



Sangfor NGAF

Bandwidth Management Configuration Guide

Product Version	8.0.35
Document Version	02
Released on	Jun. 09, 2021



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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

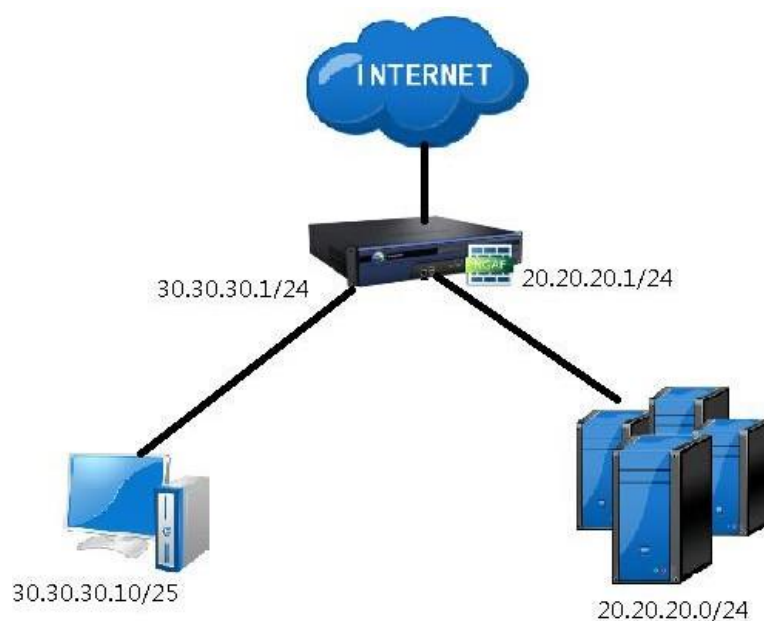
NGAF in this article refers to the SANGFOR NGAF device.

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 ⓘ ⓘ ⓘ admin

Policies

- Access Control
 - Application Control
 - GeoLocation Blocking
 - Local ACL
 - Connection Control
- NAT
- Network Security
- Decryption
- Bandwidth Management
 - Bandwidth Channel**
 - Link Settings
- Authentication
- Custom Webpage

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
<input type="checkbox"/>	Default channel	Network Object: All	All	All	All week	All	-	11000 (Mbps) 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:

eth1

Outbound:

0

Kbps

Inbound:

0

Kbps

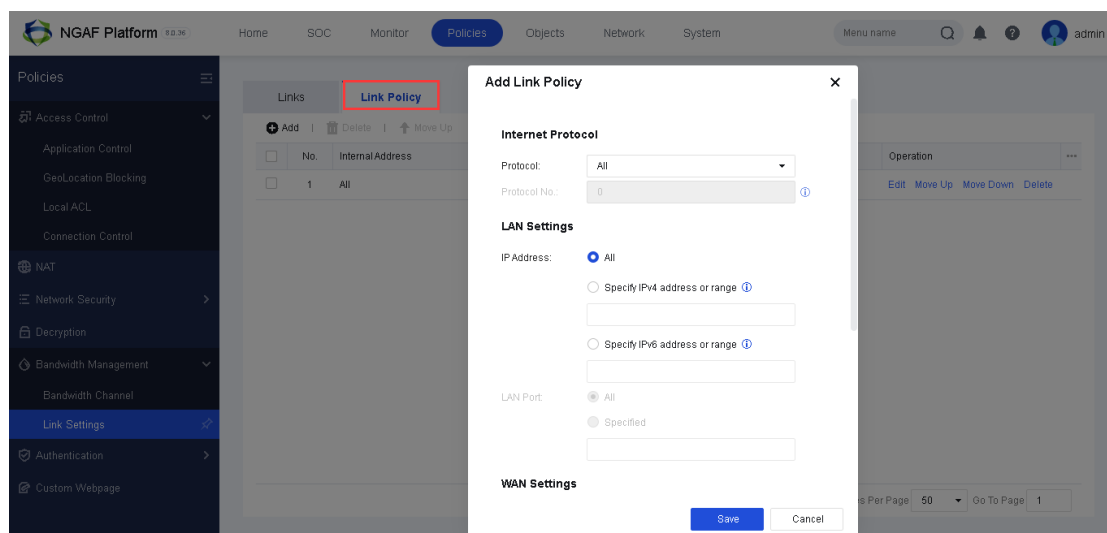
Save

Cancel

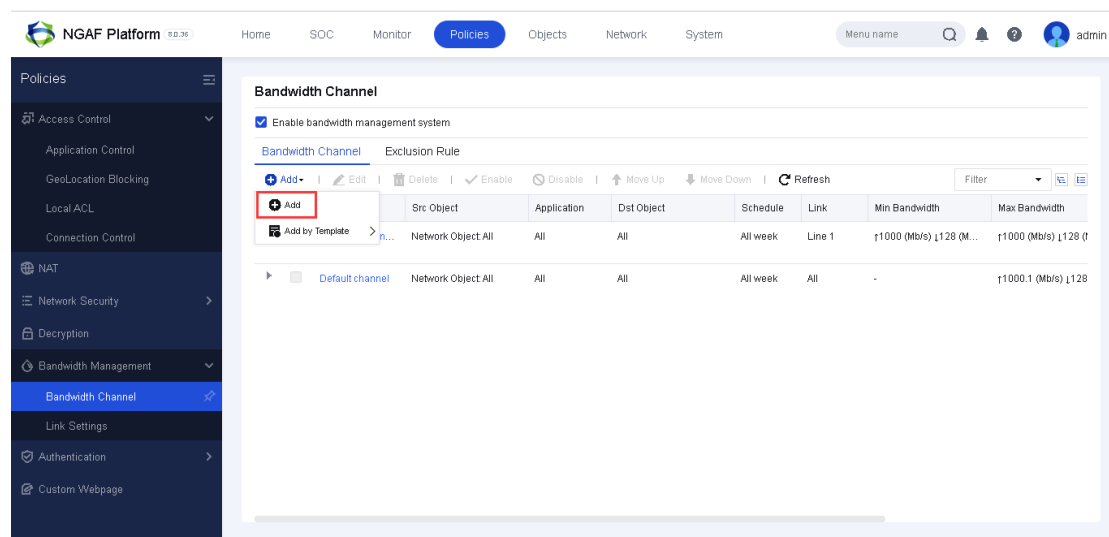


Outbound and inbound are recommended to fill in the actual bandwidth of the ISP. Otherwise, bandwidth control based on the bandwidth ratio may not take effect (1KB=8Kb, 1MB=8Mb).

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:

BandwidthManagement

Options

Bandwidth Channel

Applicable Objects

Bandwidth Channel

Link:

Line 1

Channel Type

☒ Guaranteed channel

Outbound: Min 100 % 1000 Mbps

Max 100 % 1000 Mbps

Inbound: Min 100 % 128 Mbps

Max 100 % 128 Mbps

Priority: High

☐ Limited channel

Outbound: Max 100 % 1000 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:

BandwidthManagement



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

Save

Cancel

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

Select Application



All
Search

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

Save

Cancel

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

Select Network Object



Available (6) | Add

All
Search

	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

Go to Network Objects

Save

Cancel

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.

The screenshot shows the 'Edit Channel' dialog box with the 'Applicable Objects' tab selected. The 'Name' field is 'BandwidthManagement'. Under 'Options', 'Applicable Objects' is highlighted. In the 'Applicable Objects' section, 'Application' is set to 'Specified'. The 'Src Object' dropdown is open, showing 'Recurring Schedule' selected, with 'All week' highlighted in blue. Below it are buttons for 'Add One-Time Schedule' and 'Add Recurring Schedule', with the latter highlighted by a red rectangle. The 'Schedule' dropdown is also open, showing 'All week'. The 'Dst Object' is set to 'Network Objects' with 'All' selected in the dropdown below it. 'Save' and 'Cancel' buttons are at the bottom right.

The screenshot shows the 'Add New Recurring Schedule' dialog box. The 'Name' field is 'BandwidthManagement' and the 'Description' is 'Optional'. 'Schedule Period' is set to 'Always'. In the 'Schedules' section, the '+ Add' button is highlighted with a red rectangle. An 'Add Schedule' sub-dialog is open, showing 'Days of the Week' as 'Tue, Wed, Thu, Fri, Mon' and 'Time Period' as '08:00:00' to '18:00:00'. 'Save' and 'Cancel' buttons are at the bottom of the sub-dialog. The main dialog also has 'Save' and 'Cancel' buttons at the bottom right.

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](#)

<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	11000 (Mb/s) 1128 (M...	11000 (Mb/s) 1128 (M...	-	High	✓
<input type="checkbox"/>	Default channel	Network Object: All	All	All	All week	All	-	11000.1 (Mb/s) 1128...	-	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 8.0.39 Home SOC **Monitor** Policies Objects Network System Menu name Q ? ? ? ? admin

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

Monitor

- Logs
 - Security Logs
 - Access Logs
 - System Logs
- Sessions
 - Traffic Ranking**
 - Suspicious Traffic
 - Session Ranking
 - Bandwidth Management
- Statistics >
- Report >
- Settings >

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 0

<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 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.



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