



Web

RGOS 10.3(4b6)p2

©2000-2012



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

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

8:30 6

RGOS[®]10.3 (4b6)p2

1 Web

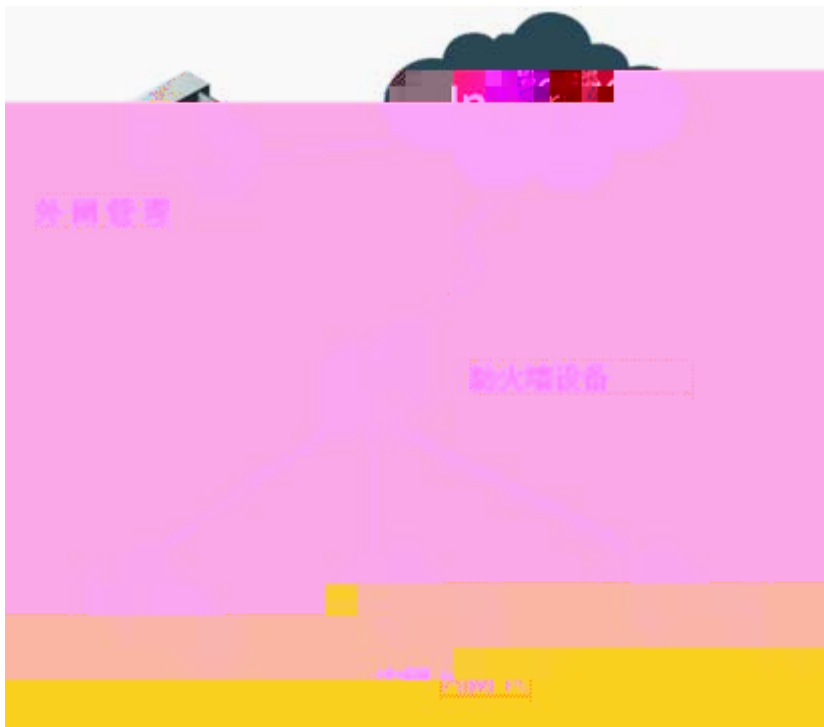
1.1

KV

D7

KV

%%



D7

KYV

D7 =D % & %%, " & % " % & # &) " &) " &) " S



<5fl L <5

=D

: Kl : 5=@CJ9F! G7; "XcW 5G

: Kl : 5=@CJ9F! 55! G7; "XcW 55

%

J@5B ' ;][U]h9h\YfbYh %%% 5WVgg J@5B &

:]fYkU`# WbZ][ifY hYfa]bU

9bhYf WbZ][ifU]cb WaaUbXgž cbY dYf `]bY' 9bX k]h\ 7BH@#N'

:]fYkU`fWbZ][L# j`Ub &

:]fYkU`fWbZ][!j`UbL# Y]h

:]fYkU`fWbZ][L#]bhYfZUW ;][U]hYh\YfbYh %%%

:]fYkU`fWbZ][!ZL# gk]hWdcfh UWVgg j`Ub &

:]fYkU`fWbZ][!ZL# Y]h

(Hb;][U]hYh\YfbYh (# % Hb;][U]hYh\YfbYh (#& fl L 5[[fYhY]UhYdcfh (

:]fYkU`fWbZ][L#]bhYfZUW Hb;][U]hYh\YfbYh (# %

:]fYkU`fWbZ][!ZL# dcfh] [fci d (

:]fYkU`fWbZ][!ZL# Y]h

:]fYkU`fWbZ][L#]bhYfZUW Hb;][U]hYh\YfbYh (# &

:]fYkU`fWbZ][!ZL# dcfh] [fci d (

:]fYkU`fWbZ][!ZL# Y]h

5[[fYhY]UhYdcfh (Hfi b_ J@5B &

:]fYkU`fWbZ][L#]bhYfZUW 5[[fYhY]UhYdcfh (

:]fYkU`fWbZ][!ZL# gk]hWdcfh acXY hfi b_

:]fYkU`fWbZ][!ZL# gk]hWdcfh hfi b_ U`ckYXj`Ub fYacjY %ž'!(S(

&

:]fYkU`fWbZ][L#]bhYfZUWj`Ub &

:]fYkU`fWbZ][!][ZL#]d UXYgg % & % , " & % % &)" &)" &)" \$

' \hhd#\hhdg

\hhd

:]fYkU`fWbZ][L#]YbUV Y gYfj]W kYm gYfj Yf \hhd

\hhdg

:]fYkU`fWbZ][L#]YbUV Y gYfj]W kYm gYfj Yf \hhdg

(KYV `cWU

:]fYkU`fWbZ][L#]d \hhd U h\Ybh]W h]cb `cWU

)

:]fYkU`fWbZ][L#]i gYf Ux]b dUggkcfX Ux]b

%

:]fYkU`fWbZ][L#]i gYf Ux]b df]j]`Y[Y %

*

:]fYkU`fWbZ][L#]gYfj]W dUggkcfX YbWmdh]cb

7@-

f&L

KYV

`cWU

f&L

Ux]b



' Ux]b

(

)

=D % &'%, " &S%% KYV =9, " S % &
UX|b UX|b 0 >



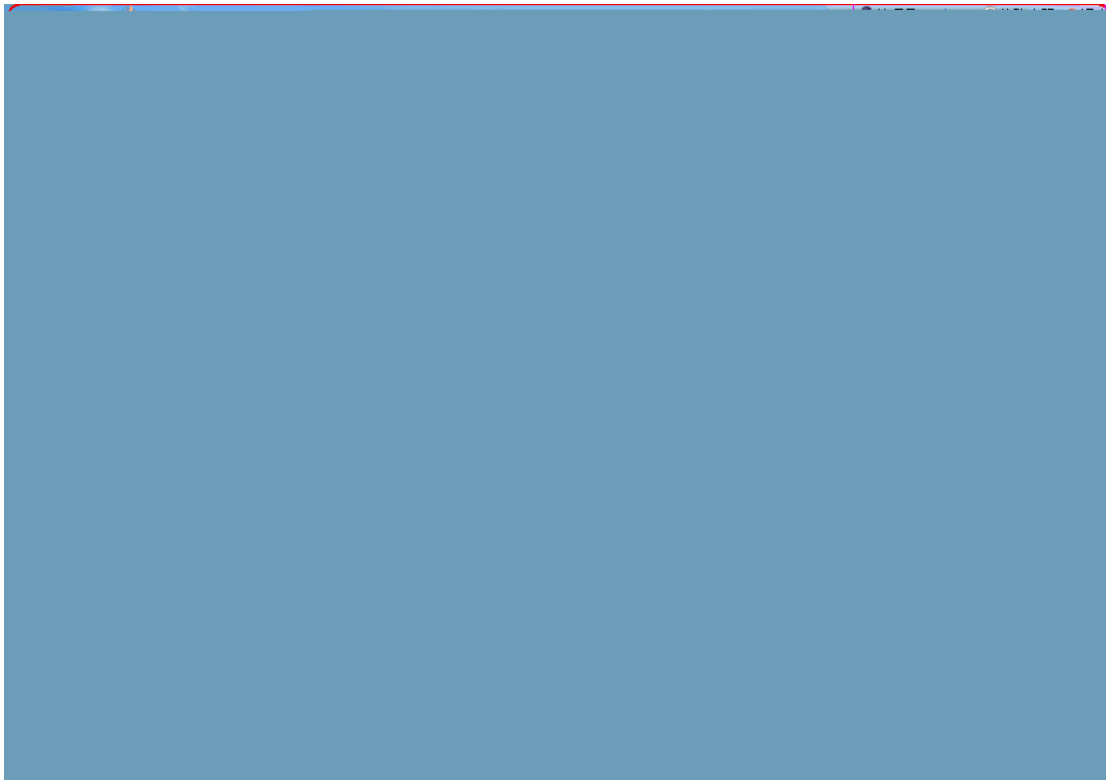
% &

1.3 Web

KYV 0 > KYV

1.4

KYV %'



%' KYV

http	<pre> Firewall(config)#ip http port ? 80 Default port number <1025-65535> Port number range </pre>
https	<pre> Firewall(config)#ip http secure-port ? 443 Default port number <1025-65535> Port number range </pre>
Web	<pre> Firewall(config)#ip http authentication ? enable Use enable passwords local Use local username and passwords enable username xxx password xxx admin Firewall(config)#enable password xxxxx local username xxx password xxx local local enable WEB local </pre>



1.7

f&LKYV A|WcgcZh =bhYbYh 9l d' cfYf *"\$ GD&
; cc[`Y 7fcaY

Acn] ``U:]fYZcl '*\$
=9, "\$

f&LKYV

KYV

2

7D

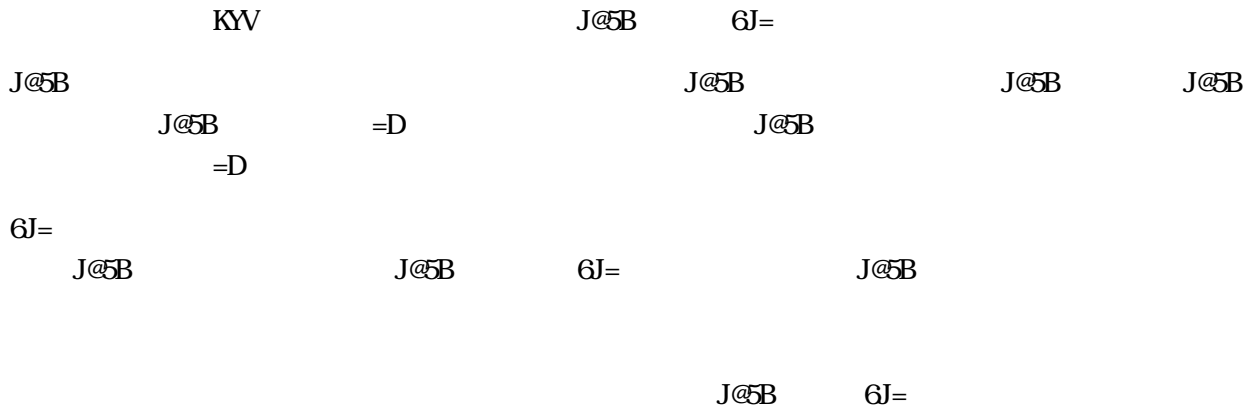
KYV

&%



&%

3



3.1 VLAN

3.1.1 VLAN



'!% J@B

		J@B		
=D	#	IP	IP	IP
		DHCP	IP	
		ID		
		8KB		

Ž ...
!

57@ 57@ 57@
]b#ci h 57@
57@

添加VLAN
✕

*VLAN ID: (1-4094)

IP配置: 无IP配置 静态地址

IP地址:

掩码: 配置从IP 配置双机热备IP地址对

※从IP地址必须与主IP地址位于不同网段

描述:

状态: 启用 禁用

确定
取消

'!& J@5B

J@5B =8	J@5B =8
=D	=D =D =D =D =D
=D	J@5B =D =D =D
=D	J@5B =D =D =D
=D	=D =D =D

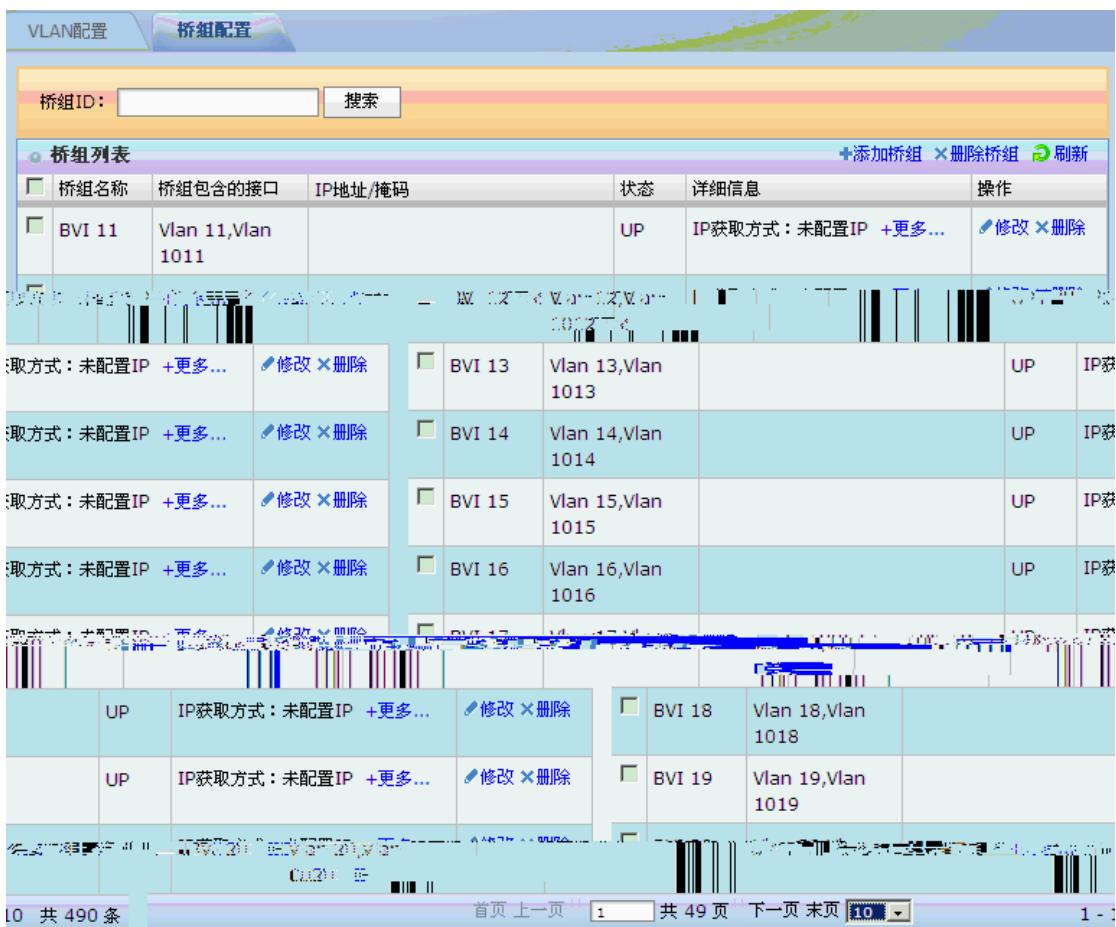
3.2 BVI

3.2.1 BVI

>

J@5B

3 3



'!'

	J@5B J@5B
	J@5B =D

=D #	IP PPP	IP	IP	IP
	ID 8CKB			
	Ž ... ! =D	=D	DDD	
	57@ 57@]b#ci h	57@ 57@	57@
	=D		=D	

3.2.2 BVI

6J=

'!'

'!(

添加桥组

*桥组ID: (1-500)

请选择接口:

所有接口	已选接口
Vlan 1	
Vlan 2	
Vlan 3	
Vlan 4	
Vlan 5	
Vlan 6	
Vlan 7	
Vlan 8	

增加->

<-移除

IP配置: 无IP配置 静态地址 PPP协商

IP地址:

掩码: 配置从IP 配置双机热备

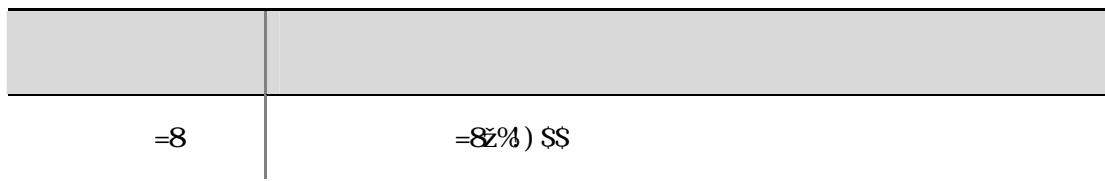
※从IP地址必须与主IP地址位于不同网段

从IP地址: 掩码:

描述:

状态: 启用 禁用

!()



=8

=82%) \$\$

=D #	IP
=D #	IP IP

4

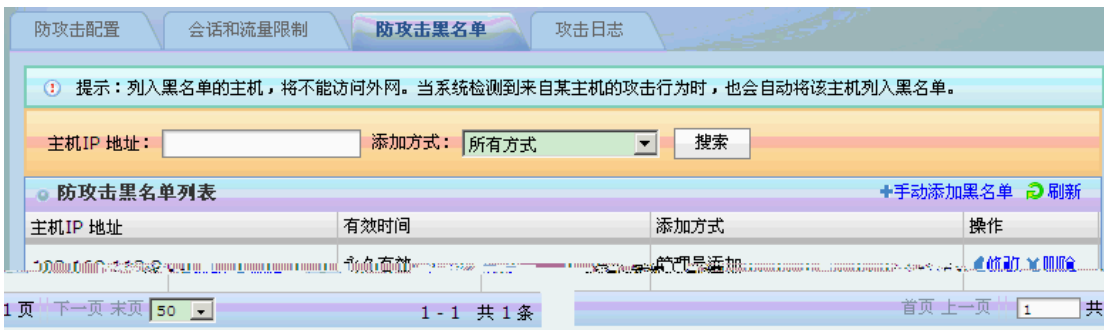
4.1

4.1.1

]d =D =D =D

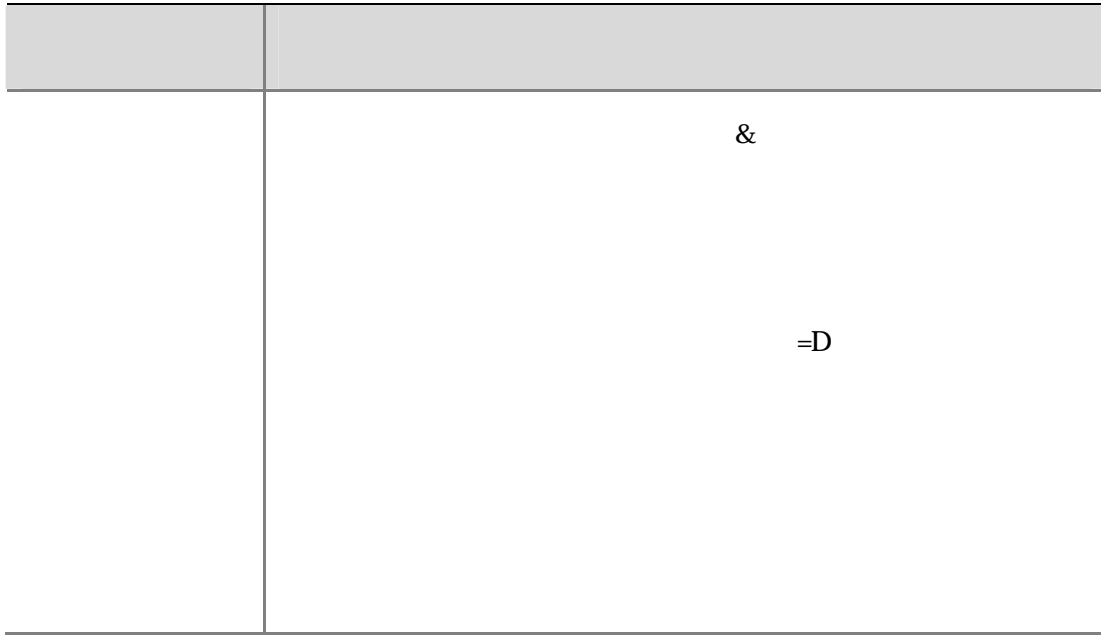
4.1.2

> (!%



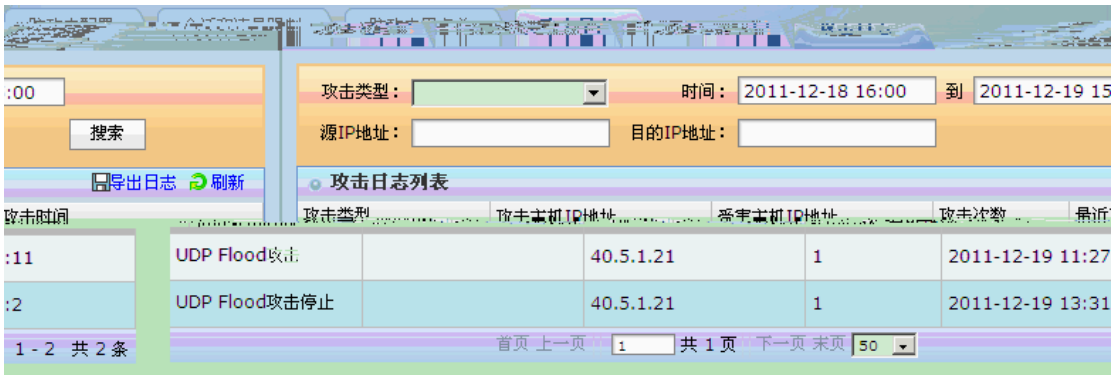
(!%

=D	=D



4.1.3

(!%



(!'

	GMB : @CC8 I8D : @CC8 =7AD : @CC8 =D
=D	=D =D
=D	=D GMB : @CC8 I8D

Z ck Z ccX

]d]d

iXl Z ccX

]WdZ ccX

4.3.2

>

(!(

防攻击配置			
会话和流量限制		防攻击黑名单	攻击日志
会话和流量限制列表 +添加 ×删除			
主机范围	例外主机	规则	操作
<input type="checkbox"/> 192.168.3.0/255.255.255.0	192.168.3.25/255.255.255.255	每IP带宽限制：流入(in):1000000 流出(out):1000000	修改 删除
<input type="checkbox"/> 7.0.0.0/255.0.0.0 119.75.218.77/255.255.255.255 224.0.0.0/255.0.0.0 172.2.1.0/255.255.255.0 172.1.0.0/255.255.0.0 119.75.217.56/255.255.255.255 6.6.6.66/255.255.255.255	7.2.3.11/255.255.255.255	每IP带宽限制：流入(in):10000000 流出(out):10000000 每IP会话建立速率限制：流入(in):100000 流出(out):100000 每IP会话总数限制：流入(in):1000000 流出(out):1000000	修改 删除

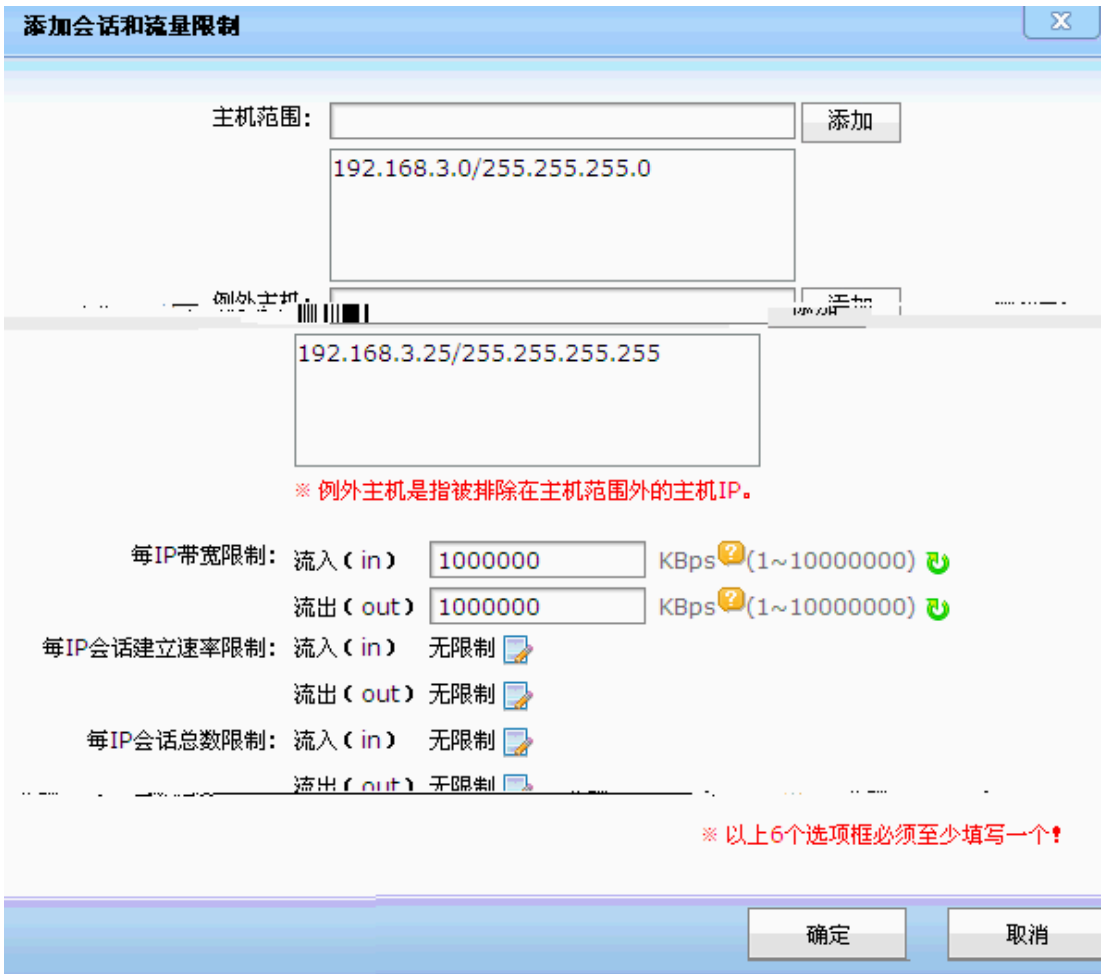
(!(

	=D
#	#
#	#
#	#

4.3.3

(!(

(!



(!)

		=D	=D =D
	Ubm Ubm		
			=D
	=D Ubm Ubm		
	% &'%, "' " &	% &'%, "' " \$	
	(!) ž		
	% &'%, "' " \$	% &'%, "' " &	
=D		=D	=D
	% %SSSS_6dgŁ		



@bX	<p>@bX H7DGMB</p> <p>=D</p> <p>GMB! 57? 57?</p> <p>@bX IB=L</p> <p>K] bXckg BH</p>
Gai fZ	<p>Gai fZ =7AD</p> <p>=7AD</p> <p>Gai fZ</p> <p>=7AD</p> <p>Gai fZ</p> <p>: fU[`Y</p>
K] bbi _Y	<p>K] bBi _Y K] bXckg</p> <p>BYh6=CG %- CC6 ci h! cZI VbX</p> <p>BYh6=CG</p>
GMB : `ccX	<p>H7D#=D H7D</p> <p>GMB: `ccX GMB</p> <p>GMB! 57?</p> <p>57?</p> <p>GMB : `ccX</p>
=7AD : `ccX : `ccX	<p>=7AD d] b[I 8D</p>

D] b[cZ 8YU\	D] b[cZ 8YU\ =7AD =D % *)') =7AD *) \$+ =7AD =D f&S\ =7AD , > *)')

4.4.2

SYN FLOOD

TCP

>

(!*



(!*

HUFXcd

Gai fZ

H7D: `U

D] b[cZ 8YU\

4.4.3

>

(!+



(!+





TCP UDP ICMP

TCP

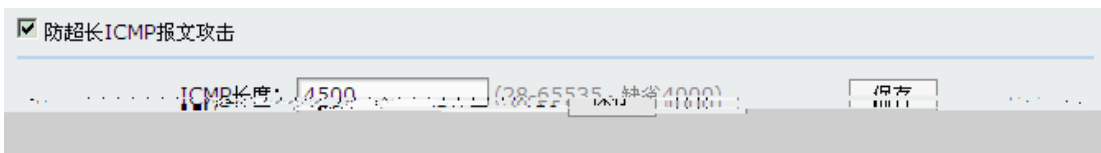
UDP

(!, =D :@CC8

=D :@CC8	. =D :@CC8 =D :@CC8
	ddg
	=D :@CC8

4.4.4.2 ICMP

(!-



(!- =7AD

=7AD	. =7AD =7AD
=7AD	=7AD (SSS VmYg VmY =7AD

4.4.4.3 SYN FLOOD

(!%\$

防SYN Flood攻击 [返回顶部](#)

+增加受保护IP +引用ACL ×删除

<input type="checkbox"/> 受保护主机IP ACL名称	速率阈值 pps(每秒包数)	操作
<input type="checkbox"/> audp	12	修改 删除
<input type="checkbox"/> 12.2.1.0/255.255.255.0	12	修改 删除
<input type="checkbox"/> 1	1000	修改 删除
<input type="checkbox"/> z2	11	修改 删除

记录日志

(!%\$ GMB : @CC8

GMB : @CC8	GMB : @CC8 GMB : @CC8
=D 57@	GMB : @CC8 =D 57@ 57@ 57@ 57@
	GMB : @CC8

KV GMB : `ccX % =D & 57@

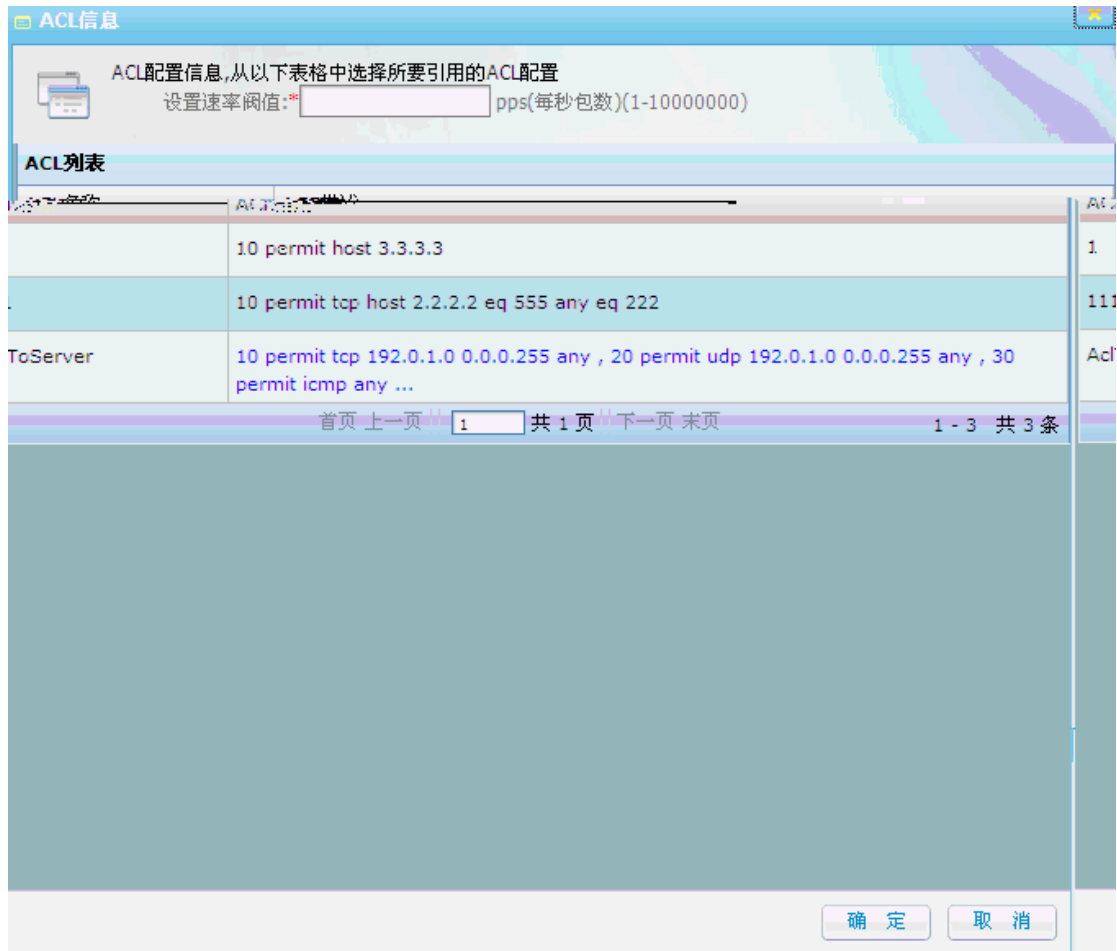
=D

%L =D GMB (!%\$

添加SYN报文限速 ✕

* 受保护主机IP范围:

* 速率阈值: pps(每秒包数)(1-10000000)



4.4.4.4 UDP FLOOD

(!%&



(!%& I8D:@08

I8D: @008	I8D: @008 I8D: @008
=D	I8D: @008 =D 57@ 57@ 57@ 57@
	I8D: @008 I8D: @008
	I8D: @008

I8D: `ccX % =D /&L 57@

% I8D: @008 (!%



(!% I8D: @008

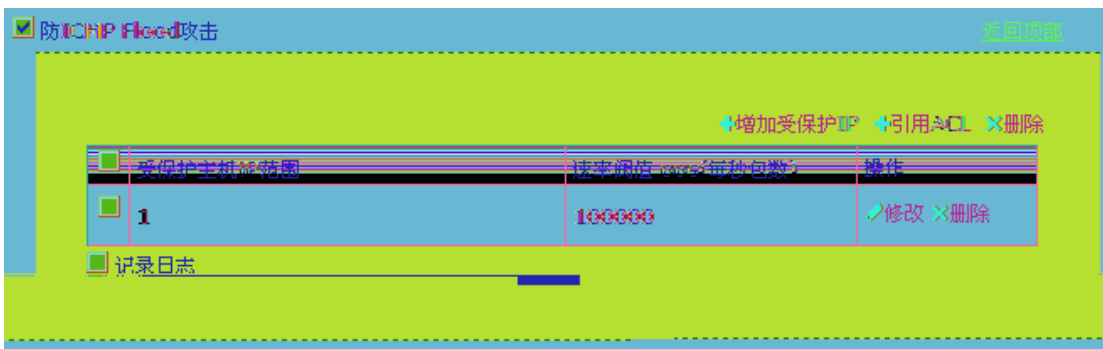
--	--

=D	I 8D : @CC8 =D
	I 8D : @CC8

& 57@ ("(")"

4.4.4.5 ICMP FLOOD

(!%



(!% =7AD : @CC8

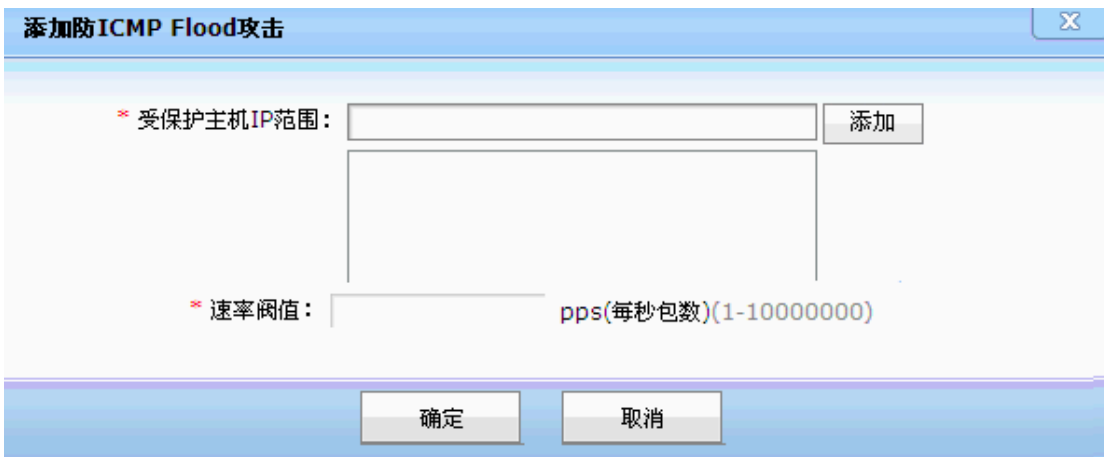
=7AD : @CC8	=7AD : @CC8 =7AD : @CC8
=D	=7AD : @CC8 =D 57@ 57@ 57@
	=7AD : @CC8 =7AD : @CC8

	=7AD: @CC8

=7AD: `ccX % =D/ &L 57@

%L

=7AD: @CC8 (!%)



(!% =7AD: @CC8

=D	=7AD: @CC8 =D
	=7AD: @CC8

&

57@ ("(")"

5

5.1

%		=D
&		XYZU`h XYZU`h XYZU`h XYZU`h
,		

5.2

>

)!%

安全域 安全域访问策略 非法访问日志 非法访问黑名单

当前安全域创建方式: IP [改变安全域创建方式](#)

安全域名称: 等级:

安全域列表 +添加

安全域名称	主机范围	例外主机	等级	非法访问告警	非法访问阻断	操作
ip_10001	113.108.20.48/255.255.255.255	any	12	不告警	不阻断	修改 删除
ip_2	any	7.1.0.0/255.255.0.0		告警阈值:100次	阻断阈值:100	修改 删除
smp_1001	59.192.0.1/255.255.255.255 59.56.172.3/255.255.255.2 10.0.0.0/255.0.0.0	any		告警阈值:100次 告警方式:日志告警 违例记录老化时间:1天	不阻断	修改 删除
默认安全域	未划入其他安全域的IP		0	不告警	不阻断	

1 - 4 共 4 条 首页 上一页 1 共 1 页 下一页 末页 50

记录非法访问日志

)!%

)!&

请选择安全域的创建方式



源IP地址



接口

)!&

=D	=D



5.3 IP

5.3.1

=D

=D

)!'

当前安全域创建方式: IP [改变安全域创建方式](#)

安全域名称: 等级:

安全域列表 +添加

操作	安全域名称	IP地址	等级	告警方式	阻断方式	操作
删除	smp_10001	113.108.20.48/255.255.255.255	any	不告警	不阻断	修改 ×
删除	smp_2	any	7.1.0.0/255.255.0.0 113.108.20.48/255.255.255.255 59.192.0.1/255.255.255.255	告警阈值:100次 告警方式:日志和 Trap告警	阻断阈值:100 禁止访问所有安全域 禁止访问时间:1分钟	修改 ×
	any			告警阈值:100次 告警方式:日志告警	不阻断	修改 × 删除
						修改 × 删除

共 4 条 首页 上一页 1 共 1 页 下一页 末页 1-4

记录非法访问日志

)!'

=D

	=D
	=D

	hfUd hfUd %
	% &

5.3.2

)!'

)!('



5.3.3

%L

>
)!*



)!*

	5 → 6	5	6
	5 ← 6	6	5
	5 ↔ 6	5 6	
	5 × 6	5 6	
	5 → 6	5	6
	5 ← 6	6	5

&L

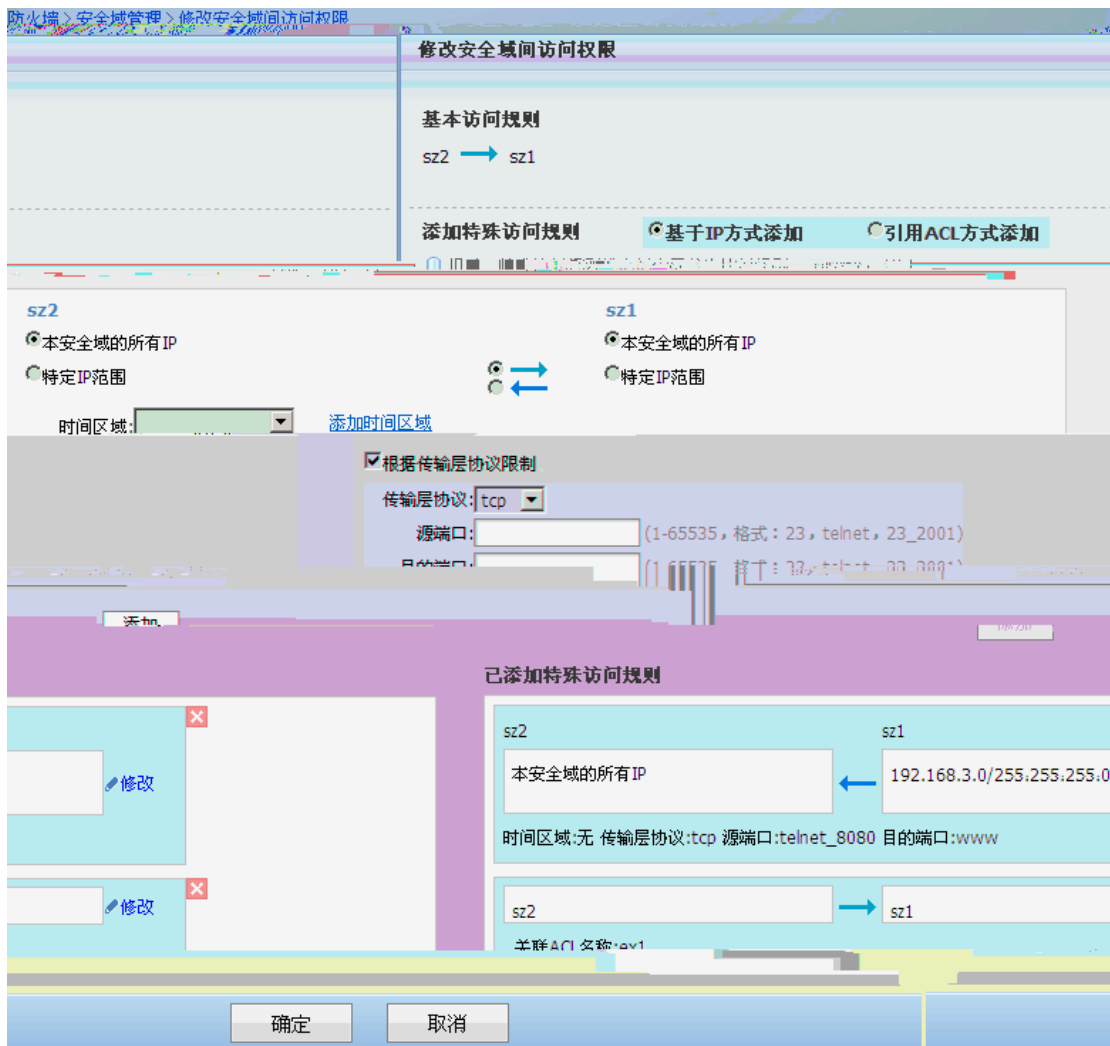
)!*

允许同一安全域内互访 允许同等级安全域间互访

)!*

允许同一安全域内互访 允许同等级安全域间互访

)!*
)!+



)!+

&

=D

=D

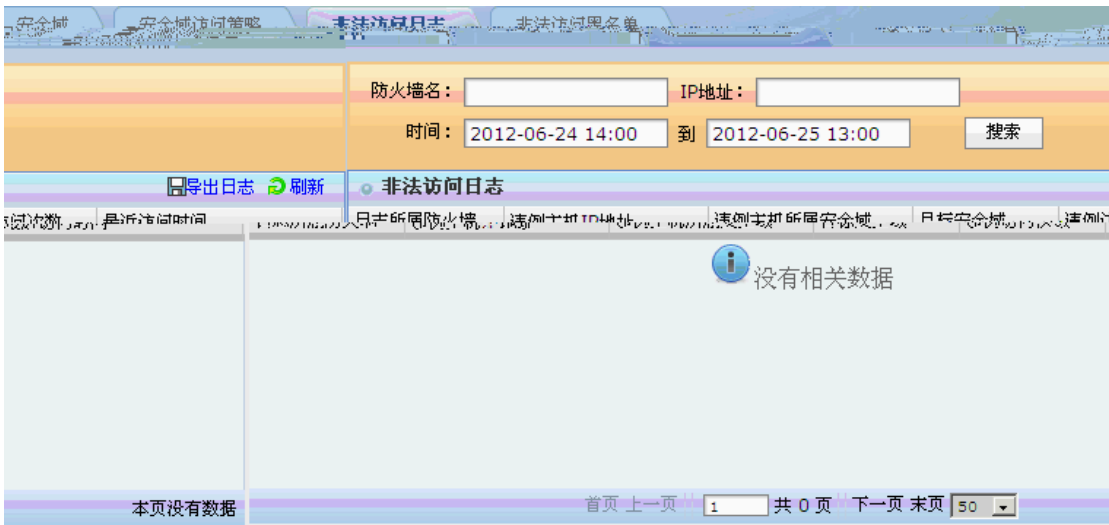
57@

57@

57@







)!

=D	=D

>
)!-



)!-

=D	=D

5.4

5.4.1

)!%\$

安全域

基本配置

* 安全域名称: (字母,数字,下划线,最长不超过16个字符)

* 接口范围:

所有接口

Vlan 2
 Vlan 3
 Vlan 4
 Vlan 5
 Vlan 6
 BVI 12

已选接口

* 安全域等级: (1到100, 数值越高, 优先级越高)

)!%%

	16

5.4.3

IP

5.2.2.3

[IP](#)

%L

)" & &'



&L

)" & &'



6 ACL

57@ 5Wgg 7cbhc` @gh

57@

f5Wgg 7cbhc` 9bfm 579L

6.1

ACL

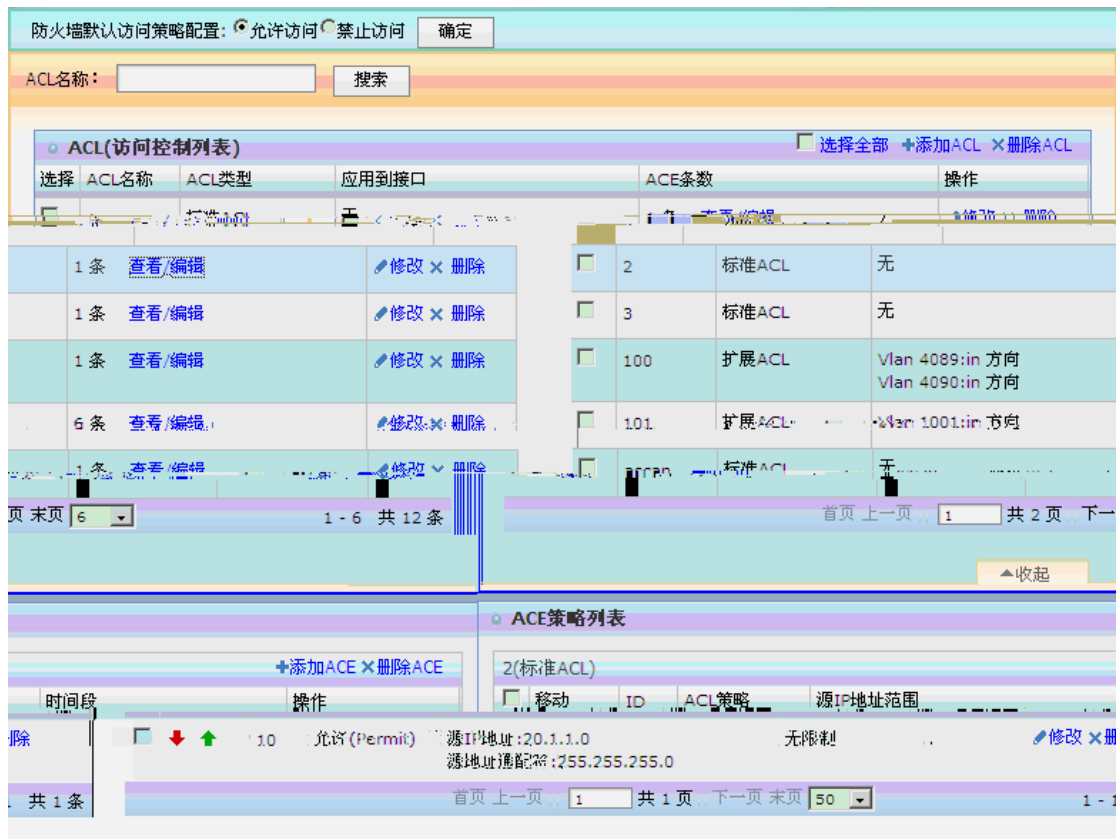
%	57@	57@ 57@
&	579	ACL ACE ACE

6.2 ACL

> 57@

57@

*!%



6 1 ACL

ACL

ACL

ACL

ACE

ACL

ACE

ACL

ACE

57@	579 dYf a] h Xbm
=D	579 =D =D =D =D
=D	579 57@

=D	579	57@ =D
=D	579	57@ =D
	579	579
ACE	ACE	579
579	579	

6.3 ACL

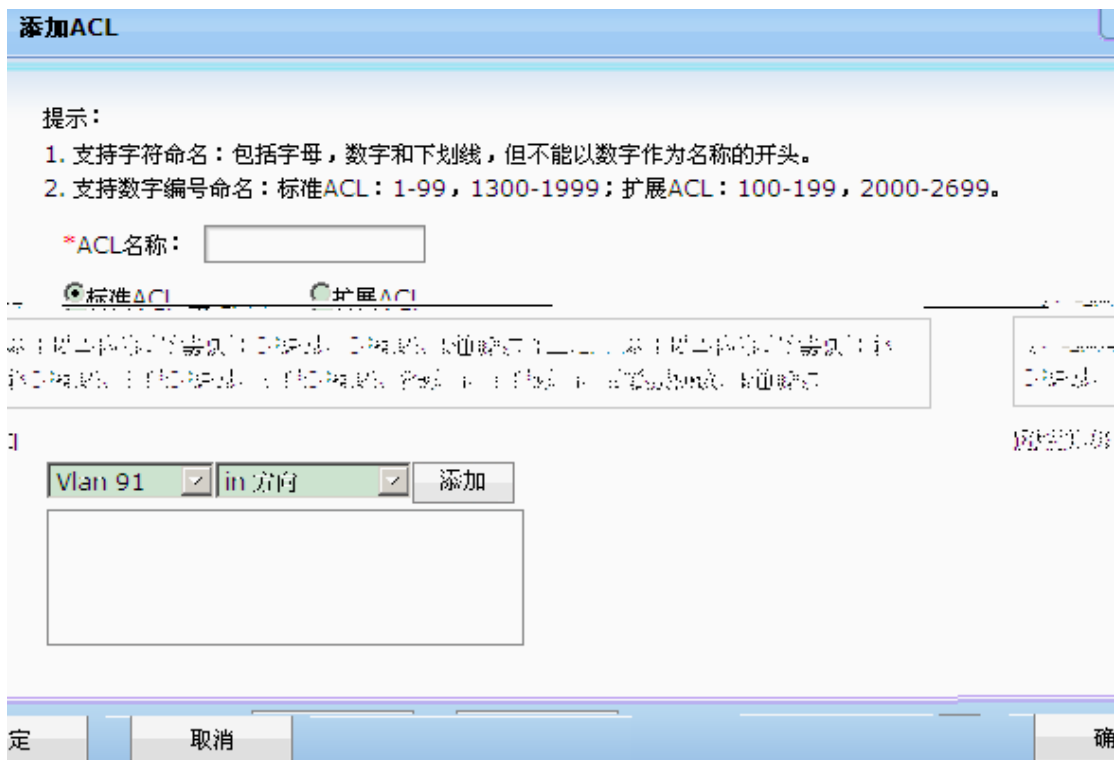
ACL

[6.1](#)

ACL

ACL

6.2



6 2 ACL

57@	<p>57@</p> <p>57@ %\$!% - &\$\$\$! &* --</p> <p>57@ %\$!% -- % \$\$! %--</p>
57@	<p>57@ IP 1 - 99 1300</p> <p>- 1999 IP</p> <p>57@ IP 100 - 199</p> <p>2000 - 2699</p>
	<p>57@</p> <p>in ACL</p> <p>ACL ACE</p> <p>out ACL</p> <p>ACL ACE</p>

KV =D =D =D

A57 A57 9 d\fh

7@=

6.4 ACE ACL

ACL ACE 2

ACL ACE ACL IP

ACL ACE ACL IP IP

ACE

1. ACE

2. " "



"

"

%L 57@ 579

ACL ACE 61 ACE ACL ACE ACE



63 ACE



57@	579 Df a] h 8Ybm
=D	=D =D
=D	=D
	& % \$
	579

&L

57@

579

ACL

ACE

6 1

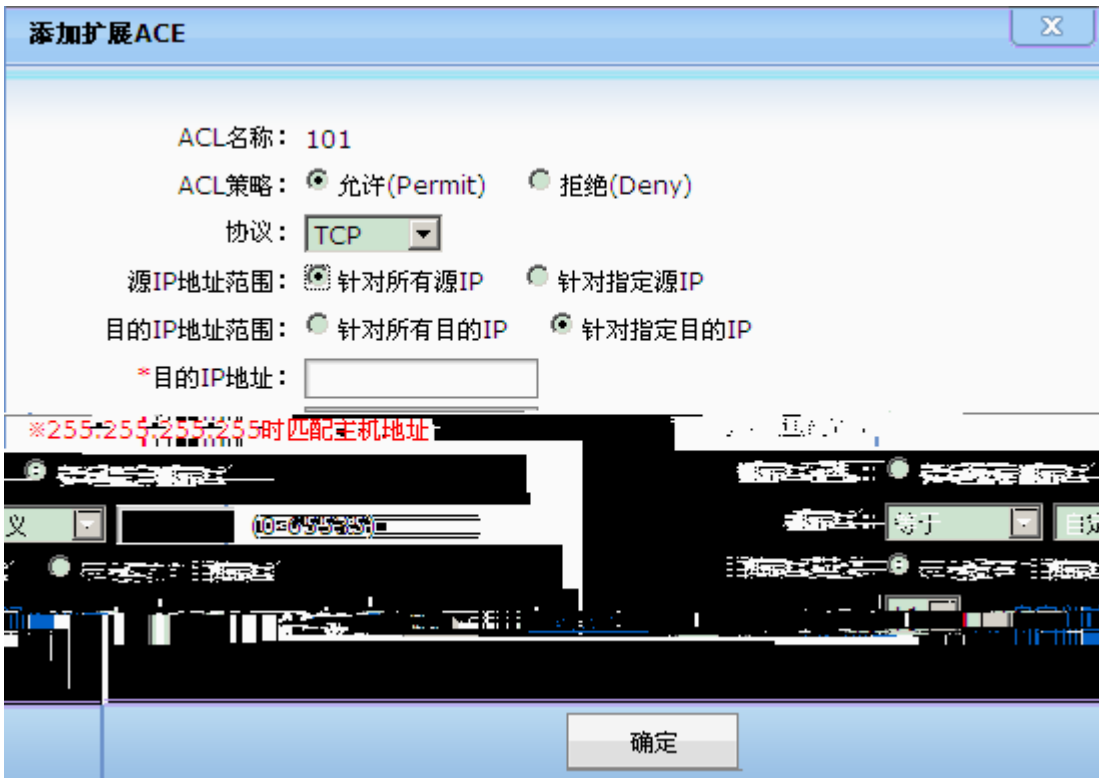
6 4

ACE

ACL

ACE

ACE



6 4 ACE



579

57@

Dyfajh

8Ybm

7 NAT

B5H BYhkcF_ 5XX Ygg H Ubg` Uh] cb =D =D =D
 =D =D B5H =D

7.1

B5H
 =D =D
 =D =D
 =D =D
 =D
 % =D
 & =D

NAT

%	B5H	B5H B5H
&	B5H	NAT =D =D =D

7.2 NAT

> B5H =D B5H +! %



+!% B5H

NAT

NAT

NAT

7 2



7 2 NAT

	B5H

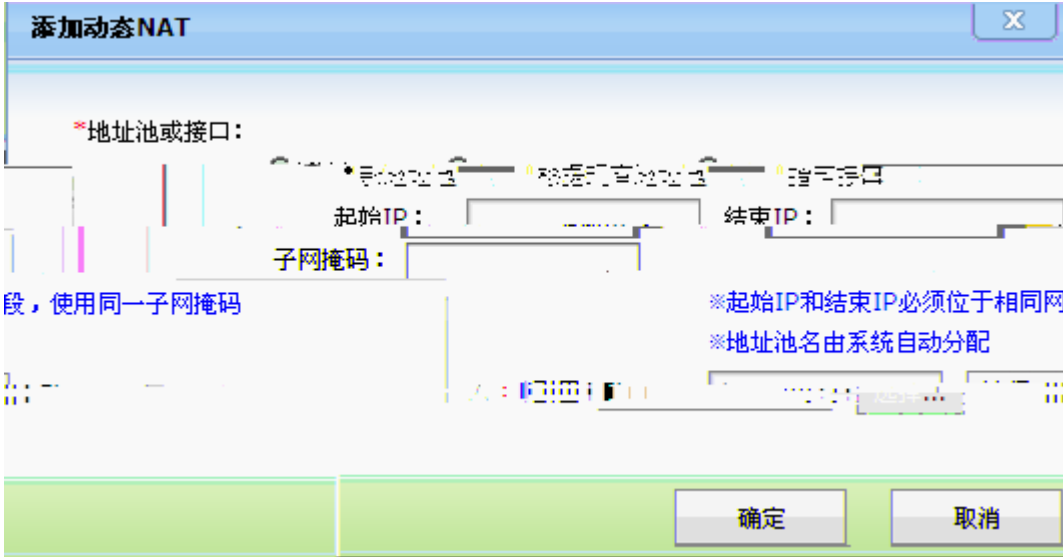
7.3 IP

NAT

7.1

IP

7.2



+! &

=D

		=D fl
	B5H L	
	&	
	% !!!!	
	&	!!!!
57@	ACL	ACL

7.4

IP

NAPT

=D

> B5H
+!'

8AN

B5H

内网、外网IP地址转换(动态NAT) | DMZ服务器配置(静态NAT)

业务系统IP地址转换

没有相关数据

地址转换配置显示区域

业务系统IP

服务器IP地址转换

服务器IP地址转换 针对2种内网服务器,分别:
第1种:为独立内网服务器,配置一个静态的外网IP地址。
第2种:为多台内网服务器,配置一个静态的外网IP地址。

内网服务器IP	允许主动访问外网	操作	类型	外网IP或接口
没有相关数据				

配置显示区域

服务器IP地址转换配



D

172.18.3.7 udp(2002)

6 172.18.3.7

UDP

	=D % %
	=D %
=D	B5H =D
=D	=D

=D	& =D— B5H =D — B5H
	=D Ž
=D	B5H =D
	B5H
	B5H

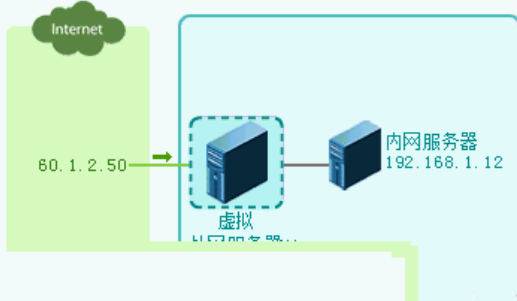
7.5 IP (1 1 1)

B5H +! =D =D
+!)

添加服务器IP地址转换

独立内网服务器IP地址配置

外网 内网 同一业务系统



*外网IP或接口: 指定主机IP 指定接口

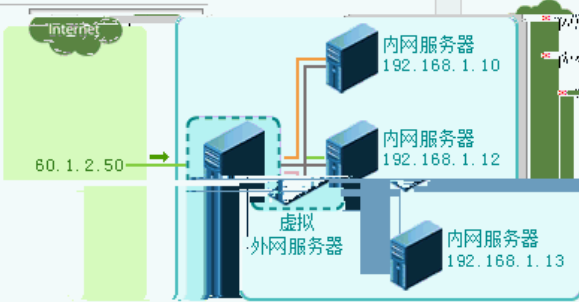
主机IP:

*内网IP地址:

允许服务器主动访问外网

多台内网服务器IP地址配置 (TCP负载均衡)

地址: 外网 内网 同一业务系统 TCP负载均衡



*外网IP:

|

|

|

|

|

|

|

|

确定

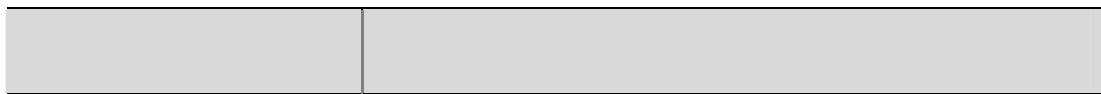
取消

+!)

=D

=D

% %



=D

B5H

=D

B5H

=D

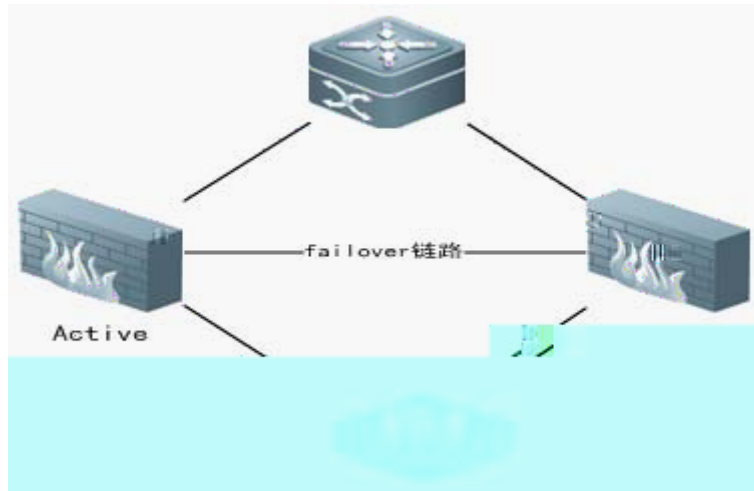
B5H

=D	B5H =D
=D	B5H
=D	B5H

8 HA

5MjY

GhUbXVm



, !%

ZU`cj Yf

: U`cj Yf

8.1

HA

> <5

<5

, !%



, !% <5

	5G 5G 5G GhUbXVm 55 55 55
	K96 ghUbXVm

<5

>>

>>

,!&

The screenshot shows a web interface with four tabs: "基本状态信息" (Basic Status Information), "心跳报文信息" (Heartbeat Message Information), "状态机信息" (State Machine Information), and "备份状态信息" (Backup Status Information). The "基本状态信息" tab is selected. Below the tabs is a terminal window displaying the output of the command "show failover info":

```
show failover info:  
failover off  
Failover create time: NA  
Last switch: NA  
This host:  
  Secondary – Failover disabled  
Other host:  
  Primary – unknown
```

At the bottom of the interface, there is a "返回" (Return) button.

,!&

8.2 HA

> <5

<5

>> ž <5

, !'



, !' <5

<5

%		
&	#	

9

添加虚拟防火墙

基本信息

* 虚拟防火墙名称: (1-15字符)

* 配置文件名称: .text (1-13字符)

选择接口

所有接口

- Vlan 1
- Vlan 2
- Vlan 91
- Vlan 99
- Vlan 100
- Vlan 999
- Vlan 1000
- Vlan 2000
- Vlan 3000
- Vlan 4000

已选接口

增加->

<- 移除

静态路由表

+添加静态路由 ×删除路由

目标地址IP	子网掩码	下一跳地址/本地转发接口	其他	操作
 没有相关数据				

9 2

	%%

interface VLAN

interface VLAN

IP

9.3

9 1

9 3



9 3

Web
30%

MAC

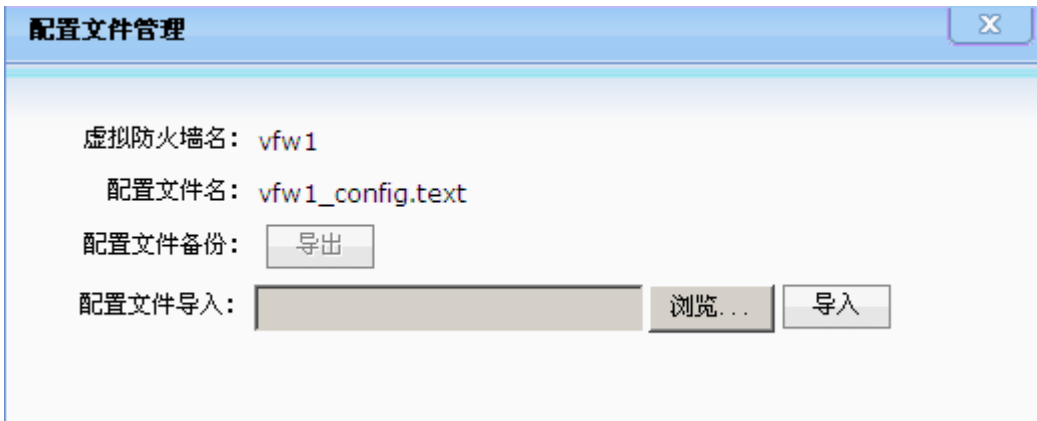
30%

L

9.4

9 1

9 4



9 4

=9



10

10.1

>

%!%



%!%

=D	=D
	=D
#	=D



添加静态路由
X

* 目标地址IP:

* 子网掩码:

* 下一跳地址: 下一跳地址 本地转发接口 Vlan 2

高级配置

管理距离(DISTANCE): 1-255
 权重(WEIGHT): 1-8

确定
取消

%& &

=D	=D =D S" S" S" S"
	=D S" S" S" S"

	=D
	=D
#	
	DDD =D DDD
	DD =D
	BGA5 D&AD =D =D
	J]fhiU!Hrad UhY J@5B
	\$f]d %SS

11

%

11.1

>

%!

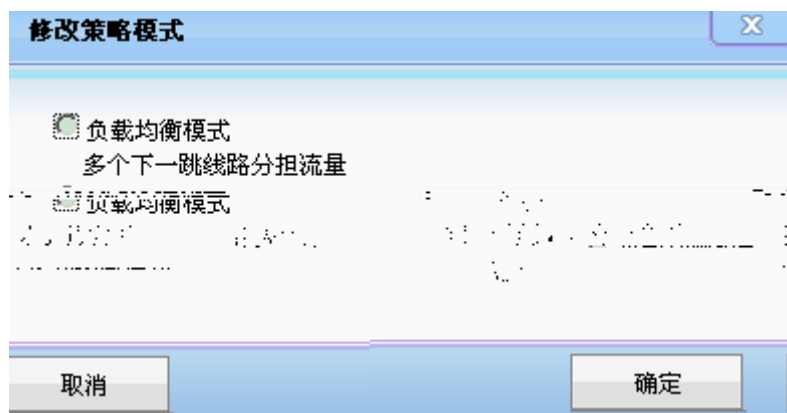


%!

11.2

[10.3](#)

10.4



11.3

[10.3](#)

10 5

基本信息

* 路由图(route-map): (字母,数字,下划线,最长不超过16个字符)

添加匹配策略路由

* 策略优先级: 0到65535, 数值越低, 优先级越高

* 匹配IP地址: 所选 除了所选以外

* IP地址范围:

* 下一跳地址:

已添加匹配策略路由

策略优先级	匹配IP地址	下一跳地址	操作
12	<input checked="" type="checkbox"/> 所选 192.168.201.66/255.255.255.255	192.168.203.3	修改 × 删除

10 5

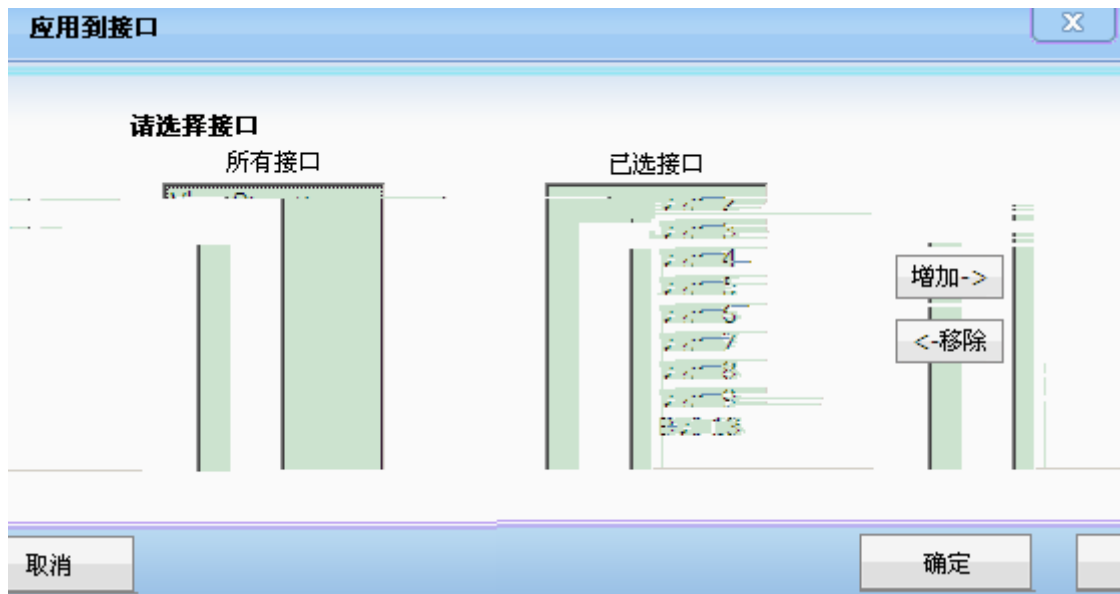
ff ci hY! aUdL	=D =D =D =D
	\$ *)))'
=D	=D =D =D =D =D
=D	=D =D
	=D

%)

11.4

10 3

10 6



10 6



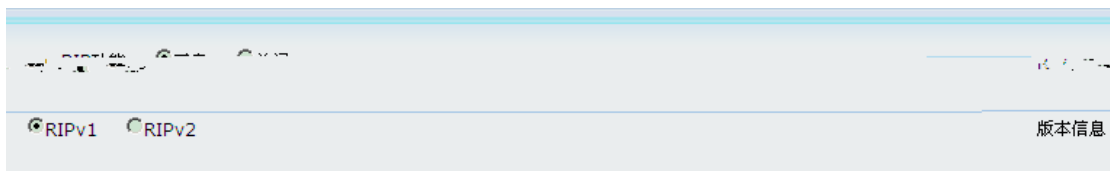
12 RIP

RIP (Routing Information Protocol)



%% & % F=D

12.2.1 RIP



%% & % & F=D

12.2.2 RIP

%

F=D

——>

ž

&

%

% &"%\$, "%\$ " \$#&

#

& % &"%\$, "%\$ " \$ @) " @) " @) " \$

" %& & %' "

!

M

*RIP进程关联网络

%% & % *

12.2.3 RIP

路由源地址验证 开启(默认) 关闭

%%&%%&

12.2.5 RIP

F]d

%%&%%&

路由通告方式

- 广播/组播方式通告路由更新报文(默认)
- 单播方式通告路由更新报文

%%&%%&F=D

]d

%

单播方式通告路由更新报文

%%&%%&

&

]d

%&%&,")"&

%&'

]d %&%&,")"&

%%&%%&"

%

]d

%&%&,")"&

×

ž

%%&%%& &

×

路由通告方式

广播/组播方式通告路由更新报文(默认)

单播方式通告路由更新报文

单播组播

添加

%%&%%&

12.3RIP

RIP

F=D

J@B

F=D

%&&&%

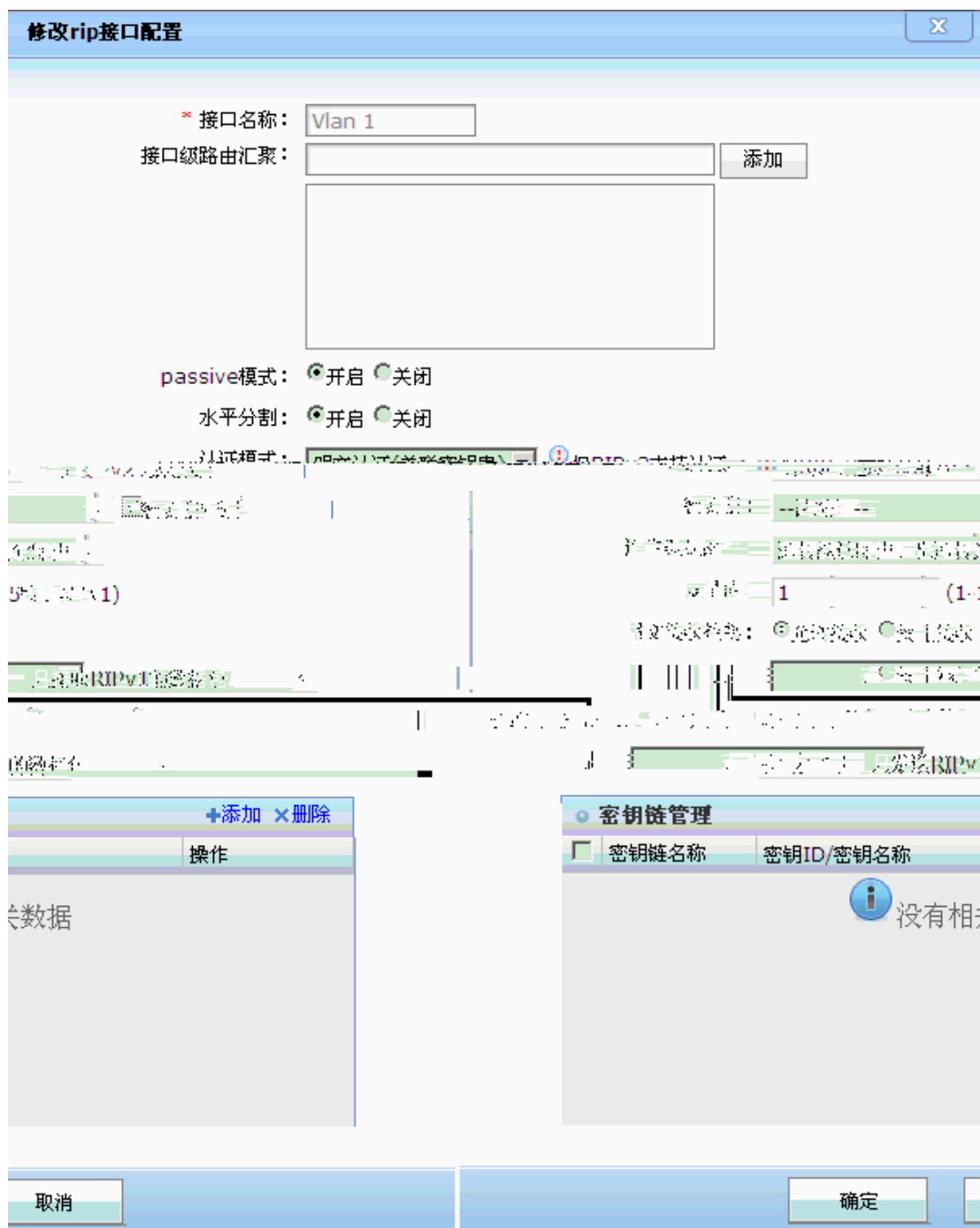


%&&&% F=D

——> ——>
%&&&&

J@B

F=D



%%&&&

12.3.1

F=D

——>

——>

[修改](#)

%%&&&

%%&&&'

f%L

%&'%"\$" \$#%

#

%%&&&(fV %&'%"\$" \$&)"&)"%

&

fU

fl&L ž %04 & &)
F=D × %0' &' %) F=D × %04 & & *
F=D %0' &' % &

接口级路由汇聚:

%04 & & '

接口级路由汇聚:

%04 & & (

接口级路由汇聚:

172.18.0.0/255.255.192.0

%04 & &)

接口级路由汇聚:

172.18.0.0/255.255.192.0 ×

%04 & & *

12.3.2

12.3.3

F=D

——>

——>

 修改

%% & & &

f]d

——>

%& & %"

=8

%& & %
%

%& & %+

=8

=8#

bYhkc_f_
%#bYhkc_f_

%& & %

\Y`c

%& & %

%& & &\$

(

%& & &%

%& & &&

%& & %\$

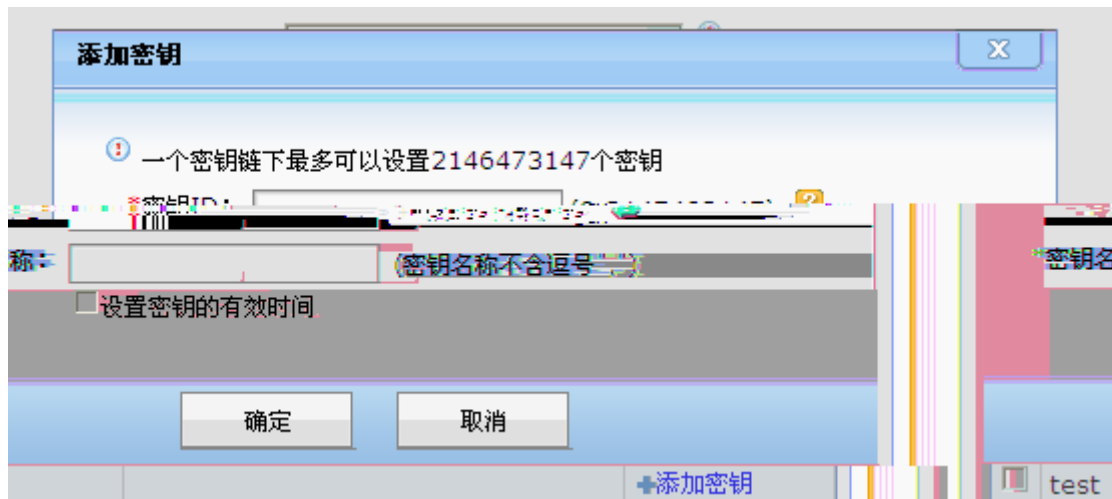
%& & %%

%& & %&

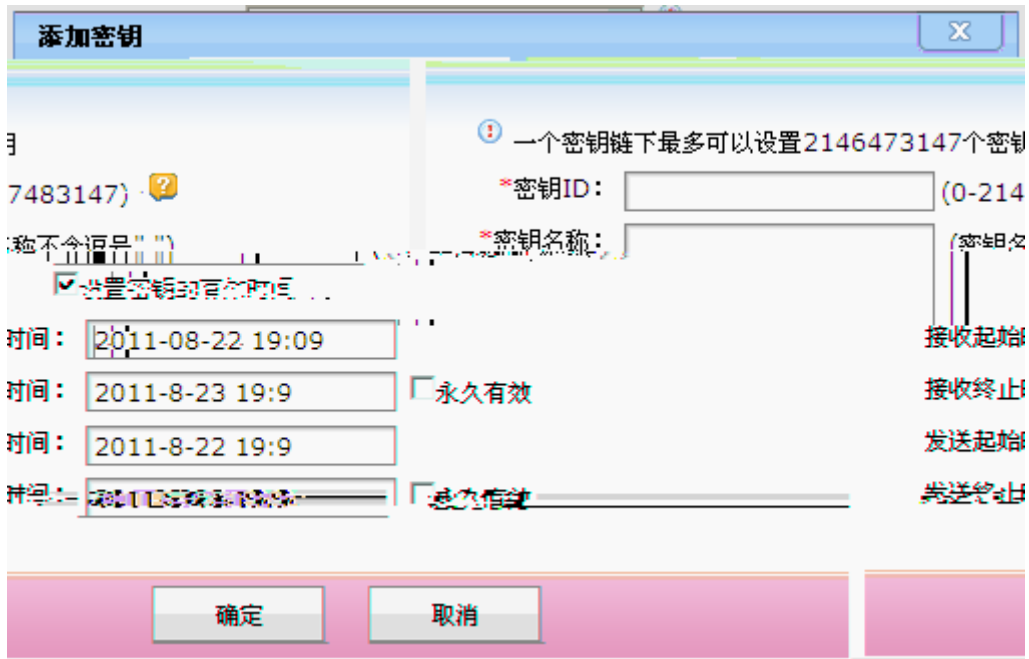
%%&&%

fi]^Y

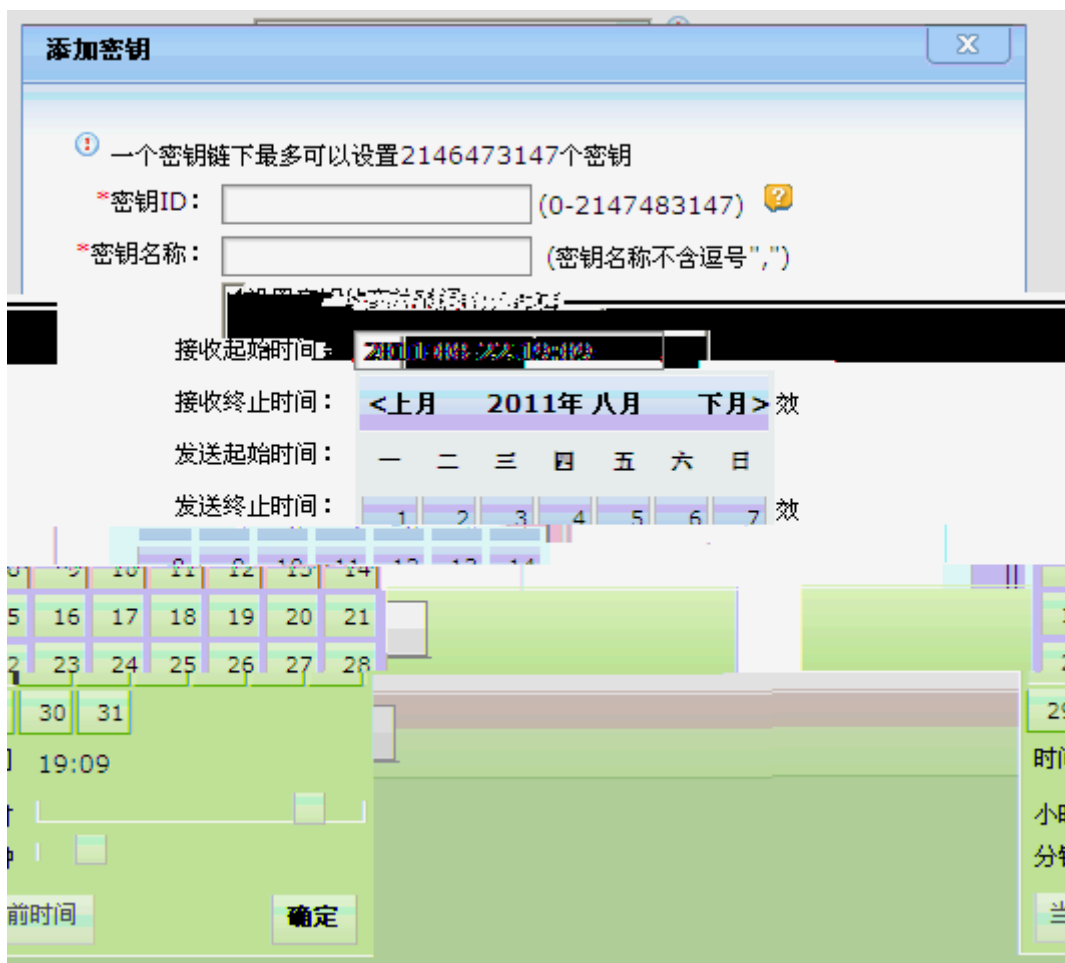
%%&&%



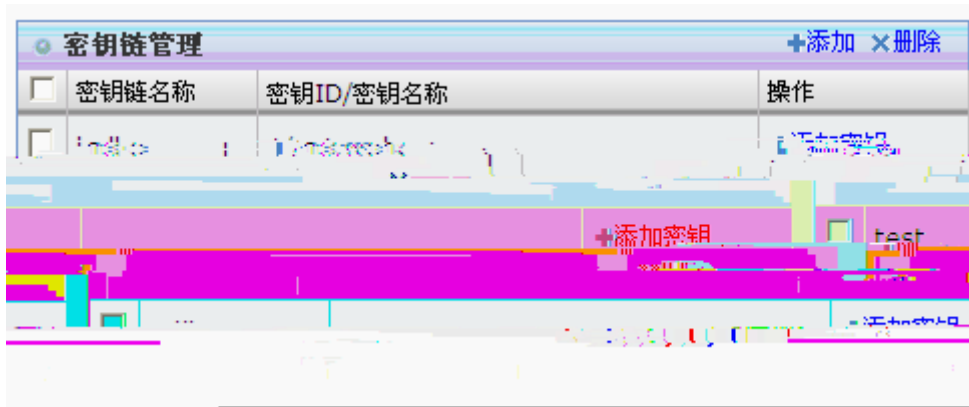
%%&&%



%% & & %



%&&%



%&&%

%#bYhkcf_

%&&%

%&&%&&

%&&%&&



%% & & &

12.3.6

f]d ' %% & & & U
V V W
V f]d %-% %% & & &

%% & & &

%% & & &

12.3.7

f]d F=D
%% & & & &
%% & & &+ %% & & & ,

%%&&&*

%%&&&+

%%&&&

12.3.8

f]d
F=D

%%&&&
%%&&&'S

%%&&&

%%&&' \$

12.3.9 VLAN

%%&&' \$

J@5B &

%%&&' %

%%&&' % " j`Ub&

%%&&' %

%%&&' &

12.3.10 VLAN

& U

%%&&' '

%%&&' &

%4 &' !%F=D

13 OSPF

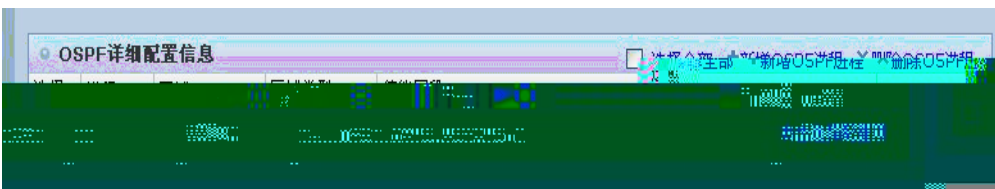
OSPF Open

13.2.1 OSPF

>CGD

CGD

CGD



13.2.1.1 OSPF

OSPF OSPF OSPF IP OSPF IP
OSPF OSPF IP OSPF IP
64 OSPF
OSPF







13.2.1.3.1 OSPF

CCD

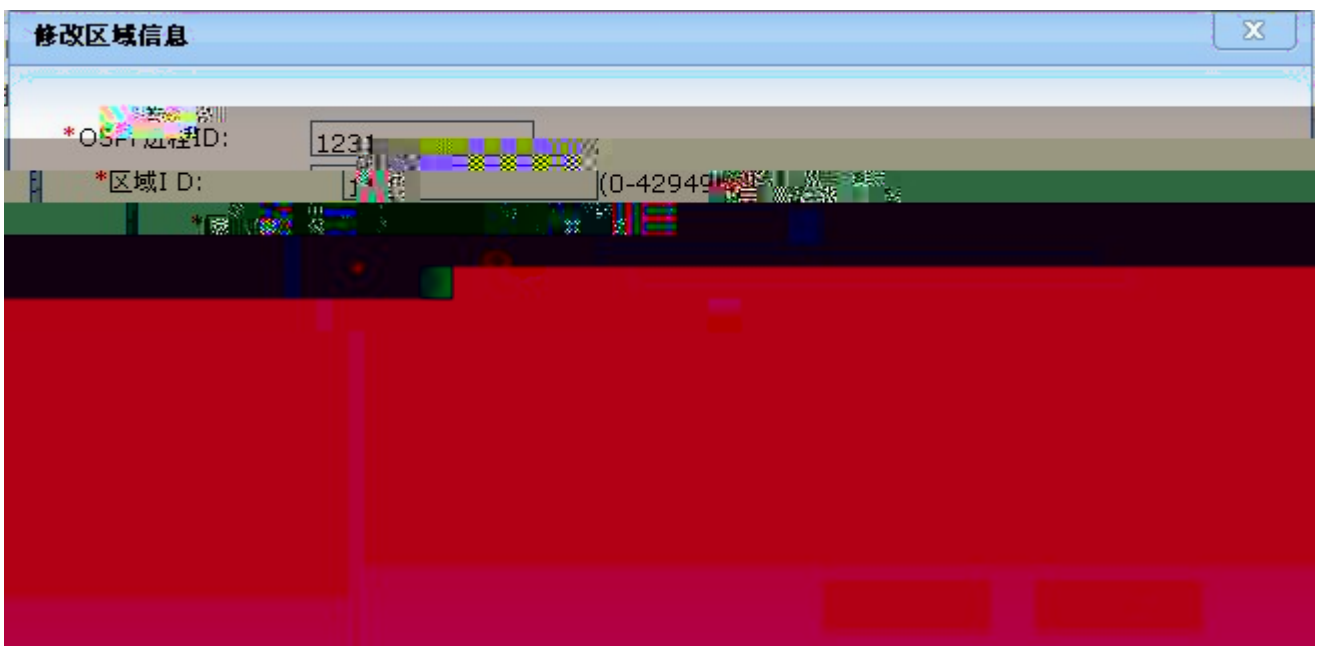
=8

CCD	=8	CCD
	=8	
		CCD

13.2.1.3.2 OSPF

CCD

=8



CCD =8	CCD
=8	CCD
	CCD

13.2.1.3.3

CCD

=8

ž

"

13.2.1.3.4 OSPF

CCD

ž

CCD

ž

OSPF

,

13.2.2

13.2.2.1

```

OSPF
2
Stub
)
OSPF
3
Stub Area
LSA
1
OSPF
1
( no summary
2
( area default cost
)
)

```

13.2.2.2 NASS

13.2.2.2.1 NASS

```

NASS(Not So Stubby Area) OSPF STUB ,NASS 5
LSA(AS external LSA) NSSA , STUB NSSA
OSPF
NASS NSSA 7 NSSA , 7 LSA
NSSA 5 LSA
NASS
NASS NSSA NSSA
NASS NSSA NSSA area nssa
NASS
NASS

```

Step 1	<pre> :]fYkU `(config-router)# area area-id nssa [no-redistribution] [no-summary] [default-information-originate[metric metric][metric-type [1 2]]] </pre>
Step 2	<pre> :]fYkU `(config-router)# area area-id default-cost cost </pre>

```

default information originate Type 7 LSA nssa ABR ASBR
ABR Type 7 LSA ASBR
( ABR) Type 7 LSA

```

no redistribution ASBR

ABR no-summary	Type-3 LSA	nssa summary LSAs	(ABR) Type-3 LSA
-------------------	------------	----------------------	---------------------

13.2.2.3 STUB

13.2.2.3.1 STUB

OSPF area stub no

area area id stub [no summary]

no area area id stub [no summary]

area-id	STUB
no-summary	ABR ABR

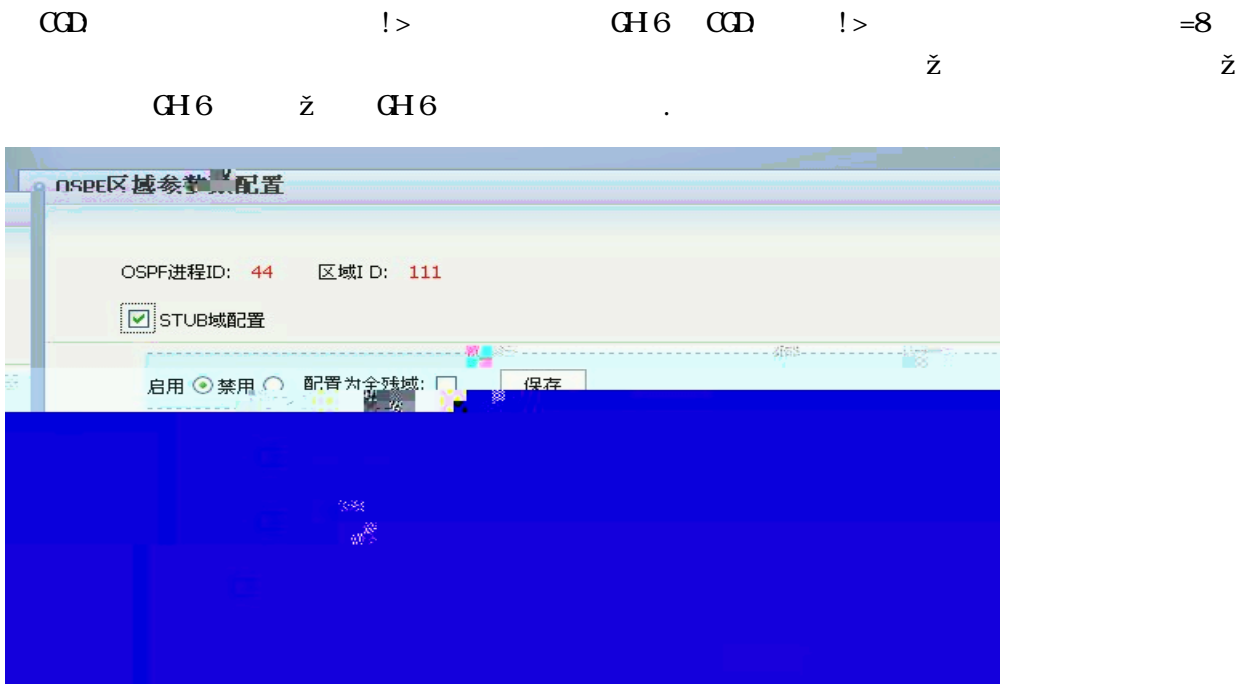
OSPF (LSA) 1 1 area stub LSA 2 2 ABR LSA 3 3
 LSA ABR area s OSPF

area default-cost

```

1
: jfYkU `(config)# router ospf 1
: jfYkU `(config-router)# network 172.16.0.0 0.0.255.255 area 0
: jfYkU `(config-router)# network 192.168.12.0 0.0.0.255 area 1
: jfYkU `(config-router)# area 1 stub
    
```

13.2.2.3.2 STUB



13.2.2.4

area-id	STUB ,

: no-summary	ABR ABR
------------------------	------------

13.2.2.4.1

OSPF

area authentication

no

OSPF

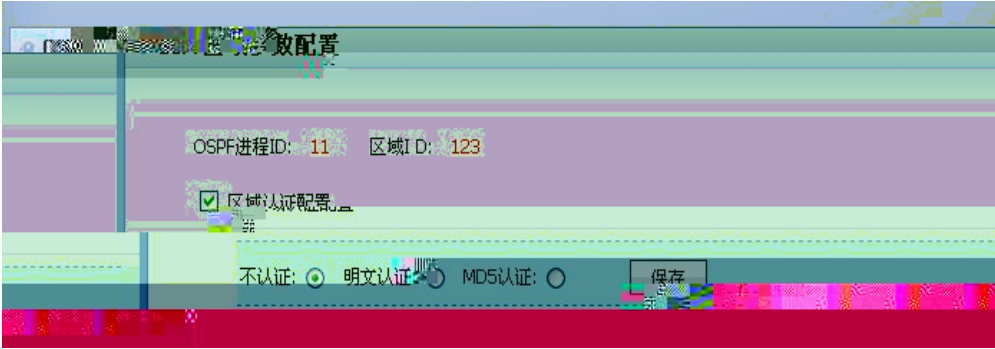
area

13.2.2.4.2

```

ospf <id> area <area-id> authentication-mode { none | plain | md5 }

```



area-id	ID	,
Authentication[message-digest]	MD5	MD5

13.2.2.5

13.2.2.5.1

```

ospf <id> area <area-id> range <ip-address> <net-mask> [no-advertise | no-cost]

```

area area id range ip address net mask [advertise | not advertise] [cost cost]

no area area id range ip address net mask [cost]

area-id	OSPF IP
ip-address net-mask	
advertise not-advertise	

cost cost

0-16777215

cost RFC1583

RFC1583
cost

ABR

advertise not-advertise

cost

OSPF

not-0>Trea rang1

ID: area-id	OSPF IP
IP ip-address	IP,
net-mask	,
advertise not-advertise	not_advertise ,advertise ,
cost cost	0-16777215

13.2.2.6

13.2.2.6.1

ABR area filter list

area area id filter list [access acl name] prefix prefix name [in | out]

no area area id filter list [access acl name] prefix prefix name [in | out]

area-id	
acl-name	acl
prefix-name	prefix-list
access prefix	prefix list ACL
in out	

ABR

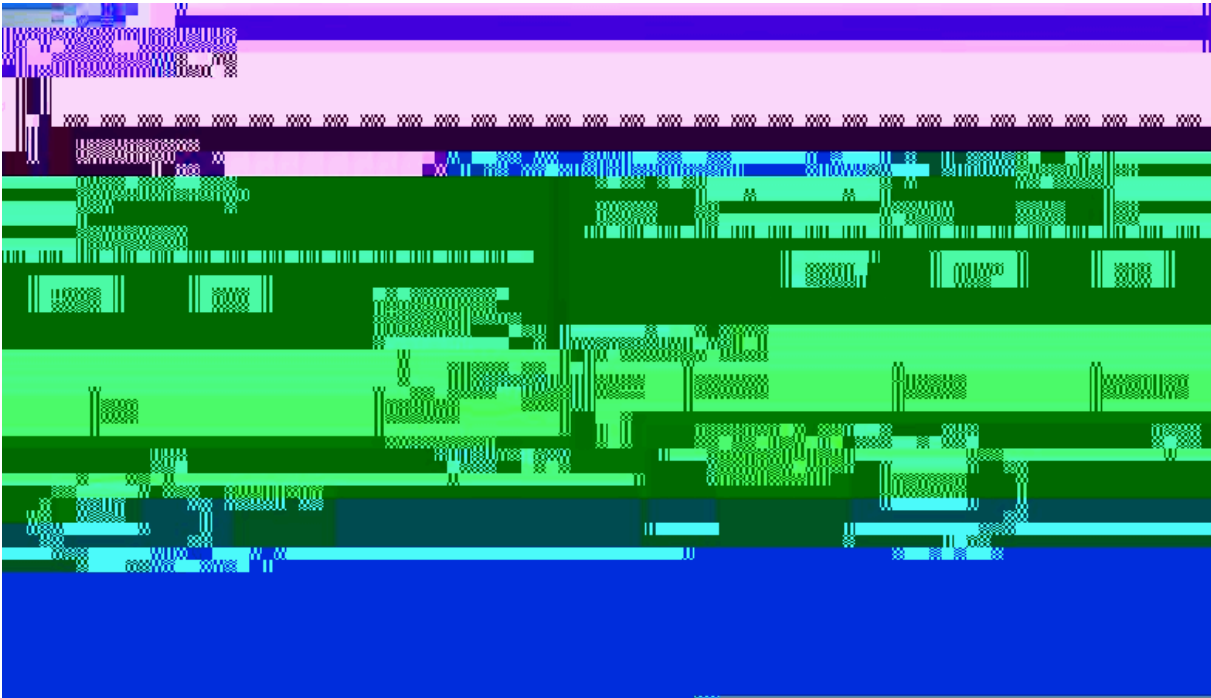


ip-address

IP

poll-interval seconds

1-2147483647



ID	ID
IP	IP 192.168.1.1
	poll-interval 1-2147483647
	0-255 (NBMA)
	1-65535 cost (point-to-multipoint)

--	--

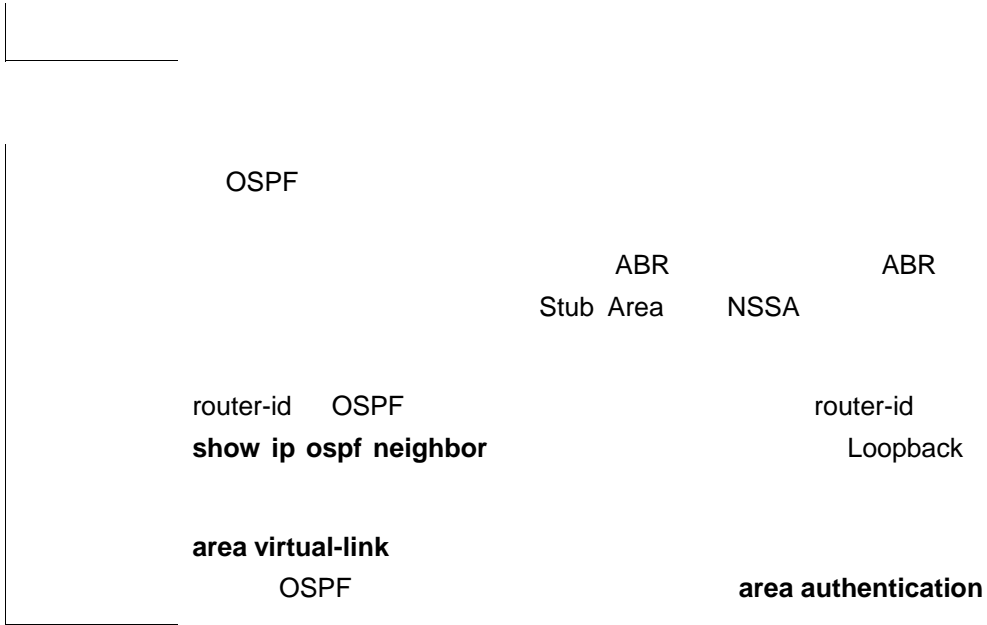
添加

ž ž \

修改

, "ospf" , \
”

dead-interval seconds	1-65535	
hello-interval seconds	OSPF 1-65535	Hello
retransmit-interval seconds	OSPF	LSA 1-65535



13.2.4.2

!>

=8
.

ž

ID:area-id	OSPF IP
Ospf ID:router-id	show ip ospf

dead-interval seconds	1-65535
hello-interval seconds	OSPF Hello 1-65535
LSA retransmit-interval seconds	OSPF LSA 1-65535
LSA transmit-delay seconds	OSPF LSA LSA 1-65535 LSA
authentication-key key	OSPF password-encryption service
message-digest-key key-id md5 key	OSPF MD5 MD5 service password-encryption
authentication	
MD5 authentication message-digest	MD5
null	

13.2.5 OSPF

13.2.5.1

OSPF

OSPF

OSPF



13.2.5.2

13.2.5.2.1

ž CGD

CGD

)

LSA

no

timers lsa-group-pacing seconds

no timers lsa-group-pacing

seconds	LSA	: 10-1800

240

LSA CPU (LSA age) CPU LSA LSA LSA

no

passive-interface [default | type number]

no passive-interface [default | type number]

type number	
default	

OSPF

13.2.5.2.2

CCD

!>

CCD

=8

CCD

ž

CCD

ž

.

ID	ID
	,
OSPF	OSPF
OSPF	OSPF

13.2.5.3 OSPF

13.2.5.3.1 OSPF

OSPF

110

OSPF

distance {distance| ospf { intra area distance| inter area distance| external distance}}

no distance [ospf]

distance	1-255
intra-area distance	1-255
inter-area distance	1-255
external distance	1-255

13.2.5.3.2 OSPF

OSPF

!>

OSPF

=8

OSPF

ž

ž

ž

OSPF ID	
	1-255 110

	1-255	110
	1-255	110

13.2.5.4

13.2.5.4.1

OSPF

SPF

SPF

timers spf

timers throttle spf

no

timers spf spf delayspf holdtime

no timers spf

timers throttle spf spf delayspf holdtimespf maxwaittime



spf-delay

SPF

spf-delay spf-holdtime

OSPF

CPU

timers spf timers throttle spf

13.2.5.5

13.2.5.5.1

OSPF

summary address

no

summary address ip address net mask {not advertise | tag value}

no summary address ip address net mask {not advertise | tag value}

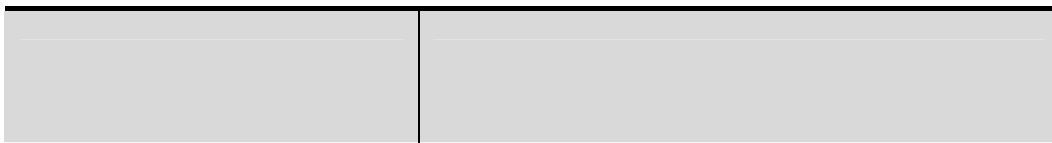
	ip-address	IP	
	net-mask		
	not-advertise		
	tag value	tag	0-4294967295

OSPF

OSPF

area range

area



always	OSPF
metric metric	0-16777214
metric-type type	OSPF 1 2 1 2
route-map map-name	route-map , route-map

metric 1
metric-type 2

```

redistribute default-information OSPF ASBR
ASBR ASBR OSPF
ASBR default-information originate

always OSPF
show OSPF -0.0.0.F

wp ip r6(obute)TC20 1 Tf02 Tw76183 0 TdPA5104B02C76A1C00C34B9E2C4F68043350E62CD543C32B03F263.335 -1.557
OSPF 1
    
```

13.2.5.6.2 OSPF

000

!>

000

=8

13.3 OSPF

13.3.1

OSPF

ip ospf hello interval ip
ospf dead interval ip ospf authentication ip ospf authentication key ip ospf message digest key, ip ospf
network

OSPF

Step 1	:]fYkU`# configure terminal	
Step 2	:]fYkU`(config)# ip routing	()
Step 3	:]fYkU`(config)# interface interface-id	
Step 4	:]fYkU`(config-if)# ip ospf cost cost-value	
Step 5	:]fYkU`(config-if)# ip ospf retransmit-interval seconds	
Step 6	:]fYkU`(config-if)# ip ospf transmit-delay seconds	
Step 7	:]fYkU`(config-if)# ip ospf hello-interval seconds	hello
Step 8	:]fYkU`(config-if)# ip ospf dead-interval seconds	
Step 9	:]fYkU`(config-if)# ip ospf priority number	BDR DR

Step 10

```
(config-if)# ip ospf priority  
{broadcast non-broadcast  
point-to-multipoint non-broadcast }  
point-to-point}
```

```
broadcast OSPF  
non-broadcast OSPF  
NBMA  
point-to-multipoint [non-broadcast]  
OSPF  
, non-broadcast  
point-to-point OSPF
```

Step 11 340.5Tc 40 1 Tf-0.503 Tc 4.6
[message-digest | null]

	,
()	X.25 OSPF Frame-relay map X.25 map OSPF X.25 OSPF

()

	OSPF	
100Mbps/Bandwidth	Bandwidth	
	bandwidth	
	OSPF	
64K	cost	1562
E1	cost	48
10M	cost	10
100M	cost	1
ip ospf cost	OSPF	

()

64K

<p>hello ()</p>	<p>hello hello OSPF hello hello 10 PPP HDLC 10 10 X.25 30</p>
<p>() dead-interval</p>	<p>OSPF Hello OSPF Hello hello 4 hello OSPF hello</p>
<p>()</p>	<p>OSPF hello OSPF DR/BDR DR BDR DR BDR DR/BDR OSPF broadcast non-broadcast ⚡ . DR BDR DR BDR</p>

<p>BFD ()</p>	<pre> , , bfd all-interfaces ip ospf bfd BFD OSPF bfd all-interfaces OSPF BFD ip ospf bfd disable BFD </pre>
<p>OSPF ()</p>	<pre> , , network area network ospf OSPF OSPF </pre>
<p>() ip ospf database-filter all out</p>	<pre> , , LSA LSA LSA </pre>
	<pre> 1: 2 3 MD5 no null , , </pre>

ip ospf authentication-key
OSPF
OSPF

KEY

OSPF
area authentication

,

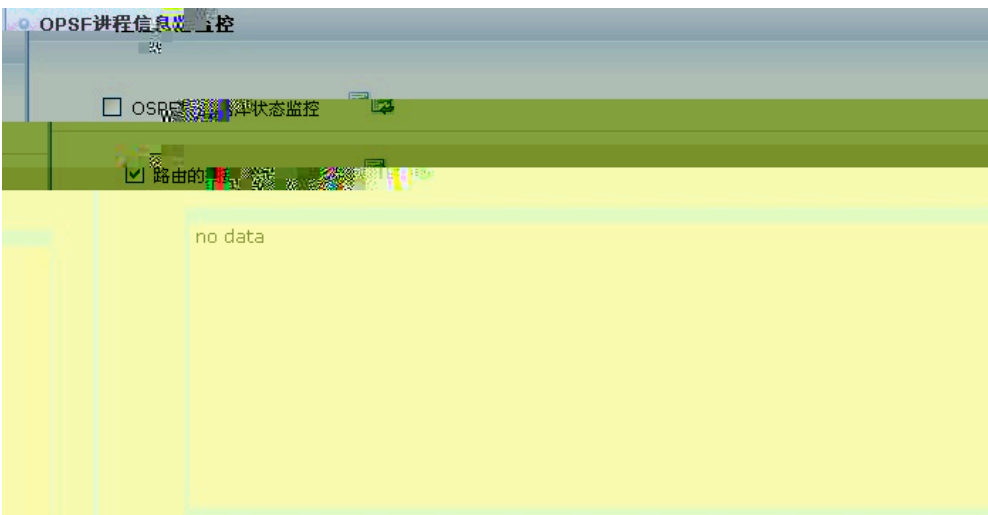
13.4.1 OSPF

OSPF , OSPF , OSPF
>CGD CGD
OSPF OSPF :



13.4.2

OSPF , OSPF , OSPF
>CGD CGD
OSPF OSPF :



13.4.3 OSPF

OSPF , OSPF , OSPF
>CGD CGD
OSPF OSPF :



	# #
	#

14.2

%' !%

%'

1.



2. la`
kY]bZc"la` /

3.

15

15.1

>

%!%

%!%

"\b "\b_

=9

↗

Z Ug\

15.2

>

%!&

%!&

WbZj["hYh

WbZj["hYh

=9



16

>

%!%

16.1SYSLOG

=D

16.2NTP

=D