HP Internet Advisor LAN - Gigabit Ethernet

Technical Specifications

Developers, troubleshooters and managers of Gigabit Ethernet networks require dependable testing capabilities to maximize network up-time. The HP Internet Advisor LAN - Gigabit Ethernet solution is the **PRO** tool that helps you:

- **P**revent many network problems before they affect users through Vitals measurements
- **R**esolve network problems quickly and effectively through Expert Commentators
- **O**ptimize network performance through comprehensive Statistics and Baselining

Maximize network up-time

Today, Gigabit Ethernet is used mostly for switch-to-switch communication. These links are both the most heavily used and the most critical for network up-time. The Internet Advisor meets associated test challenges of monitoring these heavily used links, including full duplex. The Internet Advisor incorporates two high-performance receive engines to analyze full-duplex connections used with switches and servers, helping keep these links up to maximize network up-time.

Gigabit Ethernet Testing made easy

- 1000 Mbps analysis
- Full-duplex monitoring and analysis at full line rate
- Traffic generation at full line rate
- Comprehensive MAC level and protocol statistics
- Error counts and statistics
- Expert analysis
- Extensive hardware filters and triggers
- Hardware-based 16 ns time-stamping
- 7-layer decodes of all major protocols
- Microsoft Windows®95 user interface

Gigabit Ethernet Testing Challenges: The 3 C's of Testing

Though very similar to its 10 Mbps Ethernet and Fast Ethernet cousins, Gigabit Ethernet presents challenges due to its architecture and high data rate:
- Connecting to the network
- Capturing all data
- Comprehending data and converting it into useful information

Connecting to the network

Gigabit Ethernet is mostly used in switched environments. As such, connecting a test tool presents a new challenge. This can be done in one of three ways, as shown in figures 1, 2 and 3.

In figure 3, the Internet Advisor can easily connect to the network without requiring an external hub and without the need to program the switch.

Capturing 100 percent of network data

Gigabit Ethernet is often used to provide a high-bandwidth link to servers. Traffic is usually concentrated from several 10- or 100-Mbps links into the 1000 Mbps server link. Thus, Gigabit Ethernet links are the most heavily used and most critical on the network. The combination of high data rate and high utilization (due to concentration of traffic) puts an added demand on the test tools.

The HP Internet Advisor, with its custom high-performance hardware, is designed to capture 100 percent of the data on Gigabit Ethernet networks. This capture capability allow for dependable testing of the most intricate networking problems, even under the heaviest of network traffic.

Comprehending data and converting it into useful information

Capturing 100 percent of the data is necessary but not sufficient for effective network testing. After all, who has the time or desire to sift through thousands and thousands of packets in order to derive useful information.

To simplify the task, the Internet Advisor provides powerful expert analysis software that converts data into useful information.
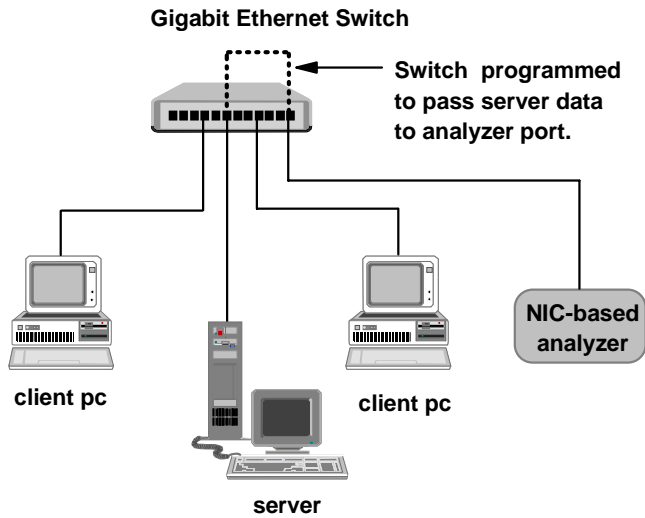
NIC-based Analyzers

Gigabit Ethernet Switch

Switch programmed to pass server data to analyzer port.

client pc

client pc

server

Figure 1. Requires programming the switch, which is inconvenient and typically degrades the performance of the switch.
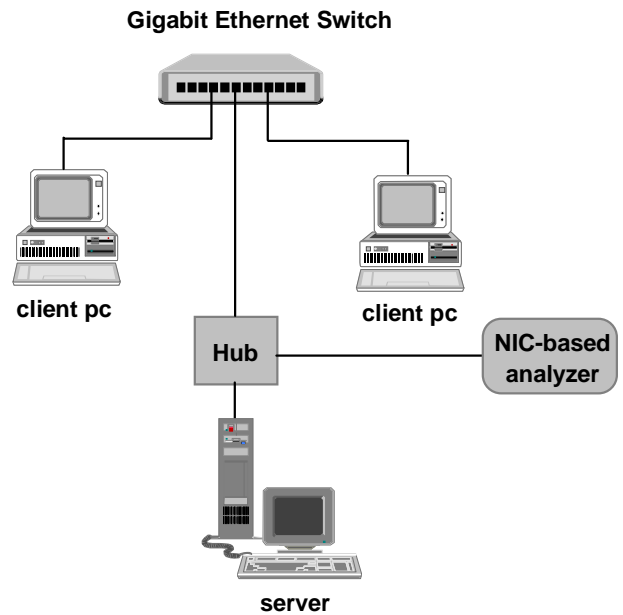
NIC-based Analyzers

Gigabit Ethernet Switch

client pc

client pc

Hub

NIC-based analyzer

server

Figure 2. Requires an external hub, which is inconvenient.

HP Internet Advisor

Gigabit Ethernet Switch

The Preferred Method

client pc

client pc

- No need for external hub
- No need to program the switch
- Convenient connection for real-world usage

HP Internet Advisor
- built-in hub logic
- full duplex testing

server
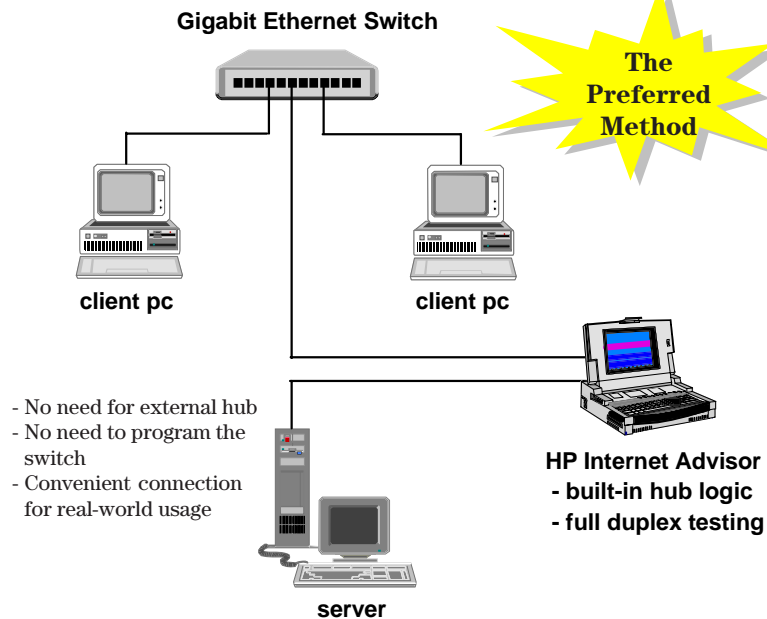
Figure 3. Convenient connection with the Internet Advisor.

Ordering:

HP J2901A   HP Internet Advisor LAN - Gigabit Ethernet Undercradle

Detailed Specifications:

HP Internet Advisor LAN - Gigabit Ethernet Undercradle (HP J2901A)
Data rate: 1000 Mbps

Physical Characteristics:

Dimensions:
   31.11 W x 29.84 D x 4.44 H cm
   (12.25 x 11.75 x 1.75 inches)

Weight:
   2.1 kg (5 lbs)

Operating Conditions:

Power:
   100-240 VAC, 50-60 Hz, 75 watts max.

Temperature:
   Operating: 5°C to 40° C;
   Non-operating: -25°C to 60°C.

Warranty:
   3 years

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