož

time-interval { hour }

Ê Ö ó • ž • • œož

no time-interval

o¬ @ ƒ ª ¢o-

@ ƒ	T
hour	z s Ÿ ß ž • • œ k ó • 1 4 ž k H › 8 0-24ož

o¬ Þ . F åo- Þ . 1 4 žož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

" N 0 ¶ µ ‘ ž ¨ · ; Y ¿ d

o¬ F å †o- 1 y F å z s Ÿ ß ž • • œ 2 4 ž

```
Ruijie(config.tmplt.iportal)#time-interval 2
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.46 url

— å portal Æ ˜ ¼ µ ª -ož
url url-string

í ” • š ¼ µ ¼ ª -ož
no url

o¬ @ ƒ ª ¢o-

@ ƒ	T
url-string	¼ µ ª - k • Y“http://” ê “https://” • ã k k é U P F å è k Â Ý x † 255 …ož

o¬ Þ . F åo- Þ . Z Ä — å portal Æ ˜ ¼ µ ª -ož

o¬ x X % ”o- % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

‡ a — ™ 0 P http redirect homepage [url-string] a — " P a — „ å ÿ ¬ £ ¹ a — d

url â " % V ð o L ´ ! http://[ip-address] [ip-address] ¹ ¶ IP a — " û ` v IP d

o¬ F å †o- 1 y 6 eportalv1 % á ¼ µ ª - “http://www.web-auth.net/login” ož

```
Ruijie(config.tmplt.eportalv1)#url http://www.web-auth.net/login
```

o¬ à • co- … show web-auth template Û ò 0 ¢ ù F å % á @ ƒ

o¬ U P ' Îo- 1 o• ³ c URL ”ož

%Error: Invalid homepage URL.

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.47 version

— å ³ ' wifi • š … Í Îož

version {1.0 | 16wifi | 3.0 }

Ê Ö ó • … ³ ' wifi • š Í Îož

no version

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬

1.48 webauth

b

WLANSEC % ” • o web • šož webauth

í ” ó F åož no webauth

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ó • ‹ µož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å … ‹ Ëož

```
Ruijie (config)# web-auth accounting jitter-off
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.50 web-auth accounting v2

6 “ Ã ¾ • • což

```
web-auth accounting v2 { default | name }
```

Ê Ö ó • F åož

```
no web-auth accounting v2 { default | name }
```

o¬ @ ƒ ª ¢o-

@ ƒ	T
name	“ Ã • c d f

o¬ Þ . F åo- ó • — F åož

o¬ x X % ”o- ¶ B ê ñ % á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å “ Ã • c ç nož

```
Ruijie (config.tmplt.eportalv2)# web-auth accounting v2 default
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.51 web-auth authentication v2

F å web • š • š • což

web-auth authentication v2 [default | name]

í ” F åož

no web-auth authentication v2 [default | name]

o¬ @ ƒ ª ¢o-

@ ƒ	T
name	6 web • š • c

o¬ Þ . F åo- ó • … aaa 6 ó • • což

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å • š • což

```
Ruijie (config.tmplt.eportalv2)# web-auth authentication v2 default
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.52 web-auth acl

d % U Y … ï ¨ • š ù U Y ˜ | B ã à Ì Ï › k ò d % U Y … ï ¨ • š e — c ˜ | B ã à Ì Ï ›ož

web-auth acl {

no web-auth bind-portal

o¬ @ ƒ ª ¢o-

@ ƒ	T
string	Ç portal Æ ˜ d f

o¬ Þ . F åo- —ož

o¬ x X % ”o- WLANSEC F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å MAC ? ’ • š Ç portal Æ ˜ož

```
Ruijie (wlansec)# web-auth bind-portal eportalv2
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

1.54 web-auth dhcp-check

F å web • š dhcp ª - þ ò k Q Ä * dhcp ã F ª - Ä € õ ª • g • šož

web-auth dhcp-check

Ê Ö ó • F åož

no web-auth dhcp-check

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¼ {ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ø • dhcp ª - þ ò

```
Ruijie (config)# web-auth dhcp-check
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.55 web-auth direct-host

— å — ¬ • š ï IP 8 ož

web-auth direct-host { ipv4-address [ip-mask] [arp] | ipv6-address | mac-address} [port interface-name]

H ƒ — ¬ • š ïož

no web-auth direct-host { ipv4-address [ip-mask] | ipv6-address | mac-address}

o¬ @ ƒ ª ¢o-

@ ƒ	T
Ipv4-address	— ¬ • š ï IPv4 ª -ož
Ipv6-address	— ¬ • š ï IPv6 ª -ož
ip-mask	g U # h — ¬ • š ï IPv4 ª - Q Aož
port interface-name	g U # h 1 ï IP — Õ € M g Ç ož
arp	g U # h ò ç — Õ o 4 ARP CHECK k ; " ¬ } + ² • š ï IP 8 g ARP Ç k ¬ } F å arp ¼ p ož N ¨ — å IPv4 ª - ž ¬ }ož
mac-address	— ¬ • š ï MAC ª -

o¬ Þ . F åo- Þ . Z Ä — å — ¬ • š ï k ñ Ä ï C · À ¯ * Web • š k õ ˜ | I ' à Ì Ï ›ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- — å ï — ¬ • š ï k ; " ¥ ï ¬ } g Web • š k - U Y ˜ | ñ Ä U à Ì Ï ›ož
Â Ý ª • 50 — ¬ • š ï à Ì 8 ož

o¬ F å †o- 1 y — å IP ª - 172.16.0.1 ï — ¬ • š ïož

```
Ruijie(config)# web-auth direct-host 172.16.0.1
```

2 y — å MAC ª - 0000:5e00:0101 ï — ¬ • š ïož

```
Ruijie(config)# web-auth direct-host 0000:5e00:0101
```

o¬ à • co- … show web-auth direct-host x X ò 0 F å @ ƒ

o¬ U P ’ Îo- 1 y ³ c IP/ Q A ”

```
%Error: Invalid IP address.
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.56 web-auth dkey-compatible url-parameter

— å - © Ï Ã URL @ ƒ ož

web-auth dkey-compatible url-parameter string

H ƒ Ã URLož

no web-auth dkey-compatible url-parameter

o¬ @ ƒ ª ¢o-

@ ƒ	T
string	post @ ƒ <ož

o¬ Þ . F åo- Þ . Z Ä F å k Ã - © Ïož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- —ož

o¬ F å †o- 1 y — å post @ ƒ loginož

```
Ruijie(config)# web-auth dkey-compatible url-parameter login
```

o¬ à • co- … show running-config x X ò 0 F å @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.57 web-auth enable

¨ € M o Web • šož Ã = web-auth port-control x X

web-auth enable [eportalv1 | eportalv2 | template-name]

¨ € M ¼ { Web • šož

no web-auth enable

o¬ @ ƒ ª ¢o-

¼ { ¥ ož

no web-auth logging enable

o¬ @ ƒ ª ¢o-

@ ƒ	T
num	SYSLOG ø - , ä k ? a U ø - SYSLOG Ú ƒož 8 [0, 65535] k 0 ' ò

o¬ Þ . F åo- Þ . ¼ { web • š SYSLOG ož

o¬ x X % "o- ¶ B F å % "ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¥ x X N ' ò % ² 3 o Õ Ñ ø - SYSLOG k ' o ê M SYSLOG I ' òož

o¬ F å †o- 1 y F å % ² SYSLOG ø - ' ,ož

```
Ruijie(config)# web-auth logging enable 0
```

o¬ à • co- * show running-config ò 0 F å ' Î

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.59 web-auth noise

F å — ¿ web • š ' ™ Œ ož

web-auth noise [aging agmin] [hit times]

Ê Ö ó • F åož

no web-auth noise

o¬ @ ƒ ª ¢o-

@ ƒ	T
agmin	™ Ò n ¾ ï ž • k ó • 1 ã U k H › 8 1-30ož
times	™ Ò î • é y ˜ | î) ip ñ times) k < • © ™ Òož ó • 3) k H › 8 3-100ož

o¬ Þ . F åo- ¼ { ' ™ ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å ‘ ™ Œ ož

```
Ruijie (config)# web-auth noise aging 1 hit 3
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- **-**

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.60 web-auth offline-detect

F å wlansec • š ï ¨ ¿ y k ¨ 6 ž • u Ê Ä z v O ¿ ê — v O ¿ož
web-auth offline-detect interval interval flow thredshold

Ê Ö • š ï ¨ ¿ y ó • F å
default web-auth offline-detect

¼ { • š ï ¨ ¿ y
no web-auth offline-detect

o¬ @ ƒ ª ¢o-

@ ƒ	T
interval	v O y u Ê k % y ã U k H › 8 [1, 65535] k ó • 15 ã Uož
threshold	v O k % y - k H › 8 [0, 4294967294] k0 n P — v O yož

o¬ Þ . F åo- 15 ã U — v O y ¿

o¬ x X % ”o- wlansec % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

10.x o ‘ ž wlansec • h ¿ ° æ e " dN » – ‰ 11.x ‘ Í N ‘ ž wlansec • " d

o¬ F å †o- 1 y F å wlansec 1 5 ã U Ä ò ç ï v O z 9 5kBytes ž < 1 ï ¿ y

```
Ruijie(config)#wlansec 1
Ruijie(config-wlansec)# web-auth offline-detect interval 5 flow 5120
```

o¬ à • co- 1 y … show running x X U Y ò 0 • š ï ¨ ¿ y , ¼ F åož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

1.61 web-auth ping

y portal Æ ˜ © k U ož

web-auth ping [interval minutes] [retry times]

Ê Ö ó • F åož

no web-auth ping

o¬ @ ƒ ª ¢o-

@ ƒ	T
minutes	y u Ê k ó • 1 ã U k H › 8 1-65535ož
times	Ý ž M n) ƒ k ó • 3) k H › 8 0-65535ož

o¬ Þ . F åo- ¼ { ping yož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y F å ping y u Ê 5 ã U k M n) ƒ 4)ož

```
Ruijie (config)# web-auth ping interval 5 rerty 4
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.62 web-auth portal

6 • š … Portal Æ ˜ož

web-auth portal { eportalv1 | eportalv2 | iportal | wechat | wifidog | name }

í ” F åož

no web-auth portal { eportalv1 | eportalv2 | iportal | wechat | wifidog | name }

- [illegible]

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . F åo- ó • … i H Portal Æ ˜ url ”ož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ¼ { Portal # ‘ ý Jož

```
Ruijie (config)# no web-auth portal extension
Ruijie (config)# http redirect url-fmt ext1
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.64 web-auth portal key

— å — Õ • š Æ ˜ $ • g * ’ % Wož

web-auth portal key key-string

Ž ” ï HTTP WEB ¬ L t M g e • WEB ¬ L • š Æ ˜ g * ’ % Wož

no web-auth portal key

o¬ @ ƒ ª ¢o-

@ ƒ	T
key-string	— Õ • š Æ ˜ $ • g * ’ % W k Â Ý x † 255 …ož

o¬ Þ . F åo- Þ . Z Ä — å % Wož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- } è • Web • š k · À — å — Õ • š Æ ˜ $ • g * ’ % Wož

¢ ù Æ ˜ % W N u 4 ¶ B F å k u 4 ? Þ y Æ ˜ 6 % Wož

o¬ F å †o- 1 y — å — Õ • š Æ ˜ $ • g * ' % W web-authož

```
Ruijie(config)# web-auth portal key web-auth
```

o¬ à • co- * show running-config ò 0 Æ ˜ % W F å

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.65

```
Ruijie (config)# web-auth portal-attribute textinfo
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.66 web-auth portal-check

y portal Æ ˜ © k U ož

web-auth portal-check [interval intsec] [timeout tosec] [retransmit retires]

Ê Ö ó • F åož

no web-auth porta-check

o¬ @ ƒ ª ¢o-

@ ƒ	T
intsec	y u Ê k ó • 10 a k H › 8 1-1000ož
tosec	† Ý ž ž • k ó • 5 a k H › 8 1-1000ož
retries	Ý ž M n) ƒ k ó • 3) k H › 8 1-100ož

o¬ Þ . F åo- ¼ { portal yož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

Ö æ Ó î , B / ¢ [û ` v M " ® _ Ÿ " ´ • [õ ô â ² " ^ Ì î • V { £ k ¨ · • • • Ÿ { ^ • q 3 õ ¹ • • ÿ Ÿ d

o¬ F å †o- 1 y F å portal yož

```
Ruijie (config)# web-auth portal-check interval 20 timeout 2 retransmit 2
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.67 web-auth portal-escape

F å portal ! ÿ k ¢ F å portal Æ ˜ C U ž k • N µ à Ì ï ² • šož
web-auth portal-escape

Ê Ö ó • F åož
no web-auth portal-escape

o¬ @ ƒ ª ¢o-

@ ƒ	T

24 1ea75 re f 117.84 4784hg(2 0.24 15.6 re f 560.7)]TJ /TT0 494.4 0.24 1567>Tj f BT 9

web-auth portal-valid unique-name

Ê Ö ó • F åož

no web-auth portal-vallid unique-name

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Ì F åož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

-

```
Ruijie (config)# web-auth sm
```

-

etection

1.72 web-auth template

ë • w µ ó •%² W • š % á F å % ”ož
web-auth template eportalv1

ë • w µ #%² W • š % á F å % ”ož
web-auth template { template-name } v1

ë • w µ ó • 8 W • š % á F å % ”ož
web-auth template eportalv2

ë • w µ # 8 W • š % á F å % ”ož
web-auth template { template-name } v2

ë • w µ ó • Ä å • š % á F å % ”ož
web-auth template iportal

ë • w µ # Ä å • š % á F å % ”ož
web-auth template { template-name } intra

ë • w µ ó • wifidog % á F å % ”ož
web-auth template wifidog

ë • w µ # wifidog % á F å % ”ož
web-auth template { template-name } wifidog

ë • w µ ó • ³ ’ wifi • š % á F å % ”ož
web-auth template wechat

ë • w µ # ³ ’ wifi • š % á F å % ”ož
web-auth template { template-name } wechat

í ” % á … ò x Xož
no web-auth template { template-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
eportalv1	ó • %² W • š % á
eportalv2	ó • 8 W • š % á
iportal	ó • Ä å • š % á

iporta

template-name	# • š % á d f

o¬ Þ . F åo- — Æ ˜ F å

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

¹ ¶) & eportalv1 f P f ´) û ip ä url " ÿ ™ 0 P http redirect ä http redirect homepage a — ½ ¨ • • ‘ ¹ P http redirect ä http redirect homepage a — " º ´ • æ ‘ N g 0 ‡ a — L ´ d

¹ P portal-server a — " º ´ ‘ N g í a — d

‘ N _ ë Web _ Ÿ ¡ " ¢ Q ¶ portal û ` v É ë portal û ` v " o eportalv1 f P V „ , Ä o ë " eportalv1 f P ¹ (g Ã IP ä url ä ¹ ? A b ‘) û • " url â " % V ð o L ´ ! http:// [ip-address] dportal û ` v IP IP

o¬ @ ƒ ª ¢o-

@ ƒ	T
seconds	' Î ¾ • ž • • œ k % y aož H › 8 30-3600ož ó • 180 aož

o¬ Þ . F åo- 180 aož

o¬ x X % "o- ¶ B F å % "ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y — å] • š ï ' Î ¾ • ž • • œ 60 aož

```
Ruijie (config)# web-auth update-interval 60
```

o¬ à • co- … show runing-config Û ò 0 ¢ ù F å

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.74 web-auth valid-ip-acct

F å ª • ^ - ï B H IP ž • k Ý ¥ ž • ï Ì B H IP ª - 1 t^ë ¿ož

web-auth valid-ip-acct [timeout seconds]

Ê Ö ó • F åož

no web-auth valid-ip-acct

o¬ @ ƒ ª ¢o-

@ ƒ	T
seconds	ª • ^ - ï B H IP ž • k % y y a k ó • 30 aož

o¬ Þ . F åo- Þ . — F åož

o¬ x X % "o- ¶ B F å % "ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

" s ð U wifi M + " Ò d

o¬ F å †o- 1 y F å ª • ˆ - ï B H IP ž • 1 ã U

```
Ruijie(config)# web-auth valid-ip-acct timeout 60
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.75 web-auth wechat-check

F å ³ ’ wifi • š Æ ˜ y
web-auth wechat-check interval minutes

¼ { Æ ˜ y
no web-auth wechat-check

o¬ @ ƒ ª ¢o-

@ ƒ	T
minutes	! ÿ ž • • œ k • ‘ F å è 30 ã U

o¬ Þ . F åo- — F åož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

ℹ û ` v ¿ _ Ÿ ‘ , ˜ † “ _ Ÿ — s õ © escape a — æ • ì Ò d

o¬ F å †o- 1 y F å Æ ˜ y @ ƒož

```
Ruijie (config)# web-auth wechat-check interval 30
```

o¬ à ’ s

o¬ u V ª ¢o- -

1.76 web-auth wechat-escape

F å ³ ’ wifi • š ¤ } ! ÿ
web-auth wechat-escape interval minutes times count

¼ { ¤ } ! ÿ
no web-auth wechat-escape

H ƒ ¤ } ! ÿ Ù Á k Ê Ö % } ! ÿ Ù Áož K 9 ‡ G x X kshow running-config ª Pož
web-auth wechat-escape recover

o¬ @ ƒ ª ¢o-

@ ƒ	T
minutes	! ÿ ž • • œ k ó • 60 ã U
count	Ò ! ÿ ï ƒ k ó • 5

o¬ Þ . F åo- — F åož

o¬ x X % ”o- ¶ B F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ▬ , ˜ † “ _ Ÿ ‘ } — s æ ˜ † “ _ Ÿ õ © escape a — • ” • ì Ò d

o¬ F å †o- 1 y F å ¤ } ! ÿ y @ ƒož

```
Ruijie (config)# web-auth wechat-escape interval 30 times 10
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.77 web-auth wechat-template wlan -range portal-ip nas-ip

F å — ¿ ³ ’ wifi %² p F å

1.78 web-auth wifidog-template wlan-range portal-ip nas-ip url

F å — ¿ wifidog %² p F å

web-auth wifidog-template name wlan-range wlanid-start wlanid-end portal-ip portal-ip-addr nas-ip nas-ip-addr url url-string [perception]

í ” — ¿ wifidog %² p F å

no web-auth wifidog-template name

o¬ @ ƒ ª ¢o-

@ ƒ	T
name	% á d f
wlanid-start	I O wlan • ÷
wlanid-end	I O wlan È Ø
portal-ip-addr	portal Æ ˜ ª -
nas-ip-addr	— å wifidog — Õ N µ Æ ip k 9 Æ ˜ g 4 ip G Ü * ’
url-string	portal Æ ˜ • š ¼ µ ª -
perception	F å — ß =

o¬ Þ . F åo- — F åož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

-- } — ³ ¢ Ï " • ¡ • — Ù Ú wlansec î • — Ù wlansec M ¥ " N _ d

o¬ F å †o- F å — ¿ wifidog %² p F åož

5 X L M L H F R Q I L J Z H E D X W K Z L I L G R J W H P S O D W H D D D Z O D Q U D Q J H S F
X U O K W W S D X W K Z L I L G R J $ X W K

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

1.79 web-auth wlan-ac-ip

F å M g URL ACIP @ ƒož

web-auth wlan-ac-ip ipv4

í ” F åož

no web-auth wlan-ac-ip

o¬ @ ƒ ª ¢o-

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

o¬ F å †o- 1 y F å winterface @ ƒož

```
Ruijie (wlansec)# web-auth winterface winterface
```

o¬ à • co- … show running-config Û ò 0 ¢ ù F å

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2 AAA

2.1 aaa accounting commands

+ £ ñ NAS ï ñ ü g x X t g “ Ã k ’ ò ï t ož

aaa accounting commands level { default | list-name }

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.2 aaa accounting exec

+ ï £ NAS ˜ | t g “ Ã k ’ ò ï t ož

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

H ƒ Exec “ Ã ož

no aaa accounting exec { default | list-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k é e µ # • c ç n • Exec “ Ã ó • • což
list-name	#%² Exec “ Ã • c ç n k U Y © ` ~ … ož
method	· À“none o•group ” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
none	g “ Ã
group	… Æ ˜ Á g “ Ã k) ù u 4 RADIUS y TACACS+ Æ ˜ Á

o¬ Þ . F åo- ¼ { “ Ã

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- RGOS Q Ä ¨ ï * 4 £ • š e k õ k o Exec “ Ã k ò ç ï £ ž Ì g • š ê • š J •
c none k é k g Exec “ Ãož
o “ Ã e k ¨ ï £ ñ NAS CLI µ ž ˜ k G “ Ã • ÷ gStart h ’ Î Ë ¶ Æ ˜ k ¨ ï
ß £ ž ˜ k G “ Ã È Ø gStop h ’ Î Ë ¶ Æ ˜ož ò ç%² ï ¨ £ ž Z Ä G ß Start ’ Î k ¨
ß £ ž - k G ß Stop ’ Îož
F å 4 Exec “ Ã • c e k · À 1 ¿ • ¨ ¬ } g x X “ Ã Ä € ¿ è k k é 1 ÿ |ož

o¬ F å †o- 1 y µ P † … RADIUS + ï £ NAS t g “ Ã k w ¨ • ÷ y È Ø ž G “ Ã † y

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

o¬ à • co- … show aaa method-list x X U Y ò 0] F å Exec “ Ã • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

%Group XXX is not existed

2 y ò ç group • º u 4 4 “ Ã • º k é U P j ¨ož

The accounting does not support this type of group

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.3 aaa accounting network

ß 9 à Ì Ë Ï ‹ ê ’ ò ï t k ¬ } + ï ˜ | t g “ Ãož

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

H ƒ à Ì “ Ã ož

no aaa accounting network { default | list-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k é e µ # • c ç n • Network “ Ã ó • • což
list-name	“ Ã • c ç n dož
start-stop	¨ ï ˜	t • ÷ y È Ø ž ® G “ Ã † k • ÷ “ Ã † — – © k è o “ Ã k C ª • ï • ÷ g à Ì ˜ |ož
method	· À n ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
none	g “ Ã
group	… Æ ˜ Á g “ Ã k) ù u 4 RADIUS y TACACS+ Æ ˜ Á

o¬ Þ . F åo- ¼ { “ Ã

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- RGOS * Ë ¶ Æ ˜ G “ £ K Å + Û ï t g “ Ãož … ¼ p start-stop k ò ï “ Ã # ¾ož

o¬ F å †o- 1 y µ P † … RADIUS + ï à Ì Æ ¬ L g “ Ã k w ¨ • ÷ y È Ø ž G “ Ã † y

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

o¬ à • co- … show aaa method-list x X U Y ò 0] F å à Ì “ Ã • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 “ Ã • º k é U P j ¨ož

```
The accounting does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.4 aaa accounting update

o “ Ã ¾ • k 9 … ¶ B “ Ã ¾ •ož

aaa accounting update

¼ { “ Ã ¾ • ož

no aaa accounting update

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- “ Ã ¾ • Þ . ¼ {ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç Z Ä o AAA ¶ Æ k é … “ Ã ¾ •ož ò ç] Æ o AAA ¶ Æ k é ¥ x X — å “ Ã ¾ • ož

o¬ F å †o- 1 y µ P † ¦ P — å “ Ã ¾ • … ož

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

o¬ à • co- … show aaa accounting update x X U Y ò 0 “ Ã ¾ • © k • oož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.5 aaa accounting update periodic

— å] Æ o “ Ã ¾ • “ Ã ¾ • • œož
aaa accounting update periodic interval

F å ó • “ Ã ¾ • • œož
no aaa accounting update periodic

o¬ @ ƒ ª ¢o-

@ ƒ	T
interval	“ Ã ¾ • • œ k Y ã U % y k Â 4 1 ã Uož

o¬ Þ . F åo- 5 ã Uož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç Z Ä o AAA ¶ Æ k é … “ Ã ¾ •ož ò ç] Æ o AAA ¶ Æ k é ¥ x X — å “ Ã ¾ • • œož

o¬ F å †o- 1 y µ P † ¦ P — å ? œ 1 ã U “ Ã ¾ •ož

```
Ruijie(config)# aaa new-model
Ruijie(config)# aaa accounting update
Ruijie(config)# aaa accounting update periodic 1
```

o¬ à • co- … show aaa accounting update x X U Y ò 0 “ Ã ¾ • • œ F å ’ Îož

o¬ U P ’ Îo- 1 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.6 aaa authentication dot1x

} … AAA g 802.1X ï • š k¬ ü g ¶ B F å x X aaa authentication dot1x F å 802.1X ï • š • c ç nož

2.7 aaa authentication enable

} … AAA g Enable • š k¬ ü g ¶ B F å x X aaa authentication enable F å Enable • š • c ç nož
aaa authentication enable default method1 [method2...]

í ” • š • c ç nož
no aaa authentication enable default

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k é e µ # • c ç n • Enable • š ó • • což Enable • š © Â 9 ¶ B • š k) ù Q u 4 — å ó • • š • c ç nož
method	· À ©“local o•noneo•groupo•enable” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
local	… Î ª ï d ƒ G € g • š
none	g • š
group	… Æ ˜ Á g • š k) ù u 4 RADIUS y TACACS+ Æ ˜ Á
enable	… enable • c g • š

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç — Õ o AAA Enable • š Æ k ï < · À … AAA g Enable • š # Œož Ó · À … aaa authentication enable x X F å ó • • c ç n 9 Enable • šož
Q Ä ù µ • c Z Ä € • k õ … e µ • c g ï a • šož
Enable • š • c ç n F å Y e kEnable • š ÿ |ož

o¬ F å †o- :1 y µ P † # AAA Enable ï a • š • c ç nož ¥ • š • c ç n ¯ … RADIUS ¶ Æ ˜ g ï a • š k ò ç ¨%² ž ’ Ä Z Ä v ñ RADIUS ¶ Æ ˜ • ‹ k é … Î ª ï ƒ G € g ï a • šož

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

o¬ à • co- … show aaa method-list x X U Y ò 0] F å Enable • š • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 • š • º k é U P j ¨ož

```
The authentication does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.8 aaa authentication iportal

} … AAA g — Õ Ä å Portal Web ï • š k¬ ü g ¶ B F å x X aaa authentication iportal F å — Õ Ä å Portal Web ï • š • c ç nož

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

í ” • š • c ç nož

no aaa authentication iportal { default | list-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
Default	… ¥ @ ƒ ké e µ # • c ç n • — Õ Ä å Portal Web ï • š ó • • což
list-name	#%² — Õ Ä å Portal Web ï • š • c ç n k U Y © ` ~ … ož
method	· À ©“local o•noneo•groupo•subs” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
local	… Î ª ï d ƒ G € g • š
none	g ï a • š
group	… Æ ˜ Á g • š k) ù u 4 RADIUS Æ ˜ Á
subs	… subs ƒ G € g • šož

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç — Õ o AAA — Õ Ä å Portal Web ¶ Æ k ï < · À … AAA g — Õ Ä å Portal Web ï • š # Œož Ó · À … aaa authentication iportal x X F å ó • ê U # • c ç n 9 — Õ Ä å Portal Web ï • šož

Q Ä ù µ • c Z Ä € • k õ … e µ • c g • šož

o¬ F å †o- 1 y µ P † #%² d rds_web AAA — Õ Ä å Portal Web • š • c ç nož ¥ • š • c ç n ¯ … RADIUS ¶ Æ ˜ g • š k ò ç ¨%² ž ’ Ä Z Ä v ñ

o¬ à • co- … show aaa method-list x X U Y ò 0] F å iportal • š • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

%Group XXX is not existed

2 y ò ç group • º u 4 4 • š • º k é U P j ¨ož

The authentication does not support this type of group

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.9 aaa authentication login

} … AAA g Login g £ h • š k ¬ ü g ¶ B F å x X

authentication login x X F å ó • ê U # • c ç n 9 Login • šož

Q Ä ù µ • c Z Ä € • k õ … e µ • c g ï a • šož

— å 4 Login • š • c e k · À 1 ¿ • ¨ ¬ } g Login • š Ä € ¿ è k k é 1 ÿ |ož

o¬ F å †o- 1 y µ P † #%² d list-1 AAA Login • š • c ç nož ¥ • š • c ç n ¯ … RADIUS ¶ Æ ˜ g • š k ò ç ¨%² ž ' Ä Z Ä v ñ RADIUS ¶ Æ ˜ • ‹ k é … Î ª ï ƒ G € g • šož

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

o¬ à • co- … show aaa method-list x X U Y ò 0] F å Login • š • c ç n ' Îož

o¬ U P ' Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 • š • º k é U P j ¨ož

```
The authentication does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ à • co-i•Um %!•R × ' ðÂ„j q\ " Y€)€VãWPU@ïåS•ÀÀ0E•Ò¿ÙÙV¸ã—gD.2Æö¸À"€Ó Ã•ÿ ò ÿ ÒÙ`•$ÐÉ$pÓ` ¢µM ÆÈ•!'VápY@

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç — Õ o AAA PPP ¶ Æ k ï < · À … AAA g PPP ï • š # Œož Ó · À … aaa authentication ppp x X F å ó • ê U # • c ç n 9 PPP ï • šož
Q Ä ù µ • c Z Ä € • k õ … e µ • c g • šož

o¬ F å †o- :1 y µ P † #%² d rds_ppp AAA PPP • š • c ç nož ¥ • š • c ç n ¯ … RADIUS ¶ Æ ˜ g • š k ò ç ¨%² ž ’ Ä Z Ä v ñ RADIUS ¶ Æ ˜ • ‹ k é … Î ª ï ƒ G € g • šož

```
Ruijie(config)# aaa authentication ppp rds_ppp group radius local
```

o¬ à • co- … show aaa method-list x X U Y ò 0] F å PPP • š • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 • š • º k é U P j ¨ož

```
The authentication does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.11 aaa authentication sslvpn

} … AAA g sslvpn ï • š k ¬ ü g ¶ B F å x X aaa authentication sslvpn F å sslvpn ï • š • c ç nož

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

í ” sslvpn ï • š • c ç nož

no aaa authentication sslvpn { default | list-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T

	• c
local	… Î ª ï d ƒ G € g • š
none	g • š
group	… Æ ˜ Á g • š k) ù u 4 RADIUS Æ ˜ Á
subs	… subs ƒ G € g • šož

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç — Õ o sslvpn Æ k ï < · À … AAA g sslvpn ï • š # Œož Ó · À … aaa authentication sslvpn x X F å ó • ê U # • c ç n 9 sslvpn ï • šož
Q Ä ù µ • c Z Ä € • k õ … e µ • c g • šož

o¬ F å †o- 1 y µ P † #%² d rds_sslvpn AAA sslvpn ï • š • c ç nož ¥ • š • c ç n ¯ … RADIUS ¶ Æ ˜ g • š k ò ç ¨%² ž ’ Ä Z Ä v ñ RADIUS ¶ Æ ˜ • ‹ k é … Î ª ï ƒ G € g • šož

```
Ruijie(config)# aaa authentication sslvpn rds_sslvpn group radius local
```

o¬ à • co- … show aaa method-list x X U Y ò 0] F å sslvpn • š • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 • š • º k é U P j ¨ož

```
The authentication does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.12 aaa authentication web-auth

} … AAA g 8 W Web • š k ¬ ü g ¶ B F å x X aaa authentication web-auth F å — Õ 8 W Web • š • c ç nož

aaa authentication web-auth { default | list-name } method1 [method2...]

í ” • š • c ç nož

no aaa authentication web-auth { default | list-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k é e µ # • c ç n • — Õ 8 W Web • š ó • • což
list-name	#%² — Õ 8 W Web • š • c ç n k U Y © ` ~ … ož
method	· À ©“local o•noneo•groupo•subs” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
local	… Î ª ï d ƒ G € g • š
none	g ï a • š
group	… Æ ˜ Á g • š k) ù u 4 RADIUS Æ ˜ Á
subs	… subs ƒ G € g • šož

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç — Õ o AAA — Õ 8 W Web ¶ Æ k ï < · À … AAA g — Õ 8 W Web ï • š # Œož Ó · À … aaa authentication web-auth x X F å ó • ê U # • c ç n 9 — Õ 8 W Web ï • šož Q Ä ù µ • c Z Ä € • k õ … e µ • c g • šož

o¬ F å †o- 1 y µ P † #%² d rds_web AAA — Õ 8 W Web • š • c ç nož ¥ • š • c ç n ¯ … RADIUS ¶ Æ ˜ g • š k ò ç ¨%² ž ’ Ä Z Ä v ñ RADIUS ¶ Æ ˜ • ‹ k é + N y g k • š * ož

```
Ruijie(config)# aaa authentication web-auth rds_web group radius none
```

o¬ à • co- … show aaa method-list x X U Y ò 0] F å web-auth • š • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 • š • º k é U P j ¨ož

```
The authentication does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.13 aaa authorization commands

+ 9] £ ñ NAS CLI µ ï k } … AAA x X I Ó + ï ü g x X g I Ó k ª • ê W 2
î ï ü g À } x Xož ¬ ü g ¶ B F å x X aaa authorization commandsož

aaa authorization commands level { default | list-name } method1 [method2...]

¼ { AAA x X I Ó ož

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

o¬ @ ƒ ª ¢o-

@ ƒ	T
level	} g I Ó x X ´ ð k8 0~15 kÐ „ ´ ð x X ¬ } I Ó * e õ ü gož
default	… ¥ @ ƒ k é e µ # • c ç n • x X I Ó ó • • c
list-name	#%² x X I Ó • c ç n k U Y © ` ~ … ož
method	· À ©“noneo• group” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
none	g I Ó
group	… Æ ˜ Á g I Ó k) ù u 4 TACACS+ Æ ˜ Á

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.14 aaa authorization config-commands

} … AAA + F å % ” g , ¶ B F å % ” C ¿ ÿ % ” h x X g I Ó k ü g ¶ B F å x X aaa authorization config-commands ož

aaa authorization config-commands

¼ { AAA + F å % ” x X g I Ó ož

no aaa authorization config-commands

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¼ { AAA + F å % ” x X g I Ó ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç Q + ³ F å % ” g ò Ô Ó % ” h x X g I Ó k U Y … ¥ x X no % ” ¼ { F å % ” I Ó k é F å % ” C ¿ ÿ % ” x X ¬ } g x X I Ó < U Y ü gož

o¬ F å †o- 1 y µ P † ø • + F å % ” x X I Ó y

2.15 aaa authorization console

} … AAA + * O ò V £ ï k ñ ü g x X g I Ó k ü g ¶ B F å x X aaa authorization console ož

aaa authorization console

¼ { AAA + * O ò V £ ï ñ ü g x X I Ó ož

no aaa authorization console

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	

o¬ Þ . F åo- ¼ { AAA + * O ò V £ ï ñ ü g x X I Ó ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- RGOS u 4 ã * O ò V £ y ¿ U Ä € £ ï kU Y — å O ò V £ ï k© k ¬ } g x X I Óož
ò ç ¼ { 4 O ò V x X I Ó k é] Æ • ñ O ò V ¿ è x X I Ó • c ç n 1 ÿ |ož

o¬ F å †o- 1 y µ P † F å O ò V £ ï x X I Ó y

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k é e µ # • c ç n • Exec l Ó ó • • což
list-name	#%² Exec l Ó • c ç n k U Y © ` ~ … ož
method	· À ©“local o•noneo•group” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
local	… Î ª ï d ƒ G € g l Ó
none	g l Ó
group	… Æ ˜ Á g l Ó k) ù u 4 RADIUS y TACACS+ Æ ˜ Á

o¬ Þ . F åo- ¼ { AAA Exec l Ó ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- RGOS u 4 + £ ñ NAS CLI µ ï g l Ó k Ð 5 ¿ CLI Ó ’ ´ ð g0~15 ´ hož) ù © + 9 * 4 Login • š ï k õ g Exec l Óož ò ç Exec l Ó â Â k é — c µ CLI µož F å 4 Exec l Ó • c e k · À 1 ¿ • ¨ ¬ } g Exec l Ó Ä € ¿ è k k é 1 ÿ |ož

o¬ F å †o- 1 y µ P † … RADIUS Æ ˜ g Exec l Ó y

```
Ruijie(config)# aaa authorization exec default group radius
```

o¬ à • co- … show aaa method-list x X U Y ò 0] F å Exec l Ó • c ç n ’ Îož

o¬ U P ’ Îo- 1 y ò ç — Õ Z Ä # 6 group k é U P j ¨ož

```
%Group XXX is not existed
```

2 y ò ç group • º u 4 4 l Ó • º k é U P j ¨ož

```
The authorization does not support this type of group
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.17 aaa authorization network

} … AAA + ˜ | à Ì ï Æ ¬ L g , PPPo•SLIP ˆ # ‘ h g l Ó k ü g ¶ B F å x X aaa authorization network ož

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

¼ { AAA I Ó ož

no aaa authorization network { default | list-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k é e µ # • c ç n • Network I Ó ó • • což
method	· À ©“noneo• group” ñ ç ¼ p $%² k%² • c ç n Â Ú Ä 4 • c
none	g à Ì I Ó
group	… Æ ˜ Á g I Ó k) ù u 4 RADIUS y TACACS+ Æ ˜ Á

o¬ Þ . F åo- ¼ { AAA Network I Ó ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- RGOS u 4 + ñ Ä à Ì Ä ¼ Æ ¬ L ò PPPo•SLIP ˆ # ‘ g I Óož ò ç F å 4 I Ó k é + ñ Ä • š ï ê N M g I Óož

U Y 6 _ c I Ó • c k ï a • š%² ý k Q Ä ¢ ù I Ó • c Z Ä € • k õ Ð Ò … e µ • c g I Ó k ò ç ¢ ù I Ó • c â Â k é Ç … ¿ U e Ð I Ó • což

RADIUS ê TACACS+ Æ ˜ © * ›%² © ç K Å + Û è + • š ï I Óož ñ Y à Ì I Ó © • y ¨ • š Â E k Q Ä • š * 4 õ Ä U B H à Ì I Óož

o¬ F å †o- 1 y µ P † … RADIUS Æ ˜ + à Ì Æ g I Ó y

2.18 aaa domain

µ ¿ F å % ” k F å ¿ K Åož

aaa domain { default | domain-name }

H ƒ ¥ x Xož

no aaa domain { default | domain-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k g Þ . ¿ F å
domain-name	6 ¿ d f

o¬ Þ . F åo- Z Ä F å ` ~ ¿ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 6 Â 9 ¿ d AAA Æ F åždefault Þ . ¿ F å k - < © ò ç ï Z Ä ` k ¿ ’ Î k à Ì — Õ ñ …
• c ç nož domain-name 6 ¿ d F å k ò ç ï ` k ¥ ¿ d k é 6 … ¿ ñ ¼ û • c ç nož) ù
© Ï u 4 Â Ú F å 32 ¿ož

o¬ F å †o- 1 y µ P † ¦ P — å ¿ d F å y

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

o¬ à • co- … show aaa domain x X ò 0 ¿ F å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.19 aaa domain enable

Â 9 ¿ d AAA Æ È • ¼ k ó • Õ Ñ ¼ { Ù Áož ¢ ø • ¥ • ¼ ž ˜ k ñ Ä AAA Æ i ¯ … Â 9 ¿ d AAA Æ F åož

aaa domain enable

¼ { ¥ • ¼ož

no aaa domain enable

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Â 9 ¿ d AAA Æ • ¼ ¼ {ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- g Â 9 ¿ d AAA Æ F å k ¬ } ø • F å • ¼ož

o¬ F å †o- 1 y ø • Â 9 ¿ d AAA Æ • ¼ y

```
Ruijie(config)# aaa domain enable
```

o¬ à • co- … show aaa domain x X ò 0 ¿ F å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.20 aaa local authentication attempts

F å login £ ï : ¡ £ â Â) ƒož

aaa local authentication attempts max-attempts

o¬ @ ƒ ª ¢o-

2.22 aaa local user allow public account

F å Web • š ê ñ Ä å Web • š Õ Ñ k Î ª Ã ï gusername ê ñ subs h k t Ú Ä € » Fož aaa local user allow public account

o¬ @ ƒ ª ¢o-	@ ƒ	

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- Ý O ï ¿ ž ø - AAA ï • š * syslog k U k - è ó I ê — Õ Å ‘ k œ 4 U Y * F å Î x X Û ¼ { ø - ož

o¬ F å †o- 1 y µ P † ¼ { ø - aaa ï • š * syslogož

```
Ruijie(config)# no aaa log enable
```

o¬ à • co- … show running-config x X ò 0 ø - aaa ï • š * syslog © k … ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.24 aaa log rate-limit

} ² … AAA ï • š * syslog ø - , ä k ¬ ü g aaa log rate-limit x X g F åož
aaa log rate-limit num

Ê Ö AAA ï • š * syslog ó • ø - , äož
no aaa log rate-limit

o¬ @ ƒ ª ¢o-

@ ƒ	T
num	? a U ø - syslog Ú ƒ k 8 0 - 65535 y 0 y n P ’ ò ø - , ä 1 - 65535 y U F å ø - , ä 8 k ó • › 5ož

o¬ Þ . F åo- 5 k / ? a ø - 5 Ú AAA ï • š * syslogož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- Ý O ï ¿ ž ø - AAA ï • š * syslog k U k - è ó I ê — Õ Å ‘ož œ 4 U Y * F å 4 x X Û ² … ï • š * syslog ø - , äož

o¬ F å †o- 1 y µ P † ² … AAA ï • š * syslog ø - , ä ? a 10 Ú

```
Ruijie(config)# aaa log rate-limit 10
```

o¬ à • co- … show running-config x X ò 0 AAA ï • š * syslog ø - , äož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.25 aaa new-model

} … RGOS AAA ¶ Æ k ¬ ü g ¶ B F å x X aaa new-model … AAAož
aaa new-model

¼ { AAA ¶ Æ ož
no aaa new-model

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¼ { AAA ¶ Æ ož

o¬ x X % ”o- ¶ B % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¥ x X © AAA … x X k ò ç Ó } … AAA ¶ Æ k < · À … aaa new-model … AAA ¶ Æ ož
ò ç Z Ä o AAA k é ñ Ä AAA x X 1 © U F å ož

o¬ F å †o- 1 y µ P † … AAA ¶ Æ ož

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

o¬ à • co- … show running-config 0 Td <091904850A080578045 r AAA ¶ Æ ož

2.26 access-limit

— å ¿ ï ƒ O ’ ò k Q + IEEE802.1x ï Ä |ož
access-limit num

H ƒ + ¿ ï ƒ O ’ òož
no access-limit

o¬ @ ƒ ª ¢o-

@ ƒ	T
num	¿ ï ƒ O ’ ò k Q ’ ò IEEE802.1x ï

o¬ Þ . F åo- Þ . Õ Ñ ’ ò ï ƒ Oož

o¬ x X % ”o- ¿ F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o-

default	… ¥ @ ƒ k 6 … Þ . F å • c ç n
list-name	6 • c ç n d f

o¬ Þ . F åo- ¨ Z Ä 6 • c ç n ž k ò ç Ä ï G Ü ¬ L k à Ì — Õ k : ¡ Ë ¥ ï 6 default • c ç nož

o¬ x X % ”o- ¿ F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¿ 6 … Network “ Ã • c ç nož

o¬ F å †o- 1 y µ P † ¦ P — å ¿ 6 Network “ Ã • c ç n y

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

o¬ à • co- … show aaa domain x X U Y ò 0 ¿ 6 Network “ Ã • c ç n F å ’ Îož

o¬ U P ’ Îo- 1 y ò ç 6 • c ç n d Ý x † ’ ò k é U P j ¨ož

```
Method list name is too long
```

2 y ò ç 6 • c ç n 9 Ì F å k é U P j ¨ož

```
%WARNING: method list named XXX for this type is not existed
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

2.28 authentication dot1x

¨ ¿ F å % ” F å IEEE802.1x • š ç nož

authentication dot1x { default | list-name }

H ƒ x Xož

no authentication dot1x

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	… ¥ @ ƒ k 6 … Þ . F å • c ç n
list-name	6 • c ç n d f

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y µ P † ¦ P — å ¿ 6 Network I Ó • c ç n y

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

o¬ à • co- … show aaa domain x X U Y ò 0 ¿ 6 Network I Ó • c ç n F å ’ Îož

o¬ U P ’ Îo- 1 y ò ç 6 • c ç n d Ý x † ’ ò k é U P j ¨ož

```
Method list name is too long
```

2 y ò ç 6 • c ç n 9 Ì F å k é U P j ¨ož

```
%WARNING: method list named XXX for this type is not existed
```

3 y ò ç M Ö F å 4 x X k é • F å ~ $ = Ä F åož

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

o¬ U P ' Îo- 1 y ò ç Ž " 6 î%² ï ž w ¥ ï ¨ k é U P ' Îož

```
User XXX unlocked
```

o¬ u V ª ¢o- -

2.31 show aaa accounting update

ª P " Ã ¾ • , ¼ ' Îož

show aaa accounting update

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % "o- Ô Ó % "o• ¶ B % "o• N M % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ª P " Ã ¾ • , ¼ ' Î k , " Ã ¾ • • ¼ © k ø • Y C " Ã ¾ • • œ ' Îož

o¬ F å †o- 1 y ª P " Ã ¾ • , ¼ ' Î

```
Ruijie# show aaa accounting update
```

o¬ U P ' Îo- **-**

o¬ u V ª ¢o- -

2.32 show aaa domain

ª P ¢ ù ñ Ä F å ¿ ' Îož

show aaa domain [default | domain-name]

o¬ @ ƒ ª ¢o-

@ ƒ	T
default	

o¬ F å †o- 1 y µ P † ª P 6 ¿ d domain.com ¿ ’ Îož

```
Ruijie# show aaa domain domain.com

============Domain domain.com============
State: Active
Username format: Without-domain
Access limit: No limit
802.1X Access statistic: 0

Selected method list:
  authentication dot1x default
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.33 show aaa lockout

ª P ¢ ù login g F å @ ƒož

show aaa lockout

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¥ x X ª P ¢ ù login g F å @ ƒož

o¬ F å †o- 1 y ª P ¢ ù login g F å

```
Ruijie# show aaa lockout
Lock tries:       3
Lock timeout:    15 minutes
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.34 show aaa group

ª P AAA F å ñ Ä Æ ˜ Áož

show aaa group

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¥ x X ª P AAA ñ Ä] F å Æ ˜ Áož

o¬ F å †o- 1 y ª P AAA ñ Ä] F å Æ ˜ Á

```
Ruijie# show aaa group
Type          Reference   Name
---------- ---------- ----------
radius        1           radius
tacacs+       1           tacacs+
radius        1           dot1x_group
radius        1           login_group
radius        1           enable_group
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.35 show aaa method-list

ª P AAA ñ Ä • c ç nož

show aaa method-list

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¥ x X ª P AAA ñ Ä • c ç nož

o¬ F å †o- 1 y µ P † ª P AAA • c ç nož

```
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 authorizating network default group radius
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.36 show aaa user

ª P aaa ï , ¼ ’ Îož

show aaa user { all | lockout | by-id session-id | by-name user-name }

o¬ @ ƒ ª ¢o-

@ ƒ	T
all	ò 0 ñ Ä AAA ï ’ Î
lockout	ò 0 ¢ ù t g AAA ï ç n ’ Î
by-id session-id	ò 0 6 session id AAA ï ’ Î
by-name user-name	ò 0 6 ï d AAA ï ’ Î

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ª P AAA ï , ¼ ’ Îož

o¬ F å †o- 1 y µ P † ª P AAA ï , ¼ ’ Î

```
Ruijie#show aaa user all
-----------------------------
            Id ----- Name
 2345687901          wwxy
```

```
-----------------------------
Ruijie# show aaa user by-id 2345687901
-----------------------------
            Id ----- Name
 2345687901          wwxy
Ruijie# show aaa user by-name wwxy
-----------------------------
            Id ----- Name
 2345687901          wwxy
-----------------------------

Ruijie# show aaa user lockout

Name                                    Tries        Lock          Timeout(min)
-------------------------------- ---------- ---------- ------------
Ruijie#
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

2.37 state

— å ¿ © k Ä |ož

state { block | active }

Ê Ö è ó • F åož

no state

o¬ @ ƒ ª ¢o-

@ ƒ	T
block	F å ¿ Ä |

o¬ u V ª ¢o- -

3.2 ip radius source-interface

6 RADIUS † › ª -ož

ip radius source-interface interface-name

í ” 6 RADIUS † › ª -ož

no radius source-interface interface-name

o¬ @ ƒ ª ¢o-

@ ƒ	T
interface-name	radius † › ª - N M

o¬ Þ . F åo- Þ . radius † › ª - à Ì C — å

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ @ ƒ ª ¢o- @ ƒ T
vrf_name vrf d

o¬ Þ . F åo- -

o¬ x X % ”o- Æ ˜ Á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 6 Æ ˜ Á # + vrfož

o¬ F å †o- 1 y µ P † Æ ˜ Á ss # + vrf vrf_nameož

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

o¬ à • co- … show radius group x X ò 0 RADIUS • º Æ ˜ Á vrf F å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.4 radius attribute

F å \ Ä K Å • º ›ož

radius attribute { id | down-rate-limit | dscp | mac-limit | up-rate-limit } vendor-type type

Ê Ö ó • \ Ä K Å • º ›ož

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

o¬ @ ƒ ª ¢o-

@ ƒ	T
id	id <1-255>
type	\ Ä K Å type <1-255>

o¬ Þ . F åo- Q + é [\ Ä K Å œ ð ó • F å y

id	×	type
1	max down-rate	1
2	q	

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	fi e-name-	15
16	max up-rate	75
17	version to server	17
18	flux-max-high32	18
19	flux-max-low32	19
20	proxy-avoid	20
21	dailup-avoid	21
22	ip privilege	22
23	login privilege	42
24	limit to user number	50

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … ¥ x X U Y F å \ Ä K Å • º › k Y • c • « `ož

o¬ F å †o- 1 y 1 max up-rate • º › # 211ož

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

o¬ à • co- … show radius vendor-specific ò 0 \ Ä K Å • º › F å Õ Ñož

o¬ U P ’ Îo- 1 y ò ç F å id ¨ Ä # 8 Ä k é U P j ¨ož

```
no application for the id
```

2 y ò ç • º ›] Æ t ¿ U K Å ñ … k é U P j ¨

the vendor type had allocated by XXXX

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.5 radius vendor-specific extend

— å radius † ä † ã \ Ä 4 Œ id
radius vendor-specific extend

Ê Ö Q œ ð é [\ Ä 4 Œ id
no radius vendor-specific extend

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Q œ ð é [\ Ä 4 Œ id

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … ¥ x X U + ñ Ä 4 Œ id K Å 7 Á F å © • º œ ðož

o¬ F å †o- 1 y F å radius † ä \ Ä K Å ã \ Ä 4 Œ idož

Ruijie(config)# radius vendor-specific extend

o¬ à • co- … show running-config ò 0 ¥ x X F å © k ÿ |ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.6 radius vendor-specific attribute support

F å radius u 4 † ä † Ã `o• " o• ³ ÷ \ Ä K Å
radius vendor-specific attribute support { cisco | huawei | ms}

F å radius u 4 † ä † Ã `o• " o• ³ ÷ \ Ä K Å

no radius vendor-specific attribute support { cisco | huawei | ms}

o¬ @ ƒ ª ¢o- @ ƒ

o¬ Þ . F åo- Þ . F å M n “ Ã ¾ • †ož

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- F å 8 W Web • š ï “ Ã ¾ • † g M n k ó • M nož ¥ F å § € ¿ U • º ïož

o¬ F å †o- 1 y F å 8 W Web • š ï “ Ã ¾ • † g M n ož

```
Ruijie(config)#radius-server account update retransmit
```

o¬ à • co- … x X show running-config ò 0 F åož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.8 radius-server attribute 31

6 RADIUS Calling-Station-ID K Å g Â 9 MAC h ”ož

radius-server attribute 31 mac format { ietf | normal | unformatted }

Ê Ö ó • RADIUS Calling-Station-ID K Å g Â 9 MAC h ”

no radius-server attribute 31 mac format

o¬ @ ƒ ª ¢o-

@ ƒ	T
ietf	6 ETF g RFC3580 h • ö Õ ” k … ‘-’ • ã œ …ož † ò y 00-D0-F8-33-22-ACož
normal	6 o n P MAC ª - ”g µ ã ¹ ò ” h k.. ‘.’ • ã œ …ož † ò y00d0.f833.22ac ož
unformatted	6 — ” k Z Ä ` ~ ã œ … k ó • … ”ož † ò y00d0f83322ac ož

o¬ Þ . F åo- … unformatted ”

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- B ã RADIUS ¶ Æ ˜ g } 9 802.1x • š h U Q œ ð IETF ” k _ Õ Ñ ¬ } 1 Calling-Station-ID K Å — å IETF ” • ºož

o¬ F å †o- 1 y µ P † # RADIUS Calling-Station-ID K Å IETF ”ož

```
Ruijie(config)# radius-server attribute 31 mac format ietf
```

o¬ à • co- … show running-config ò 0 radius Á x mac ” — å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.9 radius-server attribute class

F å RADIUS Class K Å † ä • ” y

radius-server attribute class user-flow-control { format-16bytes | format-32bytes }

o¬ u V ª sKl" %ðo¬ u V ª |pÖ“q(Œt < RADIUS •à’é´ðÆúÀg

o¬ à • co- … show running-config ò 0 radius F åož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.10 radius-server dead-criteria

F å — Õ î RADIUS ¶ Æ ˜ U ö Õož

radius-server dead-criteria { time seconds [tries number] | tries number }

Ê Ö — Õ î • RADIUS ¶ Æ ˜ U ö Õ ó • ›

no radius-server dead-criteria { time seconds [tries number] | tries number }

o¬ @ ƒ ª ¢o-

@ ƒ	T
time seconds	F å ž • Ú ^ @ ƒož— Õ ¨ 6 ž • Ä Z Ä v ñ Û RADIUS ¶ Æ ˜ 3 G € • † k é • ¥ RADIUS ¶ Æ ˜ á U ž x Ú ^ož U — å › 8 1-120 aož
tries number	F å ¬ L Ò Ý ž) ƒ Ú ^ @ ƒož¢ — Õ g c%² RADIUS ¶ Æ ˜ G ¬ L † Ò Ý ž) ƒ ñ ñ —) ƒ ké • ¥ RADIUS ¶ Æ ˜ á U Ò Ý ž) ƒ Ú ^ož U — å › 8 1-100ož

o¬ Þ . F åo- time seconds ó • › 60 aož

tries number ó • › 10)ož

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç%² V RADIUS ¶ Æ ˜ c ž á ž • Ú ^ y ¬ L Ò Ý ž) ƒ Ú ^ k é — Õ • ¥ RADIUS ¶ Æ ˜ U ož … ¥ x X k ï U Y + ž • Ú ^ y ¬ L Ò Ý ž) ƒ Ú ^ @ ƒ g ² …ož

o¬ F å †o- 1 y µ P † 6 ž x 120 a k Ò Ý ž) ƒ 20)ož

```
Ruijie(config)# radius-server dead-criteria time 120 tries 20
```

o¬ à • co- … show radius parameter U Y ò 0 — Õ î RADIUS ¶ Æ ˜ U ö Õ F å ’ Îož

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.11 radius-server deadtime

F å — Õ 2 g Ô 9 U Ù Á RADIUS ¶ Æ ˜ G ¬ L † ž • x †ož
radius-server deadtime minutes

Ê Ö — Õ 2 g Ô 9 U Ù Á RADIUS ¶ Æ ˜ G ¬ L † ž • x † ó • ›ož
no radius-server deadtime

o¬ @ ƒ ª ¢o-

@ ƒ	T
minutes	F å — Õ 2 g Ô 9 U Ù Á RADIUS ¶ Æ ˜ G ¬ L ž • k% y ã Uož U — å › 8 1-1440 ã U g 24 4 ž bž

o¬ Þ . F åo- minutes ó • › 0 ã U g / … RADIUS ¶ Æ ˜ U k — Õ Q À ª ¥ RADIUS Æ ˜ G ¬ L h

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç — Õ +%² V RADIUS ¶ Æ ˜ o 4 M y k ; " radius-server deadtime ž • @ ƒ + ¥
RADIUS

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.14 radius-server retransmit

F å — Õ ¨ • RADIUS ¶ Æ ˜ Z Ä F • Y ù M G †) ƒož
radius-server retransmit retries

Ê Ö ó • M G) ƒož
no radius-server retransmit

o¬ @ ƒ ª ¢o-

@ ƒ	T
retries	RADIUS : ¡ M G) ƒ k H › 8 © 1-100ož

o¬ Þ . F åo- ó • M G) ƒ 3ož

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- AAA ¨ … %² • c + ï g • š ù U © ¢ ù • š ¶ Æ ˜ Z Ä F •ož— Õ î • ¶ Æ ˜ Z Ä F
• ö Õ © ¶ Æ ˜ ¨ — Õ M G 6) ƒ RADIUS † Ê • ® Z Ä • ‹ k ?) M G $ • Ä Ý ž • œož

o¬ F å †o- 1 y µ P † 6 M G) ƒ 4ož

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

o¬ à • co- … x X show radius parameter U Y ò 0 radius M n) ƒ F å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.15 radius-server source-port

F å — Õ G RADIUS † › € Mož

radius-server source-port port

Ê Ö ó • ›ož
no radius-server source-port

o¬ @ ƒ ª ¢o-

@ ƒ	T
port	} — å € Mož U — å › 8 1-65535ož

o¬ Þ . F åo- š Ñ € M

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- — Õ G RADIUS † › € M ó • Õ Ñ © š Ñ ož ò ç ¬ } 6 › € M k … ¥ x X F åož

o¬ F å †o- 1 y µ P † 1 G radius † › € M # 10000ož

```
Ruijie(config)# radius-server source-port 10000
```

o¬ à • co- … show running-config U Y ò 0 — Õ radius † › € M F å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.16 radius-server timeout

F å — Õ M GRADIUS † ˆ - ¶ Æ ˜ • ‹ ž •ož
radius-server timeout seconds

Ê Ö ó • ›ož
no radius-server timeout

o¬ @ ƒ ª ¢o-

@ ƒ	T
seconds	Ý ž ž • g % y a bž U — å › 8 1-1000 aož

o¬ Þ . F åo- ó • 5 a

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … ¥ x X F å — Õ M G RADIUS † ˆ - ¶ Æ ˜ • ‹ ž •ož

o¬ F å †o- 1 y µ P † 1 Ý ž ž • # 10 aož

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

o¬ à • co- … show radius parameter U Y ò 0 — Õ M G RADIUS † ˆ - ¶ Æ ˜ • ‹ ž • F å ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.17 radius set qos cos

— å radius G qos › N M cos ›
radius set qos cos

Ê Ö ó • radius G qos ›
no radius set qos cos

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Þ . qos F å dscp ›

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y — å radius G qos › N M cos ›ož

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

o¬ à • co- … show running-config ò 0 qos › F å ’ Î

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.18 radius support cui

— å radius u 4 cui K Å
radius support cui

¼ { radius u 4 cui K Å
no radius support cui

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Þ . u 4 cui K Å

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … ¥ x X U Y ÿ G ¬ } F å radius © k u 4 cui K Å

o¬ F å †o- 1 y F å radius u 4 cui K Åož

```
Ruijie(config)# radius support cui
```

o¬ à • co- … show running-config ò 0 radius u 4 cui K Å u 4 Õ Ñ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.19 server auth-port acct-port

- AAA Æ ˜ Á Æ ˜ kno ¥ ” í ”ož

server { ipv4-addr | ipv6-addr} [auth-port port1] [acct-port port2]
no server { ipv4-addr | ipv6-addr} [auth-port port1] [acct-port port2]

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-addr	Æ ˜ ip ª -
Ipv6-addr	Æ ˜ ipv6 ª -
port1	Æ ˜ • š € M
port2	Æ ˜ “ Ã € M

o¬ Þ . F åo- — Æ ˜ F å

o¬ x X % ”o- Æ ˜ Á F å % ”ož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ª 6 Æ ˜ • Æ ˜ k 6 € M ž … ó • ›ož

o¬ F å †o- 1 Ö µ P † Æ ˜ Á ss • Æ ˜ 192.168.4.12 w ò ¿ “ Ã € M 5 y • š € M 6ož

```
Ruijie(config)# aaa group server radius ss
Ruijie(config-gs-radius)# server 192.168.4.12 acct-port 5 auth-port 6
Ruijie(config-gs-radius)# end
Ruijie# show aaa group
Type          Reference   Name
---------- ---------- ----------
radius        1           radius
tacacs+       1           tacacs+
radius        1           ss
```

o¬ à • co- … show radius group x X ò 0 RADIUS • º Æ ˜ Á Æ ˜ ’ Îož

o¬ U P ’ Îo- -

o¬ , ¼ x Xo-

x X	T
aaa group server	F å aaa Æ ˜ Á
show aaa group	ª P aaa Æ ˜ Á

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

3.20 show radius acct statistics

ª P RADIUS ‹ Ë , ¼ Ï ‹ ’ Îož

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ª P RADIUS • š , ¼ Ï ‹ ’ Îož

```
Ruijie#show radius auth statistics
Authentication Servers:

Server Index..................................... 1
Server Address................................... 192.168.1.1
Server Port...................................... 1812
Msg Round Trip Time.............................. 0 (msec)
First Requests................................... 0
Retry Requests................................... 0
Accept Responses................................. 0
Reject Responses................................. 0
Challenge Responses.............................. 0
Malformed Msgs................................... 0
Bad Authenticator Msgs........................... 0
Pending Requests................................. 0
Timeout Requests................................. 0
Unknowntype Msgs................................. 0
Other Drops...................................... 0
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

3.22 show radius group

ª P RADIUS Æ ˜ Á F åož

show radius group

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- ¶ B % ”o• Ô Ó % ”o• N M % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ª P RADIUS Æ ˜ Á F åož

```
Ruijie#show radius group
==========Radius group radius==========
Vrf:not-set
Server:192.168.1.1
   Server key:ruijie
   Authentication port:1812
   Accounting port:1813
   State:Active
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

3.23 show radius p arameter

ª P RADIUS Æ ˜ ¶ B @ ƒož

show radius parameter

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- ¶ B % ”o• Ô Ó % ”o• N M % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ª P RADIUS Æ ˜ ¶ B @ ƒož

```
[redacted]
Server Timout:     5 Seconds
Server Deadtime: 0 Minutes
```

o¬ u V ª ¢o- -

3.24 show radius server

ª P RADIUS Æ ˜ F å Õ Ñož

show radius server

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- ¶ B % ”o• Ô Ó % ”o• N M % ”

o¬ Þ . ´ ðo- 14

```
Statistics:
Authen: request 0, timeouts 0
Author: request 0, timeouts 0
Account: request 20, timeouts 0
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

3.25 show radius vendor-specific

ª P RADIUS \ Ä K Å • º F åož

show radius vendor-specific

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- ¶ B % ”o• Ô Ó % ”o• N M % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y ª P RADIUS \ Ä K Å • º F åož

```
Ruijie#show radius vendor-specific
id      vendor-specific          type-value
----- -------------------- ----------
1       max-down-rate            1
2       port-priority            2
3       user-ip                  3
4       vlan-id                  4
5       last-supplicant-vers 5
        ion
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
16	max-up-rate	16
17	current-supplicant-version	17
18	flux-max-high32	18
19	flux-max-low32	19
20	proxy-avoid	20
21	dialup-avoid	21
22	ip-privilege	22
23	login-privilege	42
26	ipv6-multicast-address	79
27	ipv4-multicast-address	87

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4 802.1x

4.1 clear dot1x user all

í ” — Õ ñ Ä dot1x ïož

clear dot1x user all

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo-

-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y 1 — Õ ñ Ä dot1x • š ï í ”ož

o¬ F å †o- 1 y í ” ñ Ä dot1x • š ïož

```
Ruijie#clear dot1x user all
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.2 clear dot1x user id

ÿ G dot1x ï session id Û í ” , • ïož

clear dot1x user id session-id

o¬ @ ƒ ª ¢o-

@ ƒ	T
- session-id	-dot1x • š ï session id

o¬ Þ . F åo-

-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ¬ } 1 Ô session id dot1x • š ï í ” ž k U Y … 4 x Xož

o¬ F å †o- 1 y í ” session id 12345678 dot1x • š ïož

```
Ruijie#clear dot1x user id 12345678
```

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.3 clear dot1x user mac

ÿ G dot1x ï mac Û í ” , • ïož

clear dot1x user mac mac-addr

o¬ @ ƒ ª ¢o-

@ ƒ	T
- mac-addr	-dot1x • š ï MAC ª -

o¬ Þ . F åo- -

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ¬ } 1 Ô mac ª - dot1x • š ï í ” ž k U Y … 4 x Xož

o¬ F å †o- 1 y í ” mac ª - 0012.3456.789A dot1x • š ïož

```
Ruijie#clear dot1x user mac 0012.3456.789A
```

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.4 clear dot1x user name

ÿ G dot1x ï ï d Û í ” , • ïož

clear dot1x user name name-str

o¬ @ ƒ ª ¢o-

@ ƒ	T
- name-str	-dot1x • š ï ï d

o¬ Þ . F åo- -

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 15

4.6 dot1x accounting

F å • š • c ç nož

dot1x accounting list-name

o¬ @ ƒ ª ¢o-

@ ƒ	T
list-name	“ Ã • c ç n

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ” k wlan ¶ % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ò ç aaa dot1x “ Ã • c © ó • k ¬ } … 4 x X Û F å , • “ Ã • což

wlansec F å “ Ã • c ä 9 ¶ B F å “ Ã • c

o¬ F å †o- 1 y F å U • š Ñ ç nož

```
Ruijie(config)# dot1x accounting dot1x-acct
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.7 dot1x acct-update base-on first-time server

F å # + Ù) • š ž * Æ ˜ G “ Ã ¾ • u Êož

dot1x acct-update base-on first-time server

¼ { # + Ù) • š ž * Æ ˜ G “ Ã ¾ • u Êož

no dot1x acct-update base-on first-time server

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	ó • ¼ {

o¬ Þ . F åo- ¼ {

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- B ã Æ ˜ ¨ ï M • š ž k G “ Ã ¾ • u Ê k x © A } L · À 7 Á ï Ù) • š ž G “ Ã ¾ • u Ê Û G “ Ã ¾ • † k U Y F å 4 x X

o¬ F å †o- 1 y F å # + Ù) • š ž * Æ ˜ G “ Ã ¾ • u Êož

```
Ruijie(config)# dot1x acct-update base-on first-time server
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.8 dot1x auth-mode

F å • š % ”ož

dot1x auth-mode { eap | chap | pap }

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	¢p( )]TJ ET 0.75 g 118.26 46324 442.68 0.24 re f 118.26 64764 0.24 15.6 re f 271.8

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B % ” k wlan ¶ % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ò ç aaa dot1x • š • c © ó • k ¬ } … 4 x X Û F å , • • š • což
wlansec F å • š • c ä 9 ¶ B F å “ Ã • c

o¬ F å †o- 1 y F å U • š Ñ ç nož

```
Ruijie(config)# dot1x authentication dot1x-authen
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.10 dot1x dbg-filter

S + Ô mac ª - ø - ² ¡ ’ Îož
dot1x dbg-filter H.H.H

Ž ” ² ¡ ¡ ~ ’ Îož
no dot1x dbg-filter H.H.H

o¬ @ ƒ ª ¢o-

@ ƒ	T
H.H.H	¬ } ÿ ß ² ¡ ’ Î ï Mac ª -

o¬ Þ . F åo- ñ Ä • š ï ² ¡ ’ Î ® ø -

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- à Ì Ä Ý O ï ¬ } ¨ ¢ ù à Ì y { ž ž k U Y * ¥ x X + ð ï ø - ² ¡ ’ Î k 9 ² — Õ ø -
ß Ú ² ¡ ’ Îož

o¬ F å †o- 1 y F å Ô mac ª - ø - ² ¡ ’ Îož

```
Ruijie(config)# dot1x dbg-filter 00d0.f800.0001
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.11 dot1x default-user-limit

F å N M U • š ï ƒ ' òož
dot1x default-user-limit num

Ê Ö ó • ›ož
no dot1x default-user-limit

o¬ @ ƒ ª ¢o-

@ ƒ	T
num	' ò%² N M Ä U • š ï ƒož @ ƒ 8 1-1000000ož ó • ¼ { k / ' ò ï ƒož

o¬ Þ . F åo- ó • ¼ {

o¬ x X % "o- N M % "4Xãy ™qu\RB3 Ü) ™´ RFúÀW€E€ŽD

o¬ Þ . F åo-

o¬ x X % ”o- ¶ B % ” % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- F å 4 Ý O dot1x x X $ e k 4 ½ , M • F å k U Y R … 4 x X

o¬ F å †o- 1 y Ê Ö dot1x ?o• ó • F åož

```
Ruijie(config)# dot1x default
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.13 dot1x encryption only

F å 802.1x WEB • š » ož
dot1x encryption only

¼ { 802.1x WEB • š » ož
no dot1x encryption only

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	

o¬ Þ . F åo- Þ . 802.1x WEB • š » ¼ {

o¬ x X % ”o- wlan ¶ % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- 802.1x y WEB • š » ž k802.1x ï N • % ž U Y … 4 x Xož

o¬ F å †o- 1 y F å 802.1x y WEB • š » ož

```
Ruijie(config-wlansec)#dot1x encryption only
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- — ¿ u V u 4

4.14 dot1x event server-invalid action bypass-wlan

F å RADIUS Æ ˜ ! ÿ ož

dot1x event server-invalid action bypass-wlan wlan-id

¼ { RADIUS Æ ˜ ! ÿ ož

no dot1x event server-invalid action bypass-wlan

o¬ @ ƒ ª ¢o-

@ ƒ	T
wlan-id	! ÿ wlan id

o¬ Þ . F åo- Þ . RADIUS Æ ˜ ! ÿ ¼ {

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- RADIUS U ž k ä E ñ Ä å wlan ž U Y … 4 x Xož

o¬ F å †o- 1 y F å RADIUS Æ ˜ ! ÿ ož

```
Ruijie(config)#dot1x event server-invalid action bypass-wlan 10
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- — ¿ u V u 4

4.15 dot1x get-static-ip enable

F å B H ² Á IP ª -ož

dot1x get-static-ip enable

¼ { B H ² Á IP ª -ož

no dot1x get-static-ip enable

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . F åo- ¼ {

o¬ x X % ”o- ¶ B % ”

4.17 dot1x mab-username upper

F å MAB • š ï d … Ý Ê >ož

dot1x mab-username upper

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . F åo- ¼ {

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- MAB • š ï d > ó • 4 Ê >ož F å Î x X e k • MAB • š ï d 1 … Ý Ê > k Y á } L MAB • š ï d Ý Ê Æ ˜ } Lož

o¬ F å †o- 1 y F å mab • š ï d … Ý Ê >ož

```
Ruijie(config)# dot1x mab-username upper
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.18 dot1x mab-username format

F å mab • š ï d ”ož

dot1x mab-username format [with-dot | with-colon | with-hyphen]

» J Ð Ð c á “ ´

no dot1x mab-username format

o¬ @ ƒ ª ¢o-

@ ƒ	T

o¬ Þ . F åo- ¼ {

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- Mab • š ¬ } ï d ” © xx-xx-xx-xx-xx-xx k F å with-hyphen
Mab • š ¬ } ï d ” © xxxx.xxxx.xxxx k F å with-dot
Mab • š ¬ } ï d ” © xx:xx:xx:xx:xx:xx k F å with-colon

o¬ F å †o- 1 y F å mab • š ï d ”ož

```
Ruijie(config)# dot1x mab-username format with-hyphen
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.19 dot1x max-req

F å request/challenge † M n) ƒož
dot1x max-req num

o¬ @ ƒ ª ¢o-

@ ƒ	T
num	request/challenge † M n) ƒ k ó • 3 k F å 8 1-10

o¬ Þ . F åo- 3

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ó • › / Uož

o¬ F å †o- 1 y F å request/challenge † M n) ƒož

```
Ruijie(config)# dot1x max-req 2
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.20 dot1x multi-account enable

F å u 4%² mac … Ú Ã Z • šož
dot1x multi-account enable

¼ { u 4%² mac … Ú Ã Z • š

o¬ … 6 -o- U # F åož

9 ² STA ¿ 4 k x — Õ Z ¶ M y ñ ò Ð Ò + ï ‹ Ë U Y F å 4 x X.

wlan ¶ % ” F å ï v O y i ¯ 9 ¶ B F å • š ï v O y

o¬ F å †o- 1 y F å Ú v O y ož

no dot1x re-authentication

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Þ . ¼ {

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- M • š k Ë Æ ˜ - è 9 k ¨ ï O Ý ê Ë k • ‘ ¼ { ¥ ož

o¬ F å †o- 1 y F å M • š ož

```
Ruijie(config)# dot1x re-authentication
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.24 dot1x timeout re-authperiod

F å M • š • œož

dot1x timeout re-authperiod time

o¬ @ ƒ ª ¢o-

@ ƒ	T
time	M • š • œ k % y a k ó • 3600 k F å 8 1-65535

o¬ Þ . F åo- 3600 a

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ó • › / Uož

o¬ F å †o- 1 y F å M • š • œož

```
Ruijie(config)# dot1x timeout re-authperiod 2400
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.25 dot1x timeout quiet-period

F å • š â Â e ² ó ž •ož

dot1x timeout quiet-period time

o¬ @ ƒ ª ¢o-

@ ƒ	T
time	• š â Â e ² ó ž • k % y a k ó • 10 k F å 8 1-65535

o¬ Þ . F åo- 10

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ó • › / Uož

o¬ F å †o- 1 y F å • š â Â e ² ó ž •ož

```
Ruijie(config)# dot1x timeout quiet-period 60
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.26 dot1x timeout supp-timeout

F å request/challenge † M n • œož

dot1x timeout supp-timeout time

o¬ @ ƒ ª ¢o-

@ ƒ	T
time	request/challenge † M n • œ k % y a k ó • 3 k F å 8 1-65535

o¬ Þ . F åo- 3 a

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ó • › / Uož

@ þ%A T EF‰ _·Rr ûTd –ï¸Q AB nûu'd –ï° • •gTdƒ<!ðS n7 • D =`PpY€-Ðyàyà·öù k " ´ia k ú € tpÕÂ ðÅ @qSk žP|j8

o¬ Þ . F åo- 3 a

o¬ x X % ”o-

4.30 dot1x valid-ip-acct enable

F å ï B H IP $ e G Ü “ Ã ož
dot1x valid-ip-acct enable

¼ { ï B H IP $ e G Ü “ Ã ož
no dot1x valid-ip-acct enable

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	ó • ¼ {

o¬ Þ . F åo- Þ . ¼ {

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- Æ ˜ } L • š ï · À ¨ “ Ã † ` k IP ª - U Y F å 4 ož

o¬ F å †o- 1 y ï B H IP $ e G Ü “ Ãož

```
Ruijie(config)# dot1x valid-ip-acct enable
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.31 dot1x valid-ip-acct timeout

F å ï • š * $ e k ª • ˆ - ¥ ï B H IP ž •ož
dot1x valid-ip-acct timeout time

Ê Ö ó • ›ož
no dot1x valid-ip-acct timeout

o¬ @ ƒ ª ¢o-

@ ƒ	T
- time	Ý ž ž • k ó • 5 ã U

o¬ Þ . F åo- ó • 5 ã U

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- • o 4 ï B H IP $ e õ • ÷ “ Ã Õ Ñ k 9 ² ï € x ž • B H IP ò G Ü “ Ã k U Y ÿ G ¬ } F å 4 Ý ž ž •ož

o¬ F å †o- 1 y ï • š * $ e k ª • ˆ - ¥ ï B H IP ž •ož

```
Ruijie(config)# dot1x valid-ip-acct timeout 10
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.32 dot1x-mab

F å — ¿ mab ož

dot1x-mab

Ê Ö ó • ›ož

no dot1x-mab

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¼ { mab

o¬ x X % ”o- wlan ¶ % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- U # F å

WLAN ï € ¬ } … ¿ mac ¬ } Ÿ ¶ • š ž F å ¥ x X

o¬ F å †o- 1 y • o — ¿ mab ož

```
Ruijie(config-wlansec)# dot1x-mab
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- N — ¿ u V u 4

4.33 show dot1x

ò 0 802.1x # ‘ @ ƒož

show dot1x

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo-

-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 802.1x ¢ ù # ‘ @ ƒo• ï ƒ ˆ ’ Îož

o¬ F å †o- 1 y ò 0 802.1x # ‘ @ ƒož

```
Ruijie#show dot1x

802.1X basic information:
   802.1X Status ......................... enable
   Authentication Mode ................... eap
   Authorization mode .................... disable
   Total User Number ..................... 0 (exclude dynamic user)
   Authenticated User Number ............. 0 (exclude dynamic user)
   Dynamic User Number ................... 0
   Re-authentication ..................... disable
   Re-authentication Period .............. 3600 seconds
   Re-authentication max ................. 3 times
   Quiet Period .......................... 10 seconds
   Tx Period ............................. 30 seconds
   Supplicant Timeout .................... 3 seconds
   Server Timeout ........................ 5 seconds
   Maximum Request ....................... 3 times
   Client Online Probe ................... disable
   Eapol Tag ............................. enable
   802.1x redirect ....................... disable
   Private supplicant only ............... disable
```

< † K y

<	ª ¢
802.1X Status	© k Ä F å 802.1x

Authentication Mode	• š % ”
Total User Number	¢ ù • š ï È ƒ k m 3 ¨ • š y] Æ • š
Authed User Number	¢ ù] • š ï ƒ
Dynamic User Number	€ M % ” Á ï ƒ O
Re-authentication	M ã • š • ¼ Ù Á
Re-authentication Period	M • š u Ê
Re-authentication max	Â Ý M • š) ƒ
Quiet Period	• š â Â $ e ² ó u Ê
Tx Period	request/id † M n • œ
Supplicant Timeout	request/challenge † M n • œ
Server Timeout	Æ ˜ Ý ž ž •
Maximum Request	Â Ý ¬ L) ƒ
Client Online Probe	ï € ¨ ¿ M y • ¼
Eapol Tag	Eapol † k tag • ¼
802.1x redirect	† 8 W su ´ • ¼
Private supplicant only	\ Ä ï € M y • ¼

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.34 show dot1x auth-address-table

ò 0 U • š Ñ ç nož

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

o¬ @ ƒ ª ¢o-

@ ƒ	T
addr	6 Ä € mac ª - ª P
Interface	6 € M ª P ç n

o¬ Þ . F åo- -

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … U • š Ñ ç nož

o¬ F å †o- 1 y ò 0 U • š Ñ ç nož

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

Packet-Num : 0

Req-Interval: 30 Seconds

< † K y

<	ª ¢
Auto-Req	• š Ù Á
User-Detect	ï y Ù Á
Req-Interval	• š † G • œ

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.36 show dot1x max-req

ò 0 request/challenge † M n) ƒ ož

show dot1x max-req

o¬ @ƒ ª ¢o- [illegible] /TT2 1 Tf -0.0026 T.22 Td ( )24.68 _0 66

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o-

4.37 show dot1x port-control

ò 0 I O M ’ Îož

show dot1x port-control [interface interface-type interface-number]

o¬ @ ƒ ª ¢o-

@ ƒ	T
interface-type	€ M • º
interface-number	€ M Ú Z

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 I O M ’ Îož

o¬ F å †o- 1 y ò 0 I O M ’ Î

```
Ruijie#show dot1x port-control
Interface Mode          Dynamic-User Static-User Max-User   Authened MAB
--------- ---------- ------------ ----------- --------- -------- ---------
Gi0/5     mac-based   0            0           unlimited no       disable
```

< † K y

<	ª ¢
Interface	I O M d f
Mode	€ M % ”
Dynamic-User	€ M Á ï ƒ O
Static-User	€ M ² Á ï ƒ O
Max-User	€ M Â Ý ï ƒ
Authened	€ M © k • š * Ù Á
MAB	€ M F å MAB • š Ù Á

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.38 show dot1x private-supplicant-only

ò 0 ¡ ³ i H ï € • ¼ Ù Áož

show dot1x private-supplicant-only

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 ¡ ³ i H ï € • ¼ Ù Áož

o¬ F å †o- 1 y ò 0 ¡ ³ i H ï € • ¼ Ù Á

```
Ruijie#show dot1x private-supplicant-only

private-supplicant-only: Disabled
```

< † K y

<	ª ¢
private-supplicant-only	¡ ³ i H ï € • ¼ Ù Á

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.39 show dot1x probe-timer

ò 0 ï € M y @ ƒož

show dot1x probe-timer

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 ï € M y @ ƒož

o¬ F å †o- 1 y ò 0 ï € M y @ ƒ

```
Ruijie#show dot1x probe-timer
Hello Interval      : 20
Hello Alive         : 60
```

< † K y

<	ª ¢

Hello Interval	M y u Ê
Hello Alive	M y ž x

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.40 show dot1x re-authentication

ò 0 M • š • ¼ Ù Áož

show dot1x re-authentication

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 M • š • ¼ Ù Áož

o¬ F å †o- 1 y ò 0 M • š • ¼ Ù Á

```
Ruijie#show dot1x re-authentication

Reauth-Enabled: Disabled
```

< † K y

<	ª ¢
Reauth-Enabled	M • š • ¼ Ù Á

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.41 show dot1x reauth-max

ò 0 request/id † M n) ƒož

show dot1x reauth-max

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … ¥ x X U Y ò 0 request/id † M n) ƒ ož

o¬ F å †o- 1 y ò 0 request/id † M n) ƒ

```
Ruijie#show dot1x reauth-max

Reauth-Max: 3 Times
```

< † K y

<	ª ¢
Reauth-Max	request/id † M n) ƒ

o¬ U P ’ Îo-

<	ª ¢
ID	R AAA B H ID kU … show aaa user all x X + Á ò 0
User	ï d
MAC	• š Ä € mac ª -
Interface0	• š Ä € ñ ¨ € M
VLAN	• š Ä € ñ ¨ vlan id
Auth-State	• š Ù Á Ñ Ù Á
Backend-State	• š Ù Á Ñ Ù Á
Port-State	€ M • š Ù Á
User-Type	• š • º
Time	¨ ¿ ž •

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.43 show dot1x timeout quiet-period

ò 0 • š â Â e ² ó ž •ož
show dot1x timeout quiet-period

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ò 0 • š â Â e ² ó ž •ož

o¬ F å †o- 1 y ò 0 • š â Â e ² ó ž •

```
Ruijie#show dot1x timeout quiet-period

Quiet-Period: 10 Seconds
```

< † K y

<	ª ¢
Quiet-Period	• š â Â e ² ó ž •

o¬ Þ • “ÖúÀ•à’ ò 7’ 4Sa68 ª ¢

o¬ u V ª ¢o- -

4.44 show dot1x timeout re-authperiod

ò 0 M • š • œož

show dot1x timeout re-authperiod

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ò 0 M • š • œož

o¬ F å †o- 1 y ò 0 M • š • œ

```
Ruijie#show dot1x timeout re-authperiod

Reauth-Period: 3600 Seconds
```

< † K y

<	ª ¢
Reauth-Period	M • š • œ

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.45 show dot1x timeout server-timeout

ò 0 Æ ˜ Ý ž ž •ož

show dot1x timeout server-timeout

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ò 0 Æ ˜ Ý ž ž •ož

o¬ F å †o- 1 y ò 0 Æ ˜ Ý ž ž •

```
Ruijie#show dot1x timeout server-timeout

Server-Timeout: 5 Seconds
```

< † K y

<	ª ¢
Server-Period	Æ ˜ Ý ž ž •

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.46 show dot1x timeout supp-timeout

ò 0 request/challenge † M n • œož

show dot1x timeout supp-timeout

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- ò 0 request/challenge † M n • œož

o¬ F å †o- 1 y ò 0 request/challenge † M n • œ

```
Ruijie#show dot1x timeout supp-timeout

Supp-Timeout: 3 Seconds
```

< † K y

<	ª ¢
Supp-Timeout	request/challenge † M n • œ

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

4.47 show dot1x timeout tx-period

ò 0 request/id † M n • œož

show dot1x timeout tx-period

o¬ @ ƒ ª ¢o-

o¬ F å †o- 1 y ò 0 • š ï ¦ Â ’ Î

Vlan id	ï vlan id
Access from port	ï ñ ¨ € M
Time online	ï ¨ ¿ ž •
User ip address	ï IP ª -
Max user number on this port	¥ € M Â Ý ï ƒ
Authorization session time	¥ ï I Ó ž •
Supplicant is private	¥ ï ï € © k © é [su
Start accounting	¥ ï … 4 “ Ã
Permit proxy user	ª • ¥ ï W ò
Permit dial user	ª • ¥ ï * Z
IP privilege	¥ ï IP Ó ’ ´ ð
user acl-name	¥ ï G ACL ’ Î

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

4.50 show dot1x user name

ÿ G ï mac ò 0 ï ¦ Â ’ Îož
show dot1x user name name

o¬ @ ƒ ª ¢o-

@ ƒ	T
-name	- • š ï ï d …

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”o• N M % ”

o¬ Þ . ´ ðo- 15

o¬ … 6 -o- … show dot1x summary ò 0 ï " } ’ Î k R # + ï ï k … 4 x X %² 5 ò 0 ï ’ Îož

o¬ F å †o- 1 y ò 0 • š ï ¦ Â ’ Î

```
Ruijie#show dot1x user name ts-user

User name: ts-user
User id: 16777225
Type: static
Mac address is 0023.aeaa.4286
Vlan id is 2
```

```
Access from port Gi0/5
Time online: 0days 0h 0m17s
User ip address is 192.168.3.21
Max user number on this port is 0
Authorization session time is 1000 seconds
Supplicant is private
Start accounting
Permit proxy user
Permit dial user
IP privilege is 0
 user acl-name ts-user_6_0_0 :
```

< † K y

<	ª ¢
User name	ï d f
User id	ï id
Type	ï • º
Mac address	ï mac ª -
Vlan id	ï vlan id
Access from port	ï ñ ¨ € M
Time online	ï ¨ ¿ ž •
User ip address	ï IP ª -
Max user number on this port	¥ € M Â Ý ï ƒ
Authorization session time	¥ ï I Ó ž •
Supplicant is private	¥ ï ï € © k © é [su
Start accounting	¥ ï … 4 “ Ã
Permit proxy user	ª • ¥ ï W ò
Permit dial user	ª • ¥ ï * Z
IP privilege	¥ ï IP Ó ’ ´ ð
user acl-name	¥ ï G ACL ’ Î

o¬ U P ’ Îo- **-**

o¬ u V ª ¢o- -

5 ARP Check

5.1 arp-check

• o ARP † òož

arp-check

¼ { ARP † òož

no arp-check

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¼ { ARP Check

o¬ x X % ”o- N M F å % ” ê ñ — ¿ ¶ F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ÿ G ¶ • % ² ` c ï ’ Î D ÿ , • ARP ¡ ’ Î k ë + à Ì ³ c ARP † ¡ož

o¬ F å †o- µ © ¨ € M GigabitEthernet 0/1 • o ARP Check † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# arp-check
Ruijie(config-if-GigabitEthernet 0/1)# end
Ruijie# configure terminal
Ruijie(config)# wlansec 1
Ruijie(config-wlansec)# arp-check
Ruijie(config-wlansec)# end
```

o¬ à • co- 1 y … show interface arp-check list x X k U Y ò 0 N M Ž ÿ | ARP Check n ¾ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

5.2 show interface arp-check list

ò 0 N M Ž ÿ | ARP Check n ¾ož

show { interface [interface-type interface-number] | wlan [wlan-id] } arp-check list

o¬ @ ƒ ª ¢o-

@ ƒ	T
interface-type	Ä ¿ N M • º z
interface-number	Ä ¿ N M Ú Z z
wlan-id	— ¿WLAN ID

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ü g 4 x X k U Y ò 0 ¢ ù IP › ª - Ç ƒ G € F å Õ Ñož

o¬ F å †o- µ © ª P † ÿ y

```
Ruijie(config)#show interface arp-check list
INTERFACE                    SENDER MAC      SENDER IP          POLICY SOURCE
------------------------ ---------------- ---------------- --------------------
GigabitEthernet 0/1          00D0.F800.0003    192.168.1.3        address-bind
GigabitEthernet 0/1          00D0.F800.0001    192.168.1.1        port-security
GigabitEthernet 0/4                            192.168.1.3        port-security
GigabitEthernet 0/5          00D0.F800.0003    192.168.1.3        address-bind
GigabitEthernet 0/7          00D0.F800.0006    192.168.1.6        AAA ip-auth-mode
GigabitEthernet 0/8          00D0.F800.0007    192.168.1.7        GSN
Ruijie(config)#show wlan arp-check list
INTERFACE                    SENDER MAC      SENDER IP          POLICY SOURCE
------------------------ ---------------- ---------------- --------------------
WLAN 1                       00D0.F800.0008    192.168.1.8        GSN
```

< † K y

<	ª ¢
INTERFACE	N M d f
SENDER MAC	› MAC ª -
SENDER IP	› IP ª -
POLICY SOURCE	“ £ Û ›

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

6 T ¯ » ARP °

1.1 anti-arp-spoofing ip

— å … à ¼arp - áož
anti-arp-spoofing ip ip-address

í ” … à ¼ arp - áož
no anti-arp-spoofing ip ip-address

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-address	à ¼ IP ª -

o¬ Þ . F åo- ¥ Þ . ÿ |

o¬ x X % ”o- — ¿ ¶ F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 1o• -

7 µ A IP+MAC –

7.1 address-bind

— å ¶ B IP+MAC ª - Ç ož

address-bind { ip-address | ipv6-address } mac-address

í J ¶ B IP+MAC ª - Ç ož

no address-bind { ip-address | ipv6-address } mac-address

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-address	Ç IPv4 ª -
ipv6-address	Ç IPv6 ª -
mac-address	Ç MAC ª -

o¬ Þ . F åo- —

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y µ † ÿ © ¶ B F å IPv4+MAC ª - Ç y

```
Ruijie# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Ruijie(config)# address-bind 192.168.5.1 00d0.f800.0001
```

o¬ à • co- 1 y … show run ê ñ show address-bind x X ò 0

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

7.2 address-bind install

¶ B ª - Ç • o

address-bind install

¼ { ª - Ç

no address-bind install

o¬ @ ƒ ª ¢o-	@ ƒ	T

o¬ @ ƒ ª ¢o-

@ ƒ	T
compatible	Ã % ”
loose	! à % ”
strict	% ”

o¬ Þ . F åo- % ”

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y w J IPv6 ª - Ç % ” y

```
Ruijie# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Ruijie(config)# address-bind ipv6-mode compatible
```

o¬ à • co- … show run x X U Y ò 0ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

7.4 address-bind uplink

F å ª - Ç † Ù € M

address-bind uplink interface-id

Ê Ö ó • % ”

no address-bind uplink interface-id

o¬ @ ƒ ª ¢o-

@ ƒ	T
interface-id	A E M ê ñ L2AP M

o¬ Þ . F åo- ñ Ä € M ® ³ † Ù M

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- -

o¬ F å †o- 1 y w J IPv6 ª - Ç % ” y

```
Ruijie# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Ruijie(config)# address-bind uplink GigabitEthernet 0/1
```

o¬ à • co- …

< † K y

<	ª ¢

8 DHCP Snooping

8.1 clear ip dhcp snooping binding

} í ” DHCP Snooping ƒ G € ñ Ä Á ï k ¬ } ¨ Ô Ó % ” ü g 4 x Xož

clear ip dhcp snooping binding [ip] [mac] [vlan vlan-id] [interface interface-id | wlan wlan-id]

o¬ @ ƒ ª ¢o-

@ ƒ	T
mac	6 í ” ï MAC ª -ož
vlan-id	6 í ” ï vlan idož
ip	6 í ” ï IP ª -ož
interface-id	6 í ” ï ñ K N Mož
wlan-id	6 í ” ï ñ K WLAN

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ü g ¥ x X k U Y í ” DHCP snooping ƒ G € ñ Ä Á ïož

û a — N U þ — s IP Source Guard _ Ÿ Ç DHCP ‘ 7 í ƒ È î • M ¥ À 9 î d

o¬ F å †o- 1 y µ í ” DHCP snooping ƒ G € ñ Ä Á ï † ÿ y

```
Ruijie# clear ip dhcp snooping binding
Ruijie# show ip dhcp snooping binding
Total number of bindings: 0
NO.     MACADDRESS          IPADDRESS          LEASE(SEC)     TYPE            VLAN
INTERFACE
----- ------------------ ---------------- ------------ ------------- ----- --------------------
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

8.2 ip dhcp snooping

o ¶ B DHCP Snooping ož

ip dhcp snooping

¼ { ¶ B DHCP Snooping ož
no ip dhcp snooping

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ø • DHCP Snooping ¶ B e kU Y … show ip dhcp snooping x X ò 0 DHCP Snooping © k ø •ož

o¬ F å †o- 1 y µ © ø • DHCP snooping ¶ B • ¼ † ÿ y

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

o¬ à • co- 1 y … show ip dhcp snooping x X k U Y ò 0 DHCP Snooping © o © ¼ {ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.3 ip dhcp snooping bootp-bind

o DHCP Snooping u 4 Bootp Ç ož
ip dhcp snooping bootp-bind

¼ { DHCP snooping u 4 Bootp Ç ož
no ip dhcp snooping bootp-bind

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- Þ . Õ Ñ k DHCP Snooping N + Bootp † g ô Gož ø • ¥ e k DHCP Snooping + Bootp # ‘ † gLá Mož ¢ Bootp ï € è ¬ ª - e kDHCP Snooping 1 Bootp ï • ñ ² Á Ç ƒ G € ož

o¬ F å †o- 1 y µ © ø • DHCP Snooping u 4 Bootp Ç † ÿ y

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

o¬ à • co- 1 y … show ip dhcp snooping x X k U Y ò 0 DHCP Snooping © k u 4 Bootp Ç ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.4 ip dhcp snooping check-giaddr

o DHCP Snooping u 4 Ô ò Relay ¬ L † ož
ip dhcp snooping check-giaddr

¼ { DHCP snooping u 4 Ô ò Relay ¬ L † ož
no ip dhcp snooping check-giaddr

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- • o 4 e k B æ … Relay ¬ L ÿ è DHCP Snooping Ç n ¾ k ò IP Source Guard/dot1x • š ˆ k k é U - ï — c àož

standard-format	Option82 # ¾ … ö Õ ”ož

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 1 y * F å ¥ x X k 1 ¨ DHCP ¬ L † • option82 ’ Î kDHCP Æ ˜ ÿ G option82 # ¾ ’ Î g ¾ ` ò ª - ã Fož

2 y o option82 # ¾ ž k ¥ ó • Ô 9 ý J % ”ož

DHCP Snooping option82 _ Ÿ 0 DHCP Relay option82 _ Ÿ â Ÿ k d

o¬ F å †o- 1 y µ © F å ¨ DHCP ¬ L † µ option82 # ¾ † ÿ y

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

o¬ à • co- 1 y … show ip dhcp snooping x X k U Y ò 0 Option82 © o © ¼ {ož

o¬ U P ’ Îo- -

o¬ o • j ¨o- 1 y DHCP Relay option82 c ž • oož k - Â Ä DHCP † option82 < › ß jož

o¬ u V ª ¢o- -

8.9 ip dhcp snooping information option format remote-id

— å option82 # ¾ Ô 9 ý J % ” ž k ÿ # ¾ remote-id # … ê © Ñ dož

ip dhcp snooping informati on option format remote-id { string ascii-string | hostname }

H ƒ — å option82 # ¾ ÿ # ¾ remote-id # … ê © Ñ dož

no ip dhcp snooping information option format remote-id { string ascii-string | hostname }

o¬ @ ƒ ª ¢o-

@ ƒ	T
string ascii-string	Option82 # ¾ remote-id ý J ” Ä # … ož
hostname	Option82 # ¾ remote-id ý J ” Ä Ñ dož

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ F å †o- 1 y µ © F å

2 y ¥ x X F å ¨ 8 C A E Mo•AP M ê ñ / x ÿ N M k y ö ÿ |ož ¿ U N M F å ¥ x X 1 k â Âož

⚠ ¹ (Ü h] Ç ‡ U ð DHCP û ` v Ç • " TRUST Ç d

o¬ F å †o- 1 y µ © F å N M GigabitEthernet 0/1 TRUST M † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# ip dhcp snooping trust
Ruijie(config-if-GigabitEthernet 0/1)# end
```

o¬ à • co- 1 y … show ip dhcp snooping x X k U Y ò 0 N M ' ` Ù Áož

o¬ U P ' Îo- 1 y ò ç N M F å 4 ¿ U N µ ¶ O ò # ¾ k — c — å è TRUST Mož

```
% Failed to execute command, because of "Security config conflict".
```

2 y ¢ © ¨ 2 C A E Mo•AP M ê ñ / x ÿ N M ü g ¥ x X ž k é U P j ¨ož

```
% Failed to execute command, because of "Configure is not supported on current interface".
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.12 ip dhcp snooping verify mac-address

ø • › MAC ª - û à ož

ip dhcp snooping verify mac-address

¼ { › MAC ª - à ož

no ip dhcp snooping verify mac-address

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- › MAC ª - à k © + Û UNTRUST N M DHCP ¬ L † g ò k ò e è C ã B › MAC ª - y DHCP † CLIENT MAC < © k , což › MAC ª - à â Â ž k † 1 t ’ož

o¬ F å †o- 1 y µ © ø • DHCP † › MAC ò † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping verify mac-address
Ruijie(config)# end
```

o¬ à • co- 1 y …

2 y µ © ¨ VLAN1 VLAN10 ø • DHCP Snooping † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# ip dhcp snooping vlan 1-10
Ruijie(config)# end
```

o¬ à • co- 1 y … show run x X k U Y ò 0 „ ? VLAN Ô 9 ¼ { % ”ož

o¬ U P ’ Îo- 1 y 3 — å VLAN › ¨ 1~4094 8 Ä k é U P j ¨ož

```
% Failed to execute command, because of "Not supported vlan range".
```

2 y 3 6 VLAN ¨ k é U P j ¨ož

```
% Failed to execute command, because of "VLAN not exist".
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.14 ip dhcp snooping vlan vlan-id information option change-vlan-to vlan

— å option82 # ¾ Ô 9 ý J % ” ž k ÿ # ¾ circuit-id VLAN 6 VLANož

ip dhcp snooping vlan vlan-id information option change-vlan-to vlan vlan-id

¼ { ¥ ož

no ip dhcp snooping vlan vlan-id information option change-vlan-to vlan vlan-id

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan-id	6 g Á E VLAN Ú Z

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- N M F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- * F å ¥ x X k ¢ DHCP † option82 # ¾ • o k Ô 9 ý J % ” ž k 1 option82 ÿ # ¾ circuit-id Ê - VLAN “ w 6 VLANož

o¬ F å †o- 1 y µ © F å ¨ DHCP ¬ L † • option82 # ¾ k ¿ option82 ÿ # ¾ circuit-id VLAN4094 “ w VLAN4093 † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# ip dhcp snooping vlan 4094 information option change-vlan-to vlan 4093
Ruijie(config-if-GigabitEthernet 0/1)# end
```

o¬ à • co- 1 y … show run x X k U Y ò 0 © k • oož

o¬ U P ’ Îo- 1 y 3 6 VLAN ¨ k é U P j ¨ož

```
% Failed to execute command, because of "VLAN not exist".
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.15 ip dhcp snooping vlan vlan-i d information option format-ty pe circuit-id string

— å option82 # ¾ Ô 9 ý J % ” ž k ÿ # ¾ circuit-id ï # Ä g ¥ ” ASCII h w g ô Gož
ip dhcp snooping vlan vlan-id information option forma t-type circuit-id string ascii-string

¼ { 4 ož
no ip dhcp snooping vlan vlan-id information option format-type circuit-id string ascii-string

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan-id	DHCP ¬ L † ñ ¨ VLAN
ascii-string	Circuit ID } Ê - ï # Ä

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- N M F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- * F å ¥ x X k ¢ DHCP † option82 # ¾ • o k Ô 9 ý J % ” ž k 1 option82 ÿ # ¾ circuit-id Ä — å # Ä ož ¥ Ä x † 3 ñ 63 - … ož

o¬ F å †o- 1 y µ © F å ¨ DHCP ¬ L † µ option82 # ¾ k ¿ option82 ÿ # ¾ circuit-id Ä port-name † ÿ y

```
Ruijie# configure terminal
```

```
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# ip dhcp snooping vlan 4094 information option format-type circuit-id
string port-name
Ruijie(config-if-GigabitEthernet 0/1)# end
```

o¬ à • co- 1 y … show run x X k U Y ò 0 © k • oož

o¬ U P ' Îo- 1 y 3 6 VLAN ¨ k é U P j ¨ož

```
% Failed to execute command, because of "VLAN not exist".
```

2 y 3 6 # … © 3 ñ 63 … k é U P j ¨ož

```
% Failed to execute command, because of "Circuit-ID string must be 3 to 63 characters".
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.16 ip dhcp snooping vlan max-user

— å N M 6 vlan Â Ý ª • ÿ è Ç ï ƒož

ip dhcp snooping vlan vlan-word max-user user-number

¼ { 4 ož

no ip dhcp snooping vlan vlan-word max-user user-number

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan-word	ÿ | vlan 8
user-number	ª • Â Ý ï ƒ O

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % "o- N M F å % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- * F å ¥ x X k• o Â 9 N M y VLAN Ç ï ' ò kF ` , • à Ì " ÷ È ã kU Y Ü ñ … 2 q - DHCP † x à • ož

o¬ F å †o- 1 y µ © F å ¨ N M 1 VLAN 1~10 C VLAN 20 µ • o Ç ï ƒ) ' ò k Â Ú ª • 30 ï y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/1
```

```
Ruijie(config-if-GigabitEthernet 0/1)# ip dhcp snooping vlan 1-10,20 max-user 30
Ruijie(config-if-GigabitEthernet 0/1)# end
```

o¬ à • co- 1 y … show run x X k U Y ò 0 © k • oož

o¬ U P ’ Îo- 1 y 3 N M DHCP snooping TRUST M k é U P j ¨ož

```
% Failed to execute command, because of "Security config
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

8.18 show ip dhcp snooping

} ò 0 DHCP Snooping ¢ ù F å Õ Ñ k ¬ } ¨ Ô Ó % ” ü g 4 x Xož
show ip dhcp snooping

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ü g 4 x X k U Y ò 0 ¢ ù DHCP Snooping F å Õ Ñož

o¬ F å †o- 1 y µ © ò 0 ¢ ù DHCP Snooping F å Õ Ñ † ÿ y

```
Ruijie# show ip dhcp snooping
Switch DHCP snooping status                    :    ENABLE
DHCP snooping Verification of hwaddr status    :    DISABLE
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

9 IP Source Guard

9.1 ip source binding

¨ IP › ª - Ç ƒ G € • ² Á ï ' Îož

ip source binding mac-address vlan vlan-id ip-address { interface interface-id | wlan wlan-id | ip-mac | ip-only }

í " + • ² Á ïož

no ip source binding mac-address vlan vlan-id ip-address { interface interface-id | wlan wlan-id | ip-mac | ip-only }

o¬ @ ƒ ª ¢o-	@ ƒ	T ª(ïd /TT00.0162 Tc 0.D <6FAC05400(a) Tf 0.28 0 Td (8.18 491.1 .24062B06TJ /TT<>T

```
Ruijie(config)# ip source binding 0000.0000.0002 vlan 1 1.1.1.2 wlan 1
Ruijie(config)# end
```

2 y µ © — å%² ² Á ï ¨ ¶ B 8 Ä ÿ | k w ¡ • º © IP+MAC Ç † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# ip source binding 0000.0000.0001 vlan 1 1.1.1.1 ip-mac
Ruijie(config)# end
```

3 y µ © — å%² ² Á ï ¨ ¶ B 8 Ä ÿ | k w ¡ • º © N IP Ç † ÿ y

```
Ruijie# configure terminal
Ruijie(config)# ip source binding 0000.0000.0001 vlan 1 1.1.1.1 ip-only
Ruijie(config)# end
```

o¬ à • co- 1 y … show ip source binding x X k U Y ò 0 IP › ª - Ç ƒ G €ož

o¬ U P ’ Îo- 1 y … no x X í ” ² Á F å ž k ÿ µ @ ƒ $ ù F å ž @ ƒ %² k é U P j ¨ož

```
% Failed to execute command, because of "No such binding entry
[mac 0000.0000.0001 ip 1.1.1.1 vlan 2 GLOBAL]".
```

2 y F å ï “ £ ž k 3 ÿ µ VLAN w ¨ k é U P j ¨ož

```
% Failed to execute command, because of "VLAN 4094 not exist".
```

3 y F å ï “ £ ž k 3 ÿ µ Ä ¿ N M © 8 C A E Mo•AP M ê ñ / x ÿ N M k é U P j ¨ož

```
% Failed to execute command, because of "Configure is not supported on current interface".
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

9.2 ip verify source

ø • € M IP Source Guard ož

ip verify source [port-security]

¼ { € M IP Source Guard ož

no ip verify source

o¬ @ ƒ ª ¢o-

@ ƒ	T
port-security	F å IP Source Guard g Â 9 IP+MAC ož

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- N M F å % ” ê ñ — ¿ ¶ F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 1 y * ¥ x X ø • € M IP Source Guard k U Y + ï g Â 9 IP y k ê ñ g Â 9 IP+MAC yož

2 y N u 4 ¨ Ä ¿ N µ 2 C A E Mo•AP Mo• / x ÿ N M Y C — ¿ N µ WLAN F å ¥ x Xož ¿ U • º N M 1 F å â Âož

, • , • • IP Source Gourd _ Ÿ § æ ¥ ô h ÿ W DHCP Snooping 0 A _ " d / j Ç h ' ' — s t IP Source Gourd _ Ÿ ì ¾ " æ ¥ ô l ÿ W V ý ! U þ j Ç M ¥ þ (° î d

o¬ F å †o- 1 y µ © F å Ä ¿ A E M y — ¿ WLAN IP Source Guard k N + ï g Â 9 IP y y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# ip verify source
Ruijie(config-if)# end
Ruijie(config)# wlansec 1
Ruijie(config-wlansec)# ip verify source
Ruijie(config-wlansec)# end
```

2 y µ © F å N M 2 IP Source Guard k + ï g Â 9 IP+MAC y y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/2
Ruijie(config-if-GigabitEthernet 0/2)# ip verify source port-security
Ruijie(config-if)# end
Ruijie(config)# wlansec 2
Ruijie(config-wlansec)# ip verify source port-security
Ruijie(config-wlansec)# end
```

o¬ à • co- 1 y … show ip source binding x X k U Y ò 0 IP Source Guard ï ¡ n ¾ož

2 y … show run x X k U Y ò 0 x X © k F å è ož

o¬ U P ’ Îo- 1 y ò ç ¨ DHCP ’ ` M q • k é U P j ¨ož

```
% Failed to execute command, because of “Security configuration conflict in interface name".
```

o¬ o • j ¨o- 1 y • o IP Source Gourd k ò F å ` c ï “ £ Û ›ož

o¬ u V ª ¢o- -

9.3 Ip verify source exclude-vlan

€ M 6 IP Source Guard † Ù VLAN ož

ip verify source exclude-vlan vlan-id

í ” € M IP Source Guard † Ù VLAN ož

no ip verify source exclude-vlan vlan-id

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan-id	I € M IP Source Guard O ò vlan id

o¬ Þ . F åo- ¥ Þ . ¼ {ož

o¬ x X % ”o- N M F å % ” ê ñ — ¿ ¶ F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- 1 y o IP Source Guard € M k * ¥ x X U Y O ò ¥ € M î ? VLAN I IP Source Guard O ò k ? VLAN 8 Ä IP † t ò y ¡ ò © + N y gož

2 y € M ¼ { IP Source Guard e k 6 † Ù VLAN - k t Ž ”ož

3 y u 4 ¨ Ä ¿ N µ 2 C A E Mo•AP Mo• / x ÿ N M ê ñ — ¿ N µ WLAN F åož

▲ Ç • ¡ • s N IP Source Guard ì ¶ » G H ó VLAN d

o¬ F å †o- 1 y µ © F å € M IP Source Guard w 6 † Ù VLAN y

```
Ruijie# configure terminal
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# ip verify source
Ruijie(config-if-GigabitEthernet 0/1)# ip verify exclude-vlan 1
Ruijie(config-if)# end
Ruijie(config)# wlansec 1
Ruijie(config-wlansec)# ip verify source
Ruijie(config-wlansec)# ip verify exclude-vlan 1
Ruijie(config-wlansec)# end
```

o¬ à • co- 1 y … show run x X k U Y ò 0 x X © k F å è ož

o¬ U P ’ Îo-

```
-
```

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

9.4 show ip source binding

ò 0 IP › ª - Ç ƒ G € ' Îož

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

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-address	ª P + • ip ï Ç ' Î z
mac-address	ª P + • mac ï Ç ' Î z
dhcp-snooping	ª P Á ï Ç ' Î z
static	ª P ² Á ï Ç ' Î z
vlan-id	ª P + • vlan ï Ç ' Î z
interface-id	ª P + • Ä ¿ N µ N M ï Ç ' Îož
wlan-id	ª P + • — ¿ N µ WLAN ï Ç ' Îož

o¬ x X % "o- Ô Ó % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ü g 4 x X k U Y ò 0 ¢ ù IP › ª - Ç ƒ G € F å Õ Ñož

o¬ F å †o- 1 y µ © ª P † ÿ y

```
Ruijie# show ip source binding static
Ruijie#show ip source binding static
Total number of bindings: 5
NO.    MACADDRESS          IPADDRESS        LEASE(SEC)    TYPE          VLAN
INTERFACE
----- ---------------- -------------- ----------- ------------ ----- --------------------
1      0001.0002.0001      1.2.3.2          Infinite      Static        1      Global
2      0001.0002.0002      1.2.3.3          Infinite      Static        1      GigabitEthernet 0/5
3      0001.0002.0003      1.2.3.4          Infinite      Static        1      Global
4      0001.0002.0004      1.2.3.5          Infinite      Static        1      Global
5      0001.0002.0005      1.2.3.6          Infinite      Static        1      WLAN 1
```

< † K y

<	ª ¢
Total number of bindings	¢ ù Binding ƒ G € Ç ƒ

NO.	“ £ ~ Z
MACADDRESS	ï MAC ª -
IPADDRESS	ï IP ª -
LEASE(SEC)	“ £ c ³ ž •
TYPE	“ £ • º
VLAN	ï ñ K VLAN
INTERFACE	Ä ¿ N M d f ê ñ — ¿ WLAN ID

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

9.5 show ip verify source

ò 0 IP Source Guard ï ¡ n ¾ož

show ip verify source [interface interface-id] [wlan wlan-id]

o¬ @ ƒ ª ¢o-

@ ƒ	T
interface-id	ª P + • Ä ¿ N M ï ¡ n ¾
wlan-id	ª P + • — ¿ WLAN ï ¡ n ¾

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ü g 4 x X kU Y ò 0 ¢ ù IP › ª - Ç ï “ £ ÿ | Õ Ñož) ù IP Source Guard u 4 “ £ Ù Á , ò y

- Inactive-restrict-off k Ç “ £ ñ K N M Z Ä • o IP Source Guard ož
- Inactive-system-error k 9 © Ï j ¨ k — c 1 Ç ï “ £ ô E è ¡ n ¾ož
- Active k Ç ï “ £ n ¾ + • ¡ n ¾] Æ ÿ |ož

o¬ F å †o- 1 y µ © ª P † ÿ y

```
Ruijie # show ip verify source
Total number of bindings: 7
NO.     INTERFACE                FILTERTYPE   FILTERSTATUS              IPADDRESS
MACADDRESS          VLAN TYPE
----- -------------------- ----------- ---------------------   ---------------- ---------------- -------- -------------
1       Global                   IP+MAC        Inactive-system-error   192.168.0.127     0001.0002.0003   1
```

```
Static
2    GigabitEthernet 0/5   IP-ONLY    Active                    1.2.3.4          0001.0002.0004   1
DHCP-Snooping
3    Global                IP-ONLY    Active                    1.2.3.7          0001.0002.0007   1
Static
4    Global                IP+MAC     Active                    1.2.3.6          0001.0002.0006   1
Static
5    GigabitEthernet 0/1   UNSET      Inactive-restrict-off     1.2.3.9          0001.0002.0009   1
DHCP-Snooping
6    GigabitEthernet 0/5   IP-ONLY    Active                    Deny-All
7    WLAN 1                IP-ONLY    Active                    Deny-ALL
```

< † K y

<	ª ¢
NO.	“ £ ~ Z
INTERFACE	Ä ¿ N µ N M ê ñ — ¿ N µ WLAN
FILTERTYPE	¡ Œ
FILTERSTATUS	Ù Á
IPADDRESS	ï IP ª -
MACADDRESS	ï MAC ª -
VLAN	ï ñ K VLAN
TYPE	ï • º k , DHCP Snooping Á ÿ è ê ñ ² Á F å ÿ è

10 DNS SNOOPING

10.1 clear free-url

Ž ” ² • š URL ’ Îož

clear free-url

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”o• ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- … ¥ x X U Y Ž ” ² • š URL ’ Îož

o¬ F å †o- 1 y Ž ” ² • š APP ’ Î

```
Ruijie(config)#clear free-url
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

10.2 free-url

F å ² • š URLož

free-url { weixin | sina | iphone | url url }

H ƒ ² • š URLož

no free-url { weixin | sina | iphone | url url }

o¬ @ ƒ ª ¢o-

o¬ Þ . F åo- Þ . q F åož

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ² • š URL U Y c ž • o Ú ož

o¬ F å †o- 1 y F å ² • š URLož

```
Ruijie#configure terminal
Ruijie(config)# free-url weixin
Ruijie(config)#exit
```

o¬ à • co- 1 y … show free-url x X k ò 0 ² • š URL ’ Îož

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

10.3 show free-url

ò 0 ² • š URL ’ Îož - -

Â ð

_ 0

```
Total number of ip address       : 11


====================== free-url domain name table ========================

Host                                type
```

11 IGMP Snooping

11.1 clear ip igmp snooping gda-table

Ž ” Á ô G n ¾ož

clear ip igmp snooping gda-table

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ x X % ”o- Ô Ó % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- IGMP Snooping ô G n ¾ m yVLAN Ú Zo• Á ª -o• è N Mo• è t Mož

VLAN Ú Z y Á ª - Š%² ö œ 4%² ô G n ¾ož

%² ô G n ¾ U Y m Ú è N Mg U © Á è N M ê ² Á è N M bž² Á è N M k ï

ož

%² ô G n ¾ U Y m Ú è t M g U © Á è t M ê ² Á è t M bž ² Á è t M k ï ož … clear ip igmp snooping gda-table x X í ” ² Á è t Mož

o¬ F å †o-

```
Ruijie# clear ip igmp snooping gda-table
```

o¬ U P ’ Îo- -

o¬ u V ª ¢o- -

11.2 ip igmp snooping

¶ B o IGMP Snooping w — å IVGL g % ”ož

ip igmp snooping

¼ { IGMP Snoopingož

no ip igmp snooping

Ê Ö IGMP Snooping Þ . F å

default ip igmp snooping

o¬ @ ƒ ª ¢o-

@ ƒ	T

-	-

o¬ Þ . F åo- ¼ { IGMP Snooping

o¬ x X % ”o- ¶ B % ” ê AC ap-config % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¨ IVGL % ” k_ VLAN • Á n v © , ; Þ y ož Ñ Q É \ Ô 9 c%² VLAN è N M ¬ L N v Á n v z — Õ ¨ N v ñ ` ~%² VLAN Á n v ž k Q ª , c VLAN Ä è t M ô Gož AC ¨ ap-config % ” * igmp snooping x X F å o AP Á n k * no igmp snooping ¼ { AP Á n

o¬ F å †o- 1 y o IGMP Snooping IVGL % ”ož

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

o¬ à • co- * show ip igmp snooping x X ò 0 ¢ ù IGMP Snooping Ù Á

o¬ U P ’ Îo- 1 y ò ç — Õ u 4 IVGL % ” k é U P j ¨ož

```
% Error: It’s invalid to configure IVGL mode in this product.
```

2 y ò ç — Õ F å 4 8 C Á n ² Á v g O ò k é U P ¯ ¼ { 8 C Á n ² Á v g O òož

o¬ x X % ”o- ¶ B % ” ê AC

o¬ x X % ”o- ¶ B % ” ê AC ap-config % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- z x X ©%² i x X k — ¿ ê Ë k à Ì ê Ë ß I Õ Ñ U Y F å 4 x X k 9 U ¨
ë » k ò ç v ñ ò ¤ † • ‹ report † ¢ k € M ® ½ < k ï Jož
z ¨ AC ap-config % ” * x X igmp snooping ignore-query-timer F å AP ¿ ò ¤ † M å € M
ï ž ˜ k * no igmp snooping ignore-query-timer Ê Ö ó • F åož

o¬ F å †o- 1 y F å ¿ ò ¤ † M å € M ï ž ˜ož

```
Ruijie(config)# ip igmp snooping ignore-query-timer
```

o¬ à • co- * show ip igmp snooping ò 0 F å @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.6 ip igmp snooping mcast-to-unicast enable

• o Á n ô % n ož
ip igmp snooping m cast-to-unicast enable

¼ { Á n ô % n ož
no ip igmp snooping mcast-to-unicast enable

Ê Ö Á . è N M Þ . F åož
default ip igmp snoopi ng mcast-to-unicast enable

o¬ @ ƒ ª ¢o-

@ ƒ	T
-	-

o¬ Þ . F åo- Ì o 4

o¬ x X % ”o- AC ap-config % ” ê ñR…AP ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- — ¿ Á n ê Ë k Q Ä AP õ À Ä Á n ô % n ož

o Á n ô % n $ e k ¢ † ñ AP k † U Y ÿ G Á n ô % n Œ î • „ ? Á n † ¬ } ô % n Ô ò G ož

AC ap-config % ” x X igmp snooping m cast-to-unicast enable

AC ap-config % ” F å no igmp snooping m cast-to-unicast enable yR..AP ¶ B % ” F no ip igmp snooping m cast-to-unicast enable U Y ¼ { Á n ô % n

s t ¦ Ì g æ Ì _ Ÿ ¦ Ì g æ Ì Û ì m) û ¦ Ì q 3 g æ Ì g Ÿ d ¦ Ì g æ Ì ‰ 8 â ' ' ‘ — s ¦ Ì g æ Ì a — . ‘ õ Ö c Q Û ¾ q 3 . Ñ c ¦ Ì g æ Ì ³ d

o¬ F å †o- 1 y ¨ ap-config % ” • o Á n ô % n

```
Ruijie(config-ap)# igmp snooping mcast-to-unicast enable
```

o¬ à • co- * show ip igmp snooping x X ò 0 F å © k ÿ |

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.7 ip igmp snooping mcast-to-unicast group-range

F å Á n ô % n Á n Á 8 ož

ip igmp snooping mcas t-to-unicast group-range ip-addr ip-addr

í ” Á n ô % n Á n Á 8 F åož

no ip igmp snooping m cast-to-unicast group-range

Ê Ö Þ . F åož

default ip igmp snooping mcast-to-unicast group-range

o¬ @ ƒ ª ¢o-

@ ƒ	T
ip-addr	Á n ª - k 8 224.0.1.0~239.255.255.255

o¬ Þ . F åo- Ì F å Á n Á 8 k ñ Ä ` c Á n ª - C ª • Á n ô % n

o¬ x X % ”o- AC ap-config % ” ê ñR…AP ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- — ¿ Á n ê Ë k Q Ä AP õ À Ä Á n ô % n , ¼ F å
F å 4 Á n ô % n Â Ý Á ƒ $ e k U Y ` ò ï k !ož ò ç F å Á ƒ A û Ý k ? Á C ¬ } ô % n
Ô ò kx © ¢ ù k ! A á Y u8Ü " Ú Á g ô % n Ô ò ž kU Y * Ú x X Û ² … u 4 Â Ý
Á n ô % n ƒ k ý U Y - ã ï k !ož ò ¢ Ä Á n Á ß Á n ô % n ž k¿ Á U Y µ Á n ô %
n k U Y ¾ Ä | ª O ò Ï ›ož
AC ap-config % ” x X igmp snooping mcast-to-unicast max-group
AC ap-config % ” F å no igmp snooping mcast -to-unicast max-group yR..AP ¶ B % ” F
default ip igmp snooping mcast-to-unicast max-group U Y Ê Ö ó • F å

o¬ F å †o- 1 y ¨ ap-config % ” F å Á n ô % n Â Ý Á ƒ

```
Ruijie(config-ap)# igmp snooping mcast-to-unicast max-group 10
```

o¬ à • co- * show ip igmp snooping x X ò 0 F å © k ÿ |

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.9 ip igmp snooping mrouter learn pim-dvmrp

o Á . è N M ož
ip igmp snooping [vlan vid] mrouter learn pim-dvmrp

¼ { Á . è N M ož
no ip igmp snooping [vlan vid] mrouter learn pim-dvmrp

Ê Ö Á . è N M Þ . F åož
default ip igmp snooping [vlan vid] mrouter learn pim-dvmrp

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan vid	6 vlanož Þ . é 9 ñ Ä vlanož

o¬ Þ . F åo- o 4

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- è N M © • o IGMP Snooping Á n — Õ • o Á n è # ‘ Á n > D — Õ + N , € Mož Þ . Õ Ñ k o Á . è N M k — Õ Š n IGMP Query/DVMRP/PIM Hello † k Á œ ð è N Mož

o Á . è N M g Þ . o Ik U Y B ± Á è N Mož

F å ip igmp snooping vlan mrouter interface x X k U Y B ± ² Á è N Mož

F å no ip igmp snooping mrouter learn pim-dvmrp x X kñ Ä VLAN ¼ { Á . è N M ož

F å no ip igmp snooping vlan vid mrouter learn pim-dvmrp x X k N % VLAN ¼ { Á . è N M ož

s W j Ç ¿ _ Ÿ ¨ ¶ ¾ U Ç) & ¦ Ì ì ¾ æ ¥ ¦ Ì • • < ô I g Ÿ ¿ ¸ _ j Ç " — ¶ Ä ¾ U Ç) & ¦ Ì „ Ê ¾ Ä ¥ Ü „ I y d

o¬ F å †o- 1 y N ¨ VLAN1 o Á . è N M ož

```
Ruijie(config)# no ip igmp snooping mrouter learn pim-dvmrp
Ruijie(config)# ip igmp snooping vlan 1 mrouter learn pim-dvmrp
```

o¬ à • co- * show ip igmp snooping x X ò 0 @ ƒ

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.10 ip igmp snooping querier

o IGMP Snooping ò ¤ ˜ ož

ip igmp snooping [vlan vid] querier

¼ { IGMP Snooping ò ¤ ˜ ož

no ip igmp snooping [vlan vid] querier

Ê Ö Þ . F å

default ip igmp snooping [vlan vid] querier

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan vid	6 vlanož Þ . é 9 ñ Ä vlanož

o¬ Þ . F åo- ¼ { 4

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¢ ¶ B o ò ¤ ˜ e k Ç ¨ VLAN o ò ¤ ˜ kVLAN ò ¤ ˜ õ ÿ |ož
ò ç ¨ ¶ B ¼ { 4 ò ¤ ˜ k ñ Ä VLAN ò ¤ ˜ 1 ¶ B ¼ {ož

o¬ F å †o- 1 y ¨ VLAN2 o ò ¤ ˜ ož

```
Ruijie(config)# ip igmp snooping querier
Ruijie(config)# ip igmp snooping vlan 2 querier
```

o¬ à • co- * show ip igmp snooping querier ê show ip igmp snooping querier detail x X ò 0 ò ¤ ˜ Ù Á y @ ƒ ’
Î

o¬ U P ’ Îo- 1 y F å ¶ B ò ¤ ˜ $ ù k F å VLAN ò ¤ ˜ k é U P j ¨ ’ Î

```
% Command did not take effect due to reason: IGMP switch querier is globally disabled
```

o¬ o • j ¨o- 1 y ¶ B ò ¤ ˜ Ì • o ù k ¯ o VLAN ò ¤ ˜ k 4 ž — c F å VLAN ò ¤ ˜ ož

o¬ u V ª ¢o- -

11.11 ip igmp snooping querier address

F å IGMP Snooping ò ¤ ˜ › IP ª -ož

ip igmp snooping [vlan vid] querier address a.b.c.d

í ” F åož

no ip igmp snooping [vlan vid] querier address

Ê Ö Þ . F åož

default ip igmp snooping [vlan vid] querier address

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan vid	6 vlanož Þ . é 9 ñ Ä vlanož
a.b.c.d	› IP ª -

o¬ Þ . F åo- -

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- o ò ¤ ˜ e k · À ò ¤ ˜ 6 %² › IP ª - k k é ò ¤ ˜ ÿ |ož
ò ç VLAN 6 4 ò ¤ ˜ › IP ª - k i ¯ … VLAN F åož

o¬ F å †o- 1 y F å IGMP Snooping ò ¤ ˜ › IP ª - 1.1.1.1ož

```
Ruijie(config)# ip igmp snooping querier address 1.1.1.1
```

2 y F å VLAN3 IGMP Snooping ò ¤ ˜ › IP ª - 1.1.1.1ož

```
Ruijie(config)# ip igmp snooping vlan 3 querier address 1.1.1.1
```

o¬ à • co- * show ip igmp snooping querier ê show ip igmp snooping querier detail x X ò 0 ò ¤ ˜ Ù Á y @ ƒ ’
Î

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.12 ip igmp snooping querier max-response-time

F å IGMP Snooping ò ¤ ˜ Â Ý € • ž •ož
ip igmp snooping [vlan vid] querier max-response-time seconds

í ” F åož
no ip igmp snooping [vlan vid] querier max-response-time

Ê Ö Þ . ›ož
default ip igmp snooping [vlan vid] querier max-response-time

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan vid	6 vlanož Þ . é 9 ñ Ä vlanož
seconds	Â Ý € • ž •ož % y a k H › 8 1-25ož

o¬ Þ . F åo- 10 a

o¬ x X % ”o- ¶ B F å % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç VLAN 6 4 ò ¤ ˜ Â Ý € • ž • k i ¯ … VLAN F åož

o¬ F å †o- 1 y F å ò ¤ ˜ Â Ý € • ž • 15 aož

```
Ruijie(config)# ip igmp snooping querier max-response-time 15
```

2 y F å VLAN3 ò ¤ ˜ Â Ý € • ž • 15 aož

```
Ruijie(config)# ip igmp snooping vlan 3 querier max-response-time 15
```

o¬ à • co- * show ip igmp snooping querier ê show ip igmp snooping querier detail x X ò 0 ò ¤ ˜ Ù Á y @ ƒ ’ Î

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.13 ip igmp snooping querier query-interval

F å IGMP Snooping ò ¤ ˜ ò ¤ • œož

ip igmp snooping [vlan vid] querier query-interval seconds

í ” F å

no ip igmp snooping [vlan vid] querier query-interval

Ê Ö Þ . ›ož

default ip igmp snooping [vlan vid] querier query-interval

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan vid	6 vlanož Þ . é 9 ñ Ä vlanož
seconds	ò ¤ • œož % y a k H › 8 1-18000ož

o¬ Þ . F åo- 60 a

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ò ç VLAN 6 4 ò ¤ • œ k i ¯ … VLAN F åož

o¬ F å †o- 1 y F å ò ¤ • œož

```
Ruijie(config)# ip igmp snooping querier query-interval 100
```

2 y % VLAN F å ò ¤ • œož

```
Ruijie(config)# ip igmp snooping vlan 3 querier query-interval 100
```

o¬ à • co- * show ip igmp snooping querier ê show ip igmp snooping querier detail x X ò 0 ò ¤ ˜ Ù Á y @ ƒ ’ Î

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.14 ip igmp snooping querier timer expiry

F å IGMP Snooping ò ¤ ˜ Ý ž ž •ož

ip igmp snooping [vlan vid] querier timer expiry seconds

í ” F åož

no ip igmp snooping [vlan vid] querier timer expiry

Ê Ö Þ . ›ož

default ip igmp snooping [vlan vid] querier timer expiry

o¬ @ ƒ ª ¢o-

@ ƒ	T
vlan vid	6 vlanož Þ . é 9 ñ Ä vlanož
seconds	Ý ž ž •ož % y a k H › 8 60-300ož

o¬ Þ . F åo- 125 a

o¬ x X % ”o- ¶ B % ”

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- o 4 ò ¤ ˜ e k - U ¨ # J Âož ò ç J Â ñ ¨ “ ò ¤ ˜ Ý ž ž •” Ä Z Ä v ñ ¢ ù ò ¤ ˜ G ß ò ¤ † k é • ¢ ù ò ¤ ˜ â | k G Ü %² ö # ož

ò ç , • VLAN] Æ F å 4 ò ¤ ˜ Ý ž ž • k i ¯ … VLAN F å ›ož

o¬ F å †o- 1 y F å ò ¤ ˜ Ý ž ž • 60 aož

```
Ruijie(config)# ip igmp snooping querier timer expiry 60
```

2 y F å VLAN3 ò ¤ ˜ Ý ž ž • 60 aož

o¬ à • co- * show ip igmp snooping querier ê show ip igmp snooping querier detail x X ò 0 ò ¤ ˜ Ù Á y @ ƒ ’ Î

o¬ U P ’ Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.16 ip igmp snooping query-max-response-time

F å ò ¤ † Â Ý € • ž •ož

ip igmp snooping query-max-response-time seconds

í ” F å

no ip igmp snooping query-max-response-time

Ê Ö Þ . ›ož

default ip igmp snooping query-max-response-time

o¬ @ ƒ ª ¢o-

@ ƒ	T
seconds	ò ¤ † Â Ý € • ž • k % y a k H › 8

o¬ F å †o- 1 y F å ò ¤ † Â Ý € • ž • 100sož

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

o¬ à • co- *

o¬ U P ' Îo- -

o¬ o • j ¨o- -

o¬ u V ª ¢o- -

11.18 ip igmp snooping vlan

¨ VLAN o IGMP Snooping gIVGL % " hož
ip igmp snooping vlan vid

¨ VLAN ¼ { IGMP Snooping gIVGL % " hož
no ip igmp snooping vlan vid

Ê Ö Þ . F å
default ip igmp snooping vlan vid

o¬ @ ƒ ª ¢o-

@ ƒ	T
vid	VLAN Ú Z k H › 8 1-4094

o¬ Þ . F åo- ò ç ¶ B o IGMP Snooping gIVGL % " Ìk é ñ Ä VLAN ® o IGMP Snooping gIVGL % " bž
ò ç ¶ B Ì o IGMP Snooping gIVGL % " h k é ñ Ä VLAN ® Ì o IGMP Snooping gIVGL % " bž

o¬ x X % "o- ¶ B % "

o¬ Þ . ´ ðo- 14

o¬ … 6 -o- ¨ ¶ B o IGMP Snooping gIVGL % " h Õ Ñ k … no ip igmp snooping vlan vid x X k U Y ¨ " 6
VLAN Ù ¿ U VLAN o IGMP Snooping gIVGL % " bž

PIM Snooping ¡ § IGMP Snooping } ° no ip igmp snooping vlan ' ž VLAN h IGMP Snooping _ Ÿ ¨ " ´ VLAN h s t PIM Snooping • V ' ž â N _ É " µ • ' ž PIM Snooping d

o¬ F å †o- 1 y ¶ B o IGMP Snooping gIVGL % " Ìk ¨ vlan 2 ¼ { IGMP Snooping gIVGL % " bž

```
Ruijie(config)# ip igmp snooping ivgl
Ruijie(config)# no ip igmp snooping vlan 2
```

o¬ à • co- * show ip igmp snooping vlan ò 0 F å @ ƒ

o¬ U P ' Îo- -