SANGFOR

Sangfor NGAF

Policy-Based Routing Configuration

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Change Log

Date	Change Description
Jul. 21, 2021	This is the first release of this document.

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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 these documents, please feel free to give us feedback, email: tech.support@sangfor.com.

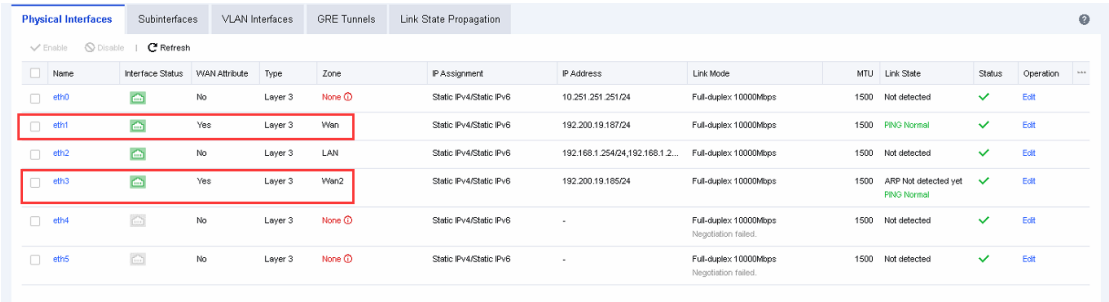
2 Requirements

1. Server 10.1.131.2 HTTP traffic goes through eth3 while other traffic goes through eth1.
2. Internal network users when accessing telecommunication will go through eth1 while access to China Unicom will go through eth3
3. All internal network users will go to the external network through eth1. When eth1 is down, eth3 is being used as a backup.

3 Sample Network Configuration

Following is the sample of a network configuration for testing purposes.

First, the environment must have two WAN interfaces, as shown below.



The interfaces are defined with different zone, WAN1, and WAN2.

Link State Detection is required on both the WAN interface.

The purpose of setting up the link-state detection is to facilitate the switching process of the line when the link is detected as faulty.

Static IPv4/Static IPv6	10.251.251.251/24	Full-duplex 10000Mbps	1500	Not detected	✓	Edit
Static IPv4/Static IPv6	192.200.19.187/24	Full-duplex 10000Mbps	1500	PING Normal	✓	Edit
Static IPv4/Static IPv6	192.168.1.254/24,192.168.1.2...	Full-duplex 10000Mbps	1500	Not detected	✓	Edit
Static IPv4/Static IPv6	192.200.19.185/24	Full-duplex 10000Mbps	1500	ARP Not detected yet PING Normal	✓	Edit
Static IPv4/Static IPv6	-	Full-duplex 10000Mbps Negotiation failed.	1500	Not detected	✓	Edit

3.1 Policy-Based Routes configuration

Here, the server with the source IP address of 10.1.131.2 access the external network via eth1 which is the WAN line. The configuration is as below:

Step 1. Fill in the policy name. (Any will do)

Step 2. Source Zone (where the server is located)

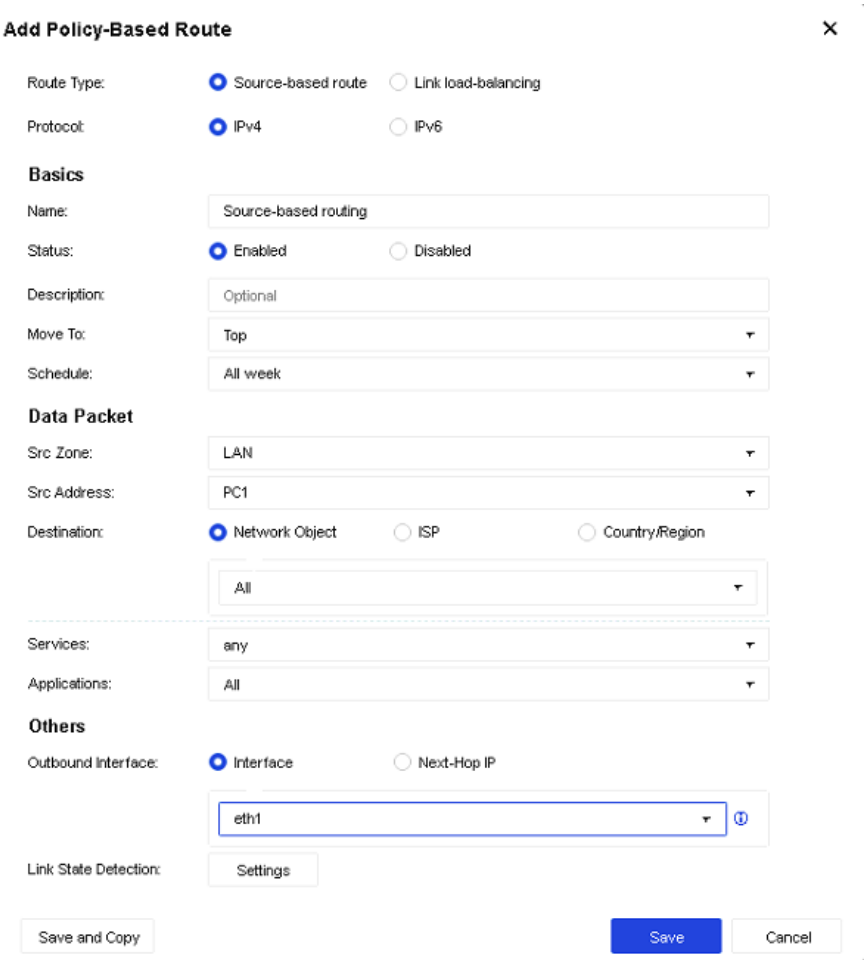
Step 3. Source IP (10.1.131.2)

Step 4. Destination IP group (Select all)

Step 5. Interface (Select eth1)

Step 6. Others can be kept as default.

Sample Configuration



4 Policy-Based Routes based on application

This policy is created based on the default policy which we had created earlier.

Requirement: Server 10.1.131.2 HTTP traffic goes through eth3 while other traffic goes through eth1, configuration as below:

Based on the policy route we created earlier, only select the website application and then select eth3 to go out.

Configuration:

Step 1. Fill in the policy name (Any will do)

Step 2. Source Zone (where the server is located)

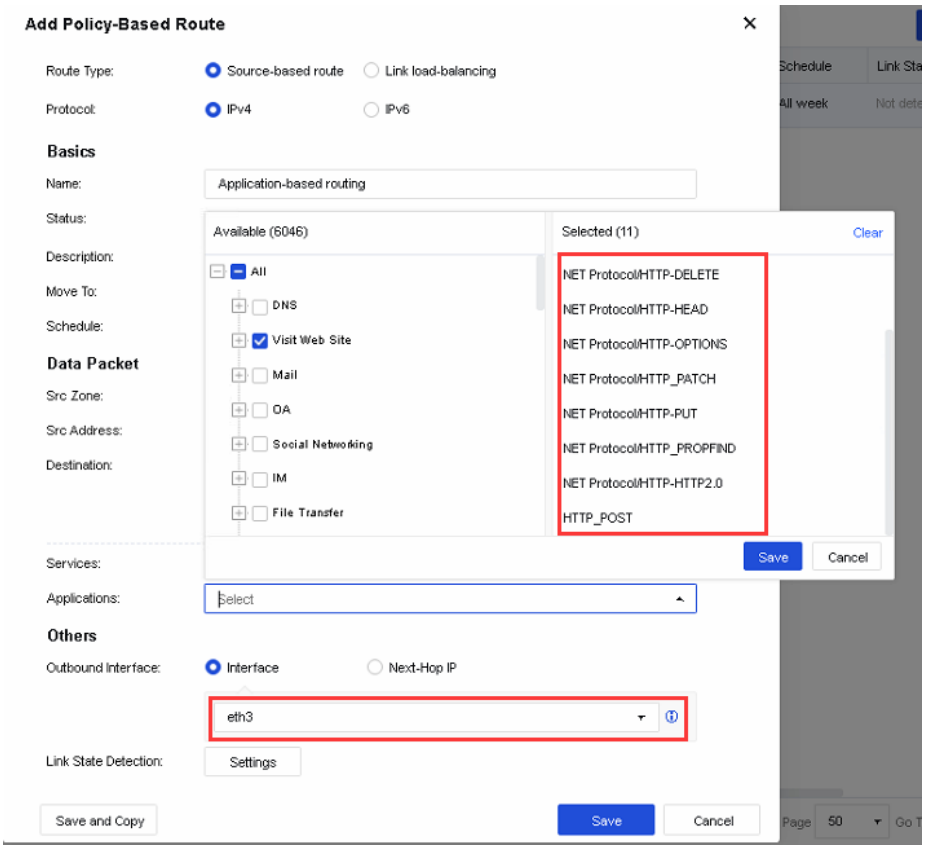
Step 3. Source IP (10.1.131.2)

Step 4. Destination IP group (Select all)

Step 5. Select HTTP application in the Application

Step 6. Interface (Select eth3)

Step 7. Others can be kept as default Sample Configuration:



The policy we have created for the server is as below:

☐	1	Application-base...	ipv4	LAN	PC1	All	http,https	Visit Web Sit...	eth3-192.200.19.1	-	All week	Not detected	✓
☐	2	Source-based ro...	ipv4	LAN	PC1	All	any	-	eth1-192.200.19.1	-	All week	Not detected	✓

With this, we have realized the requirement which is allowing the server 10.1.131.2 HTTP traffic goes through eth3 while other traffic goes through eth1.

5 Policy-based routing based on destination IP address

Effect:

This policy-based route allows the customer to conveniently select the line based on the destination IP. It is common to access the telecommunication via the telecommunication interface and access China Unicom via the China Unicom interface.

Requirement:

Internal network users when accessing telecommunication will go through eth1 while access to China Unicom will go through eth3.

Configuration:

Step 1. Fill in the policy name (Any will do)

Step 2. Source Zone (where the internal network user is located)

Step 3. Source IP

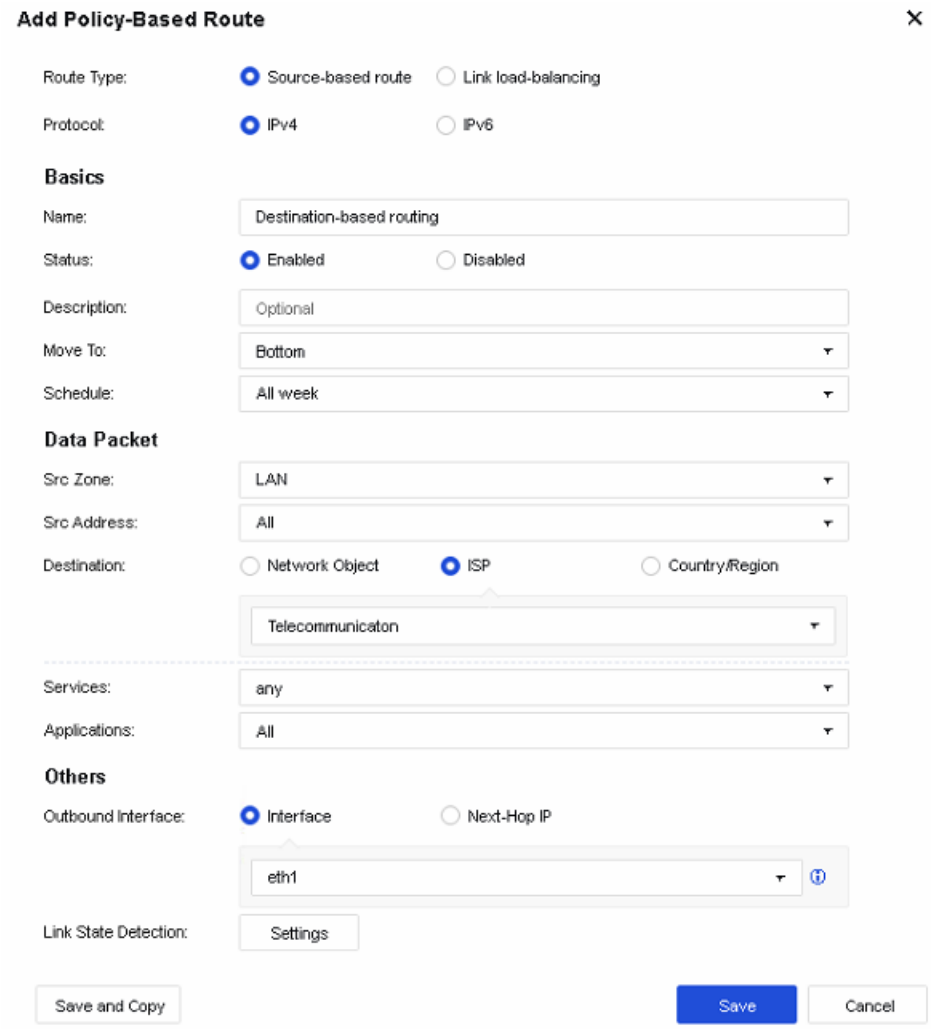
Step 4. Destination IP group (Select telecommunication ISP)

Step 5. Select HTTP application in the Application

Step 6. Interface (Select eth1)

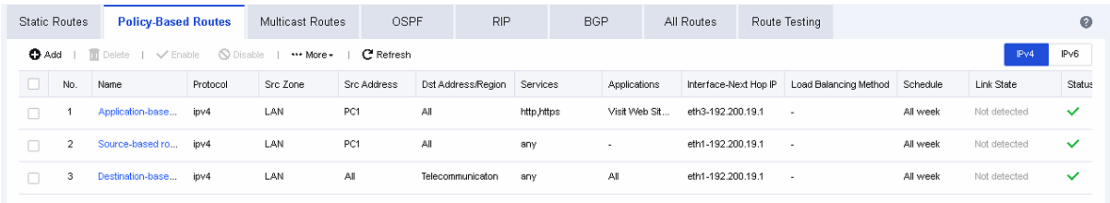
Step 7. Others can be kept as default

Sample Configuration:



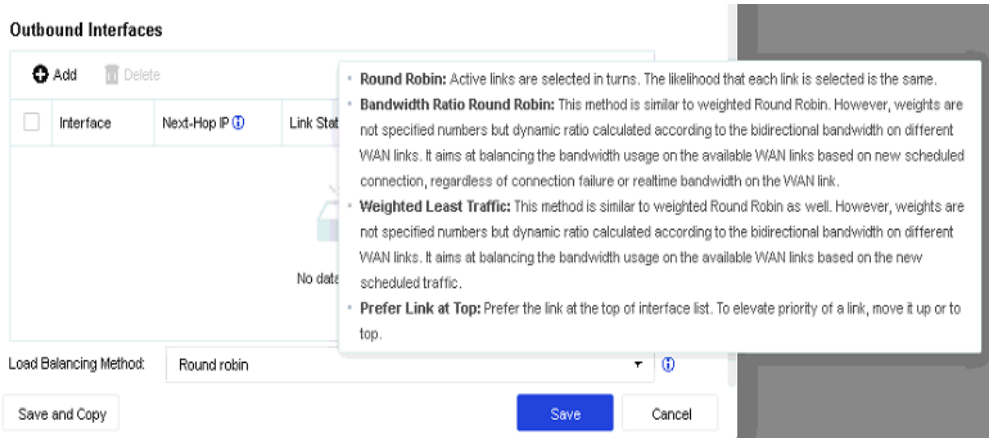
NOTICE

After the policy has been configured, the policy will be added at the top by default. Since the policy here is matched from top to bottom, it is necessary to move this policy to the back to ensure that the previous policy does not become invalid. As follows:



6 Link Load-Balancing Route

In the multi-wan scenario, the link-load balancing route can be used to prevent wasting bandwidth. There are four types of policy for link-load balancing:



Requirements: All internal network users will go to the external network through eth1. The method being chosen here is **Prefer Link at Top**.

Configuration:

Step 1. Fill in the policy name (Any will do)

Step 2. Source Zone (where the internal network user is located)

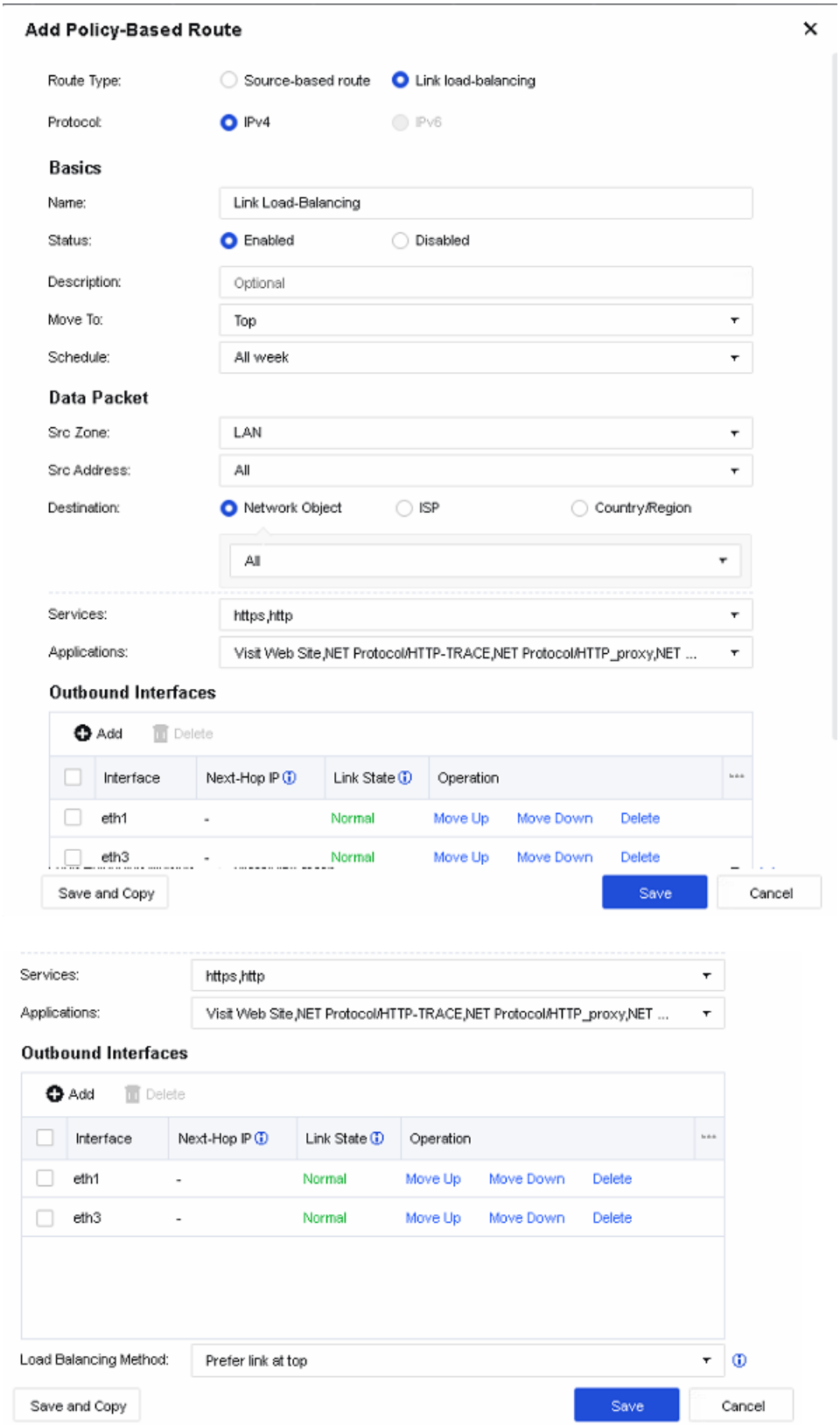
Step 3. Source IP (All)

Step 4. Destination IP group (All)

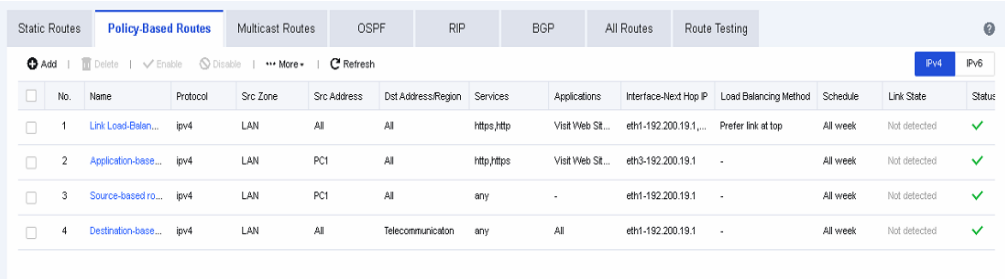
Step 5. Select HTTP application in the Application

Step 6. Interface (Select eth1 and eth3)

Step 7. Others can be kept as default Sample Configuration:


Add Policy-Based Route
Route Type:
Source-based route
Link load-balancing
Protocol:
IPv4
IPv6
Basics
Name:
Link Load-Balancing
Status:
Enabled
Disabled
Description:
Optional
Move To:
Top
Schedule:
All week
Data Packet
Src Zone:
LAN
Src Address:
All
Destination:
Network Object
ISP
Country/Region
All
Services:
https,http
Applications:
Visit Web Site,NET Protocol/HTTP-TRACE,NET Protocol/HTTP_proxy,NET ...
Outbound Interfaces
Add
Delete
Interface
Next-Hop IP
Link State
Operation
eth1
-
Normal
Move Up
Move Down
Delete
eth3
-
Normal
Move Up
Move Down
Delete
Save and Copy
Save
Cancel
Services:
https,http
Applications:
Visit Web Site,NET Protocol/HTTP-TRACE,NET Protocol/HTTP_proxy,NET ...
Outbound Interfaces
Add
Delete
Interface
Next-Hop IP
Link State
Operation
eth1
-
Normal
Move Up
Move Down
Delete
eth3
-
Normal
Move Up
Move Down
Delete
Load Balancing Method:
Prefer link at top
Save and Copy
Save
Cancel

Results:



NOTICE

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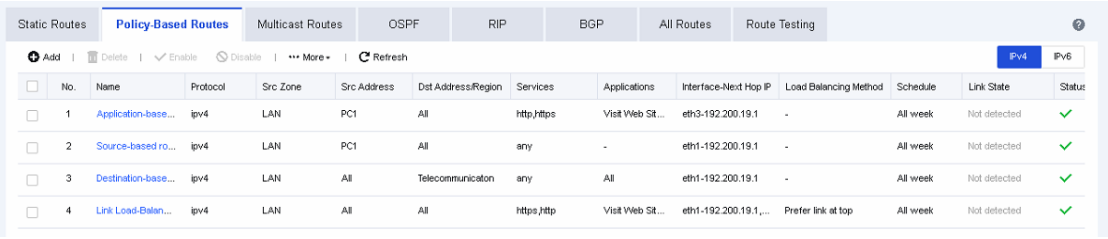

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