



SANGFOR

SANGFOR WANO

Bandwidth

Management

Guide

SANGFOR Technologies Co., Ltd.

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WANO Bandwidth Management Guide

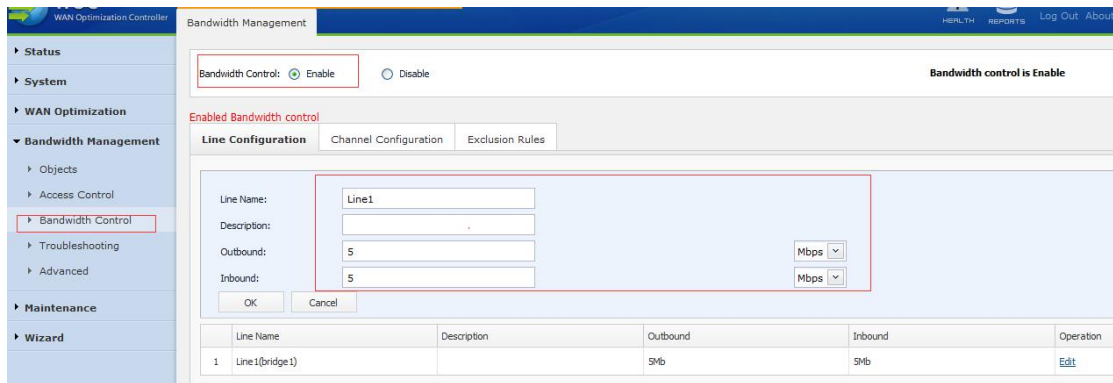
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1. Requirement Confirm

1. Which type user use which application need to do which policy in which time.
2. Bandwidth of line.
3. Network confirm, ensure traffic use the source IP through WANO.

2. Configuration

1. Define line bandwidth and enable bandwidth control.



Bandwidth Management

Bandwidth Control: ☒ Enable ☐ Disable Bandwidth control is Enable

Enabled Bandwidth control

Line Configuration Channel Configuration Exclusion Rules

Line Name: Line1

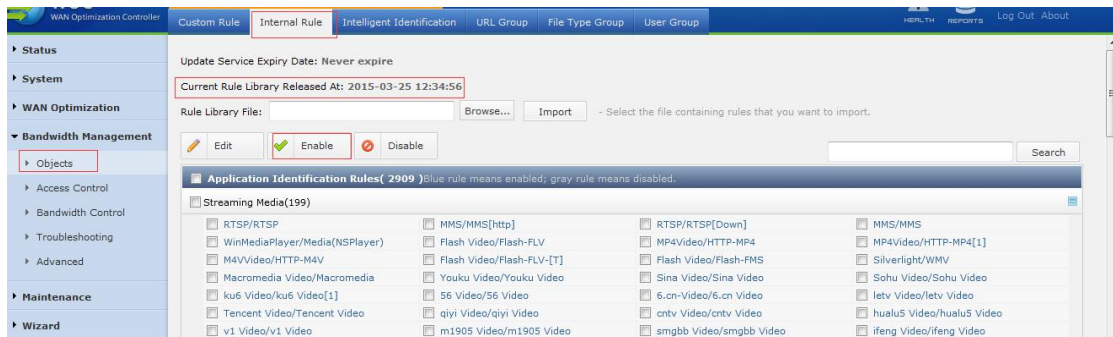
Description: Smb

Outbound: 5 Mbps

Inbound: 5 Mbps

Line Name	Description	Outbound	Inbound	Operation
1 Line1(Bridge1)	Smb	5Mbps	5Mbps	Edit

2. Enable internal rules, make sure all application color is blue (default is disable and the color is gray) and current rule library released date is recently.



Custom Rule Internal Rule Intelligent Identification URL Group File Type Group User Group

Update Service Expiry Date: Never expire

Current Rule Library Released At: 2015-03-25 12:34:56

Rule Library File: Browse... Import - Select the file containing rules that you want to import.

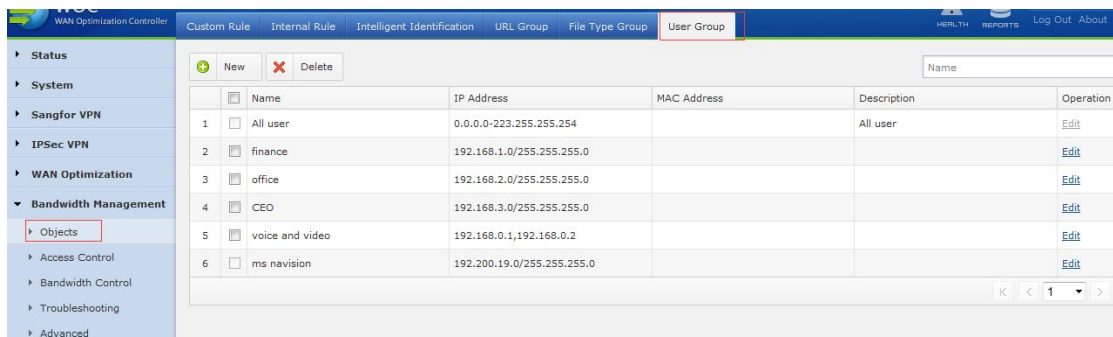
Edit Enable Disable Search

Application Identification Rules(2909) Blue rule means enabled; gray rule means disabled.

Streaming Media(199)

<input type="checkbox"/> RTSP/RTSP	<input type="checkbox"/> MMS/MMS[Http]	<input type="checkbox"/> RTSP/RTSP[Down]	<input type="checkbox"/> MMS/MMS
<input type="checkbox"/> WinMediaPlayer/Media(NSPlayer)	<input type="checkbox"/> Flash Video/Flash-FLV	<input type="checkbox"/> MP4Video/HTTP-MP4	<input type="checkbox"/> MP4Video/HTTP-MP4[1]
<input type="checkbox"/> M4VVideo/HTTP-M4V	<input type="checkbox"/> Flash Video/Flash-FLV-[T]	<input type="checkbox"/> Flash Video/Flash-FMS	<input type="checkbox"/> Silverlight/WMV
<input type="checkbox"/> Macromedia Video/Macromedia	<input type="checkbox"/> Youku Video/Youku Video	<input type="checkbox"/> Sina Video/Sina Video	<input type="checkbox"/> Sohu Video/Sohu Video
<input type="checkbox"/> ku6 Video/ku6 Video[1]	<input type="checkbox"/> 56 Video/56 Video	<input type="checkbox"/> 6.cn Video/6.cn Video	<input type="checkbox"/> letv Video/letv Video
<input type="checkbox"/> Tencent Video/Tencent Video	<input type="checkbox"/> qiyi Video/qiyi Video	<input type="checkbox"/> cntv Video/cntv Video	<input type="checkbox"/> hualu5 Video/hualu5 Video
<input type="checkbox"/> v1 Video/v1 Video	<input type="checkbox"/> m1905 Video/m1905 Video	<input type="checkbox"/> smgbb Video/smgbb Video	<input type="checkbox"/> ifeng Video/ifeng Video

3. Define user group.



Custom Rule Internal Rule Intelligent Identification URL Group File Type Group User Group

New Delete

Name	IP Address	MAC Address	Description	Operation
1 All user	0.0.0.0-223.255.255.254		All user	Edit
2 finance	192.168.1.0/255.255.255.0			Edit
3 office	192.168.2.0/255.255.255.0			Edit
4 CEO	192.168.3.0/255.255.255.0			Edit
5 voice and video	192.168.0.1,192.168.0.2			Edit
6 ms navision	192.200.19.0/255.255.255.0			Edit

4. Define time schedule

WAN Optimization Controller

IP Group Application **Schedule** HEALTH REPORTS Log Out About

Name:

Description:

Please click and drag over the grids to select time segment(s).

☒ Selected
 ☐ Unselected

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon																									
Tue																									
Wed																									
Thu																									
Fri																									
Sat																									
Sun																									

	Name	Description	Operation
1	<input type="checkbox"/> All day	All day	Edit

5. Do bandwidth control or access control policy.

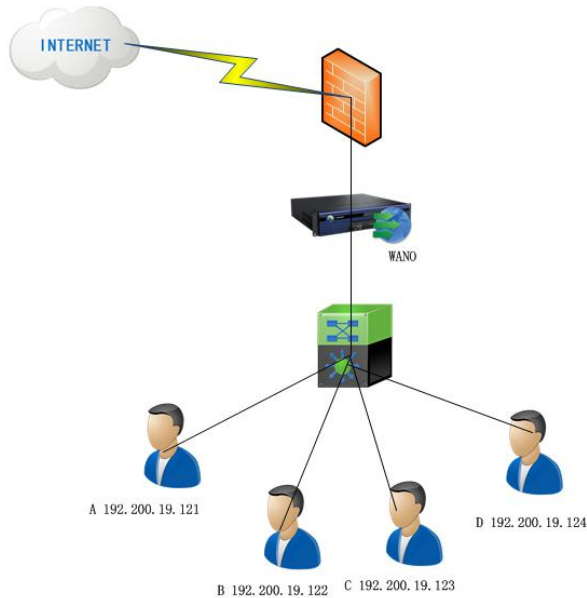
WAN Optimization Controller

Policy HEALTH REPORTS Log Out About

	Policy Name	User	Description	Expiry Date	Enabled	Move	Operation
No data available							

3. Typical Case

3.1 Topology Map



3.2 Requirement

User type:

user A 192.200.19.121 user B 192.200.19.122 user C 192.200.19.123 user D 192.200.19.124

Office time: from Monday to Friday 9:00 am-12:00am 14:00am-18:00am

Bandwidth: 5Mb

Policy requirement:

User A is a boss, he can do all thing, his traffic has high privilege to pass through.

User B can't visit website except www.sangfor.com.

User C can only use mail application and IM application.

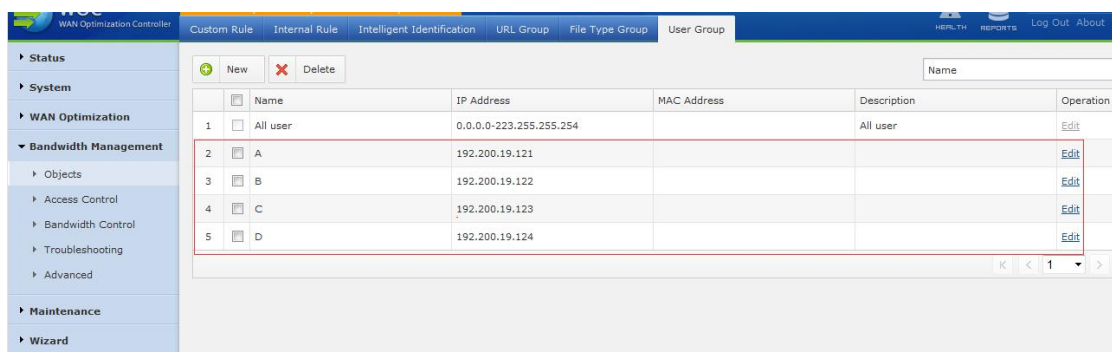
User D can't use streaming media in office time.

All mail traffic has high privilege to pass through.

User B/C/D can't play online game in office time, p2p application traffic can't above 50% all day.

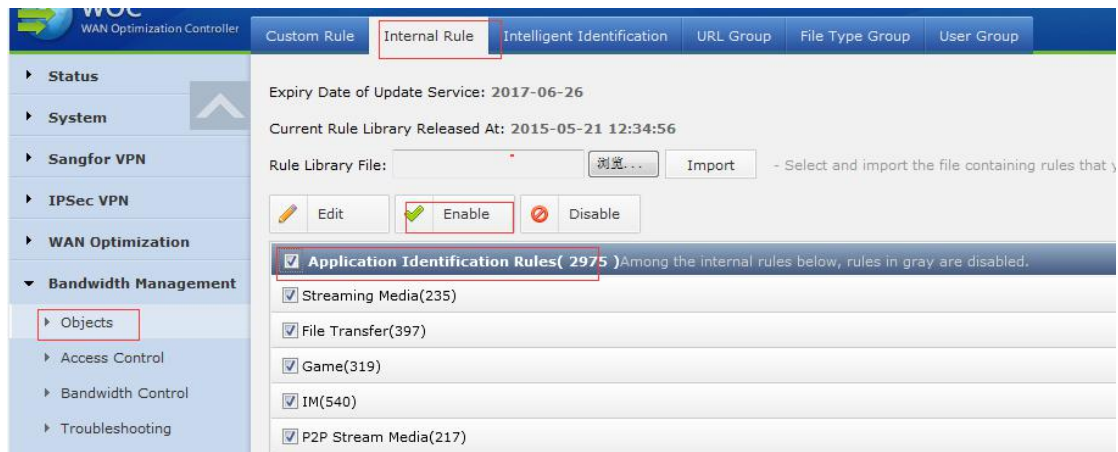
3.3 configuration

1. Define user group.



	Name	IP Address	MAC Address	Description	Operation
1	All user	0.0.0.0-223.255.255.254		All user	Edit
2	A	192.200.19.121			Edit
3	B	192.200.19.122			Edit
4	C	192.200.19.123			Edit
5	D	192.200.19.124			Edit

2. Enable all internal rule.



Expiry Date of Update Service: 2017-06-26
Current Rule Library Released At: 2015-05-21 12:34:56

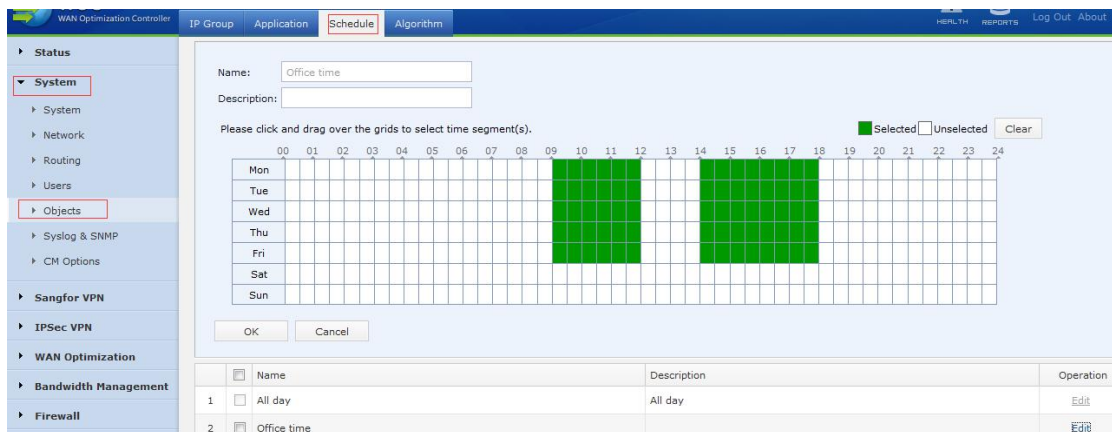
Rule Library File: [浏览...](#) [Import](#) - Select and import the file containing rules that y

[Edit](#) [Enable](#) [Disable](#)

☒ **Application Identification Rules(2975)** Among the internal rules below, rules in gray are disabled.

- ☒ Streaming Media(235)
- ☒ File Transfer(397)
- ☒ Game(319)
- ☒ IM(540)
- ☒ P2P Stream Media(217)

3. Define time schedule.



Name: Office time
Description:

Please click and drag over the grids to select time segment(s).

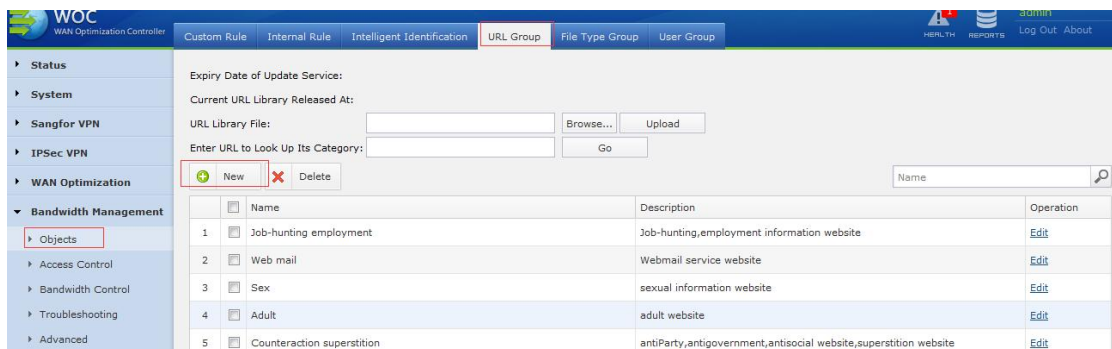
☒ Selected ☐ Unselected [Clear](#)

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon																									
Tue																									
Wed																									
Thu																									
Fri																									
Sat																									
Sun																									

[OK](#) [Cancel](#)

	Name	Description	Operation
1	All day	All day	Edit
2	Office time		Edit

4. Define website



Expiry Date of Update Service:
Current URL Library Released At:

URL Library File: [Browse...](#) [Upload](#)

Enter URL to Look Up Its Category: [Go](#)

[New](#) [Delete](#)

	Name	Description	Operation
1	Job-hunting,employment	Job-hunting,employment information website	Edit
2	Web mail	Webmail service website	Edit
3	Sex	sexual information website	Edit
4	Adult	adult website	Edit
5	Counteraction superstition	antiParty,antigovernment,antisocial website,superstition website	Edit

WAN Optimization Controller

URL Group

Name: sangfor

Description:

URL: One entry per row. Example: *.google.com
www.sangfor.com

Domain Name Keyword: (One entry per row.)

Save Cancel

5. Define line bandwidth

WAN Optimization Controller

Bandwidth Management

Bandwidth Control: ☒ Enable ☐ Disable **Bandwidth control is Enable**

Line Configuration Channel Configuration Exclusion Rules

Line Name	Description	Outbound	Inbound	Operation
1 Line1(bridge1)		5Mb	5Mb	Edit

6. Add a access policy for B, chose web filter, allow sangfor and deny other website.

Access Control ☒ Web Filter ☒ Flow

☒ URL Filter ☐ File Type Filter

Basic ☐ Advanced

Filtering specific for HTTP GET. This feature is mainly used for controlling access to common webpages.

If any URLs are unrecognized and failed to be filtered, please report them to SANGFOR ([Report Unrecognized URL](#))

[Select All](#) [Inverse](#) Selected: ([Move Up](#) [Move Down](#) Action Select Valid Time Select) [Show All](#) [Hide Unspecified](#)

Select	No.	Category	Description	Action	Valid Time
<input checked="" type="checkbox"/>	1	sangfor		Allow	All day
<input type="checkbox"/>	2	Job-hunting employment	Job-hunting,employment information website	Deny	All day
<input type="checkbox"/>	3	Web mail	Webmail service website	Deny	All day
<input type="checkbox"/>	4	Sex	sexual information website	Deny	All day
<input type="checkbox"/>	5	Adult	adult website	Deny	All day
<input type="checkbox"/>	6	Counteraction super	antiParty,antigovernment,antisocial website,superstition website	Deny	All day

7. Add a access policy for C, chose access control, allow IM/Mail/DNS and deny all know application/other application.

Access Control ☒ Web Filter ☐ Flow

☒ Application ☐ Service ☐ Advanced

Control based on content of packet (if any application cannot be blocked, please [contact us](#))

[Add](#) [Delete](#) [Select All](#) [Inverse](#) [Allow](#) [Deny](#) [Move Up](#) [Move Down](#)

Select	No.	Category	Application	Action	Valid Time
<input type="checkbox"/>	1	IM	All	Allow	All day
<input type="checkbox"/>	2	Mail	All	Allow	All day
<input type="checkbox"/>	3	DNS	All	Allow	All day
<input type="checkbox"/>	4	All known application	All	Deny	All day
<input type="checkbox"/>	5	Other application	All	Deny	All day

8. Add a access policy for D, chose access control ,deny P2P stream media and streaming

media, in office time.

☒ Access Control ☐ Web Filter ☒ Flow

☒ Application ☐ Service ☐ Advanced

Control based on content of packet (if any application cannot be blocked, please [contact us](#))

[Add](#) [Delete](#) [Select All](#) [Inverse](#) [Allow](#) [Deny](#) [Move Up](#) [Move Down](#)

Select	No.	Category	Application	Action	Valid Time
<input type="checkbox"/>	1	P2P Stream Media	All	Deny	Office time
<input type="checkbox"/>	2	Streaming Media	All	Deny	Office time

[Add](#) [Delete](#) [Select All](#) [Inverse](#) [Allow](#) [Deny](#) [Move Up](#) [Move Down](#)

9. Add a access policy for B/C/D, chose access control ,deny Game, in office time.

☒ Access Control ☐ Web Filter ☒ Flow

☒ Application ☐ Service ☐ Advanced

Control based on content of packet (if any application cannot be blocked, please [contact us](#))

[Add](#) [Delete](#) [Select All](#) [Inverse](#) [Allow](#) [Deny](#) [Move Up](#) [Move Down](#)

Select	No.	Category	Application	Action	Valid Time
<input type="checkbox"/>	1	Game	All	Deny	Office time

[Add](#) [Delete](#) [Select All](#) [Inverse](#) [Allow](#) [Deny](#) [Move Up](#) [Move Down](#)

10. Add a bandwidth control policy chose all application , chose group A, use assured channel, priority high, assured bandwidth 80%, Max bandwidth 100%.

Bandwidth Channel

Application: ☒ All ☐ Specified

Applicable Users: ☐ All ☒ Specified

Channel Type: ☒ Assured channel ☐ Limited channel ☐ Video channel

Priority: High

Assured Outbound Bandwidth: 80 % 1953 KB/s

Assured Inbound Bandwidth: 100 % 2441 KB/s

Max Outbound Bandwidth: 80 % 1953 KB/s

Max Inbound Bandwidth: 100 % 2441 KB/s

Channel Bandwidth Assignment: ☒ Assigned evenly by IP

Max Bandwidth Per IP: ☐ Enable

Outbound: 0 KB/s

11. Add a bandwidth control policy chose mail application , use assured channel, priority high, assured bandwidth 50%, Max bandwidth 80%.

☐ All ☒ Specified

[Add](#) [Delete](#) [Select All](#) [Inverse](#)

Category	Sub-category	Operation	Select
Mail	All	Edit	<input type="checkbox"/>

Applicable Users: ☒ All ☐ Specified

Channel Type: ☒ Assured channel ☐ Limited channel ☐ Video channel

Priority: High

Assured Outbound Bandwidth: 50 % 1220 KB/s

Assured Inbound Bandwidth: 50 % 1220 KB/s

Max Outbound Bandwidth: 80 % 1953 KB/s

Max Inbound Bandwidth: 80 % 1953 KB/s

Channel Bandwidth Assignment: ☒ Assigned evenly by IP

Max Bandwidth Per IP: ☐ Enable

Outbound: 0 KB/s

12. Add a bandwidth control policy chose P2P/download tool application , use limited channel, Max bandwidth 80%, Max bandwidth per IP 100KB/s.

Bandwidth Channel

Category	Sub-category	Operation	Select
P2P	All	Edit	<input type="checkbox"/>
Download Tools	All	Edit	<input type="checkbox"/>

Applicable Users

☐ All ☒ Specified

[Select](#)

Channel Type

☐ Assured channel ☒ Limited channel ☐ Video channel

Max Outbound Bandwidth: 50 % 1220 KB/s

Max Inbound Bandwidth: 50 % 1220 KB/s

Channel Bandwidth Assignment: ☒ Assigned evenly by IP

Max Bandwidth Per IP: ☒ Enable

Outbound: 100 KB/s

Inbound: 100 KB/s

13. adjust bandwidth control policy order, put high priority policy up and low priority policy down.

ALL access control policy.

Policy

[New](#) [Delete](#)

	Policy Name	User	Description	Expiry Date	Enabl...	Move	Operation
1	B	B	B	Never expire	<input checked="" type="checkbox"/>	Up Down	Edit Rename
2	C	C	C	Never expire	<input checked="" type="checkbox"/>	Up Down	Edit Rename
3	D	D	D	Never expire	<input checked="" type="checkbox"/>	Up Down	Edit Rename
4	Online Game	B,C,D		Never expire	<input checked="" type="checkbox"/>	Up Down	Edit Rename

[K](#) [<](#) [1](#) [>](#) [X](#)

All bandwidth control policy.

Bandwidth Channels

Virtual Lines

Bandwidth Control: ☒ Enable ☐ Disable **Bandwidth control is enabled**

Bandwidth Channels

[New](#) [Delete](#)

	Name	Application	Users	Dst IP	Valid Time	Vir...	Assured	Maximum	Max Per IP	Priority	Enabl...	Move
1	A	All	A	All IP	All day	All	(Out)1.9MB,(In)2.4MB	(Out)1.9MB,(In)2.4MB	No Limit	High	<input checked="" type="checkbox"/>	Up Down
2	Mail	Mail	All	All IP	All day	All	(Out)1.2MB,(In)1.2MB	(Out)1.9MB,(In)1.9MB	No Limit	High	<input checked="" type="checkbox"/>	Up Down
3	P2P and ...	P2P,Download Tools	B,C,D	All IP	All day	All	None	(Out)1.2MB,(In)1.2MB	(Out)100...	Low	<input checked="" type="checkbox"/>	Up Down
4	Default C...	All	All	All IP	All day	All	(Out)244KB,(In)244KB	(Out)2.4MB,(In)2.4MB	No Limit	High	<input checked="" type="checkbox"/>	Up Down

[K](#) [<](#) [1](#) [>](#) [X](#)

4. Troubleshooting

1. Internal rules not enable or current rule library too early
2. Policy valid time not match with test time.
3. Traffic not through device.
4. Recognize incorrect, we can monitor [bandwidth monitor]>[connections]
If recognize incorrect, we can customer application.

-
5. Enable packet drop list view which policy cause deny.
 6. If policy has problem effect work, we can enable bypass or excluded IP.