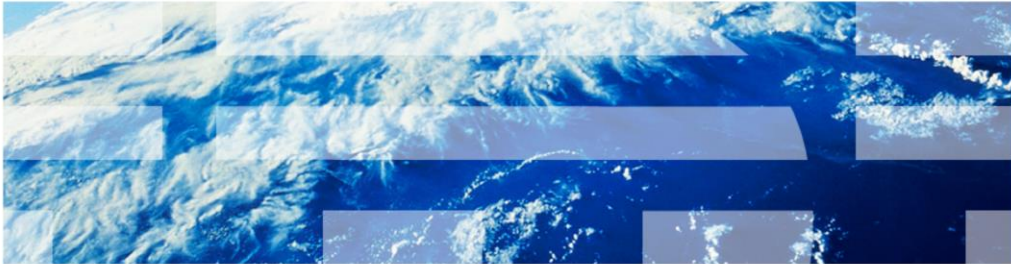


IBM Security 10G Network Active Bypass

10G Network Active Bypass overview



IBM Security 10G Network Active Bypass, 10G Network Active Bypass overview

Objectives

When you complete this module, you will be able to:

- Describe features of the 10G Network Active Bypass
- Articulate how network traffic flows whether in:
 - Bypass mode
 - Inline mode

When you complete this module, you will be able to:

- Describe features of the 10G Network Active Bypass
- Articulate how network traffic flows, whether it is in bypass mode or inline mode

Introduction to the 10G Network Active Bypass unit

- A network active bypass (NAB) is an independent piece of network equipment. It is placed “in line” before a more sophisticated piece of network equipment such as an Intrusion Prevention System (IPS)
- If the IPS becomes faulty or fails, the NAB ensures that network traffic continues to flow



- A network active bypass or (NAB) is an independent piece of network equipment placed “in line” before a more sophisticated piece of network equipment such as an Intrusion Prevention System (IPS)
- The purpose of a NAB is to ensure that network traffic continues to flow unimpeded if the IPS experiences fault or failure

Using the 10G Network Active Bypass unit

- Active bypass switching of network traffic during IPS failure or loss of power
 - Ensures network uptime
- Passive bypass switching of network traffic if NAB loses of power
 - Ensures network uptime
- Independent system
 - Does not rely on the IPS for instruction or heartbeat
- Remote notification capabilities
 - Automatically informs IT department of various network, system, and status changes through SNMP, email, and syslog
- TAP capability
 - Sends duplicate traffic to other monitoring/logging systems

Some of the capabilities of a 10G NAB unit include that:

- It ensures network up time if the IPS fails or loses power.
- It also ensures network up time in the event that all equipments loses power. The 10G NAB is able to switch the internal relay on and allow traffic to flow through the unit without any power.
- It is an independent system and does not take instruction from the IPS.
- The NAB can inform the IT department of various network, system, and status changes.
- It can duplicate traffic and send it to another monitoring or logging system.

10G Network Active Bypass models

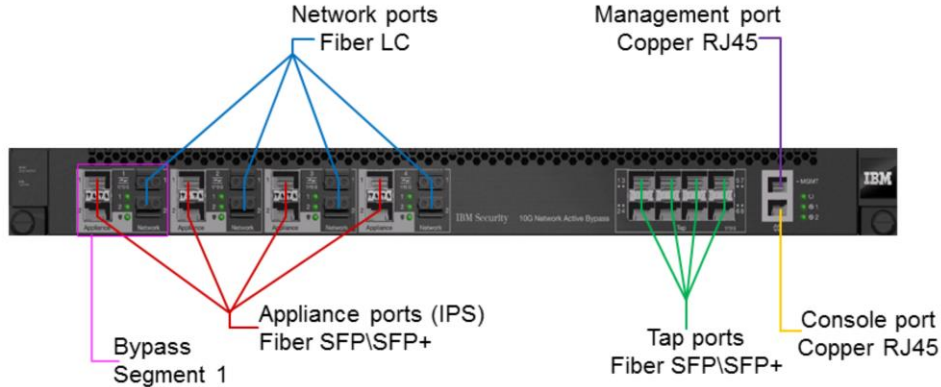


- Models
 - ABYP-10G-4SR
 - ABYP-10G-4LR
 - ABYP-10G-2SR-2LR
- Each model offers four segments of independently operating bypass
 - 4SR = four short range fiber (multi-mode) segments
 - 4LR = four long range fiber (single-mode) segments
 - 2SR\2LR = two short range fiber and two long range fiber segments
- Each segment supports 10G or 1G connectivity

There are three models of the IBM Security 10G Network Active Bypass unit. Each model offers four segments that operate bypass independently.

- The ABYP-10G-4SR has four short range fiber segments that are indicated with beige network ports.
- The ABYP-10G-4LR has four long range fiber segments that are indicated with blue network ports.
- The ABYP-10G-2SR-2LR is the hybrid model. It includes two short range fiber and two long range fiber segments.

10G Network Active Bypass ports



6

10G Network Active Bypass Overview

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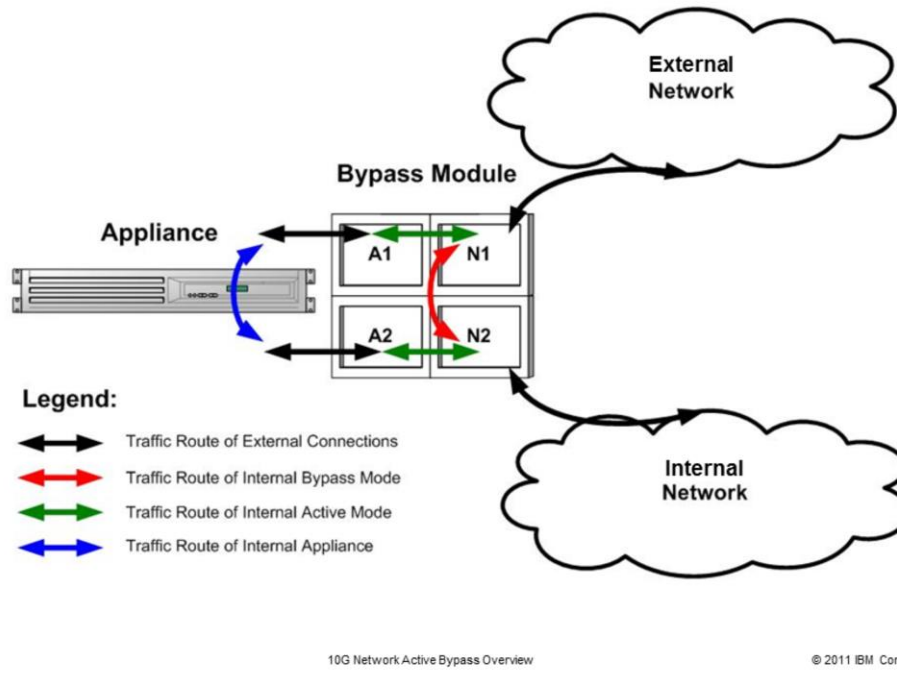
Take a few minutes to examine the ports on the 10G Network Active Bypass unit.

A few notes about the unit are as follows:

- The ports are arranged vertically, not horizontally. This is a change from previous models.
- The pink square on the graphic indicates a single segment. Within that segment, the appliance ports are on the left, and the network ports are on the right.
- Both the appliance and tap ports are transceiver-based.

Note that tap number eight is not available for use.

Segment traffic flow



This slide illustrates how traffic flows through the 10G Network Active Bypass unit and a Network IPS appliance.

1. Network traffic comes into the first network port, N1. When the network bypass is successfully transmitting, the traffic goes to the first appliance port, A1.
2. A1 sends the traffic to the Network IPS. As long as the IPS does not block that type of traffic, the IPS sends it to appliance port 2, A2.
3. A2 sends it to network port 2, N2, and then to the internal network.

The blue lines indicates how traffic flows when in inline mode. The red line indicates how traffic flows in bypass mode.

Interoperability with 7000 series Network IPS appliances

GX7800 SFP



10G NAB



- The 10G Network Active Bypass is designed for use with the IBM Security Network IPS GX7000 series appliances
- GX7800 SFP = 4 x 10G segments (four total segments)
- Deploy one 10G NAB for all four segments

The 10G Network Active Bypass is designed for use with IBM Security Network IPS GX7000 series appliances. The GX7800 appliance has four 10 gigabit segments. You can deploy one 10G Network Active Bypass to cover all four segments.

New software features

- Fail open or closed configuration
- Port statistics
- Link speed configuration for network ports
- Link speed listed for network, appliance and tap ports
- Seven functioning Tap ports (1-7)
Tap port 8 is not available for use
- Local management interface and online help are available in the following languages:
 - English
 - French
 - German
 - Spanish
 - Brazilian Portuguese
 - Simplified Chinese, Traditional Chinese
 - Japanese
 - Korean

The 10G Network Active Bypass includes new features. You can configure the bypass unit to fail open or fail closed. Port statistics are available in the local management interface (LMI). You can configure the link speed for the network ports and configure the link speed for network, appliance, and tap ports. There are seven functioning tap ports. However, you should be aware that tap port 8 is not available for use.

The local management interface and online help are available in the following languages: English, French, German, Spanish, Brazilian Portuguese, Simplified Chinese, Traditional Chinese, Japanese, and Korean.

Port statistics

IBM Security Network Active Bypass English Logout

Home

Status

Management

Segment 1

Segment 2

Segment 3

Segment 4

Management Port

E-mail

SNMP

NTP

Time Zone

Advanced

System Settings

Firmware Update

Log Files

Port Statistics

Restart

Authentication

Users

Remote Authentication

Port Statistics [Help](#)

Started on: 5/17/2011 1:40:22 PM [Reset](#)

Segment

1	2	3	4
N1 <input checked="" type="checkbox"/> A1 <input type="checkbox"/>	N1 <input type="checkbox"/> A1 <input type="checkbox"/>	N1 <input type="checkbox"/> A1 <input type="checkbox"/>	N1 <input type="checkbox"/> A1 <input type="checkbox"/>
N2 <input type="checkbox"/> A2 <input type="checkbox"/>	N2 <input type="checkbox"/> A2 <input type="checkbox"/>	N2 <input type="checkbox"/> A2 <input type="checkbox"/>	N2 <input type="checkbox"/> A2 <input type="checkbox"/>

Tap

1	2	3	4	5	6	7
---	---	---	---	---	---	---

	Received	Sent
Total Bytes	4,857,682,918	4,848,472,088
Current Traffic Rate	43.42 Mbps	43.98 Mbps
Peak Traffic Rate	45.27 Mbps	44.93 Mbps
Peak Traffic Time	5/19/2011 10:17:28 AM	5/19/2011 10:15:55 AM
Unicast Packets	50,433,633	63,702,055
Multicast Packets	0	0
Broadcast Packets	0	0
Pause Frames	0	0
MAC Error Packets	10	0
Error Bytes	7,844	
Dropped Events	0	
Total CRC Errors	46	

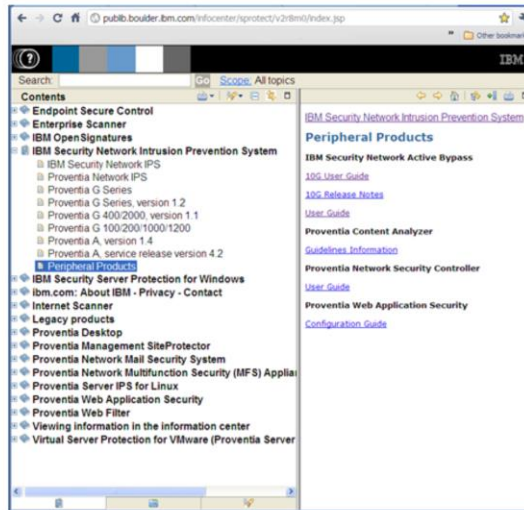
Note: The local management interface is supported by Internet Explorer v8.0 and Firefox v4.0.1

This slide shows an example of the port statistics page in the local management interface (LMI). On this page you can select multiple segments and taps in order to view a snapshot of traffic activity. The information on this page updates every ten seconds.

Note that the local management interface is supported on Internet Explorer 8.0 and Mozilla Firefox 4.0.1.

10G user guide

- publib.boulder.ibm.com/infocenter/sprotect/v2r8m0/index.jsp
- The user guide is located in the **IBM Security Network Intrusion Prevention System** category, under **Peripheral Products**



The IBM Security 10G Network Active Bypass user guide is located on IBM's main documentation page. The link is listed in the first bullet on the slide. To navigate to the guide, expand the IBM Security Network Intrusion Prevention System node and then select Peripheral Products.

Summary

Now that you have completed this module, you should be able to:

- Describe features of the 10G Network Active Bypass
- Articulate how network traffic flows whether in:
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Now that you have completed this module, you should be able to:

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