



SANGFOR

IPsec VPN

Troubleshooting guide for IPsec VPN packet drops



Change Log

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1. Document Description

The purpose of this document is to provide guidance for troubleshooting on the packet drops issue with IPsec VPN.

2. Applicable Version

This document is applicable for the packet drops issue with IPsec VPN on all Sangfor product.

The version included VPN/DLAN version 5.0 onwards.

3. Problem Scenario

The packet drops issue with IPsec VPN in this document is referring to the scenario that Sangfor device is trying to build IPsec VPN with another third party device, but there is packets drop whenever 2 sites transmit data.

For packet drops issue with IPsec VPN, mainly divided into the following scenarios:

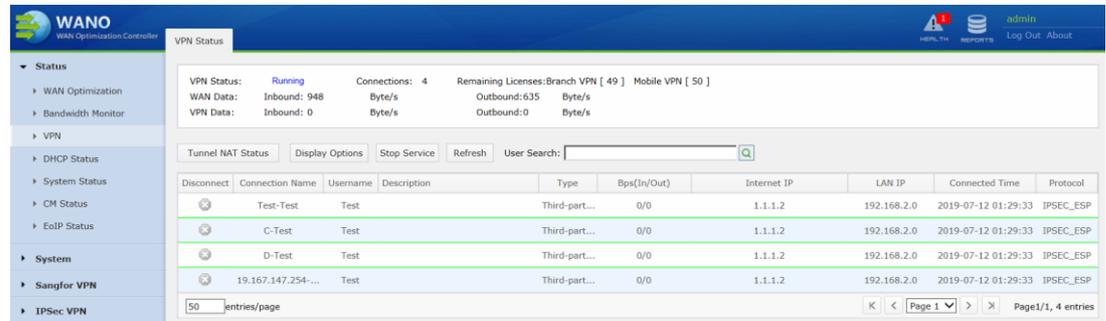
- Packet drops on public network
- Packet drops on NIC
- Internal network unstable

4. Troubleshooting Guide

4.1 General Scenario Troubleshooting Step

The following basic information need to be confirmed when the IPsec VPN build up failure:

1. Ensure the IPsec VPN connection status is connected and normal.



The screenshot shows the WANO VPN Status page. The VPN Status is 'Running'. There are 4 connections. The remaining licenses are: Branch VPN [49], Mobile VPN [50]. The WAN Data shows Inbound: 948 Byte/s and Outbound: 635 Byte/s. The VPN Data shows Inbound: 0 Byte/s and Outbound: 0 Byte/s. The table below shows the details of the VPN connections.

Disconnect	Connection Name	Username	Description	Type	Bps(In/Out)	Internet IP	LAN IP	Connected Time	Protocol
	Test-Test	Test		Third-part...	0/0	1.1.1.2	192.168.2.0	2019-07-12 01:29:33	IPSEC_ESP
	C-Test	Test		Third-part...	0/0	1.1.1.2	192.168.2.0	2019-07-12 01:29:33	IPSEC_ESP
	D-Test	Test		Third-part...	0/0	1.1.1.2	192.168.2.0	2019-07-12 01:29:33	IPSEC_ESP
	19.167.147.254-...	Test		Third-part...	0/0	1.1.1.2	192.168.2.0	2019-07-12 01:29:33	IPSEC_ESP

2. Ensure the Internet IP in Sangfor VPN connection status is normal.
3. Ensure the Connected Time is not always change to most recent time.

4.2 Network Environment Issue

VPN packet drops issue mainly need to determine whether the packet drops is in the internal device or drop on the public network or drop on our device.

4.2.1 Check Network status

For VPN packet drops troubleshooting, first understand the customer's network environment, mainly to confirm the following:

For example, in such an environment, the PC accesses the headquarters Server and has packet drops:

PC---SW---VPN(Sangfor)----(public network)----VPN(third-party)---SW---Server

Then, ensure that the network environment from the PC to the public network is normal, specifically the following:

1. Whether the local internal network has device that applies traffic management or policy interception to VPN data.
2. Whether the packet drops issue is caused by traffic interception by any security device between the VPN device to the public network

4.2.2 Locating packet drop issue

Packet drop issue require to check and confirm where does the packet is dropped. For standard IPSEC devices, check and confirm whether the packet is drop in

Sangfor device or the packet has sent out successfully.

First, check and confirm whether there is any packet drops from PC to Sangfor device.

If there is a packet drop issue in the internal network itself, it is necessary to find out and locate whether it is an internal network issue. Then, check and see if the device LAN port (ifconfig) has a large number of drop packets and error packets. If yes, it is either the port compatibility issues or the network card is broken.

4.2.3 Check any packet drop on the public network

Check whether there is any PING packet drop on the public network by pinging from the branch device to the HQ public IP to see if there are any packet drops. The PING test needs to be performed with big and small packet sizes to be tested for packet drop. If there are packet drops on the public network, contact the ISP carrier first to solve the problem of packet loss on the public network.

If the above mentioned cannot find and solve the problem, then try the method below to further locate the problem.

Method 1: If both sides can perform packet capture, then capture the packets at the same time at both devices. After that, use the text comparison method to compare the data packets. If do not know how to compare, kindly consult the Sangfor Technical Support.

5. Collect Information

If the problem still unable to be resolve through the troubleshooting steps above, you can collect the below information and escalate the problem to Sangfor Technical Support with the Community Open a Case feature. Technical Engineer will contact you to provide assistance on resolving the issue.

Information need to be collect:

- i. Network Topology.
- ii. Both sides total bandwidth.
- iii. Screenshot of the System Logs for both sides.
- iv. What troubleshooting step you had gone through.

Open a support case access link:

<http://community.sangfor.com/plugin.php?id=service:case>

6. Request Articles

If you have new document requirement, you can feedback to us with the feedback link below. We will provide the troubleshooting guide document based on the feedback.

Feedback Link

CMS: <http://192.200.19.22/request-articles/>

Sangfor Community: <http://community.sangfor.com/plugin.php?id=service:feedback>



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