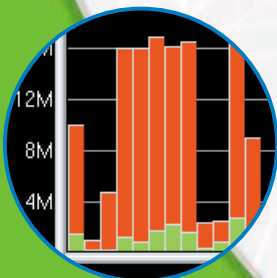
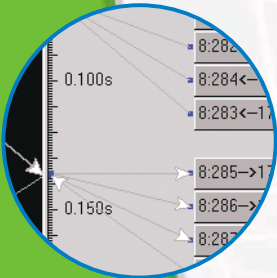
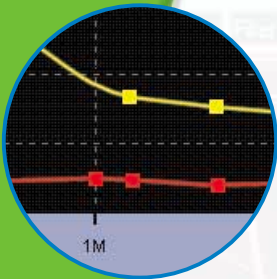




# EXPERT OBSERVER

- Advanced Probes
- Local Observer
- W** WAN Probes
- G** Gigabit Ethernet Full
- R** RMON Probes
- S** SNMP Devices
- Demo Simulation
- Charts



## **HIGH PERFORMANCE NETWORK MANAGEMENT SOLUTIONS**

**REAL-TIME AND POST-CAPTURE EXPERT  
EVENT IDENTIFICATION AND MODELING, AND  
ANALYSIS FOR LAN/WLAN/WANS**



# Expert Observer®—Pinpoint Difficult Problems Through Expert Analysis

- Expert features benefit experienced and non-experienced technicians alike
- Pinpoint difficult problems through real-time or post capture expert analysis
- Monitor hundreds of preprogrammed events automatically
- Obtain instant expert explanations online for each event and item
- Troubleshoot WAN delays through exclusive time synchronization technology
- Grade local and remote network traffic differently
- Quick key shortcut navigation saves time on common tasks
- Windows 98/NT/2000/XP compatibility
- Predict network bandwidth and response time impact with Expert's "What If" modeling
- Monitor all ports on a switch
- Collect long-term trending statistics on your network for proactive decision-making

Get Expert information about network problems in plain English...

Expert Observer®: A cost-effective, software-only, Microsoft Windows-based network monitor and troubleshooting tool for LAN/WLAN/WANs and, with the addition of Probes, Expert Observer can monitor remote LANs/WLAN/WANs.

## Unique Features of Expert Observer

**Expert Summary Problem Analysis**—Error events shown in a single, concise display in real time. For connection-oriented problems, a simple double-click drills down for further analysis.

## TCP/UDP/ICMP/IPX/SPX/Frame Relay/Wireless (b/a) NetBIOS/NetBEUI Experts

—Protocol- and application-based problems shown in real-time. Local traffic is judged using different criteria than WAN/Internet traffic to help ensure no false readings. All port-based services are tracked, slow response and slow/no connection are flagged and sorted by severity.

**Time Interval Analysis**—Network errors organized by time periods to identify whether a problem is sporadic or consistent throughout the day.

**WAN Compare Capture Feature**—Two ends of a conversation captured across a WAN link response time measurements determined. Quantifies transaction time between PC and server using an exclusive method of synchronizing captures.

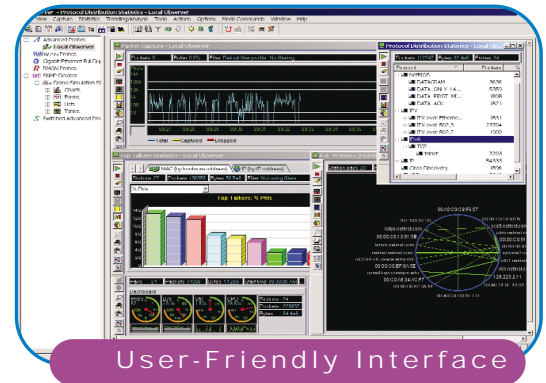
**Connection Dynamics**—Graphical view of system conversations. Packet-to-packet delay times are shown visually, allowing instant identification of long latency and response times. Flags retransmissions and lost packets for quick identification.

**Server Analysis**—Displays a server's response times charted against the number of simultaneous requests. Charts response times for recorded request sets, and plots predicted response times as request loads increase.

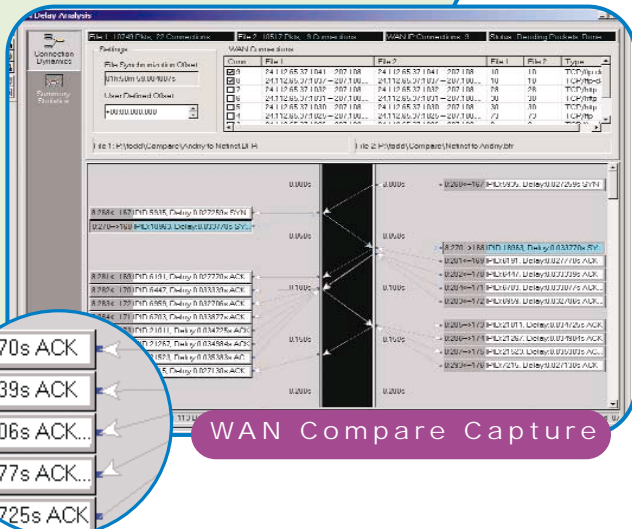
**"What If" Modeling Analysis**—Starts with measurements based on actual client/server conversations, or peer-to-peer conversations, and plots possible response times, utilization and packet flow scenarios. Allows prediction of network bandwidth and response-time impact for topology changes (e.g. 100MB to Gigabit) and/or changes on hardware and usage. "Live-modeling" lets you assess the impact of possible network or application changes.

## Packet Capture/Decode

**Decodes all primary protocols and subprotocols**—over 500 protocols decoded including: TCP/IP (v4 & v6), VoIP, IPX/SPX, SNMP, NetBIOS/NetBEUI, SQL, TNS (Oracle), OSI and many, many more!



User-Friendly Interface



# EXPERT SERVER BSERVER

**Powerful packet filtering features and options**—inclusive, exclusive, address range, library of protocol presets and offsets, custom offsets with use of up to twenty offsets simultaneously.

**Over 4,000 frame types recognized**

### Real-Time Statistics

**Bandwidth Utilization**—Shows your LAN's (or switches') current bandwidth.

**Top Talkers**—Top stations, receiving, sending & total traffic. Includes percent, total packets, broadcasts, multicasts (each per second)—for each station on your LAN or switch.

**Protocol Statistics**—Breakdown of all traffic by protocols and subprotocols presented in tree or graph format.

**Pair Statistics (Matrix)**—Tracks all conversation pairs. Graphical matrix shows pair conversations with lines that reflect total traffic flow, and average station latency.

**Internet Observer**—Shows user's Internet usage in three views: Individual users' Internet usage, true layer 3 IP addresses and each users' specific Internet (or any IP) usage by service.

**Network Activity Display**—Shows critical network utilization and broadcast information graphed against a packet traffic reference line.

**Triggers & Alarms**—Trigger can be set to flag a particular network activity and notify users by pager, email, etc.

### Error Tracking

**Vital Signs Display**—Displays network errors for Ethernet, 802.11, Token Ring or FDDI. *Ethernet*—Packets too big/small, CRC, collisions, alignment. *Token Ring*—All 29 MAC layer errors reported by Type I, II, III and beacon. *FDDI*—all 183 SMT and MAC layer errors reported. *802.11*—All MAC layer errors reported. *WLAN Vital Signs*: Displays aggregate signal strength and quality, and all wireless network speeds and errors.

**Errors by Station**—Tracks all errors by station for Ethernet, Token Ring, FDDI, and 802.11.

### One-Button Solution Examples

**Efficiency History**—Measures and grades data-carrying capacity of a network. Provides an independent baseline assessment of changes and additions.

**Web Observer**—Allows viewing of traffic flow into and out of the server for up to 8 Web servers. Displays addresses on server and the percent of network traffic being generated by each address.

**Router Observer**—Focuses on a specific device (usually a router or Access Point). Displays packets, bytes, packets and bytes/sec plus percent of the device's interface being used (i.e. percent of T1 or AP connection) for up to 8 routers.

### Switch Statistics

**Switched Modes**—Loops through all ports on your switch and collects statistics on a port-by-port basis with advanced sampling and scripting.

### Historical Trending

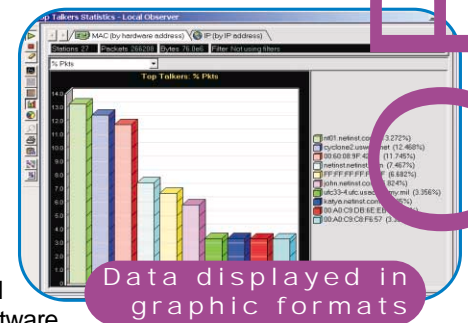
**Network Trending**—Trending mode with viewer allows user to collect, store, view and analyze network traffic over days, weeks, months, and even years.

### Software-Based 10/100/Gigabit, 802.11 Wireless, 4/16/100 TR and FDDI Probes

Extensible via the addition of software - or hardware - based, non-dedicated Probes, Observer can be upgraded into a fully-distributed protocol analyzer. Probes provide identical statistics and functionality for remote segments or switches as the local console.

Observer's Probes can be installed as either the Advanced Probe or the RMON Probe. For NT/2000/XP, either Probe can be run as a service.

**The Advanced Probe**—Offers a superset of RMON functionality. The Probe software



### Example problems Expert Observer can help you isolate:

#### What's causing the slowdown?

The Expert Analysis, real-time or upon completion of capture, will provide a summary of conclusions about any problems and possible causes—in plain English.

**Why has the company's main database become so slow?** Expert Observer will identify the client/server relationships automatically and display expert analysis statistics, including slow response times, busy network or server problems and retransmissions.

**Will moving to Gigabit increase my network response time?** Expert

Observer's What-If Analysis lets you create unlimited scenario analysis based on your captured data. This allows you to accurately determine the impact of changing variables such as network bandwidth, response time and number of users and latency.

**Implementing VoIP, and need a tool to verify performance and check compliance?** Expert Observer's complete decode of H.323, including VoIP, insures you will have the tools you need when voice and data problems arise.

**How can I isolate intermittent problems?** Expert Observer's Time

Interval Analysis of data transmissions is displayed as a "drill down" from any problem identified in the IP/TCP/UDP/IPX/SPX, NetBIOS/NetBEUI Experts. Viewing errors by time periods will show whether a problem is sporadic or consistent throughout the day.

**Can I get more detail about a particular conversation?** Expert Observer's Connection Dynamics allows you to analyze and graphically view any conversation's behavior—displaying inter-packet timing between stations and conversational events, highlighting retransmissions and lost packets in red.

Visit us online for a full-featured evaluation:

[www.NETWORKINSTRUMENTS.com](http://www.NETWORKINSTRUMENTS.com)

runs on a standard non-dedicated Windows NT/2000/XP PC and requires no additional hardware. Additionally, Probes can collect trending data without being connected to Observer (unattended modes).

**The RMON Probe**—An industry-standard RMON1/2 compliant Probe application. All 19 RMON groups are supported with full adherence to RFCs 1513, 1757, 2021 and 2074. RMON Probes can support up to 10 interfaces. A Probe running in RMON mode can report to any RMON or SNMP management console that supports RMON1/2.

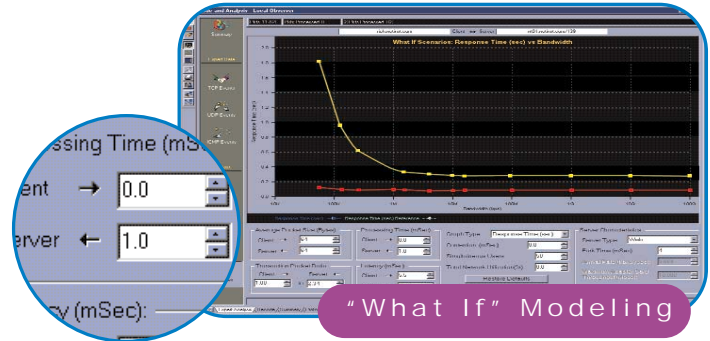
### Wireless Network Analysis

Expert Observer is a comprehensive, versatile Wireless protocol analyzer that supports both wired and wireless networks, eliminating the need to purchase separate tools for different network types. Observer provides wireless capture/decode, statistics, trending and expert analysis, and takes Wireless to a new level by including such functions as **Wireless Network Vital Signs** and **Wireless Access Point Statistics**.

### Expert Observer Requirements:

**System Requirements**—*Minimum:* Pentium 800 w/128MB RAM, Windows 98 or later, a supported network adapter, a mouse, and a monitor running at 1024x768 resolution.

*Recommended:* Windows 2000/XP, a Pentium 600 (or faster) w/256MB RAM, a fast 16-bit VGA adapter, and a color monitor running at 1280x1024 resolution.



### SOFTWARE-BASED PRODUCT OPTIONS

Select the technologies that match your needs from these high performance Observer products.

	OBSERVER	EXPERT OBSERVER	OBSERVER SUITE
<b>Observer®</b> —The complete, full-featured protocol analyzer. <ul style="list-style-type: none"> <li>• Easy to use standard Windows interface</li> <li>• Advanced switch management capabilities</li> <li>• Provides metrics, capture, and trending data</li> </ul>	<input checked="" type="checkbox"/> (included)	<input checked="" type="checkbox"/> (included)	<input checked="" type="checkbox"/> (included)
<b>The Real Time Expert</b> —Pinpoint difficult problems through real-time and post-capture expert analysis, and modeling. <ul style="list-style-type: none"> <li>• Includes TCP/IP, XoIP, NetBIOS/NetBEUI, IPX/SPX, SQL and WAN Experts</li> <li>• Time synchronization technology to troubleshoot WAN delays</li> <li>• Grades LAN data and WAN/Internet traffic differently</li> </ul>	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)	<input checked="" type="checkbox"/> (included)
<b>The SNMP Management Console</b> —View any SNMP agent's data in chart, list, table, graph or graphical device image format from within the Expert Observer interface. <ul style="list-style-type: none"> <li>• Charts, lists and manipulates SNMP data</li> <li>• Includes full MIB compiler, add your own charts</li> </ul>	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
<b>The RMON 1/2 Console</b> —View and manipulate any RMON1/2 Probe's data from within Expert Observer. <ul style="list-style-type: none"> <li>• Full adherence to RMON standards broadens the Observer console to include reporting from many types of devices.</li> <li>• Supports full RMON2 and RMON1</li> </ul>	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
<b>The Web Publishing Service</b> —View daily and historical trending data from any Web browser for local and remote networks, or SNMP device. <ul style="list-style-type: none"> <li>• Create multiple security levels</li> <li>• Harvest statistics from remote LAN/WLAN/WANs</li> </ul>	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
<b>Advanced/RMON1/2 Software Probes</b> —Supports non-dedicated PCs running 98/Me/NT/2000/XP.	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
<b>DICOM Extension</b> —Decode and troubleshoot medical imaging industry-specific protocols. <ul style="list-style-type: none"> <li>• Complete decode of the DICOM standard protocol</li> <li>• Supports extendable decodes</li> </ul>	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)



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