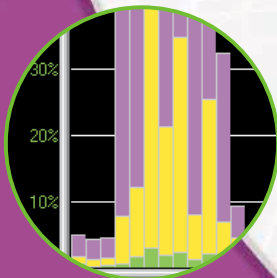
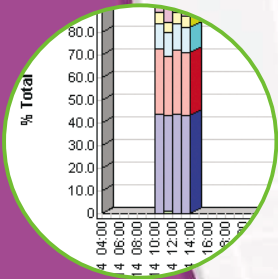
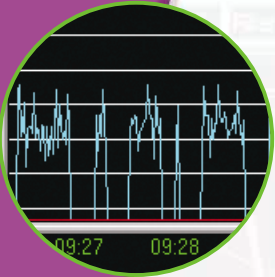




OBSERVER SUITE



HIGH PERFORMANCE NETWORK MANAGEMENT SOLUTIONS

*COMPLETE PROTOCOL ANALYSIS,
EXPERT SYSTEMS, DISTRIBUTED ARCHITECTURE,
SNMP, RMON AND WEB ACCESS FOR SHARED
AND SWITCHED NETWORKS*



Best Software
Network Analyzer



Best Wireless Application
Protocol Solutions



Observer® Suite—The Best Way To Troubleshoot & Manage Your Network

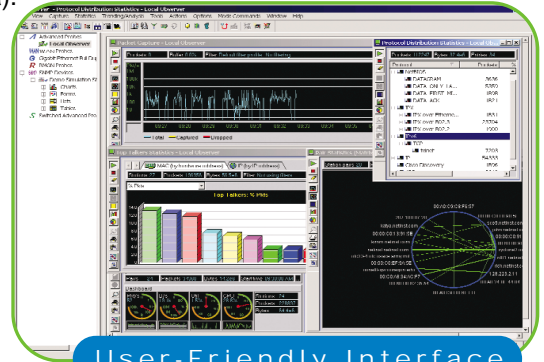
- Pinpoint difficult problems through real-time or post-capture expert analysis
- Obtain instant expert explanations online for each event and item
- Optimize specific network devices through the full-featured SNMP management console
- Quick Key shortcut navigation saves time on common tasks
- Monitor, analyze and troubleshoot a group of LAN/WLAN/WANs from a central site using the industry standard RMON 1/2 collection console
- View local or remote LAN/WLAN/WANs by adding Advanced or RMON2 software Probes
- Monitor all ports on a switch
- View Observer statistics from any Web browser using the built-in Web server
- Configure and update SNMP device parameters all from a single location
- Windows 98/NT/2000/XP compatibility

The ultimate tool for the most demanding power user...

Observer® Suite: A cost-effective, software-only, Windows-based network monitor integrating multiple networking technologies, creating the most comprehensive toolkit available.

Observer Suite is a network monitor and protocol analyzer for Ethernet, Token Ring, FDDI, and Wireless 802.11 (b/a).

Observer Suite supports metrics, capture/decode and trending for both shared and switched network environments. With its included Probe running on a PC, Observer Suite monitors local or remote networks, or switches.



A Summary of Suite's Major Functions:

Full 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!

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 (or throughput).

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.

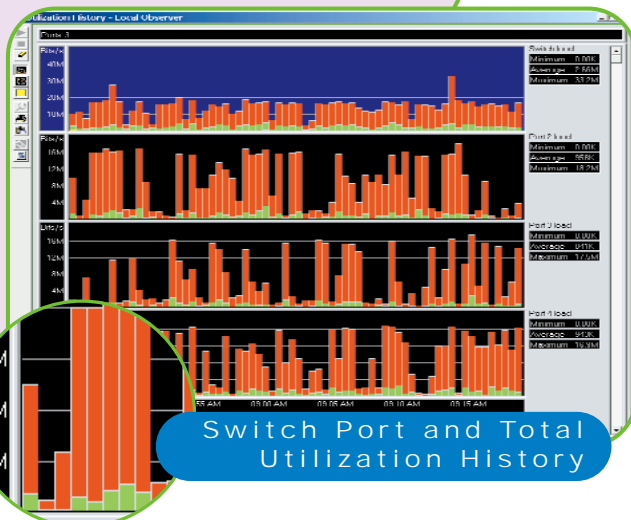
Protocol Statistics—Breakdown of all traffic divided by protocols and subprotocols presented in tree or graph format.

Pair Statistics (Matrix)—Tracks all conversation pairs. Graphical matrix shows pair conversations and 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' subprotocol usage.

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, II 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.



SERVER SUITE

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

One-Button Solution Examples

Router Observer—Focuses on a specific device (usually a router). Displays packets, bytes, packets and bytes/sec plus percent of the device's interface being used for up to 8 routers.

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

Switch Statistics

Switched Modes—Loops through all ports on your switch and collect 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 the 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 included non-dedicated Probe—Observer Suite is a fully-distributed protocol analyzer. Probes can be installed as either the Advanced Probe or the RMON Probe and allow remote monitoring of LAN/WLAN/WANs through any Observer console.

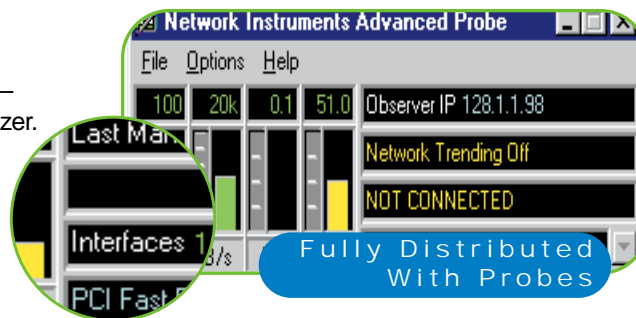
For NT/2000/XP, either Probe can be run as a service.

The Advanced Probe—Offers a superset of RMON functionality. The Probe software runs on a standard non-dedicated Windows 98/NT/2000/XP PC and requires no additional hardware. Additionally, Probes can collect trending data without being connected to Observer (unattended mode).

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

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,



Example problems Observer Suite can help you isolate:

Why are host sessions “hanging”?

Observer's capture and decode will show which system sent the last packet and which system failed to respond—host or workstation.

Why has access to the company's main database become so slow?

Observer Suite 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? Observer Suite'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.

How can I isolate intermittent problems?

Observer Suite's Time Interval Analysis of data transmissions is displayed as a “drill down” from any problem identified in the TCP/UDP/ICMP, IPX/SPX, Frame Relay, NetBIOS/NetBEUI, and SQL Experts. Viewing errors by time periods will show whether a problem is sporadic or consistent throughout the day.

Can I view utilization and errors on a multi-interface router uplink? You can use the SNMP reporting to query any router and view link utilizations and errors in chart or graphical form. Additionally, long term trending can offer period and comparison reports for management and SLA verification.

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

At what point will the added VoIP traffic critically impact the quality of network communication? VoIP Expert displays jitter and percentage of lost packets for each VoIP pair, and both the amount of network utilization the conversation is consuming and the total VoIP utilization on the network. With both utilization and jitter data, problems can be easily pinpointed, and predictions of future capacity can be made.

I have outside consultants working on my LAN, and need to provide access to traffic data but don't want to provide decode capabilities—can the Web Publishing Service help?

The Web Publishing Service can provide aggregate trending flow and SNMP data, without opening the security hole of providing packed decode.

trending and expert analysis, and takes Wireless to a new level by including such functions as:

Wireless Network Vital Signs—"At-a-glance" view of network health

Wireless Access Point Statistics—Shows traffic passing through any APs visible to Observer's wireless NIC, a critical function for maintaining performance and security on any 802.11 network.

Easily switch wireless operation between analyzer mode and standard NIC mode with Network Instruments' specially designed ErrorTrak[®] driver.

Additional Features

Traffic Generator—Allows generation of traffic for testing purposes. Specify packet size, packets/sec, time period to generate, destination, source and number of packets to send.

Discover Network Names—Discovers all MAC addresses and auto-aliases for IP, NetWare or Microsoft. Each is configurable—a DNS lookup for IP, for IPX a NetWare server query for login names, for Microsoft NetBIOS login names are found for each hard address.

Observer Suite Puts The Power In Your Hands—From Expert Analysis to Reporting via a Web Browser

Expert Analysis

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.

SNMP Device Management and Data Collection

Observer Suite offers complete SNMP device management, supporting multiple views of SNMP device data, and both readable and writable SNMP objects through Observer or a Web browser.

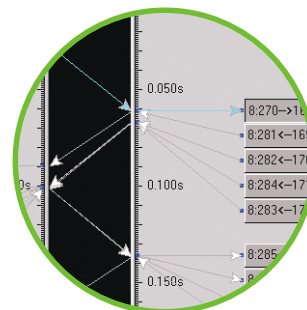
The Observer Suite's SNMP offers a variety of reporting tools, including highly configurable charts, tables, lists and graphical objects (forms). Traps are fully supported and multiple notifications are available upon trap reception. A MIB compiler is included to offer support for any vendor's SNMPv1 or SNMPv2 MIBs.

RMON Probe Device Management and Data Collection

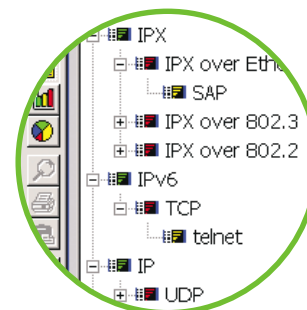
The RMON console in Observer Suite

monitors and controls any RMON-standard device—router, switch, server, or hardware probe—or program anywhere on the network. The RMON included is fully compliant with all RMON1 and RMON2 specifications, and fully supports all 19 RMON groups.

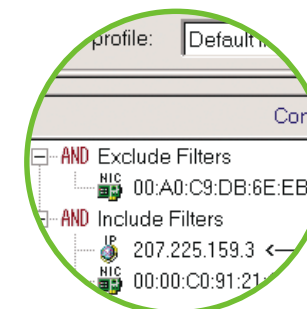
RMON probes may collect up to 19 types of information known as RMON groups, including packets sent, bytes sent, packets dropped, statistics by host, statistics by conversation between two sets of addresses, and lists of certain kinds of events which have occurred. Alarms can also be set to warn of impending problems.



WAN Compare Capture



Over 4,000 Frame Types Recognized



Powerful Packet Filtering

Visit us online for a full-featured evaluation:

www.NETWORKINSTRUMENTS.COM

Web Reporting

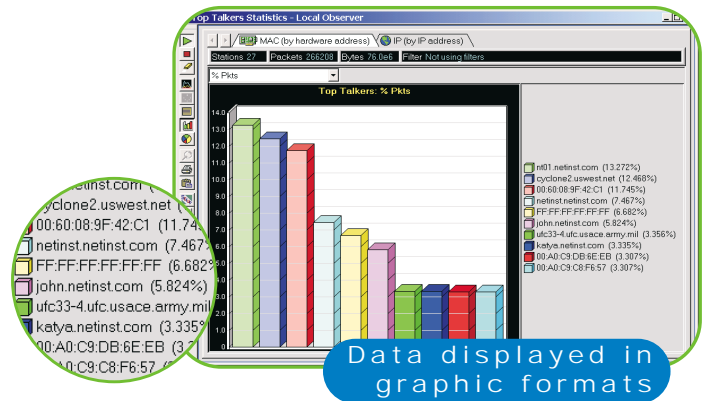
The Observer Suite's Web Publishing Service expands the availability of Observer's analysis statistics to any platform that supports a Web browser. Trending information is collected by Observer and reports are dynamically generated on a request-by-request basis from any browser. Reports can be configured to display data based on time, station(s), switch(s) or SNMP data.

Reporting can be based on specific stations or servers to get current or historical usage and usage trends.

Because Web reporting can be both password protected and content defined, access to network trending information is completely controlled by the local administrator.

Observer Suite Requirements:

System Requirements—*Minimum:* Pentium 800 w/128MB RAM, Windows 98 or later, a supported network adapter, a mouse, and a color monitor running at 1024x768 resolution. *Recommended:* Windows 2000/XP, Pentium 600 (or faster) w/256MB RAM, 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®—The complete, full-featured protocol analyzer.

- Easy to use standard Windows interface
- Advanced switch management capabilities
- Provides metrics, capture, and trending data

The Real Time Expert—Pinpoint difficult problems through real-time and post-capture expert analysis, and modeling.

- Includes TCP/IP, XoIP, NetBIOS/NetBEUI, IPX/SPX, SQL and WAN Experts
- Time synchronization technology to troubleshoot WAN delays
- Grades LAN data and WAN/Internet traffic differently

The SNMP Management Console—View any SNMP agent's data in chart, list, table, graph or graphical device image format from within the Observer Suite interface.

- Charts, lists and manipulates SNMP data
- Includes full MIB compiler, add your own charts

The RMON 1/2 Console—View and manipulate any RMON1/2 Probe's data from within the Observer Suite.

- Full adherence to RMON standards broadens the Observer console to include reporting from many types of devices.
- Supports full RMON2 and RMON1

The Web Publishing Service—View daily and historical trending data from any Web browser for local and remote networks, or SNMP device.

- Create multiple security levels
- Harvest statistics from remote LAN/WLAN/WANs

Advanced/RMON1/2 Software Probes—Supports non-dedicated PCs running 98/Me/NT/2000/XP.

DICOM Extension—Decode and troubleshoot medical imaging industry-specific protocols.

- Complete decode of the DICOM standard protocol
- Supports extendable decodes

	OBSERVER	EXPERT OBSERVER	OBSERVER SUITE
Observer®	<input checked="" type="checkbox"/> (included)	<input checked="" type="checkbox"/> (included)	<input checked="" type="checkbox"/> (included)
The Real Time Expert	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)	<input checked="" type="checkbox"/> (included)
The SNMP Management Console	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
The RMON 1/2 Console	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
The Web Publishing Service	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
Advanced/RMON1/2 Software Probes	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input checked="" type="checkbox"/> (included)
DICOM Extension	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)	<input type="checkbox"/> (optional)



Observer Suite is available from:

Corporate Headquarters:
Network Instruments, LLC
 Fourth Floor
 8800 West Highway Seven
 Minneapolis, MN 55426 USA
 (800) 526-7919 Toll Free
 (952) 932-9899 Voice
 (952) 932-9545 FAX

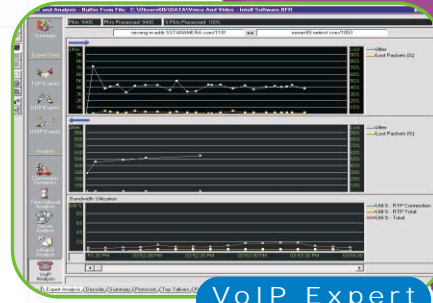
European Office:
Network Instruments Ltd.
 Brewery House
 Black Eagle Close
 Westerham TN16 1RG
 UNITED KINGDOM
 +44 (0) 1959 569880 Voice
 +44 (0) 1959 569881 FAX

info@networkinstruments.com



Troubleshoot Any Network Problem, Anywhere, at Any Time

THE REAL TIME EXPERT—Real-time and post-capture analysis of network problems, including “What-if” modeling, VoIP Expert, Connection Dynamics, Time Interval, WAN Delay, and Server Analysis.



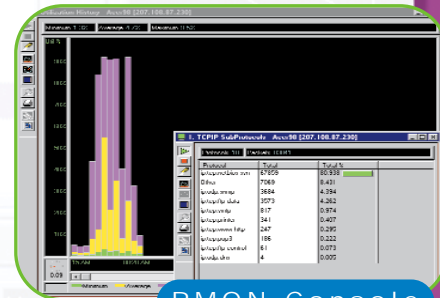
VoIP Expert

THE SNMP MANAGEMENT CONSOLE—Graphical SNMP agent management, data collection and MIB compilation for Observer, including a full reporting and trending facility.



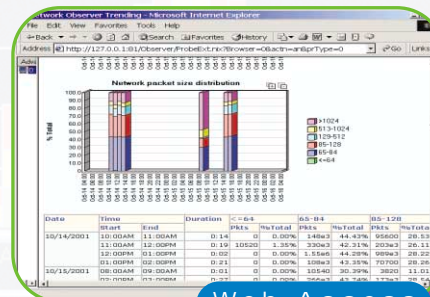
SNMP Forms

THE RMON 1/2 CONSOLE—Industry standard collection and graphical RMON data display console for Observer. Complete adherence to RMON1 and RMON2 standards.



RMON Console

THE WEB PUBLISHING SERVICE—Network trending data, Internet trending data, switch trending data, and SNMP trending data available to anyone with a Web browser.



Web Access