



SANGFOR

Sangfor NGAF

Bandwidth Management Configuration Guide

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Change Log

Date	Change Description
Jun. 09, 2021	Update document from version 8.0.8 to 8.0.35

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1 Introduction

1.1 Abbreviations and conventions

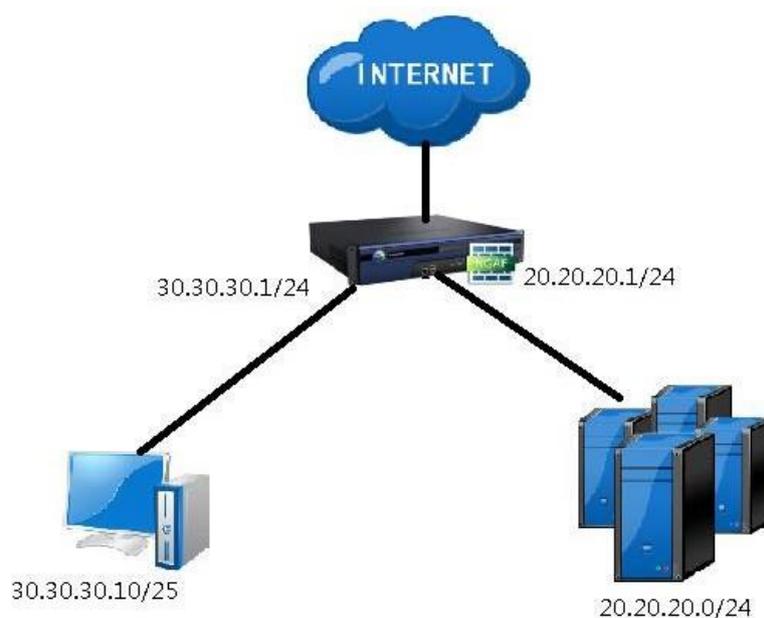
NGAF in this article refers to the SANGFOR NGAF device.

1.2 Feedback

If you find any questions about this document, please feel free to give us feedback, email: tech.support@sangfor.com.

2 Application Scenario

To prevent thunder downloaders in LAN, the application that occupies the highest bandwidth is video browsing. If the bandwidth has been occupied by video browsing it may cause another user who needs Internet access to have very little bandwidth. Usually, this is used to control the traffic in a LAN. The following diagram is the topology to test bandwidth management:



Configuration Step:

- (1) Set the corresponding external interface as the WAN attribute.
- (2) Create a new line policy.
- (3) Configure the bandwidth channel and select the corresponding application.

3 Configuration Method

Step 1. Go to **Network > Interfaces** to check which interface is the WAN attribute.

Edit Physical Interface ✕

Basics

Name: eth1

Status: Enabled Disabled

Description: Optional

Type: Layer 3

Zone: Wan

Basic Attributes: WAN attribute

System Upgrade: Temporarily use this interface for system upgrade ⓘ Remaining Period: 04:15:32

IPv4 IPv6 Link State Detection Advanced

IP Assignment: Static DHCP PPPoE

Static IP: 192.200.19.187/24
192.200.19.185/24 ⓘ

Next-Hop IP: 192.200.19.1 ⓘ

Link Bandwidth: Outbound 10240 Mbps Inbound 10240 Mbps

Save Cancel

Step 2. Identify the requirement of the bandwidth control to a specific application of the LAN which includes guaranteed bandwidth. Then configure bandwidth according to requirement.

NGAF Platform 6.0.36 Home SOC Monitor Policies Objects Network System Menu name Q ? ? ? ? admin

Bandwidth Channel

Enable bandwidth management system

Bandwidth Channel Exclusion Rule

+ Add | ✎ Edit | ✖ Delete | Enable Disable | ↑ Move Up | ↓ Move Down | ↻ Refresh Filter

<input type="checkbox"/>	Name	Src Object	Application	Dest Object	Schedule	Link	Min Bandwidth	Max Bandwidth
<input type="checkbox"/>	Default channel	Network Object: All	All	All	All week	All	-	11000 (Mb/s) 1128 (M...

Step 3. Go to **Policies > Bandwidth Management > Link Settings**, click lines and add a new line and the interface as egress interface and configure the outbound and inbound bandwidth.

Add Link✕

Outbound Interface:

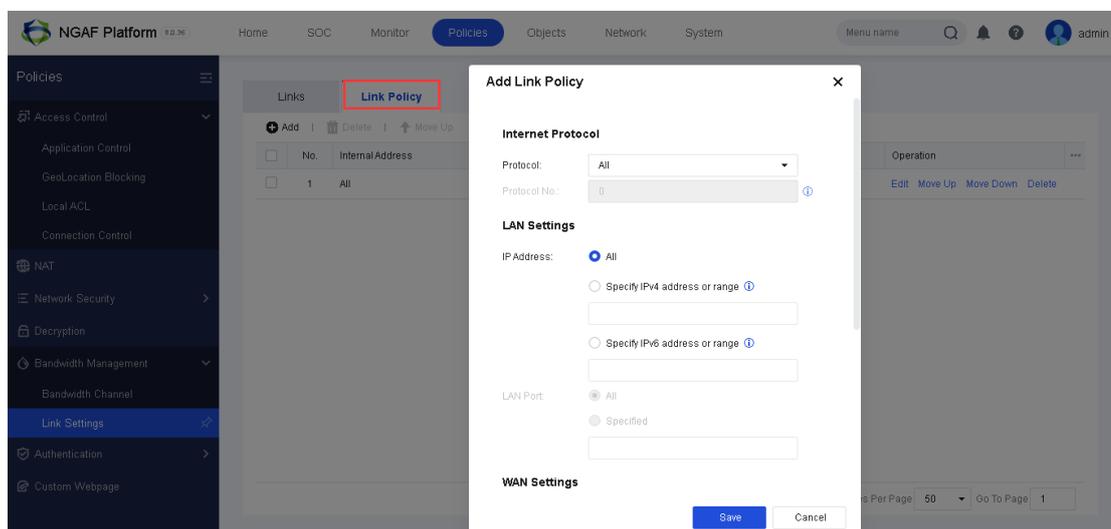
Outbound:

Inbound:

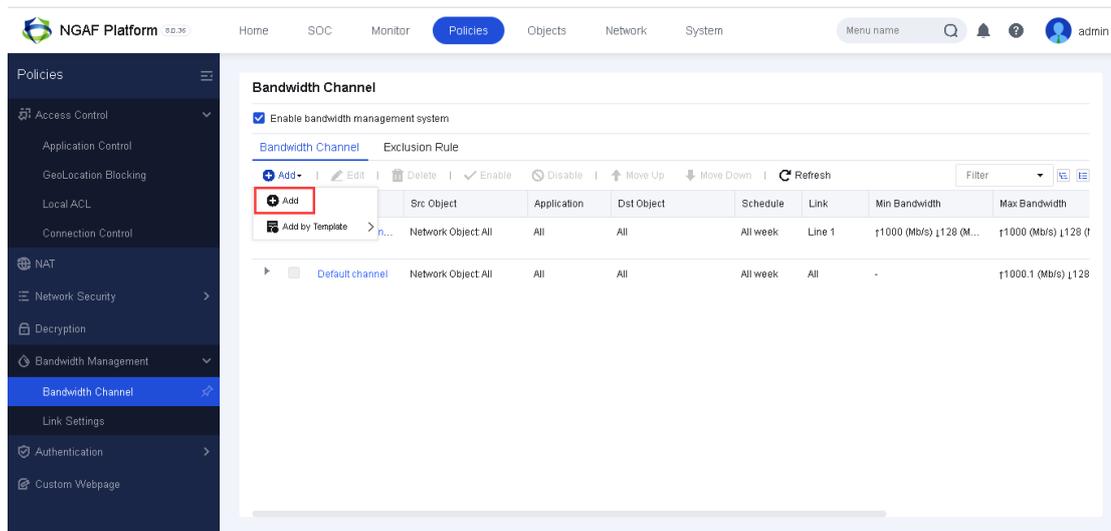


Outbound and inbound are recommended to fill in the actual bandwidth of the ISP. Otherwise, bandwidth control based on the bandwidth ratio may not take effect (1KB=8Kb, 1MB=8Mb).

Step 4. Next click on the line policy to create a new line policy for the line that was just created.



Step 5. Go to **Policies > Bandwidth Management > Bandwidth Channel**, add a bandwidth channel.



Step 6. Configure the **Guaranteed channel** or **Limited channel** accordingly, the target line is the line that you wish to control.

Edit Channel



Enable

Name:

Options	Bandwidth Channel
Bandwidth Channel	
Applicable Objects	

Link:

Channel Type

Guaranteed channel

Outbound: Min % Mbps

Max % Mbps

Inbound: Min % Mbps

Max % Mbps

Priority:

Limited channel

Outbound: Max % Mbps

Save

Cancel

Step 7. If you wish to have bandwidth limit per-ser you may turn on Per-User Max Bandwidth.

Per-User Max Bandwidth

Outbound: Kbps ▾

Inbound: Kbps ▾

Step 8. Then click on Applicable Objects to configure the application that you wish to have applied bandwidth control.

Edit Channel ×

Enable

Name: ⓘ

Options	Applicable Objects
Bandwidth Channel	Application: <input checked="" type="radio"/> All <input type="radio"/> Specified SelectApplication
Applicable Objects	Src Object: <input checked="" type="radio"/> Network Objects <input type="radio"/> User/Group <input type="text" value="All"/> ⓘ <input type="text" value="Select"/> ⓘ
	Schedule: <input type="text" value="All week"/> ▾
	Dst Object: <input checked="" type="radio"/> Network Objects <input type="radio"/> Region <input type="text" value="All"/> ⓘ <input type="text" value="Select"/> ⓘ

Step 9. Choose the application that you wish to apply bandwidth control.

Select Application



All

Application category

- Known categories
 - DNS
 - Visit Web Site
 - Mail
 - OA
 - Social Networking
 - IM
 - File Transfer
 - Network storage
 - Web Streaming Media
 - Download Tools

Selected (1)

Name	Type	Operation
DNS/All	Application	Delete

Step 10. Choose the IP group that you wish to have bandwidth control.

Select Network Object



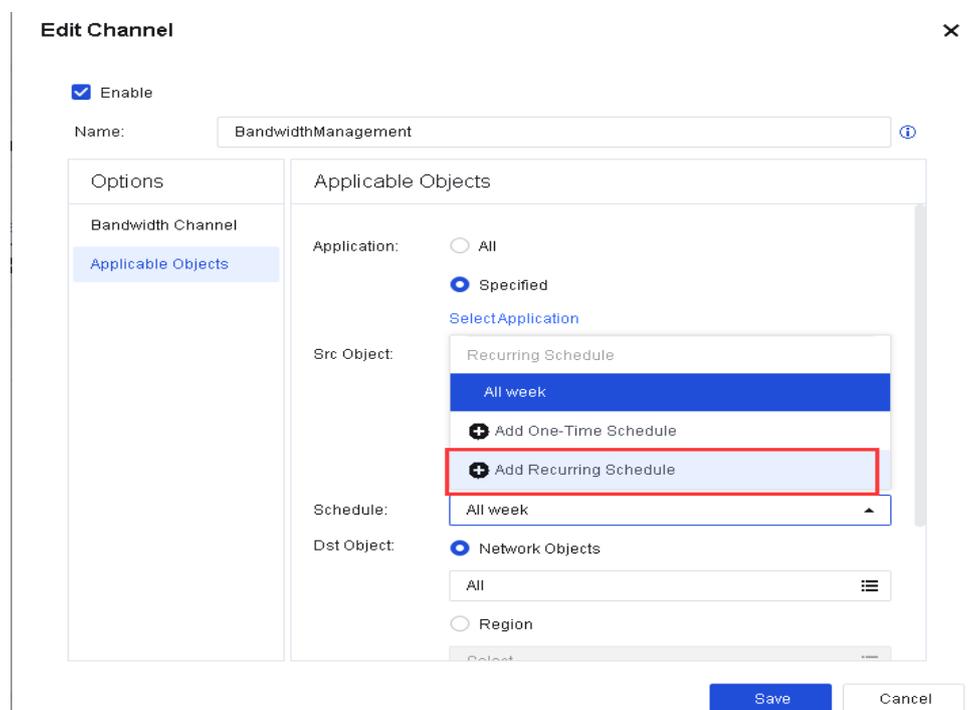
Available (6) | [Add](#)
All

	Name	Type	Address
<input checked="" type="checkbox"/>	All	IP Address	All
<input type="checkbox"/>	test	IP Address	1.1.1.1
<input type="checkbox"/>	internal	IP Address	192.168.1.0-192.168.1.255
<input type="checkbox"/>	Lan PC	IP Address	192.168.1.0-192.168.1.255
<input type="checkbox"/>		IP Address	192.168.1.110
<input type="checkbox"/>			

Selected (1) [Clear](#)

All

Step 11. If you wish to have a scheduled time, you can configure through **Applicable Objects > Schedule**. It allows you to have a one-time schedule or a recurring schedule. You can configure the time that you wish to have bandwidth control.



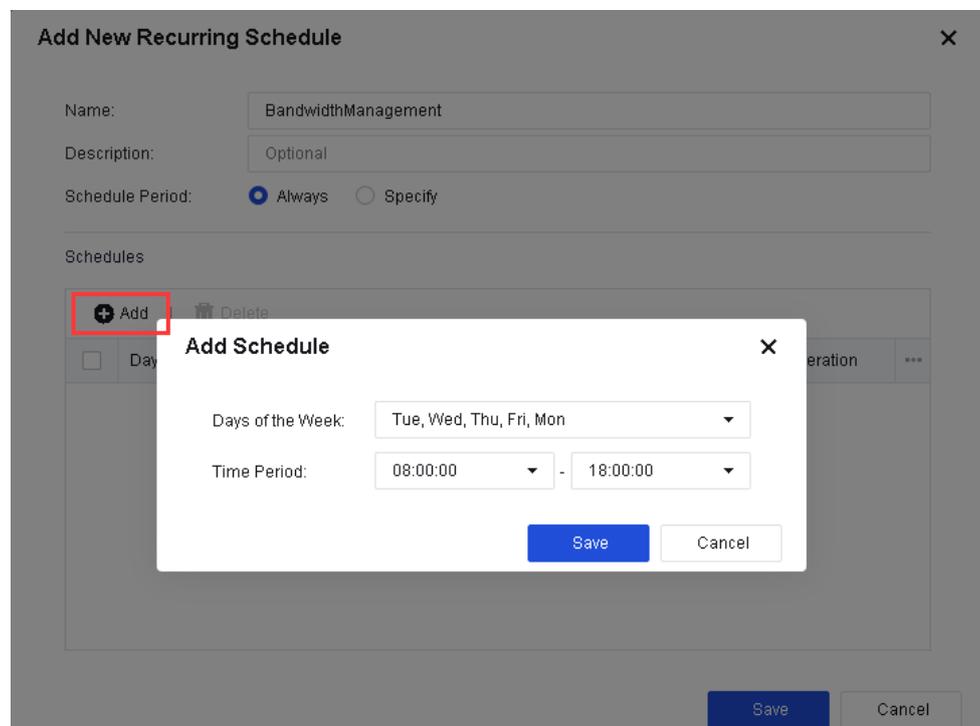
Edit Channel [Close]

Enable

Name: BandwidthManagement [Info]

Options	Applicable Objects
Bandwidth Channel	Application: <input type="radio"/> All <input checked="" type="radio"/> Specified Select Application
Applicable Objects	Src Object: Recurring Schedule All week + Add One-Time Schedule + Add Recurring Schedule
	Schedule: All week
	Dst Object: <input checked="" type="radio"/> Network Objects All [Menu] <input type="radio"/> Region Select

[Save] [Cancel]



Add New Recurring Schedule [Close]

Name: BandwidthManagement

Description: Optional

Schedule Period: Always Specify

Schedules

Day	Operation	...
<input checked="" type="checkbox"/>	+ Add	Delete

Add Schedule [Close]

Days of the Week: Tue, Wed, Thu, Fri, Mon

Time Period: 08:00:00 - 18:00:00

[Save] [Cancel]

[Save] [Cancel]

Step 12. After successfully configured the bandwidth, it should have an added bandwidth channel as the following figure.

Bandwidth Channel

Enable bandwidth management system

Bandwidth Channel Exclusion Rule

[Add](#) | [Edit](#) | [Delete](#) | [Enable](#) | [Disable](#) | [Move Up](#) | [Move Down](#) | [Refresh](#) Filter

<input type="checkbox"/>	Name	Src Object	Application	Dst Object	Schedule	Link	Min Bandwidth	Max Bandwidth	Per-User Max Bandwidth	Priority	Status
<input checked="" type="checkbox"/>	BandwidthMa...	Network Object: All	All	All	All week	Line 1	†1000 (Mb/s) †128 (M...	†1000 (Mb/s) †128 (M...	-	High	✓
<input type="checkbox"/>	Default channel	Network Object: All	All	All	All week	All	-	†1000.1 (Mb/s) †128....	-	High	✓

Step 13. **Monitor > Sessions > Traffic Ranking** will show the IP that you configure in the previous step. It shows the inbound and outbound traffic flow.

NGAF Platform 8.9.39 Home SOC Monitor Policies Objects Network System Menu name admin

Cloud-Delivered Protection is activated. NGAF will compare IP addresses with the hacker IP database and block the ones that match. [View](#)

Top Users by Traffic Top Applications by Traffic Top IP Addresses by Traffic Traffic by IP Address

Filter | Lock | Locked Users | Refresh | Refresh: 5 seconds

View: Top 60, Group ()

<input type="checkbox"/>	No.	Username	Group	Throughput Out	Throughput In	Bidirectional	Lock	Obtain	Traffic Details
<input type="checkbox"/>	1		/Default group/	528(b/s)	432(b/s)	960(b/s)	Lock user	Obtain	Others

4 Precautions

1. Ensure that NGAF has Internet access and the application control should be allowed.
2. LAN PC must be able to access the firewall and the LAN interface.
3. When testing for bandwidth management, do not use www.sangfor.com.cn download package because it has been listed in the global whitelist.
4. To test for bandwidth management. Directly download a file to test the speed and do not use 360-speed tests because it will optimize the speed.
5. VPN does not support bandwidth management.
6. The external interface is set to the WAN attribute for bandwidth management to take effect.

