
HP Internet Advisor LAN - Fast Ethernet

Troubleshooters and managers of Fast Ethernet networks require dependable autodiagnostic capabilities to maximize network uptime. The HP Internet Advisor LAN — Fast Ethernet solution is the **PRO** tool that helps you:

- Prevent many network problems before they affect users through Vital Signs
- Resolve network problems quickly and effectively through Expert Commentators
- Optimize network performance through comprehensive Statistics and Baselineing

Maximize network up-time

Today, Fast Ethernet is used mostly on server links, which can be full duplex. These links are both the most heavily used and the most critical for network uptime. The Internet Advisor meets associated test challenges of monitoring heavily used links, including full duplex, while offering real-time expert analysis at 100 Mbps. The HP Internet Advisor incorporates two high-performance receive engines to analyze full duplex connections used with servers and switches. HP Internet Advisor helps keep critical servers' links up, maximizing network uptime.

To allow quicker resolution of network problems in a switched environment, the HP Internet Advisor's Fast Ethernet undercradle includes integrated hub logic. This eliminates the need for the troubleshooter to carry a stand-alone hub to the test site and attach it to the network, and it removes the delay in reconfiguring the switch when a stand-alone hub is not available.

Fast Ethernet testing made easy

- 10/100 Mbps data rate with auto-negotiate capability
- Full duplex analysis capability
- Network Vital Signs help you anticipate many network problems
- Commentators help you solve network problems quickly and effectively
- Graphical user interface
- Traffic generation
- 7-layer decoding of all major protocols
- Network performance analysis
- Comprehensive network statistics
- Automatic node discovery
- Extensive hardware filtering
- Hardware time-stamp with 100 ns resolution
- Two RJ-45 connectors allow testing in switched environments

Technical Specifications



- MII connector for universal Fast Ethernet testing through external transceivers
- AUI connector for universal Ethernet testing through external transceivers
- Optional fiber interface

The Internet Advisor is a portable, full-featured network-analysis solution that allows users to install, support and maintain LAN, WAN and ATM networks by providing features that make troubleshooting any network segment quick and easy.

Fast Ethernet Testing Challenges: The 3 Cs of Testing

Though very similar to its 10 Mbps Ethernet cousin, Fast Ethernet presents three new challenges due to its architecture and high data rate:

- Connecting to the network
- Capturing 100% of network data
- Converting data into useful information

Connecting to the network

Fast 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 shown in figures 1, 2 and 3.

In figure 3, the Internet Advisor with its two RJ-45 connectors can easily connect to the network without requiring an external hub and without the need to program the switch.

Capturing 100% of network data

Fast Ethernet is most often used to provide a high bandwidth link to servers. Traffic is usually concentrated from several 10 Mbps links into the 100 Mbps Fast Ethernet server link. Thus, Fast Ethernet links are the most heavily used and most critical on the network.

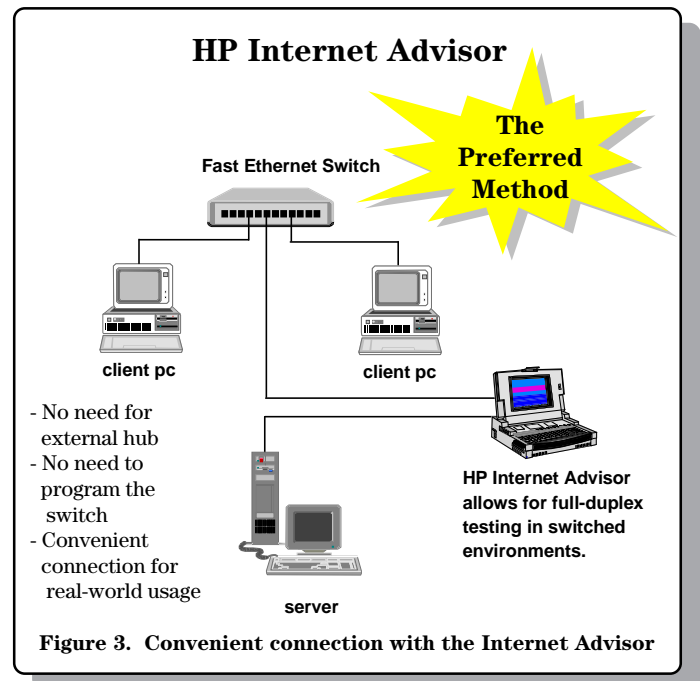
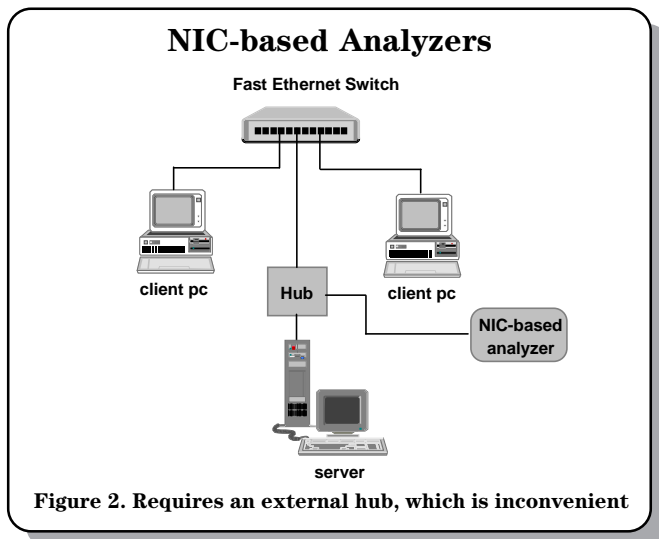
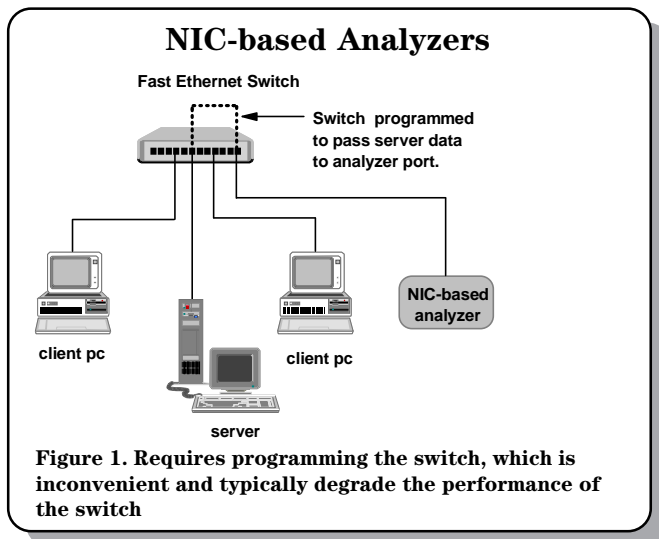
The combination of high data rate (100 Mbps) and high utilization (due to concentration of traffic) puts an added demand on the test tools.

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

Converting data 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 real-time expert analysis software that converts data into useful information. The expert analysis software provides information in the form of Vital Signs and Commentators.



Vital Signs

Vital Signs help you anticipate and resolve network problems before they affect users. They provide the user with alerts and warnings. The drill-down capability allows the user to find out what is causing these events, with recommended actions to prevent them from escalating into network problems.

Commentators

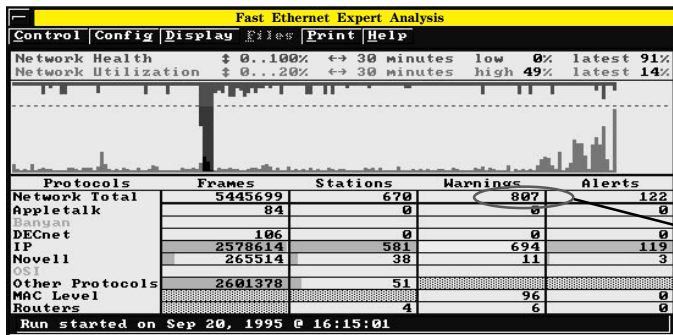
Commentators help you solve problems quickly and effectively by monitoring traffic, following the protocols and reducing hundreds of frames to a handful of significant events. Each event is completely described, time-stamped and rated in terms of its severity: normal, warning or alert. Normal events give information on network operation such as File Close in Novell, which provides statistics on file transfer time. Warning

events usually leave the network operational but may indicate a configuration or performance problem, for example, Reset Connection. Alert events indicate a serious network problem, such as a Zero Time to Live.

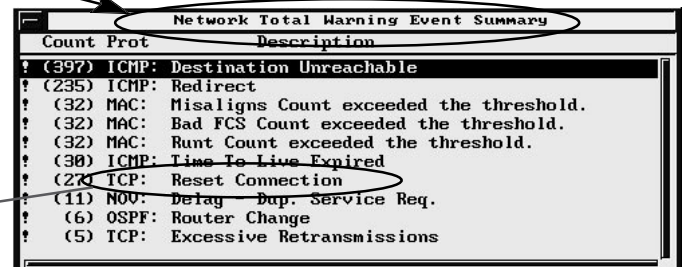
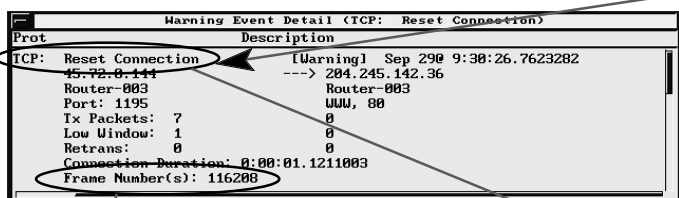
Unlike many other analyzers, the Vital Signs and Commentators in the Internet Advisor operate in real time, interpreting data traffic as it occurs. Thresholds can be set to stop the capture process automatically when significant events occur, allowing you time to analyze the problem.

Vital signs help you prevent many network problems, while Commentators help you solve problems quickly and effectively. The benefit to you: Maximize network uptime.

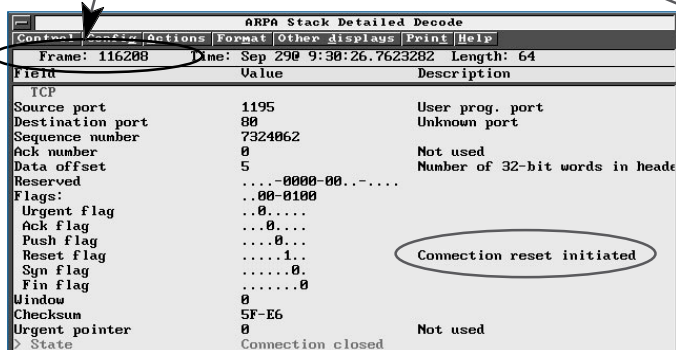
Internet Advisor features drill down capability that leads quickly to the source of problems.



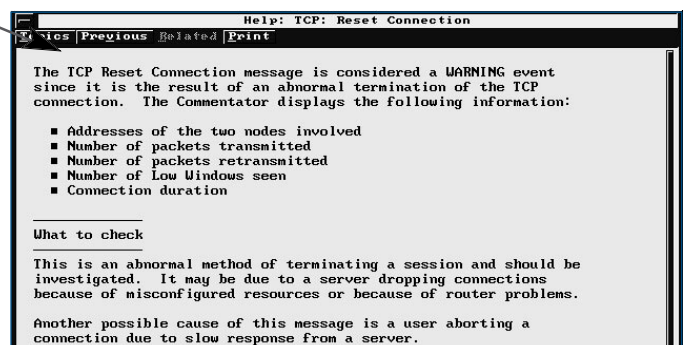
Each warning event is time-stamped and detailed, showing which stations were involved and what caused the error.



Drilling down on warning events focuses on inefficiencies that could impact network performance.



Double-clicking on the frame number(s) details the actual data frames that caused the event.



Double clicking on the event description provides an explanation of how that event was detected, its likely causes, and what to check next to resolve it quickly.

Detailed Specifications:

HP Internet Advisor LAN - Fast Ethernet Undercradle (HP J3444A)

Data rate: 10/100 Mbps with auto-negotiation capability
Analysis engine: AMD 29040 at 40 MHz with 32 MB of memory
Full duplex analysis capability.

Test interfaces:

Fast Ethernet:

- MII connector
- RJ-45 for 100Base-TX
- Second RJ-45 allows testing in switched Fast Ethernet environment
- Optional 100Base-FX Interface (HP J3445A)

Ethernet:

- AUI connector
- RJ-45 for 10BASE-T
- Second RJ-45 allows testing in switched Ethernet environment

Physical Characteristics:

Dimensions:

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

Weight:

2.1 kg (5 lbs)

HP Internet Advisor LAN - Fiber Interface for J3444A (HP J3445A)

- 2 SC type connectors
- Multimode fiber
- 1300 nm wavelength

Operating Conditions:

Power: 100-240 VAC, 50-60 Hz, 75 Watts max. (Mainframe)

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

Warranty: 3 years.

Ordering:

HP J3444A Internet Advisor LAN - Fast Ethernet Undercradle
HP J3445A Internet Advisor LAN - Fiber Interface for J3444A

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<http://www.hp.com/info/advisor>

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