6. ¹,ß ³G!5B

AÈ â	2Ï4³ Ô î ÕG!5B 32 þ ³ Ä

11.8.1.1 *üAAA

6. ¹,ß ³G!5B

AÈ â	2Ï4³ Ô î ÕG!5B 32 þ ³ Ä

11.8.1.1 *üAAA

6. ¹,ß ³G!5B

AÈ â	2Ï4³ Ô î ÕG!5B 32 þ ³ Ä

11.8.1.1 *üAAA

1.7.1

```
interface
$tatic  00d0.f800.0c0c  vlan  1  interface  fastEthernet
$tatic  00d0.f800.0c0c  vlan  1  interface  fastEthernet  0/1
```

Ctrl-A

$

```
-address-table  static  00d0.f800.0c0c  vlan  1 interface  $
```

80

1.8 CLI

1.8.1 Show

show

Ruijie# **show** *any-command* | **include** *regular-expression*	show

```
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

1.9.1 CLI

CLI PC

CLI

Console Outband

Telnet

2

2.1

Step 3	service password-encryption	
Step 4	enable [*level*] disable [*level*]	

level

2.1.1.4

1

15 16

2.1.1.4.1

Step 1	configure terminal	
Step 2	privilege *mode* [all]{ level *level* | reset } *command-string*	*mode* CL config exec interface all level *level* 0 15 reset *command-string*

no privilege *mode* [all]

level *level command*

2.1.1.4.2

reload 1 1

”test”

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

```
Ruijie(config)# enable secret level 1 0 test
Ruijie(config)# end
```

1

```
Ruijie# disable 1
Ruijie> reload ?
at                  reload at a specific time/date
cancel               cancel pending reload scheme
in                  reload after a time interval
<cr>
```

```
Ruijie# configure terminal
Ruijie(config)# privilege exec all reset reload
Ruijie(config)# end
```

1

```
Ruijie# disable 1
Ruijie> reload ?
% Unrecognized command.
```

2.1.1.5 line

TENT line

line

Step 1		line
	password [0 | 7]*line*	0 7
Step 2	login line	

Step 1	#	lockable line
Step 2	lock	line

2.1.2

2.1.2.1

AAA

RDS

RDS

RDS

2.1.2.2

AAA

AAA

Step 1	# username *name* [web-auth] [pwd-modify 0|1] [password *password* | password *encryption-type encrypted password*]	, (AAA)
Step 2	# username *name* [privilege *level*]	

2.1.2.3 web

/

aaa aaa

bbb bbb

:

CL CL

Step 1	username impo/79n 0 Td (impo7802D97c3.1 35r)5(n)5(E(filenam)7(Tc 3.329 0 Td [(user)3.775(

2.1.3.2

Step 1

reload at *hh:mm month day* [*year*] [*reload-reason*]	

2005 1 11 12:00 (
2005 1 11 8:30)

```
Ruijie# reload at 12:00 1 11 2005 midday//

Ruijie# show reload                    //

Reload scheduled in 16581 seconds.
At 2005-01-11 12:00
Reload reason: midday
```

2.1.4.3

Step 1

reload in

2.1.5

2.1.5.1

CL 32
32
“ ”

2.1.5.2

Step 1

# hostname *name*	32

no hostname

```
Ruijie# configure terminal                    //
Ruijie(config)# hostname RGOS      //          RGOS
RGOS(config)#                                 //
```

2.1.5.3

32
32
prompt EXEC

2.1.6

2.1.6.1

Step 1		*c* (&')
	banner login *c message c*	255

no banner login

(#)

Ruijie(config)# **banner login** # //
Enter TEXT message. End with the character '#'.
Access for authorized users only. Please enter your password.
//
Ruijie(config)#

2.1.6.4

C:\>telnet 192.168.65.236
Notice: system will shutdown on July 6th.
Access for authorized users only. Please enter your password.
User Access Verification
Password:

2.1.7

2.1.7.1

2.1.7.2

Ct Bo

Step 1	jR show version	

DD:H
Bt Ct

2.1.7.3

Step 1	jR show version devices	
Step 2	jR show version slots	

2.1.8

2.1.8.1

Ce

2.1.9.2 Telnet Client

Step 1	telnet *host* [*port*][/source {ip *A.B.C.D* | interface *interface-name*}][/vrf *vrf-name*]	

P 192.168.65.119

```
Ruijie# telnet 192.168.65.119      //       telnet
Trying 192.168.65.119 ... Open
User Access Verification           //
Password:
```

2.1.9.3 Telnet Server

Step 1	enable service telnet-server	

2.1.10

2.1.10.1

Step 1

execute [flash:]*filename* }	

Telnet

```
configure terminal
line tty 1 16
transport input all
no exec
end

Ruijie# execute flash:line_rcms_script.text
executing script file line_rcms_script.text ......
executing done
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# line vty
```

```
Ruijie(config)# enable service web-server https
```

	3

2.1.13 HTTP

Step 1	# ip http port *number*	80
Step 2	Ruijie(Config)# **ip http authentication** { enable | local }	web enable **enable** enable password enable secret 15 local 15

no

Http Server 8080

```
Ruijie# configure terminal                    //
Ruijie(config)# enable service web-server     //    Web Server
Ruijie(config)# username name password pass   //
Ruijie(config)# username name privilege 15    //
Ruijie(config)# ip http port 8080             //
Ruijie(config)# ip http authentication local //
```

Step 1	# ip http secure-port *number*	443

o þ

þ 4443

```
Ruijie# configure terminal                    //
Ruijie(config)# enable service web-server https //    https Server
Ruijie(Config)# ip http secure-port 4443
```

w

```
Ruijie# show web-server status
http server status : enabled
http server port : 8080
https server status:  enabled
https server port: 4443
```

	þ þ þ þ , þ þ þ þ þ

3

3.1

Flash

Flash

3.2

3.2.1

4096

flash 128M

dir

flash flash 32M
512K flash

Ruijie# **copy flash:** *filename* **flash:** *directoryname*	
Ruijie# **copy flash:** *filename* **sour** *directoryname*	

```
Ruijie# copy flash:config.tex flash:tmp/
Ruijie# copy flash:con_bak.txt flash:config.text
```

3.2.4

Ruijie# **dir**	
Ruijie# **dir** *directory*	

```
Ruijie# dir
Ruijie# dir ../bak
```

3.2.5

Ruijie# **makefs dev** *devname* **fs** *fs_name*	*fs_name* **dev**

dev MTD JFFS2

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

JFFS2 MTDBLOCK

3.2.6

Ruijie# **mkdir** *directoryname*	

P

Red-Giant# **rmdir** *directoryname*	

MNT

```
Ruijie# rmdir mnt
```

4

4.1

CLI

IP

Web

4.2

TFTP

XMODEM

4.2.1 TFTP

CLI

TFTP Server

Location TFTP Server IP

Ruijie# **copy tftp:** *//location/ filename* **flash:** *filename* [**vrf** vrfname]	URL *filename*

CLI

TFTP Server

Ruijie# **copy flash:** *filename* **tftp:** *//loca tion/filename* [**vrf** vrfname]	*filename* URL

tftp

copy tftp:”//localtion/filename” **flash:**filename [**vrf** vrfname]

copy tftp://localtion/filename **flash:**”filename” [**vrf** vrfname]

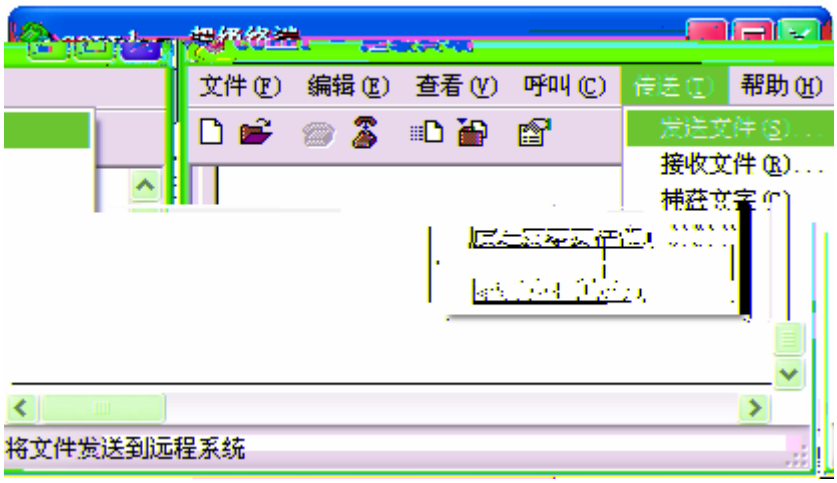
4.2.2 XMODEM

CLI

Windows

Windows “

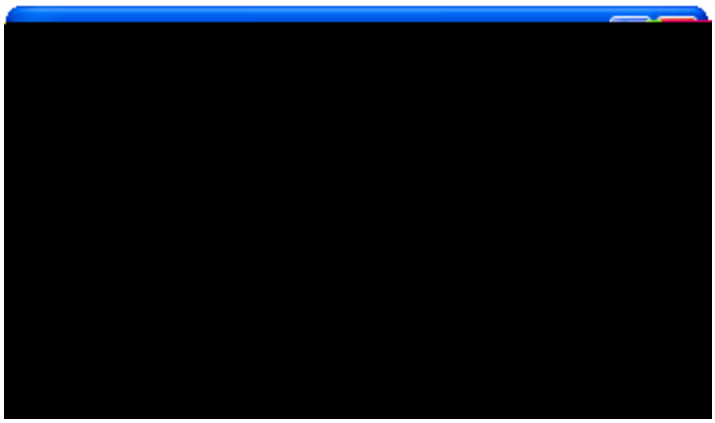
” “ ” 1



1

“Xmodem”

“ ” Windows 2



2

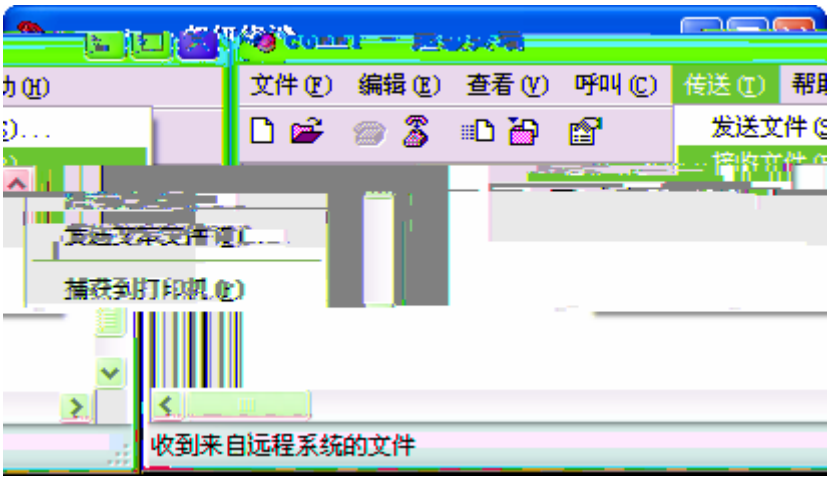
Ruijie# **copy xmodem flash**:*filename*	*filename*

CLI

Windows

Windows “

” “ ” 3



Ruijie# **copy flash**:*filename* **xmodem**	*filename*

copy xmodem flash:”filename” **copy flash:**”filename” **xmodem**

4.2.3

tftp xmodem

1

2

3

Upgrade Slave CM MAIN successful!!
Upgrade CM MAIN successful!!

1

2

Installing is in process ......
Do not restart your machine before finish !!!!!!
......

3

Installing process finished ......
Restart machine operation is permited now !!!!!!

4

System restarting, for reason 'Upgrade product !'.

5

5 6 7

System load main program from install package ......

6

A new card is found in slot [1].
System is doing version synchronization checking ......
Current software version in slot [1] is synchronous.
System needn't to do version synchronization for this card ......

System is doing version synchronization checking ......
Card in slot [3] need to do version synchronization ......

Version synchronization begain ......
Keep power on, don't draw out the card and don't restart your machine before finished !!!!!!

Transmission is OK, now, card in slot [3] need restart ...
Software installation of card in slot [3] is in process ......
!!!!!

!!!

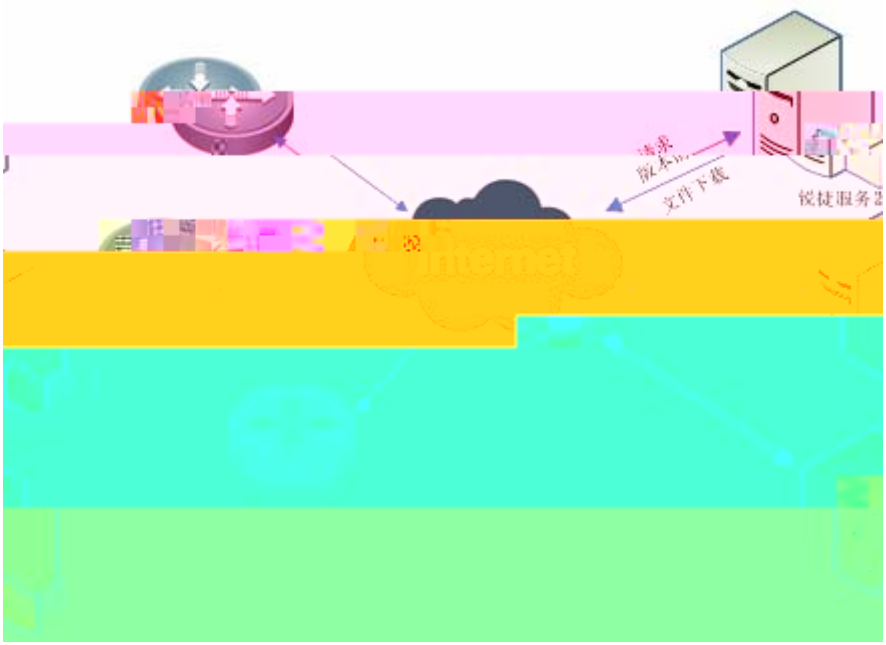
5 HTTP

5.1 HTTP

5.1.1 HTTP

5.1.2

CL



5.1.3

- R1945 - [illegible] 1.0
- R2616 - [illegible] 1.1
- R1867 - [illegible]

5.2

5.2.1

5.2.2

1. 1
2. 2

1.

HTTP

5.2.3

RFC1945 - HTTP/1.0
RFC2616 - HTTP/1.1
RFC1867 -
RFC821 - SMTP
RFC822 -

5.3

	0.0.0.0
	80

5.4 HTTP

1.
2.

5.4.1

Step 1	Ruijie# **http check-version**	
Step 2	Ruijie# **http update** { **all** | *string*}	

#

```
Ruijie# http check-version
```

5.5

1.

http update mode manual

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# http update mode auto-update
Ruijie(config)# http update auto-update url-db character-db
route-db
Ruijie(config)# exit
```

11.2

11.2.1

p

ta

ye

11.2.2

11.3 retry

#(config)# dldp ip retry val	

11.4 /

#(config)# dldp passive	

12

12.1 PPPOE

12.1.1 PPPOE

(P PoE) DDR

DDR

P DDR(R DDR P

12.1.2 PPPOE

P P

12.1.2.1

P

no shutdown

P

P # pppoe enable	P

P DDR P

DDR P

# pppoe-client dial-pool-number *pool-number* dial-on-demand	(,)

DDR , DDR

, .

12.1.2.2 ™NK7± ,Qˆà $ s6Ù# Îß üe y · s6ÐA±”ô]Ñ€ÏÆQ—•›p,,

1488

clear pppoe tunnel

12.1.2.3

ANT

dialer-list *number dialer-group* protocol *protocol-name* {permit | deny | list *access-list-number* | *access-group*}	

ip route *0.0.0.0 0.0.0.0* dialer *dialer-number* [permanent]	

```
speed auto

#
interface Dialer1
ip address negotiate
mtu 1488
encapsulation ppp
ip nat outside
dialer pool 10                                  //          10
dialer-group 1
dialer idle-timeout 300                                 //5
ppp pap sent-username pppoe password 0 pppoe
!
ip nat inside source list 1 interface Dialer1
access-list 1 permit any
ip route 0.0.0.0 0.0.0.0 Dialer1
!
dialer-list 1 protocol ip permit
!
line con 0
line aux 0
line vty 0 4
login
!
end
```

IP

P

1. P
2. IP
3.
4. NAT
5.

1 IP

1.1 IP

1.1.1 IP

P 32

8 0255 “ . ”

“ 192.168.1.1 ” P ž ÄŘÍ ×ô¼€*ü

“ 1111 ” E P P P CN P CAN Cb P		
	0.0.0.0	

B	172.16.0.0–172.31.255.255	16 B
C	192.168.0.0–192.168.255.255	256 C

P TCP/IP R 1971 0 996 UDP 44 717.38 0.48 23.22

P

P

1.1.2.1.1 IP

P P
P P P P
P P
P
C
254 254 C
C
P
P
P
P
P

P P
P P
P

P

[x] # ip address *ip-address mask* secondary	P
[x] # no ip address *ip-address mask* secondary	P

1.1.2.2 ARP

P 1

AMC AMC AMC
P 2 P

P 48 AMC
P AMC AR AMC
P ARR 1
AR 2 ßAR AR ßAR
ARR R 826 R 1027 R 903 , Õ> ºÒCÃ ?½ ºÄ î
AR AMC P P AR AMC È
AMC AMC P AMC

1.1.2.2.3 ARP

AR P MAC
AR AR
AR

AR

# arp timeout *seconds*	AR 0-2147483 0
# no arp timeout	

3600 1

1.1.2.2.4 ARP

ARP ARP arp
arp ARP
ARP ARP
ARP

# arp trust-monitor enable	p
# no arp trust-monitor enable	

p

ARP arp
mac ARP log
ARP

1.1.2.2.5 ARP

AR AR
AR AR
AR ,

[ ]# arp-learning enable	p
[ ]# no arp-learning enable	p

p

1.1.2.2.6 ARP

AR AR

P P

UP UP IP

[ ]#arp scan [*start-ip-address end-ip-address*]	AR

AR

1 ARP IP

2 IP ARP

ARP

1024

3 ARP IP IP

IP IP 22

4 ARP IP IP IP IP

IP

web ARP ARP

1.1.2.2.7 ARP

51.486 40 EC071.2470.5A AR

ARP

ARP ARP ARP ARP

ARP ARP MAC

ARP GSN

IP-MAC

DHCP server IP IP MAC

AR

Step 1	#	show arp trusted *[ip [mask]]* AR

AR

Step 1	#	clear arp trusted *[ip [mask]]* AR

clear arp trusted AR

clear arp trusted *ip* AR

1.1.2.3 IP

P P

P

P

命令 no ip routing	P
命令 ip routing	P

1.1.2.4.1

P P P
172.16.16.255

P

P “ 1 ”

[illegible]# ip directed-broadcast [*access-list-number*]	
[illegible]# no ip directed-broadcast	

1.1.3 IP

1.1.3.1

1) AR

2) P

3)

R clear arp-cache	AR
R clear ip route {*network* [*mask*]|*}	P

1.1.3.2

P

R show arp	AR
R show ip arp	AR
R show ip interface [*interface-type interface-number*]	P
R show ip route [*network* [*mask*]]	
R show ip route	
R ping *ip-address* [ength *bytes*][ntimes *times*][timeout *seconds*]	

1.1.4 IP

P

P

1.1.4.1 IP

P 1

1 IP

R R C
172.16.2.0/24 D 172.16.1.0/24

R
172.16.1.0/24 172.16.2.0/24 C 192.168.12.0/24
C D
R

A B 192.168.12.0/24 172.16.3.0/24
A B

A

```
interface GigabitEthernet 0/0
ip address 172.16.3.1 255.255.255.0 secondary
ip address 192.168.12.1 255.255.255.0
!
interface GigabitEthernet 0/1
ip address 172.16.1.1 255.255.255.0
!
router rip
```

P

1.2.3 IP

P P CMP
CMP
CMP RFC 792
P
CMP
CMP
CMP
RIP
P

1.2.3.1 ICMP

P
CMP
CMP

CMP

# ip unreachables	CMP
# no ip unreachables	CMP

1.2.3.2 ICMP

CMP

CMP

接口#	ip redirects	CMI
接口#	no ip redirects	CMI

1.2.3.3 ICMP

CMI CMI

CMI

R 791

2 IPv4

2.1 IPv4

2.1.1 IPv4

2.3

P R

AK

P

P

1. IP IP IP

2. IP IP IP IP IP

3. IP IP IP

IP

# ip ref load-sharing Original	P + P
# no ip ref load-sharing original	P P
# ip ref load-sharing original-only	P
# no ip ref load-sharing original-only	P

2.4

2.4.1

R

3

3.1

3.1.1

3.1.2

show ip fpm flows

[illegible] show ip fpm users	

3.5

[illegible]

[illegible] 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-wait | tcp-last-ack | tcp-syn-receive | tcp-syn-sent | tcp-time-wait | udp-closed | udp-connected | udp-established | udp-started } *num*	

3.6

icmp-closed	10s
icmp-connected	10s
icmp-started	10s
rawip-closed	10s
rawip-connected	300s
rawip-established	300s
rawip-started	300s
tcp-close-wait	60s
tcp-closed	10s
tcp-established	1800s
tcp-fin-wait	60s
tcp-last-ack	30s
tcp-syn-receive	10s
tcp-syn-sent	10s

tcp-time-wait	10s
udp-closed	10s
udp-connected	30s

4 NAT

4.1 NAT

AT( )

AT

AP

AT

CP

AT

AT

NAT

NAT

Step 1	ip nat pool *address-pool*	

Step 2	interface *interface-type interface-number*	
Step 3	ip nat inside	
Step 4	interface *interface-type interface-number*	
Step 5	ip nat outside	

4.1.4 TCP

TCP TCP
NAT TCP NAT
TCP

ip nat pool *address-pool start-address end-address* {netmask *mask* | prefix-length *prefix-length*}	P
access-list *access-list-number permit ip-address* wildcard	P ACL
ip nat inside destination list *access-list-number* pool *address-pool* [vrf *name*]	
interface *interface-type interface-number*	
ip nat inside	
interface *interface-type interface-number*	
ip nat outside	

4.1.5 ALG

NAT ALG ALG

no ip nat translation dns	DNS ALG
no ip nat translation ftp	FTP ALG
no ip nat translation h323	H.323 ALG
no ip nat translation pptp	PPTP ALG

#	no ip nat translation sip	SIP
#	no ip nat translation tftp	TFTP

4.1.6 NAT

TCP

4.1.6.1

NAT 200

200.168.12.2200.168.12.100 1

NAT

```
!
interface GigabitEthernet 0/0
ip address 192.168.12.1 255.255.255.0
ip nat inside
!
interface GigabitEthernet 0/1
ip address 200.168.12.1 255.255.255.0
ip nat outside
!
ip nat pool net200 200.168.12.2 200.168.12.100 netmask
255.255.255.0
ip nat inside source list 1 pool net200
!
access-list 1 permit 192.168.12.0 0.0.0.255
```

4.1.6.2

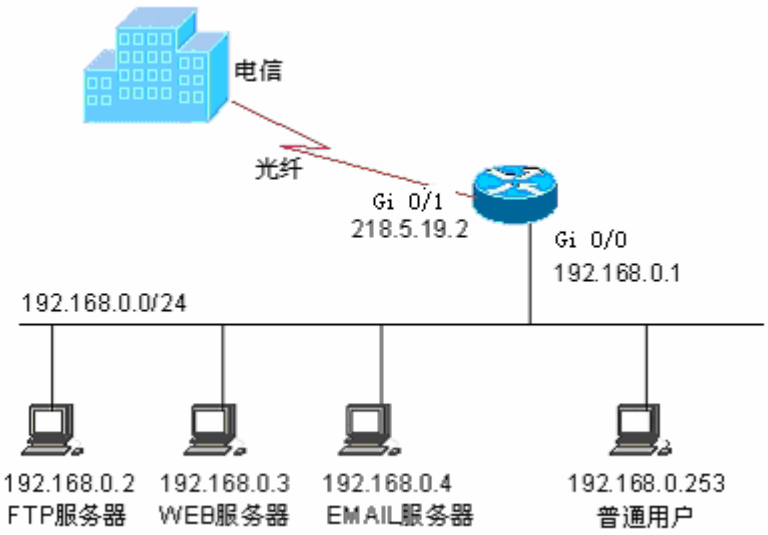
NAPT 8.1 NAT

NAPT NAT 200

200.168.12.200 P

1 NAT

```
!
interface GigabitEthernet 0/0
ip address 192.168.12.1 255.255.255.0
```



2

AT

```
#
  Ruijie> enable
#
  Ruijie# config terminal
  Enter configuration commands, one per line.  End with CNTL/Z.
#     XAN
  Ruijie(config)#interface GigabitEthernet 0/1
#     XAN
  Ruijie(config-if)# ip address 218.5.19.2 255.255.255.0
#     XAN                 e
  Ruijie(config-if)# ip nat outside

#     XAN
  Ruijie(config-if)# no shut
#
  Ruijie(config-if)# end
  Ruijie#
#                              XAN              D      (          ).
  %LINK CHANGED: Interface GigabitEthernet 0/1, changed state to up
  %LINE PROTOCOL CHANGE: Interface GigabitEthernet 0/1, changed state
  to UPRuijie# config terminal
  Enter configuration commands, one per line.  End with CNTL/Z.
#     AN
  Ruijie(config)# interface GigabitEthernet 0/0
```

ÆAN ÆAN ÆANóbrï³ ðˆ ps % Ïócrá qð-ï6rï± œ V‰ Q!WX Â ð ðü G¼5B

```
Ruijie(config-line)# end
Ruijie#
Ruijie# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# enable secret private
#
Ruijie(config)# host EG
RUIJIE(config)# end
RUIJIE#
#
RUIJIE# write
Building configuration...
[OK]
RUIJIE#
#
RUIJIE# show reh_0 1 Tf0 Tc 1.057 0 T1v091t0 T1v091t0 T1v091t0 T1v091t0 T1v09
```

```
ip nat inside source static tcp 192.168.0.2 20 218.5.19.2 20
!
ip route 0.0.0.0 0.0.0.0 GigabitEthernet 0/1 218.5.19.1
!
line con 0
line vty 0 4
password remoteuser
login
!
end
RUIJIE#
```

4.1.6.6 NAT

arp

arp

192.168.12.0 200.198.12.0

```
!
interface GigabitEthernet 0/0
ip address 192.168.12.1 255.255.255.0
ip nat inside
!
interface GigabitEthernet 0/1
ip address 200.198.12.1 255.255.255.0
ip nat outside
!
ip nat inside source static 192.168.12.0 200.198.12.0 netmask
255.255.255.0
```

4.1.6.7 NAT DNS

NAT dns alg dns DNS

ISP

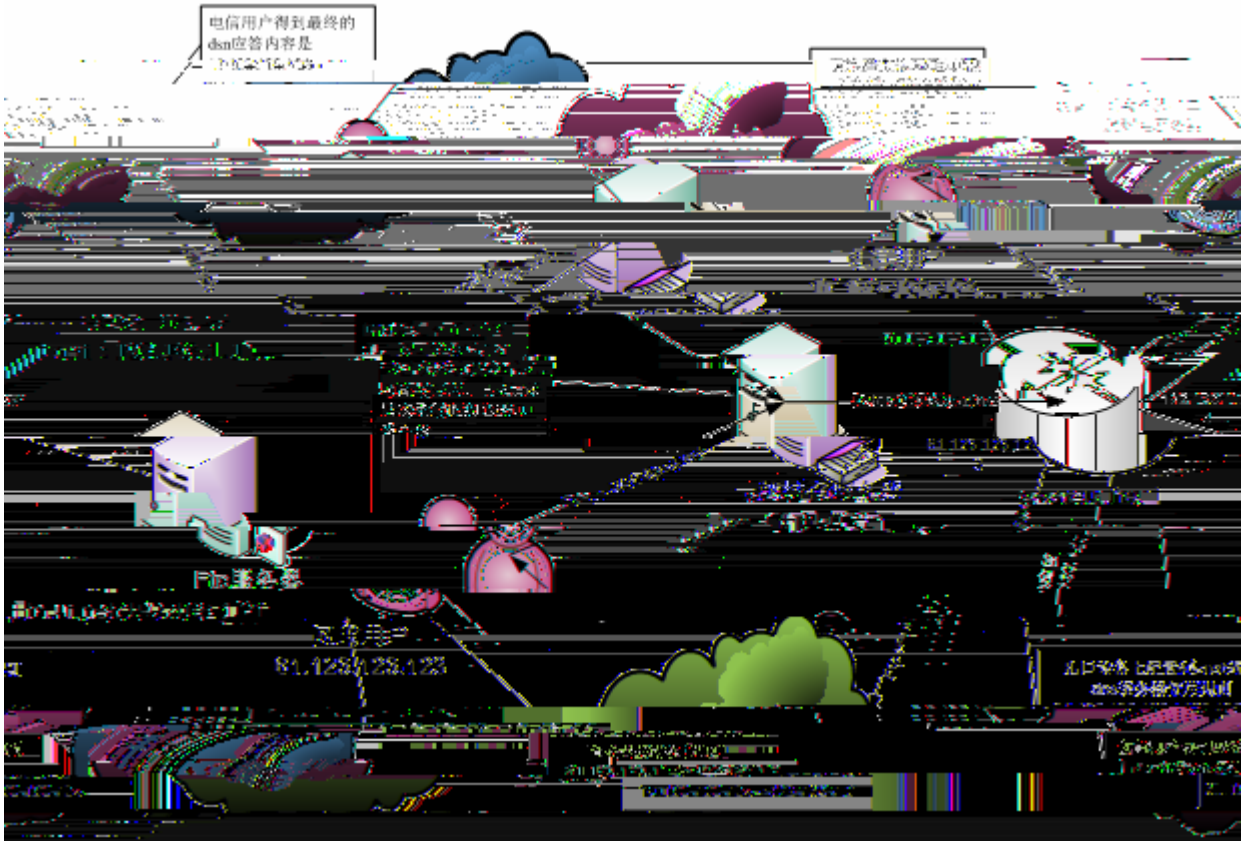
DNS

1. ftp
2. dns

3. DNS

4.
   DNS

5. DNS



interface GigabitEthernet 0/0

 ip address 10.123.123.123 255.255.255.0

 ip nat outside

 duplex auto

 speed auto

 description

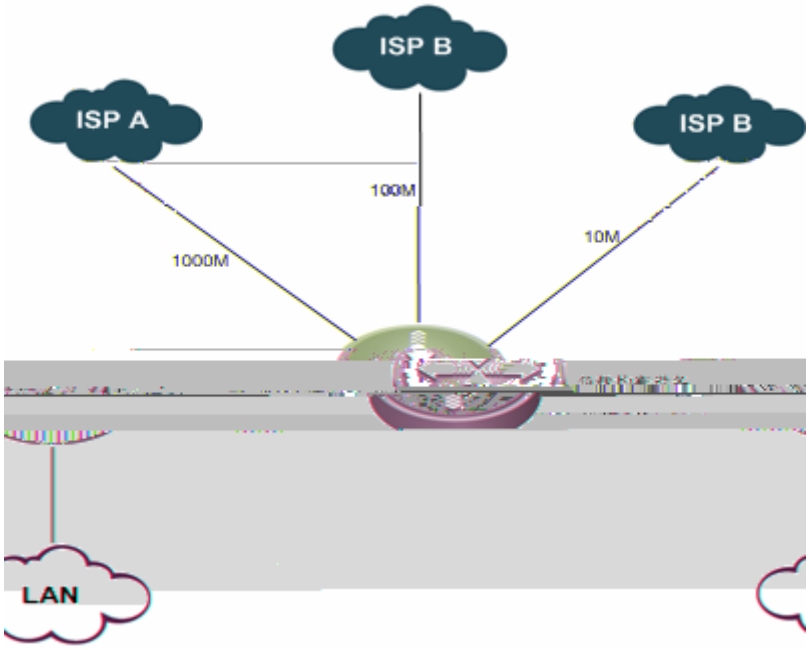
interface GigabitEthernet 0/1

 ip address 61.123.123.123 255.255.255.0

 ip nat outside

5

5.1



5.1.1

2

/

ECMP

10.3(4b)

5.1.2

5.1.2.1 ECMP

ECM

10.3(4) ECM 10.3(4)
ECM ECM

5.1.2.2

5.1.2.3

5.1.2.4

/

5.1.2.5

P

P P

P

5.1.2.6

P

<< >>

5.1.2.7

5.1.3

5.1.3.1

(b P P

5.1.3.2 IP

P ECM

P

P

ECM CM DP P

5.1.3.3

ECM

ECM

5.1.3.4

ECM

5.1.3.5

P ECM

5.1.3.6

P

5.1.4

pn p

5.2

5.2.1 /

Step 1	configure terminal	
Step 2	mllb enable	
	no mllb enable	

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# mllb enable
```

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# no mllb enable
```

5.2.2

Step 1	configure terminal	
Step 2	Ruijie(config)# **interface** *interface-name*	
Step 3	bandwidth *kilobits*	
	no bandwidth	

1M

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# interface fastEthernet 0/1
Ruijie(config-if)# bandwidth 1000
```

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# interface fastEthernet 0/1
Ruijie(config-if)# no bandwidth
```

5.2.3

1 100.

Step 1	configure terminal	

Step 2 Ruijie(config)# **mllb threshold** *percent-upper* |

5.2.7

+ /2

Step 1	configure terminal	
Step 2	Ruijie(config)#**load-monitor** {**uplink** | **mixed-link**}	**uplink** **mixed-link**
Step3	Ruijie(config)#**end**	

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#load-monitor uplink
```

#

```
Ruijie(config)#load-monitor mixed-link
```

5.2.8

P

Step 1	configure terminal	
Step 2	Ruijie(config)#**over-load-protect interface-group enable**	
Step3	Ruijie(config)# load-m n5r-(d-d-o)otJ /	

5.2.9

10

Step 1	configure terminal	
Step 2	Ruijie(config)#**over-load-protect interface-group** *interface-group-name*	**interface-group** *interface-group-name*
Step3	Ruijie(config)#**no over-load-protect interface-group** *interface-group-name*	

1

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#over-load-protect interface-group 1
```

5.2.10

90

Step 1	configure terminal	
Step 2	Ruijie(config)#**over-load-protect threshold** *percent*	*percent* 90
Step3	Ruijie(config)#**no over-load-protect threshold**	

#

[illegible]	show mllb config	

[illegible]

```
Ruijie# show mllb config
multi-link load balance configure:
multi-link load balance state: enabled
multi-link load balance policy: load
multi-link load balance load-interval: 5
multi-link load balance threshold: 90 lower: 90
multi-link load balance load-monitor: down-link
multi-link load balance first-choice set to GigabitEthernet 0/5
is up
multi-link load balance load-sharing original
```

5.3.2

show over-load-protect configure

[illegible]	show over-load-protect configure	

show load-monitor configure

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# mllb enable
```

2

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
#
Ruijie(config)# ip route 0.0.0.0 0.0.0.0 Gi0/2 202.101.98.54
Ruijie(config)# ip route 0.0.0.0 0.0.0.0 Gi0/3 202.101.98.55
```

3

#

5.5 2

5.5.1.1

1 >600M 1 500M

5.5.1.2

5.5.1.3

1

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# mllb enable
```

2

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
#
Ruijie(config)# ip route 0.0.0.0 0.0.0.0 Gi0/4 58.63.60.33
Ruijie(config)# ip route 0.0.0.0 0.0.0.0 Gi0/5 192.168.14.2
```

3

#

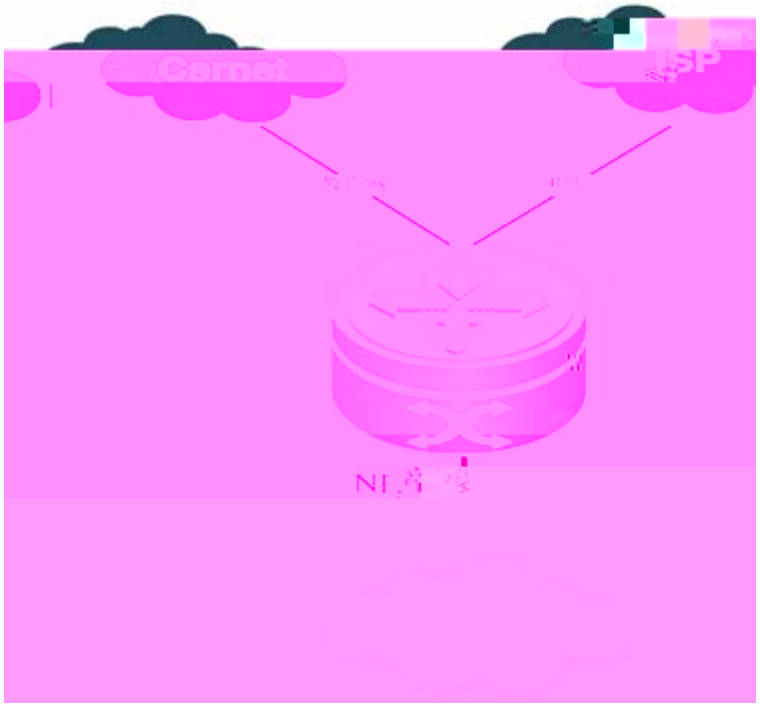
0/4
```
Ruijie(config)#route-auto-choose cnii Gi0/4 58.63.60.33
```
0/5
```
Ruijie(config)#route-auto-choose cernet Gi0/5 192.168.14.2
```

5.6

5.6.1.1

1000M *gigabitEthernet 0/1* *gigabitEthernet 0/2*

5.6.1.2



5.6.1.3

1 1

#
```
Router(config)#interface-group 1
Router(config-intf-group)# interface gi 0/1
```

```
Router(config-intf-group)# interface gi 0/2
Router(config-intf-group)# exit
```

2

```
Ruijie(config)#over-load-protect enable
```

3 1

```
Ruijie(config)#over-load-protect interface-group 1
```

1.

2.

3.

4.

5.

6.

1

1.1

1.1.1

1.1.2

1.1.2.1 vlan

1.1.2.2

1.1.2.3

jp

1.1.2.4

tw jp em

P jp em A

```
Ruijie#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)#layer23 classify enable
Ruijie(config)#end
```

1.4

1.4.1

Ruijie# **configure terminal**	
Ruijie(config)# layer23 ad-mode enable	
Ruijie(config)# end	
Ruijie# show layer23 ad-mode	Check the configuration.

ta “tag ” ta1 ta3 ta7 ta ta

```
Ruijie#configure terminal
Ruijie(config)#vlan-group vlan-group1 vlan 1,3,7-9
Ruijie(config)#end
```

1.7 vlan

jR show vlan-group [*group name*]	show vlan-group vlan vlan

vlan

jtag

tag tv te tv tid

y 9 0 0

ta 0 0 0 1

a 0 0 0 3-5

a 0 0 0 7,9

1.8

1.8.1

jR configure terminal	
j# subscriber static name *name* parent *parent* [[ip-host *ip-addr*][mac *mac-addr*] | ip-subnet *subnet mask* | ip-range *start end*]	
j# end	
jR show subscriber [all | static | dynamic | parent [*name* | root]]	

dn *name*

“ / ”

5 4

“ / ”

“ / ” “ / ”

“ 1 ” “ 192.168.196.156 ” “ 1 ” “ 1 ” “ ”

```
Ruijie#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# subscriber static name 1 parent / / 1 ip-host 192.168.196.156
Ruijie(config)#end
```

1.8.2

configure terminal	
subscriber static name *name*	

1.8.3

Ruijie# subscriber import [txt | csv] *filename* Ruijie# show subscriber [all | static | dynamic | parent]	

1.8.4

configure terminal	
network-group name *name* [parent *parent*] [[ip-host *ip-addr*]| ip-subnet *subnet mask* | ip-range *start end*]	,
end	
show network-group [all | brief | parent [*name* | root]]	

no network-group name *name*

“ / ”

5 4

“ / ” “ / ”

“ / ”

“ ” “ 192.168.196.156 ” “ 1 ” “ 1 ” “ ”

```
Ruijie#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# network-group name baidu parent / / 1 ip-host 192.168.196.156
Ruijie(config)#end
```

1.10.2

network-group import [txt | csv] *filename*	
show network-group [all | brief | parent [root |]]	

“ ”

“ ” “ ”

“ ”

“ .k ”

/ / 1, 1,192.168.197.1

“ .s ” “ .s ”

3

ṗ

“ .s ”

/ g 192.168.196.11-192.168.196.25

/ d 192.168.197.0/24

2

2.1

2.1.1

2.1.2

2.1.2.1

“ ”

“ "P ” “ ” “ ” “ 2P ”

“ ” “ ” “ ” “ ” “ ” “

” “ ” “ ” “ ” “ ”

“ ” “ ” “ ” “ ” “

” “ ” “ ” “

” “ ” “ ” “

” “ AB , ” “ ” “ R ” “ H

” “ ”

“ ”

“ ” (

)

2.1.2.2 DPI

DP

DI	
DI	

2.3

DI P2P

DI

2.3.1

Step 1	configure terminal	
Step 2	identify-application enable	
Step 3	end	
Step 4	show running	

Step 4 [illegible] end

DI P2P o

DI P2P

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# identify-application dfi enable
Ruijie(config)#
```

P2P DP P2P DP P2P P2P P2P “P2P ” “ ”

2.3.6 DFI

DI

Step 1	configure terminal

Step 2	identify-application custom name *app-name* class *class-name* {tcp | udp | ip} {sport *sport-low sport-high* dport *dport-low dport-high*}| {sip *sip-low sip-high* dip *dip-low dip-high*} |{ sip *sip-low sip-high* sport *sport-low sport-high* }|{ dip *dip-low dip-high* dport *dport-low dport-high}*	0-65535
Step 3	end	
Step 4	Ruijie#**show identify-application userdef-rule**	

no identify-application custom

name class {tcp | udp | ip } { sport dport {sip sport dip dport

1		
2		
3	32	

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# identify-application custom name        class
       ip sip 192.168.1.2 192.168.1.2 dip 100.1.1.1 10.1.1.10
Ruijie#end
Ruijie#*Jan 11 17:25:29: %SYS-5-CONFIG_I: Configured from console
by console
Ruijie#show identify-application custom-rule
TYPE  NAME                CLASS               SPL    SPH    DPL
DPH  SIPL       SIPH  DIPL       DIPH

TCP                                       any    any    any    any
192.168.1.2       192.168.1.2  100.1.1.1  10.1.1.10
```

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# identify-application custom name myqq class
        udp dip 66.12.11.34  66.12.11.36 dport 1 10
Ruijie#end
Ruijie#*Jan 11 17:25:29: %SYS-5-CONFIG_I: Configured from console
by console
Ruijie#show identify-application custom-rule
TYPE  NAME                CLASS               SPL    SPH    DPL
DPH  SIPL       SIPH   DIPL    DIPH
TCP                                        any    any    any    any
192.168.1.2        192.168.1.2   100.1.1.1   10.1.1.10
UDP  myqq                        any    any     1   10   any  any
66.12.11.34  66.12.11.36
```

2.3.9

Step 1	configure terminal	
Step 2	identify-application key *app-name*	
Step 3	end	
Step 4	show identity-application key	

no identity-application key *app-name*

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
```

FTP

2.3.12

Step 1	configure terminal	
Step 2	identify-application other *app-name*	
Step 3	end	
Step 4	show identity-application other	

no identity-application other

app-name

```
#       Q
  Ruijie# configure terminal
  Enter configuration commands, one per line.  End with CNTL/Z.
                                          QQ
#
```

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
```

app-add *QQ*

2.3.14

show identify-application version	
show identity-application userdef-rule	
show identity-application	
show identity-application routable	
show identity-application key	
show identity-application inhibitive	
show identity-application block	
show identity-application other	
show identity-application class	
show identity-application group-state	
show identify-application user-group *group-name*	
show identify-application expect	

#

```
Ruijie(config)#show identify-application ver
Version:2012.02.11.01.01.11
```

#

```
Ruijie(config)#show identify-application custom-rule
TYPE NAME                     CLASS                        SPL
SPH   DPL   DPH   SIPL          SIPH          DIPL
  DIPH
---- --------------------------
------------------------------ ----- ----- ----- -----
-------------- -------------- --------------
- ---------------
```

```
  UDP  mymsn                    myim                          any
  any   any   any   any           any           220.22.12.3
    220.22.12.10
  TCP  myqq                     myim                          any
  any   8000  8000  any           any           any
    Any
#
  Ruijie#show identity-application
  any 255-4095-63-48
              1-0-0-0
              1-1-0-0
       MSN 1-6-0-0
           MSN-CHAT 1-6-1-0
           MSN-AUDIO 1-6-2-0
           MSN-FILE 1-6-3-0
           MSN-    1-6-4-0
           MSN-    1-6-5-0
          QQ 1-7-0-0
           QQ-CHAT 1-7-1-0
           QQ-    1-7-2-0
           QQ-       1-7-3-0
           QQ-       1-7-4-0
           QQ-    1-7-5-0
           QQ-    1-7-14-0
       WEBIM 1-9-0-0
           MSN-WEBIM 1-9-1-0
           YAHOO-WEBIM 1-9-2-0
#
  Ruijie#show identity-application routable
                          3-0-0-0
                          3-3-0-0
                          3-8-0-0
                          3-9-0-0
                          3-10-0-0
                          3-12-0-0
                          3-14-0-0
```

3-16-0-0

3-18-0-0

3-20-0-0

3-23-0-0

6-0-0-0

6-26-0-0

6-27-0-0

6-28-0-0

6-29-0-0

6-30-0-0

6-30-1-0

6-31-0-0

19-0-0-0

19-1-0-0

19-2-0-0

19-3-0-0

19-4-0-0

19-5-0-0

19-6-0-0

19-7-0-0

19-8-0-0

19-9-0-0

#

Ruijie(config)#show identify-application key

(group)

Ruijie(config)#show identify-application inhibitive

P2P (group)

Ruijie(config)#show identify-application block

PCANYWHERE

Ruijie(config)#show identify-application other

IP (group)

(group)

(group)

(group)

WEB (group)

(group)

(group)

(group) (group)

(group) (group)

(group)

(group)

(group)

8-0-0-0

9-0-0-0

10-0-0-0

11-0-0-0

12-0-0-0

13-0-0-0

14-0-0-0

15-0-0-0

RFC 16-0-0-0

248-0-0-0

249-0-0-0

#

Ruijie#**show identity-application group-state**

app group state: on //off on

myqq

Q

#

Ruijie#**show identity-application proto-expect**

protocol expectation state: on //

protocol expectation timeout: 180 // 3

2.4

3

3.1

3.1.1

P P

ADS M 7-8

+ADS

P2P

ADS

	NR300G	NR500G	NR2000G

3.1.2

3.1.2.1

3.1.2.2

“

3.1.2.4

DW DW

P DW

3.1.3.2 NAT

P

3.3.2

Step 1	enable	
Step 2	configure terminal	
Step 3	app route enable	
Step 4	app route *app-name* { interface *interface-name* | interface-group *group-name*} [time-range *time-rang-name*]	*app-name* interface *interface-name* interface-group *group-name* time-range *time-rang-name*
Step 5	end	

no app route *app-name*

“ ” “ ”

“ ”

```
Router(config)#app route HTTP          interface-group
inhibitive_intf_group time-range no_midnight
```

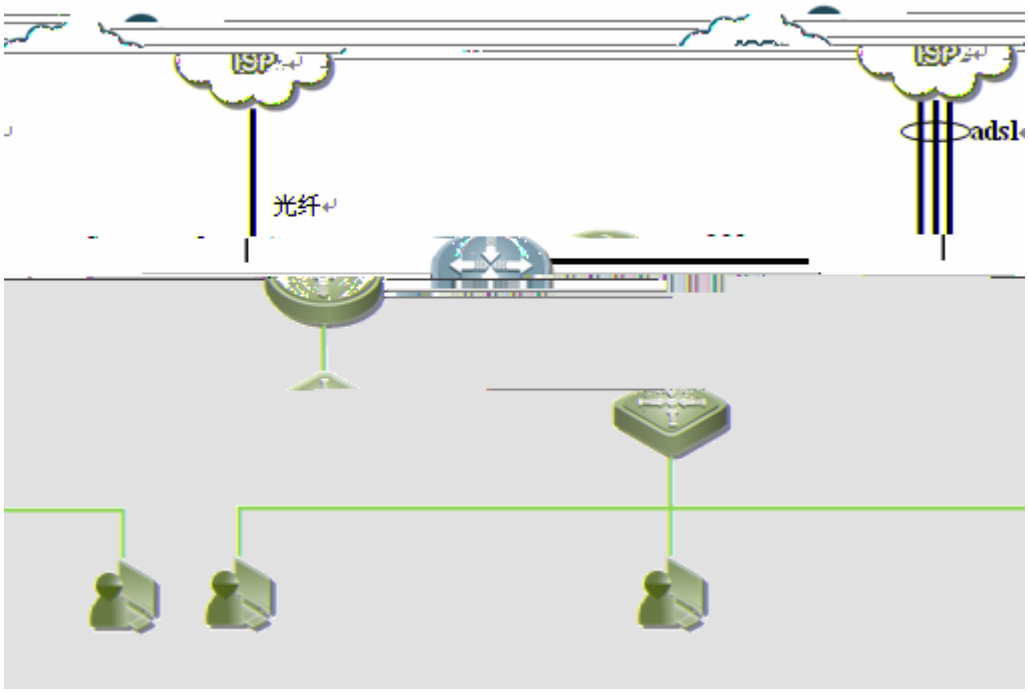
3.3.3

Step 1	enable	
Step 2	configure terminal	
Step 3	interface-group *interface-group-name*	
Step 4	)# interface *interface-name*	
Step 5	)# load-balance policy { bandwidth | load }	
Step 6	end	

no interface-group

interface-group-name

3.4.1.2



5 + ADSL

3.4.1.3

1

#

0.0.0.0 0.0.0.0 202.100.12.5

2

1,2,3

```
Router(config)#interface-group inhibitive_intf_group
Router(config-intf-group)# interface-member dialer 1
Router(config-intf-group)# interface-member dialer 2
Router(config-intf-group)# interface-member dialer 3
```

#

```
Router(config-intf-group)# load-balance policy load
Router(config-intf-group)#exit
```

3

```
Router(config)#time-range no_midnight
Router (config-time-range)#periodic daily 9:00 to 23:00
```

```
Router (config-time-range)#exit
```

4

#

```
Router(config)#app route enable
```

#

```
Router(config)#app route P2P        interface-group
inhibitive_intf_group
Router(config)#app route             interface-group
inhibitive_intf_group time-range no_midnight
Router(config)#app route HTTP         interface-group
inhibitive_intf_group time-range no_midnight
Router(config)#app route           interface-group
inhibitive_intf_group
Router(config)#app route       interface-group
inhibitive_intf_group
Router(config)#app route             interface-group
inhibitive_intf_group
```

3.4.1.4

1

CLASS FORCE( )

P2P

HTTP

CLASS	(/ / /)
FORCE( )	
TIME-RANGE	
STATE	

2

Ekwpuvcvkuvkeu

CNAS EVALUATION(RU)

HDATA(by HTIME(ms)

SDATA(by STIME(ms)

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

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

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

TPS 时延(ms)

81535/297997 0.5/3.75

101918/342496 0.6/4.68

CNAS	(/ / /)
EVALUATION(RU)	/
HDATA(by	/
HTIME(ms)	= / /
SDATA(by	= + /
STIME(ms)	= / /

3 “TPS 时延”

Ekwpuvcvkuvkeu TPS

#

3

#

2

#

```
  Router(config)#interface-group inhibitive_intf_group
  Router(config-intf-group)# interface-member dialer 1
  Router(config-intf-group)# interface-member dialer 2
  Router(config-intf-group)# interface-member dialer 3
#
  Router(config-intf-group)# load-balance policy load
  Router(config-intf-group)#exit

3
  Router(config)#time-range no_midnight
  Router (config-time-range)#periodic daily 9:00 to 23:00
  Router (config-time-range)#exit

4
#
  Router(config)#app route enable

#
  Router(config)#app route P2P        interface-group
  inhibitive_intf_group
  Router(config)#app route             interface-group
  inhibitive_intf_group time-range no_midnight
```

```
Router(config)#app route           interface-group
inhibitive_intf_group
Router(config)#app route       interface-group
inhibitive_intf_group
Router(config)#app route             interface-group
inhibitive_intf_group
```

3.4.2.4

60168/91067 0.1/1.41

20136/40359 0.1/0.98

21031/60594 0.2/2.01

3 “HTTP ”

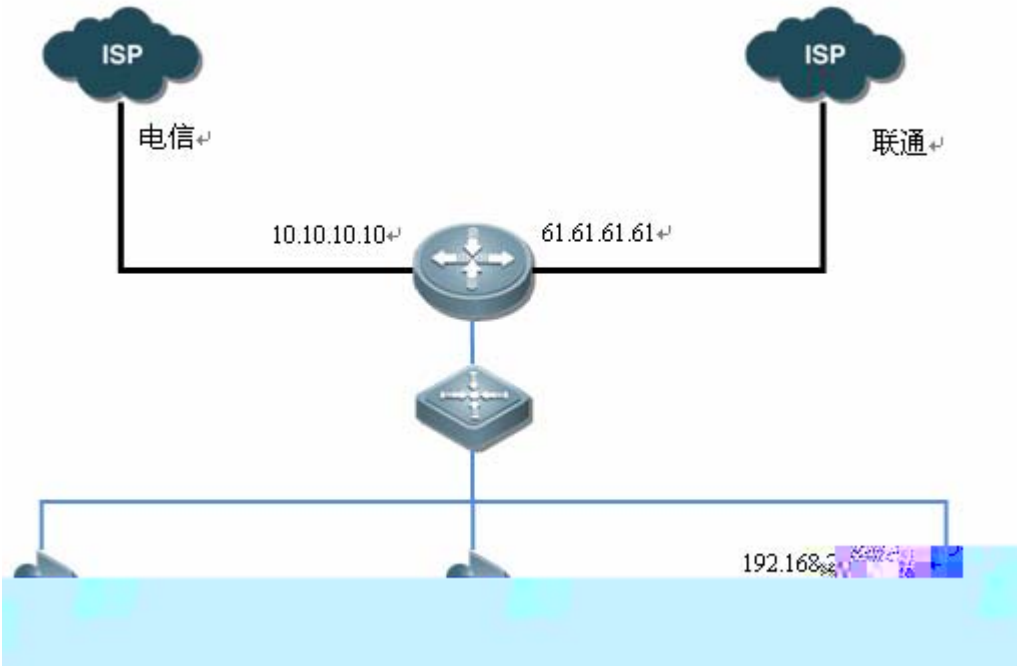
SIP	SPORT	DIP	DPORT	PRO-NUM	INTF	SUM DATA(byte)
172.18.33.77	1090	192.168.58.112	39088	6	GigabitEthernet 0/6	8153/29799
172.18.33.17	1090	192.168.58.102	20024	6	GigabitEthernet 0/6	1153/21919
172.18.33.76	1090	192.168.58.10	12345	6	GigabitEthernet 0/6	8053/2979
172.18.33.73	1090	192.168.58.20	22364	6	GigabitEthernet 0/6	8173/12799
172.18.33.72	1090	192.168.58.11	15621	6	GigabitEthernet 0/6	4153/56321

3.4.3

3.4.3.1

2

3.4.3.2



7

3.4.3.3

1

#

0.0.0.0 0.0.0.0 202.100.12.51

2

```
Router(config)#time-range no_midnight
Router (config-time-range)#periodic daily 9:00 to 23:00
Router (config-time-range)#exit
```

3 DNS

DNS

```
Router(config)#interface gi 0/1
Router(config-if-GigabitEthernet 0/1)#dns 202.96.199.133
Router(config-if-GigabitEthernet 0/1)#exit
Router(config)#interface gi 0/2
Router(config-if-GigabitEthernet 0/2)#dns 58.240.57.33
Router(config-if-GigabitEthernet 0/2)#exit
```

```
#     DNS
Router(config)#dns-proxy enable
```

4

```
Router(config)#interface gi 0/2
```

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

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

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

P P

92333/297997 0.6/3.75

202918/342496 0.7/4.68

31030/101901 0.2/1.75

401189/212002 0.3/2.61

10120/201331 0.1/2.57

100121/204691 0.2/2.98

41035/97997 0.3/1.01

60168/91067 0.1/1.41

20136/40359 0.1/0.98

21031/60594 0.2/2.01

3 “ HTTP ”

```
SIP             SPORT  DIP              DPORT    PRO-NUM  INTF                    SUM DATA(byte)
--------------  ------ ---------------- -------  -------  ----------------------  --------------
172.18.33.77    1090   192.168.58.112   39088    6        GigabitEthernet 0/6     8153/29799
172.18.33.17    1090   192.168.58.102   20024    6        GigabitEthernet 0/6     1153/21919
172.18.33.76    1090   192.168.58.10    12345    6        GigabitEthernet 0/6     8053/2979
172.18.33.73    1090   192.168.58.20    22364    6        GigabitEthernet 0/6     8173/12799
172.18.33.72    1090   192.168.58.11    15621    6        GigabitEthernet 0/6     4153/56321
```

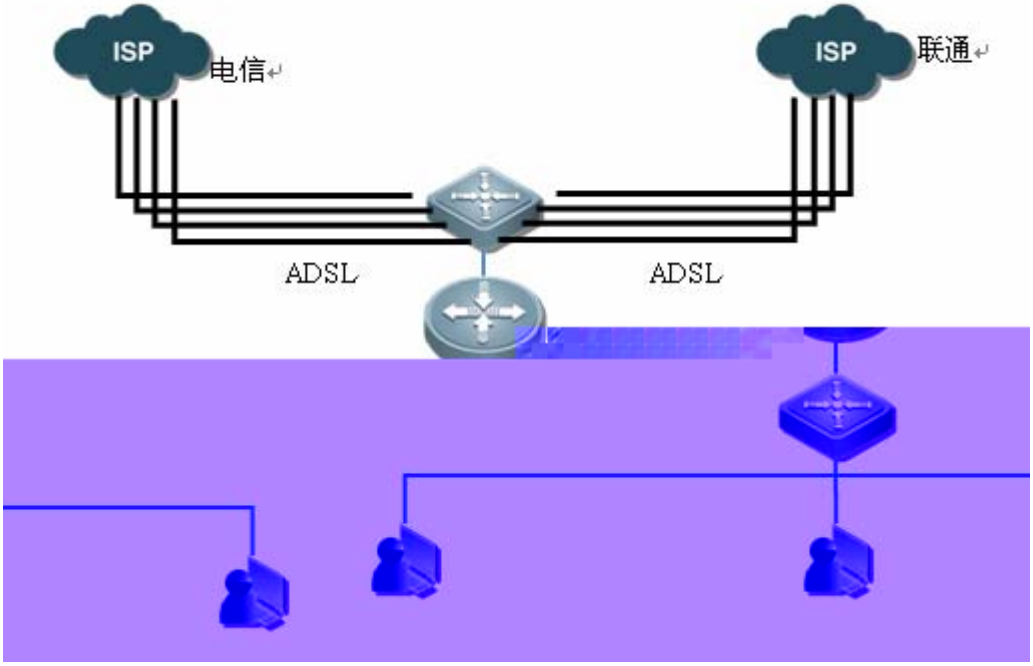
3.4.4 ADSL

3.4.4.1

ADS

30 ADS 20 ADS

3.4.4.2



8 ADSL

3.4.4.3

1

20 ADS

0.0.0 0.0.0.0 0

0.0.0 0.0.0.0 1

0.0.0 0.0.0.0 2

0.0.0 0.0.0.0 3

0.0.0 0.0.0.0 4

0.0.0 0.0.0.0 5

0.0.0 0.0.0.0 6

0.0.0 0.0.0.0 7

0.0.0 0.0.0.0 8

0.0.0 0.0.0.0 9

0.0.0 0.0.0.0 40

0.0.0 0.0.0.0 41

0.0.0 0.0.0.0 42

0.0.0 0.0.0.0 43

```
Router(config-intf-group)# load-balance policy load
Router(config-intf-group)#exit
```

3

```
Router(config)#time-range no_midnight
Router (config-time-range)#periodic daily 9:00 to 23:00
Router (config-time-range)#exit
```

4

#

```
Router(config)#app route enable
```

#

```
Router(config)#app route P2P        interface-group
inhibitive_intf_group
Router(config)#app route             interface-group
inhibitive_intf_group time-range no_midnight
Router(config)#app route HTTP          interface-group
inhibitive_intf_group time-range no_midnight
Router(config)#app route           interface-group
inhibitive_intf_group
Router(config)#app route       interface-group
inhibitive_intf_group
Router(config)#app route             interface-group
inhibitive_intf_group
```

3.4.4.4

1

CAS RCE( )

P2P			

2

CLAS INTERFACE(

HDATA(HPRE(

NDATA(NPRE(

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

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

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

P P

92333/297997 0.6/3.75

202918/342496 0.7/4.68

31030/101901 0.2/1.75

401189/212002 0.3/2.61

10120/201331 0.1/2.57

100121/204691 0.2/2.98

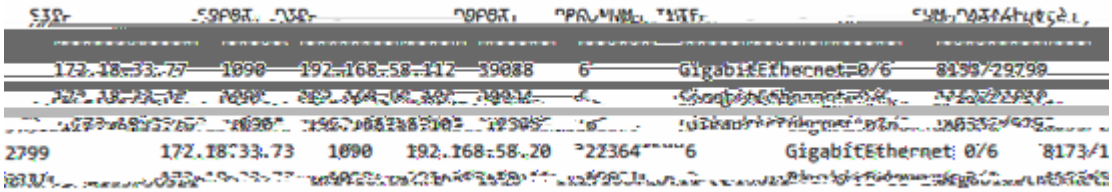
41035/97997 0.3/1.01

60168/91067 0.1/1.41

20136/40359 0.1/0.98

21031/60594 0.2/2.01

3 “HTTP ”



4

4.1

4.1.1

VOIP Voice Over Internet Protocol P2P Peer-to-Peer P2P

4.1.3

4.2

4.3

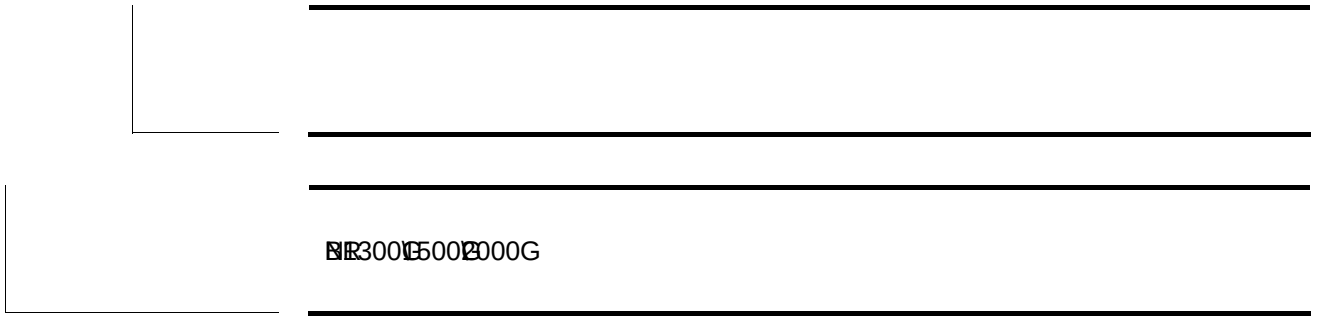
/

ACL

4.3.1

Step 1	#	flow-pre-mgr enable

o



4.3.2

Step 1	flow-pre-mgr total-limit *limit-number*	0

1 /

Step 1 [illegible]# flow-pre-mgr *rule-id* subscriber [illegible] /
subs_name action {block | by-pass | {trust [illegible] [illegible]
total-limit *total-limit-number* per-ip-limit
per-limit-number }}

4.3.4 ACL

ACL

Step 1	flow-pre-mgr *rule-id* access-list *acl-number* action {block | by-pass | {trust total-limit *total-limit-number*}}	ACL 1-50 ACL 1-99 ACL / ACL 0

id

1

2 ACL P

3

ACL

4 ACL P P P P

1

2 ACL

3 ACL ACL P P
ACL

4

NE300E5000E2000G

1

ACL P 220.200.20.20
30
E d dC Z
220.220.20.20
-s 120 30
2
P 192.168.1.0/24 P
E d dC Z
#p 192.168.1.0 0.0.0.255

4.3.5

Step 1	# flow-pre-mgr priority-swap *rule-id1 rule-id2*	

1
2

NE300 500 2000G

4.3.6

jR show flow-pre-mgr rule-info	
jR show flow-pre-mgr ip-info [*ip-address*]	P P jsd P P

#
jRkmgfn
fmgd200000
(jkmg1 ls G ifd5000
pt300 (446 jv
(jkmg2 ls120 tk0 jv
jR

P P
jRkmgfn
PADDRS fm fm
==========
203 500
103 500
20 0
15 0
jR

4.4

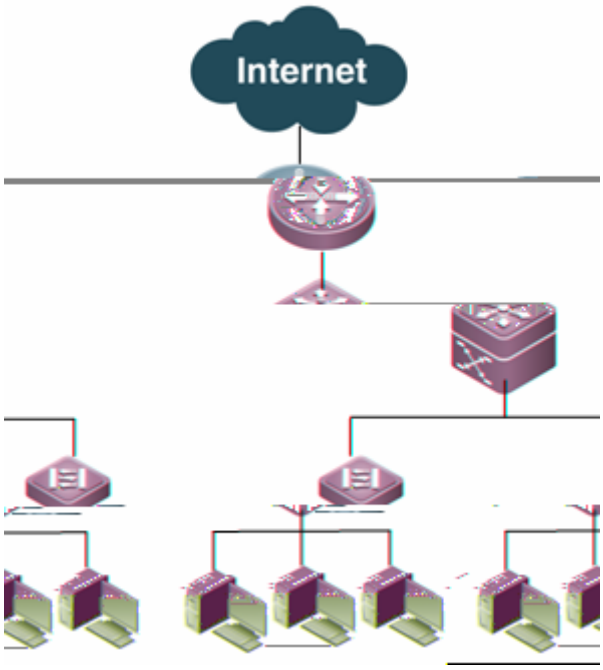
4.4.1

20

P 500

P 1000

4.4.2



9

4.4.3

1

#

#

#

192.168.5.11

192.168.5.12

2

#

```
Ruijie(config)# flow-pre-mgr total-limit 200000
```

#

```
Ruijie(config)# flow-pre-mgr subscriber any action trust
total-limit 0 per-ip-limit 500
```

#

```
Ruijie(config)# flow-pre-mgr subscriber LeaderGroup action trust
total-limit 0 per-ip-limit 1000
```

4.4.4

#

1000 (234

(523

5.1.2.1

5.1.2.1.1

1.
2.

5.1.2.1.2

cir pir pir
cir cir pir pir
cir
10M
cir 5M pir 10M
10M

5.1.2.1.3

1 0 7 0 7
2

5.1.2.1.4

BT

DU 5M

R

CR CR R BT

R 2M DU BT 5M 2M

BT BT

5.1.2.3

2p

TCP

1	TCP DP
2	4

5.1.2.4

5.1.2.4.1

b

EP

5.1.2.4.2

1.

2. 8
8

3.

5.1.2.5

VID

P

P

vpn VPDN

(

)

1.

2. Action pass in-channel i ê€³t®1 Î b Õ, „ ñ¸ P> >(# • È •€Ñ

5.3

5.3.1

Step 1	configure terminal	
Step 2	flow-control *Name*	
Step 3	show running	

no flow-control *Name*

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# flow-control DianXin
Ruijie(config-flow-control))# end
```

5.3.2

Step 5	flow-policy *Name*	
Step 6	end	
Step 7	show running	

no flow-policy

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# flow-control DianXin
Ruijie(config-flow-control)# exit
Ruijie(config)#interface Gi 0/1
Ruijie(config-if-GigabitEthernet 0/1)# flow-policy DianXin
Ruijie(config-if-GigabitEthernet 0/1)#end
```

5.3.3

Step 1	configure terminal	
Step 2	flow-control *Name*	
Step 3	channel-tree inbound	
Step 4	exit	flow-control
Step 5	channel-tree outbound	
Step 6	end	
Step 7	show running	

#

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# flow-control DianXin
Ruijie(config-flow-control)# channel-tree inbound
Ruijie(config-channel-tree)#exit
Ruijie(config-flow-control)# channel-tree outbound
Ruijie(config-channel-tree)#end
```

5.3.4

Step 1	configure terminal	
Step 2	flow-control *Name*	
Step 3	channel-tree inbound	
Step 4	channel-group *name* parent {NULL | *parent_name*} cir *cir_num* pir *pir_num* [pri *pri_num*] [schedule-type { fifo | sfq | per-net per-mask *mask* per-cir *pcir_num* per-pir *ppir_num* limit *limit_num* [session-limit *session_limit_num*] [auto][reverse]	
Step 6	end	
Step 7	show running	

Name

1. cir pir
2. cir cir

depart1

```
Ruijie# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Ruijie(config)# flow-control DianXin
Ruijie(config-flow-control)# channel-tree inbound
Ruijie(config-channel-tree)# channel-default depart1
Ruijie(config-channel-tree)# end
```

5.3.6

Step 1	configure terminal	
Step 2	flow-control *Name*	
Step 3	flow-rule *num* vlan-group *vlan-group-name* subscriber *subscriber-name* auth-group *auth-group-name* network-group *network-group-name* app-group *app-group-name* time-range *time-rang-name* [vpn]	
Step 4	flow-rule *num* session-limit *session-num* action {drop | log-drop | pass [in-channel *in-channel-name*] [out-channel *out-channel-name*]} [commet *string*]	
Step 6	end	
Step 7	show running	

flowl-control no flow-rule *num*

3M 300

```
Ruijie# configure terminal
```

5.4

# show flow-control *Name* {inbound | outbound} [channel-group *channel-name*]	

```
#
Ruijie#show flow-control test inbound channel-group root
group-name                      cir     pir     pri  schedule
------------------------------- -------- -------- ---- --------
root                           1000000  1000000  4    fifo

#
Ruijie#show flow-control test inbound
group-name                      cir     pir     pri  schedule
------------------------------- -------- -------- ---- --------
root                           1000000  1000000  4    fifo
part1                           700000   1000000  4    fifo
part2                           200000   1000000  4    fifo
part3                           100000   1000000  4    fifo
```

5.6

Ruijie(config)# **show flow-control-policy rule [group** *name***]**	

#

5.7

5.7.1

10M 3 192.168.1.0/24 192.168.2.0/24 192.168.3.0/24
5M 3M 2M

5.7.2

5.7.3

```
Ruijie# configure terminal
#
Ruijie(config)# flow-control Corp
#
Ruijie(config-flow-control)# channel-tree inbound
Ruijie(config-channel-tree)# channel-group root parent null cir
10000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department1 parent
root cir 5000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department2 parent
root cir 3000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department3 parent
root cir 2000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# exit
#
Ruijie(config-flow-control)# channel-tree outbound
Ruijie(config-channel-tree)# channel-group root parent null cir
10000 pir 10000 pri 4 schedule-type fifo
```

```
Ruijie(config-channel-tree)# channel-group department1 parent
root cir 5000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department2 parent
root cir 3000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department3 parent
root cir 2000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# exit
Ruijie(config-flow-control)# exit


Ruijie# configure terminal
#
Ruijie(config)# identify-application enable
#
Ruijie(config)# subscriber static name department1 parent /
ip-subnet 192.168.1.0 255.255.255.0
Ruijie(config)# subscriber static name department2 parent /
ip-subnet 192.168.2.0 255.255.255.0
Ruijie(config)# subscriber static name department3 parent /
ip-subnet 192.168.3.0 255.255.255.0
#             any              any
Ruijie(config)# time-range any
Ruijie(config-time-range)# periodic Daily 0:00 to 23:59


Ruijie# configure terminal
Ruijie(config)# flow-control Corp
#     1  2  3                 th           th           th
 f  f  f  
```

```
Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# flow-policy Corp
```

5.8 Normal

5.8.1

10M 2

192.168.10.0/24 192.168.20.0/24

5M 10M

BT 1M 5M

BT 6M

5.8.2

5.8.3

```
# 
 0:00 to 23:59

#
depart1 192.168.10.0 255.255.255.0
depart2 192.168.20.0 255.255.255.0

# BT
```

#

fbo *Dianxin*

leab

lep *BT* la *6000* ybam

leg *root* la *null* ic *10000* ip *10000* ip *4* lebf

leg *depart1* la *root* ic *5000* ip *10000* ip *4* lebf

leg *depart1-BT* la *depart1* ic *1000* ip *5000* ip *4* leb

fo

1 BT BT

channel-group *depart1-BT* pool *BT*

leg *depart2* la *root* ic *5000* ip *10000* ip *4* lebf

leg *depart2-BT* la *depart2* ic *1000* ip *5000* ip *4* leb

fo

2 BT BT

leg *depart2-BT* ip *BT*

leal *root*

!

leab

lep *BT* la *6000* ybam

leg *root* tbic *10000* ip *10000* ip *4* lebf

leg *depart1* la *root* ic *5000* ip *10000* ip *4* lebf

leg *depart1-BT* la *depart1* ic *1000* ip *5000* ip *4* leb

fo

1 BT BT

leg *depart1-BT* ip *BT*

leg *depart2* la *root* ic *5000* ip *10000* ip *4* lebf

leg *depart2-BT* la *depart2* ic *1000* ip *5000* ip *4* leb

fo

2 BT BT

leg *depart2-BT* ip *BT*

leal *root*

!

1 2 BT

fbo *1* lagbe *depart1* lagpgp

ieg *any*

fbo *1* ism *0* lepiha *depart1* u la *depart1*

fbo *2* lagbe *depart2* lagpgp

ieg *any*

fbo *2* ism *0* lepiha *depart2* tba *depart2*

```
#        1        2    BT
 ftp      3 tcp          depart1 tcp
BITTORRENT tcp      any
 ftp      3 ism      0 tcp          depart1-BT tcp
depart1-BT
 ftp      4 tcp          depart2 tcp
BITTORRENT tcp      any
 ftp      4 ism      0 tcp          depart2-BT tcp
depart2-BT

#
interface FastEthernet0/1
 ip ad..
 ftp          Dianxin
```

5.9 Per-IP

5.9.1

10M

500 BT 800k 512k

BT 5M 7M

1M

5.9.2

tV

5.9.3

 0:00 to *23:59*

BT

1

BITTORRENT any

1 *0* *BT* *BT*

2

any

2 *0* *Xunlei* *Xunlei*

#

interface GigabitEthernet 0/1

...

Dianxin

5.10

5.10.1

P2p

192.168.10.0/24 P2p

5.10.2

Global

5.10.3

#

0:00 to *23:59*

DP-test 192.168.10.0 255.255.255.0

1 any any any P2P any

1 0

2 any DP-test any any

5.6 ¹,ß# G£ { 1*+9?˜ í µ C

Q ¸	0*ü
Ruijie(config)# show flow-control-policy rule [group name]	¹,ß2Ï4³ Ý# G£ {1*+9?˜ í,XAº4š µ C ê5Ù ¤ þ# { { 4˜ ß Ý?˜ í,XAº4š µ C

G!5B _ Ö

/ Ý# G£ {1*+9?˜ í,XAº4š µ C Ö

Ruijie#show flow-control-policy rule

Pri_num grp_id rule_num ifx vlan_id subs_id D6 D6 D69DM29DM2 Â•Â•îï þ| & P7M ™•ᵀ

5.9.3 G!5B!9Px

Aº4šG!5B!9Px+9 ÈG!5B ` ä âG!5B V ß Ö

"¼ ã ÈTime-range ÍB5 á Õ any 0 GK + È ™NOG!5B Í h,X ÍB5

time-range any

periodic Daily 0:00 to 23:59

BT

5.9.3 G!5B!9Px

Aº4šG!5B!9Px+9 ÈG!5B ` ä âG!5B V ß Ö

"¼ ã ÈTime-range ÍB5 á Õ any 0 GK + È ™NOG!5B Í h,X ÍB5

time-range any

periodic Daily 0:00 to 23:59

BT

Ruijie(config)# subscriber static name LeaderA parent /LeaderGroup ip-host 192.168.5.11

Ruijie(config)# subscriber static name LeaderB parent /LeaderGroup ip-host 192.168.5.12

2 ÅG!5B# îA± DNX ï ÎL$ â1u)Ú,X?˜ í

G!5B < # îA± DL$

Ruijie(config)# flow-pre-mgr total-limit 200000

#G!5B Ý*ü ,X# îA± DL$

Ruijie(config)# flow-pre-mgr subscriber any action trust

total-limit 0 per-ip-limit 500

#G!5B @ ÌNZ Ð,X# îA± DL$

Ruijie(config)#flow-pre-mgrsubscriberLeaderGroupactiontrust

total-limit 0 per-ip-limit 1000

4.4.4 / P`A•

¹,ßA' Û ' !,X# îA± DNX ï ÎL$ â1u)Ú?˜ í Ä

Ruijie#show flow-pre-mgr rule-info

flow-pre-mgr total-limit 200000

(active)flow-pre-mgr 1 subscriber LeaderGroup action trust total-limit 0 per-ip-limit 1000 (234 flows)

(active)flow-pre-mgr 2 subscriber any action trust total-limit 0 per-ip-limit 500 (523 flows)

Ruijie#

5.9.3 G!5B!9Px

Aº4šG!5B!9Px+9 ÈG!5B ` ä âG!5B V ß Ö

"¼ ã ÈTime-range ÍB5 á Õ any 0 GK + È ™NOG!5B Í h,X ÍB5

time-range any

periodic Daily 0:00 to 23:59

BT

Ruijie(config)# interface GigabitEthernet 0/1
Ruijie(config-if-GigabitEthernet 0/1)# flow-policy Corp

5.8 # {Normal E •"4 h*ü _

5.8.1 *ü LÔ"

¤ @ Ì+ µ5%4° Î · ú ‘ 10M Ä @ Ì YF¼ æ Ú2 þF¼K¼ Ödepartment1Î
department 2 È5%!‰ Ú ÿ Ö192.168.10.0/24 ` 192.168.20.0/24 È*ü LÔ" V ß Ö
!£ þF¼K¼ Î ú ‘ 5M È Ô û Ã ¹E’ 10M ×
!£ þF¼K¼BT Î ú ‘ 1M È Ô û Ã ¹E’ 5M ×
H þ @ Ì BT # G£ á6ÑCYE6M ×

5.8.2 G!5B?U&•

.BAx ` ä ¹ ßG!5B ¹ 0 Ö
G!5B h*üAš ÿ,Ì GG!5B ÈAš ÿ Î Ø þF¼K¼,X# G£ ×
B rL LÔ" È Ú ÿ ï Î Þ> ` ß> ,X# {EîF' å ×
G!5B E •"4G!5B È ¹ žEîF' t 9 E •"4
G!5B# {1*+9 È ‡ n Ø þF¼K¼# G£ 9 Í h,X# {EîF' ×
h*ü# {4˜ Wan ·

5.8.3 G!5B!9Px

Aº4šG!5B!9Px+9 ÈG!5B ` ä âG!5B V ß Ö
"¼ ã ÈTime-range ÍB5 á Õ any 0 GK + È ™NOG!5B Í h,X ÍB5
time-range any
periodic Daily 0:00 to 23:59

*ü F¼K¼ æ Ú
subscriber static name depart1 parent / ip-subnet 192.168.10.0 255.255.255.0
subscriber static name depart2 parent / ip-subnet 192.168.20.0 255.255.255.0

BT î u ü(M U g á + BITTORRENT È á*ü º ê n

Ruijie(config)# subscriber static name LeaderA parent /LeaderGroup ip-host 192.168.5.11

Ruijie(config)# subscriber static name LeaderB parent /LeaderGroup ip-host 192.168.5.12

2 ÅG!5B# îA± DNX ï ÎL$ â1u)Ú,X?˜ í

G!5B < # îA± DL$

Ruijie(config)# flow-pre-mgr total-limit 200000

#G!5B Ý*ü ,X# îA± DL$

Ruijie(config)# flow-pre-mgr subscriber any action trust

total-limit 0 per-ip-limit 500

#G!5B @ ÌNZ Ð,X# îA± DL$

Ruijie(config)#flow-pre-mgrsubscriberLeaderGroupactiontrust

total-limit 0 per-ip-limit 1000

4.4.4 / P`A•

¹,ßA' Û ' !,X# îA± DNX ï ÎL$ â1u)Ú?˜ í Ä

Ruijie#show flow-pre-mgr rule-info

flow-pre-mgr total-limit 200000

(active)flow-pre-mgr 1 subscriber LeaderGroup action trust total-limit 0 per-ip-limit 1000 (234 flows)

(active)flow-pre-mgr 2 subscriber any action trust total-limit 0 per-ip-limit 500 (523 flows)

Ruijie#

5.7 # { Î h*ü _

5.7.1 *ü LÔ"

¤ @ Ì5%4° Î · ú ‘ 10M Ä @ Ì YF¼ æ Ú3 þF¼K¼ Ödepartment1Ãdepartment 2 ` department 3 È5%!‰ Ú ÿ Ö192.168.1.0/24 Ã192.168.2.0/24 ` 192.168.3.0/24 È Ú ÿ ÚG! ú ‘ 5M Ã3M ` 2M Ä

5.7.2 G!5B?U&•

.BAx ` ä ¹ ßG!5B ¹ 0 Ö

B rL LÔ" È Ú ÿ ï Î Þ> ` ß> ,X# {EîF' å ×

G!5B h*üAš ÿ,Ì GG!5B ÈAš ÿ Î Ø þF¼K¼,X# G£ ×

G!5B# {1*+9 È ‡ n Ø þF¼K¼# G£ 9 Í h,X# {EîF' ×

h*ü# {4˜ Wan ·

5.7.3 G!5B!9Px

G!5B# {4˜ `# {EîF' å

```
Ruijie# configure terminal
# ï Î# {4˜
Ruijie(config)# flow-control Corp
# ï Î ß> • å# { å
Ruijie(config-flow-control)# channel-tree inbound
Ruijie(config-channel-tree)# channel-group root parent null cir
10000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department1 parent
root cir 5000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department2 parent
root cir 3000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# channel-group department3 parent
root cir 2000 pir 10000 pri 4 schedule-type fifo
Ruijie(config-channel-tree)# exit
# ï Î Þ> • å# { å
Ruijie(config-flow-control)# channel-tree outbound
Ruijie(config-channel-tree)# channel-group root parent null cir
10000 pir 10000 pri 4 schedule-type fifo
```