Observer® Product Family

Powerful, Scalable, and Distributed Network Analysis Solutions for Multi-Topology Networks (LAN, wireless, gigabit, WAN, Fibre Channel, and 10 GbE)

OBSERVER STANDARD

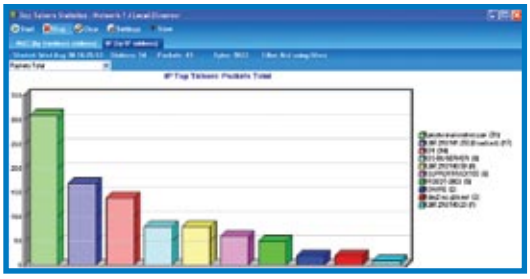
Protocol analysis, real-time statistics, trending, and network troubleshooting

OBSERVER EXPERT

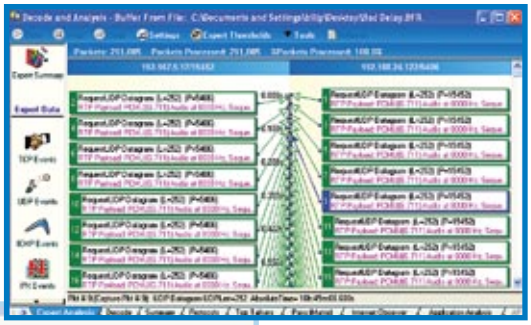
Pinpoint difficult problems through Expert Analysis

OBSERVER SUITE

The most feature-rich network management and analysis solution

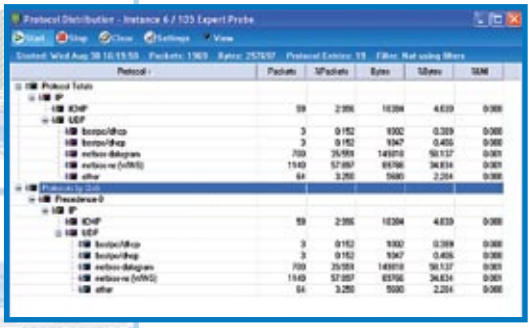


Top Talkers

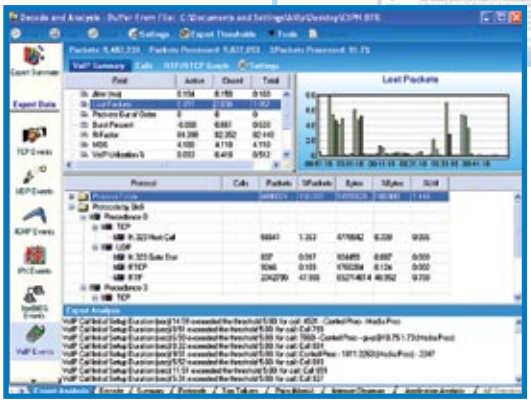


Connection Dynamics

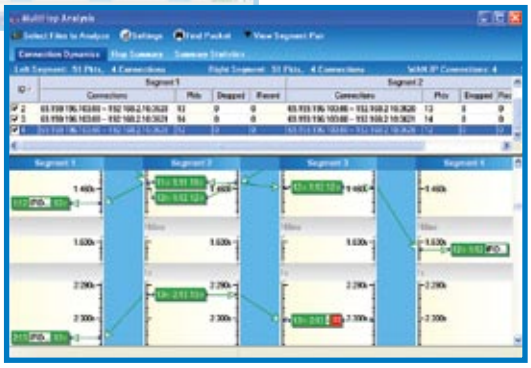
Application Analysis



NetFlow Protocol Distribution



VoIP Analysis



MultiHop Analysis

OBSERVER® STANDARD

The first level of network control is to fully understand network health. With Observer Standard, administrators gain the insight they require to make network adjustments for improved efficiency. Observer Standard also offers problem-solving capabilities for faster troubleshooting.

- Capture, view and decode network traffic in **real time**
- Analyze network traffic to **diagnose critical problems**
- Collect long-term trending statistics for **proactive decision making**
- Detect abnormalities quickly with custom **triggers and alarms**

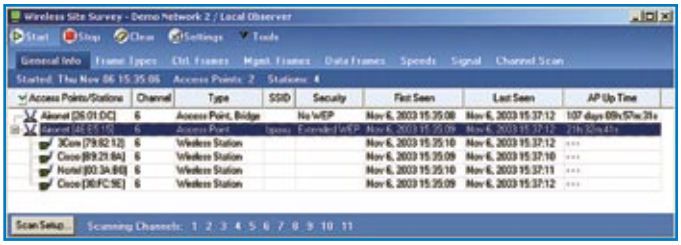
Key Features

Superior Packet Capture and Decode

- Decode over 590 protocols and countless sub-protocols (including wireless)
- Nanosecond resolution provides precise analysis, even for 10 GbE networks
- Schedule automated packet captures to solve recurring problems

Network Trending and Reporting

- Collect and store data for long-term reporting and analysis
- View and analyze Internet traffic over time
- Justify capacity upgrades from Comparison Analysis Reports
- Schedule reports to Observer and non-Observer users



Wireless Site Survey

Complete Vital Signs Display

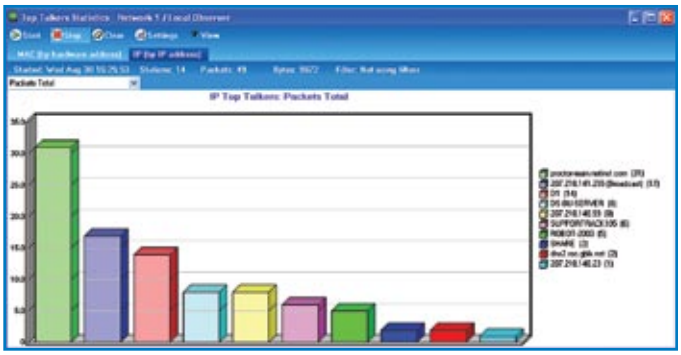
- Comprehensive snapshot of error conditions ranked by severity
- Ethernet specific errors with ErrorTrak™ drivers (e.g. packets too big/too small, CRC, collisions, alignment)
- Wireless specific errors (e.g.WEP, retries, beacons, polls, CRC, short PLCP, transmit errors)

Powerful Packet Filtering Features

- Include or exclude packets by address, address range, protocol offsets and presets; use Boolean logic to create complex filters
- Design filters visually with an enhanced graphical interface
- Instantly create protocol filters selected from the Protocol Distribution List
- Execute multiple filters concurrently
- Share complete filter libraries with other Observer users
- Isolate traffic of interest with Fast Post Filtering
- Utilize data-mining capabilities to search multiple files for any user-defined pattern

Over 30 Real-Time Statistics for Deeper Network Understanding

- Get a comprehensive snapshot of network health with Network Summary
- Set Triggers and Alarms to flag activities or errors and be notified by e-mail, pager, SNMP trap, etc.
- Obtain insight into the total network load with Bandwidth Utilization
- Use Internet Observer to track conversations of interest
- View all access point utilization rates with Wireless Access Point Load Monitor
- Analyze conversation response time with Pair Statistics (Matrix)
- See all protocols and applications with Protocol Distribution
- Predict imminent slowdowns with Network Activity Display
- Scan wireless channels continuously with Wireless Site Survey
- Use Router Observer to display interface utilization rates
- See bandwidth usage by device with Top Talkers
- Determine if VLANs are overloaded and verify setups with VLAN Analysis

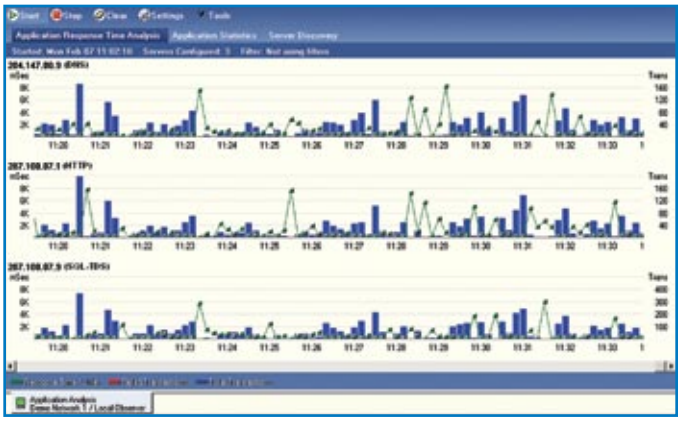


Top Talkers

OBSERVER EXPERT

Observer Expert includes all the features of Observer Standard and adds the next level of control by identifying network issues and offering immediate solutions. Dramatically reduce the time it takes to troubleshoot network problems with over 570 real-time experts.

- Pinpoint difficult problems through real-time or post-capture **Expert Analysis**
- Track and solve application problems with **Application Analysis**
- View packet-by-packet graphical flows of network conversations with **Connection Dynamics**
- Raise network and traffic visibility with **NetFlow and sFlow®** integration
- Receive accurate high-speed, high volume packet capture with **up to a 124 GB** (maximum) **memory buffer**



Application Analysis

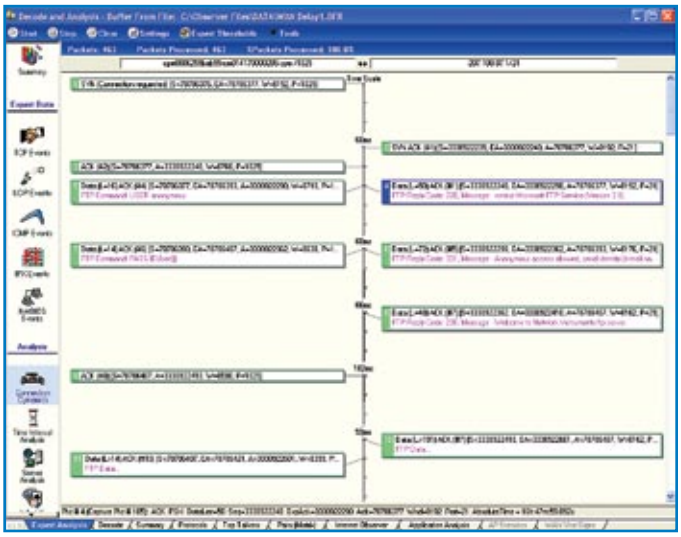
Key Features

Application Analysis - *Take troubleshooting to the application layer with your analyzer*

- Real-time and post capture analysis
- Track application session flows and failed transactions
- Receive statistics on errors and monitor response time
- Automate server/application discovery
- Drill down with Connection Dynamics to view conversation flow detail
- Supports SQL (TDS), Oracle (TNS), VoIP, DNS, FTP, HTTP, POP3, Telnet, SMTP, SNMP, Exchange, Microsoft Networking (SMB), and Citrix
- Eliminate need to purchase a separate application monitoring system

Up to 124 GB Memory Buffer - *Keep up with enterprise level traffic*

- Industry's largest memory buffer allows for increased packet capture size and extended time frames for Expert Analysis
- User-defined memory model lets each administrator fine tune Observer's individual memory mode usage
- Guarantee no dropped packets by using reserved memory not associated with Windows



Connection Dynamics

Connection Dynamics

- Provide a graphical view of conversations up to the application layer
- Show packet-to-packet delay times, allowing instant identification of long latency and response times
- Flag retransmissions, lost packets, and errors in red for quick identification
- Obtain Expert analysis inside the Connection Dynamics interface

VoIP Performance Analysis

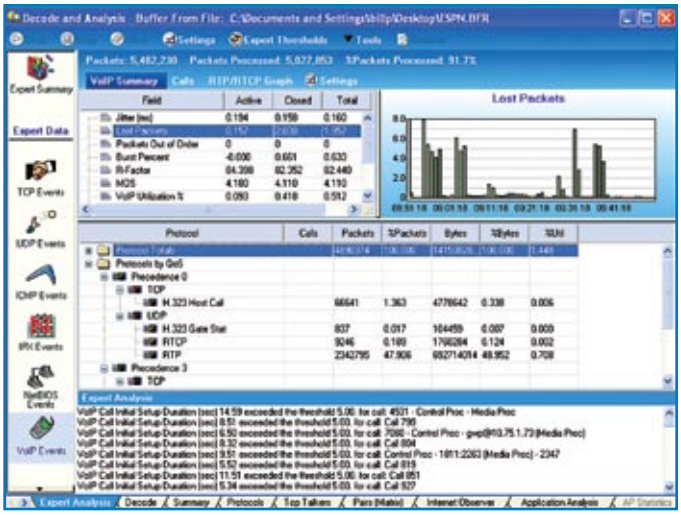
- Monitor calls in-depth with over 70 VoIP metrics
- Measure call quality based on industry standards
- Acquire relevant, actionable detail and diagnostics
- Save or play voice conversations or streaming video

Expert Summary Problem Analysis

- Error events shown in a single, concise display in real-time
- For connection-oriented problems, double-click for further analysis

TCP/UDP/ICMP Events

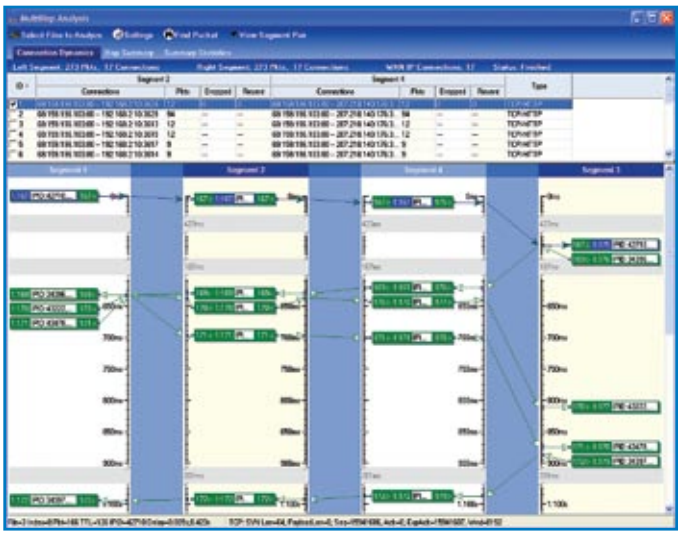
- Display protocol-based and application-based problems
- Local traffic is judged using different criteria than WAN/Internet traffic to ensure no false readings
- Common services are tracked and response is sorted and flagged by severity
- A generic TCP condition expert tracks all port-based protocols for slow response or other connection issues



VoIP Analysis

MultiHop Analysis

- Track conversations through multiple segments, hops, and routes
- Quickly pinpoint and eliminate transaction delay
- Supports up to 10 hops
- Easily see across routers over time



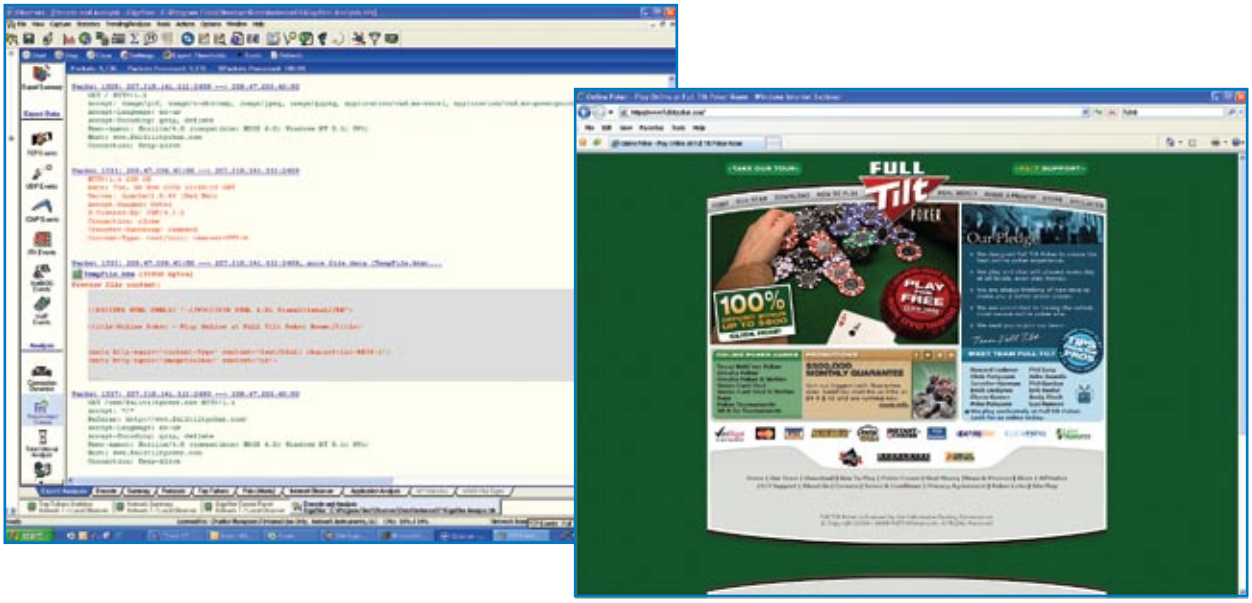
MultiHop Analysis

NetFlow and sFlow®

- Obtain critical metrics across the entire network
- Analyze traffic statistics over weeks or months
- Aggregate data from many devices to a single console
- Manage traffic patterns and plan for capacity upgrades

Stream Reconstruction

- Recreate communications from captured traffic
- Rebuild web pages, e-mails, IM, and VoIP calls
- Document policy violations, investigate network problems, identify unauthorized activities



Stream Reconstruction

Expert Wireless Events

- Track wireless conversations, logging errors, rogue access points, and other events of interest

"What-If" Modeling Analysis

- Track bandwidth capacity changes (e.g. 100 Mbps to 1000 Mbps)
- Review variable changes (e.g. packet size, latency, server load, and number of users)
- Measure based on actual client, server, or peer-to-peer conversations
- Plot possible response time, bandwidth utilization, and packet flow scenarios

Server Analysis

- Display server response times charted against the number of simultaneous requests
- Chart response times for recorded request sets, and as request loads increase

Time Interval Analysis

- Display network errors organized by time frequency to identify whether a problem is sporadic or consistent
- Show if slow response is due to network load

OBSERVER SUITE

For the most complete level of network control, acquire all the functionality of Observer Standard and Observer Expert plus full SNMP and RMON device management with web reporting from Observer Suite.

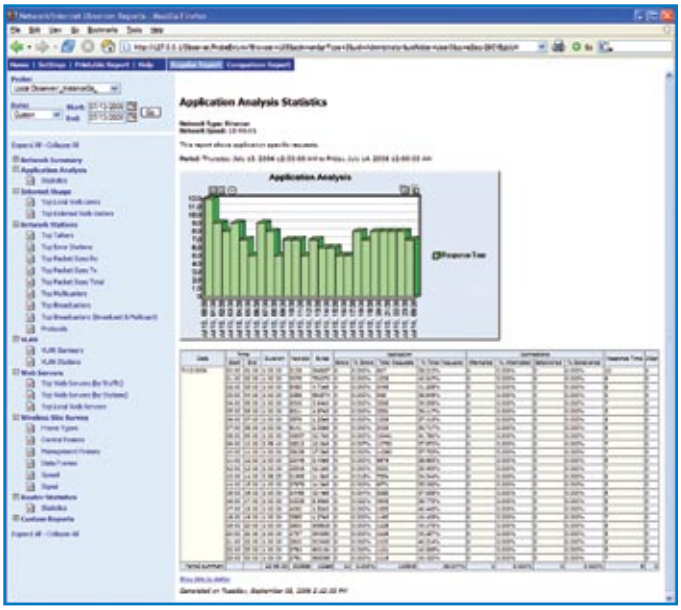
- Optimize network devices (including switches and routers) with a full **SNMP management console**
- Monitor LANs/WANs from a central location using **RMON1**, **RMON2**, and **HCRMON** collection consoles
- View statistics from any browser with **web reporting**

Key Features

Web Publishing and Reporting

Whether they're internal employees or outside consultants, a web browser is all they need to view data and generate reports. You control the level of access.

- Share Observer reports with non-Observer users
- Generate reports dynamically
- Configure reports based on time, station, switch, or SNMP data
- Obtain current and historical trends
- Define different access permissions for users
- Distribute network "weather reports" via your corporate intranet/extranet
- Quickly publish data with ready-made or custom reporting options



Web Reporting

Complete SNMP Device Management

A single solution for multi-vendor hardware networks, including a remote console for SNMP-compliant devices anywhere on your LAN/WAN or connected by the Internet.

Full Support

- Obtain multiple views of device data
- Review both readable and writable SNMP objects through Observer or the web
- Monitor notifications triggered by SNMP traps
- Maintain compatibility with all SNMP versions
- Configure Triggers and Alarms for SNMP data

Extensive Reporting and Trending

- Report SNMP data in real time
- Collect data for baseline comparisons later
- Share findings with custom charts, tables, lists and graphical objects (forms)

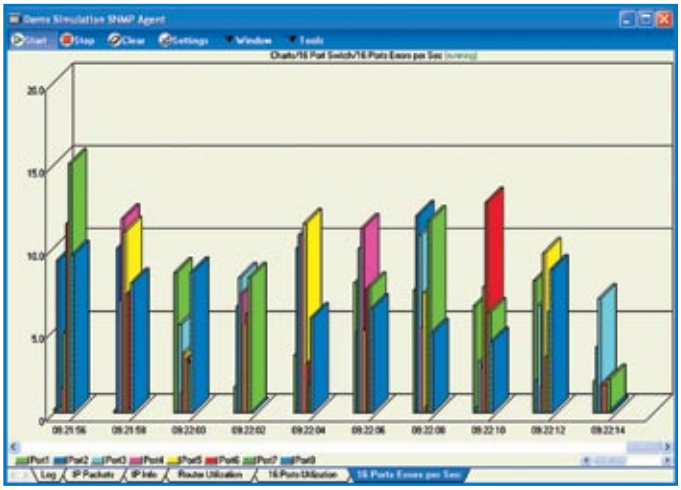
RMON Device Management

RMON is the industry standard for traffic management and packet level data collection for multi-segment LANs.

- Fully compliant with all RMON1 and RMON2 specifications
- Configurable alarms to warn of impending problems
- RMON console supports high capacity RMON (HCRMON)
- Monitor and control any RMON-standard device (router/switch/server) or program

Supports all 21 RMON and HCRMON groups including:

- Packets received/sent/dropped
- Statistics by host
- Statistics by conversation
- Lists of events



Switched Port Errors per Second

Switch Station Locator

- Display names or addresses of devices by switch port using SNMP

Full XML/SOAP Support

- Obtain access to error, capacity, and historical network data to any application that supports XML or SOAP (Simple Object Access Protocol)

Custom Decode Kit

- Add custom, proprietary or additional protocols to Observer decodes
- Full wireless support

Proven Network Management, Analysis, and Troubleshooting Solutions

for Local

The award-winning Observer family of products from Network Instruments combines a comprehensive, freestanding management and analysis console with high-performance distributed probes to provide integrated monitoring and management of your entire network (LAN, wireless, gigabit, WAN, Fibre Channel, 10 GbE).

Console Options

Observer Standard

- Decodes over 590 protocols and countless subprotocols
- Long-term network trending and analysis
- Over 30 real-time statistics
- Supports Ethernet (10/100/1000), wireless, Token Ring, and FDDI

Observer Expert *(All the features of Observer Standard plus)*

- Application Analysis
- Monitors over 570 real-time Expert Events
- Connection Dynamics
- VoIP Analysis
- NetFlow/sFlow® Integration
- Full-duplex gigabit, WAN, Fibre Channel, and 10 GbE

Observer Suite *(All the features of Observer Expert plus)*

- Complete SNMP device management
- Full supports for RMON1, RMON2, and HCRMON
- Automated reporting by web or e-mail
- Full-duplex gigabit, WAN, Fibre Channel, and 10 GbE
- View statistics from any web browser
- Share Observer reports with non-Observer users

The NI-DNA Advantage

Network Instruments' Distributed Network Analysis architecture, (NI-DNA™), offers several analysis advantages. With a single Observer console and interface, you can:

- Manage multiple network topologies
- View and analyze both local and remote links
- Monitor heterogeneous networks regardless of size or capacity

for Remote

Network Instruments provides a complete set of remote monitoring solutions so administrators can acquire identical management and analysis information from local to remote networks.

- Gain multiple points of visibility
- Manage remote networks as if they were local (24 x 7)
- Eliminate the time and expense of travel
- Select Probes to fit any topology or infrastructure

Probe Software Options

Advanced Single Probes

- Continuously collect and store remote network information for baseline comparison
- Protect network data with passwords and encryption
- Adhere to RMON and HCRMON standards with RMON probe option

Advanced Multi-Probes *(All the features of Advanced Single Probes, plus)*

- Monitor data from multiple network adapter cards simultaneously
- Collaborate across locations to solve complex network problems by analyzing the same data concurrently
- Capture up to 124 GB worth of data with the industry's largest memory buffer

Advanced Expert Probes *(All the features of Advanced Multi-Probes, plus)*

- View remote Expert Analysis in real time for faster troubleshooting
- Perform packet captures and decodes at the individual probe level
- Save bandwidth by only transferring Expert screenshots, not raw data packets

Probe Hardware Options

- 10 GbE Appliance
- 10/100 Appliance
- 10/100/1000 Appliance
- Fibre Channel Appliance
- Full-duplex 10/100 Appliance
- Gigabit Probe Appliance
- GigaStor™ Probe Appliance
- WAN Probe Appliance
- Wireless Probe Appliance

Field Service Solutions

- Gigabit Observer Suite System
- WAN Observer Suite System
- Fibre Channel Observer Suite System
- GigaStor Portable

PC Pro Labs Winner · CRN Test Center recommended · PCPlus Editor's Choice · Finalist Best of the Tests NetworkWorld 2003 · Products of the Year · Redmond Readers' Choice Awards · TechWorld.com Network Awards 2005 · Recommended Personal Computer World · 2005 MobileVillage Mobile Star Awards Gold Star

CHOOSE YOUR LEVEL OF CONTROL

OBSERVER SUITE

OBSERVER EXPERT

OBSERVER STANDARD

Packet Capture and Decode
Decode over 590 primary protocols
Countless subprotocols
Nanosecond resolution
Automate packet captures
Security controls

Unlimited Filtering Options
Use Boolean logic for creating complex filters
Design filters visually
Instantly create protocol filters from list
Share filter lists between Observer users
Filter for virus and attack signatures
Fast Post Filtering for quick execution
Pre-Filtering for data mining

Cross Mode Drill Down
Instantly displays detailed data information

Network Trending and Reporting
Network Trending Dashboard Display
Efficiency History
Comparison Analysis Reports and Summary
Ready-Made Reports
Custom Reports
Report Scheduler

Triggers and Alarms
Flag activities or errors with a predefined list
Set custom notifications based on any filter
Receive immediate alerts when security threats are detected
Choose alert method (e-mail, pager, etc.) and schedule response (e.g. launch program)

64 and 32-bit support

Error Tracking
Network Vital Signs Mode
Wireless Vital Signs
Network Errors by Station

Real-Time Statistics
Network Summary
Bandwidth Utilization
Top Talkers
Internet Observer
Protocol Distribution
Network Activity Display
Wireless Site Survey
Wireless Access Point Load Monitor
Switch Statistics
Router Observer
Pair Statistics
VLAN Statistics
Network Delay

IPv6 Support

Over 570 Real-Time Experts
Directional indicators for full-duplex capture
Expert Summary Problem Analysis
TCP/UDP Events
ICMP Events
IPX Events
NetBIOS Events
Expert Wireless Events

NetFlow/sFlow® Integration
HP OpenView Integration

SSL Decryption

Expert Analysis
Connection Dynamics
MultiHop Analysis
Server Analysis
"What-If" Modeling
Time Interval Analysis
MPLS Analysis

Up to 124 GB Memory Buffer
Designed for enterprise-level traffic
Guarantees no dropped packets

Stream Reconstruction
E-mail, IM, HTTP, and VoIP

Application Analysis
Real-time and post capture
Monitor response time
View total/failed transactions
Track application session flows
Provide statistics on errors
Automate server/application discovery
Long-term trending

VoIP Analysis
Aggregate statistics
In-depth call metrics
QoS reporting
Quality Scoring

SNMP Device Management
Review readable and writable SNMP objects
Monitor and set notifications based on traps
Supports SNMP 1, 2 and 3 with MIB compiler

Network Trending and Reporting
Report SNMP data in real-time

Switch Station Locator
Identify users' port location by switch

RMON Device Management
Full support for all 21 RMON and HCRMON groups
Enhanced RMON Filtering
WAN RMON

Web Publishing Service
Publish network health reports to intranet or extranet

SOAP Support Automated Report Delivery

Operating Systems Supported: Windows® 2003, XP, XP x64
For minimum and recommended system requirements, please visit our web site at: www.networkinstruments.com

How well do you know your network?

Common problems solved with Observer Standard:

How do I determine whether it's the network or the application that is underperforming?
Observer has, among other things, a comprehensive set of tools for determining what is causing delay, including: link saturation, server overload, and application problems. Observer shows you what is wrong so that you can fix it efficiently.

Do I need a faster WAN/Internet connection?
Router Observer shows averages by minute and by hour for router interface usage statistics.

How can Observer help solve connection problems?
Packet Capture can display login negotiations, retransmissions, and response times to locate the problem.

Can I isolate and view WAN and Internet traffic?
Yes, Observer has a variety of ways to view WAN and Internet traffic, including statistical displays and threshold triggers, the ability to store and analyze long-term trends, as well as the ability to decode and filter on all the major IP subprotocols.

Can I monitor the performance of a secured wireless network?
Yes, Observer simultaneously monitors the wired and wireless sides of the network. Wireless-only analyzers cannot decode beyond the MAC layer since the header is encrypted with most security configurations. With Observer, you have the option to view the entire payload on the wired side.

Common problems solved with Observer Expert:

Is there a tool that can monitor my VoIP connections?
Observer Expert monitors VoIP connections and improves VoIP performance across the organization. VoIP Expert monitors traffic statistics and more than 50 metrics that track call quality. It offers complete decode of VoIP protocols including H.323, MGCP, SCCP, and SIP. Save or play voice conversations or streaming video. Track jitter or lost packets (in either direction) and total VoIP utilization.

What's causing the slowdown?
Expert Analysis will provide a summary of conclusions about any problems and possible causes, in real-time or upon completion of capture.

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

Will upgrading my bandwidth improve my network response time?
With Observer Expert's "What-If" Analysis, predict the impact of infrastructure changes by creating unlimited scenarios based on captured data.

Can I document specific network policy violations?
Yes. With Observer you can identify and document network policy violations. For example, the administrator can use long-term trending to identify web sites visited and the length of a visit. Observer's stream reconstruction rebuilds e-mail and instant messages captured en route, and web pages browsed as hard evidence of a user's actions on the LAN or Internet.

Can I isolate intermittent problems?
Observer has many tools to help troubleshoot intermittent network problems. Active alerts can be set to notify the administrator when particular events have occurred on the network, and when usage, error rate, or other thresholds have been exceeded. In addition to triggering automatic notification, these alerts can also trigger a packet capture. In addition, network trending allows you to efficiently store network communications over long periods of time for later investigation. Time Interval Analysis can also be used to view errors by time periods, and clarify if a problem is sporadic or consistent.

Can I get more detail about a particular conversation?
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 application detail.

Common problems solved with Observer Suite:

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

I have outside consultants working on my LAN that need to constantly see traffic data. Can I provide them with this access without giving them packet decode abilities, which would compromise network security?
Yes. With the Web Reporting Service, you can provide access to trending flow and SNMP data, without the security risk of sending decoded packets.

About Network Instruments
Network Instruments provides in-depth network intelligence and continuous network availability through innovative analysis solutions. Enterprise network professionals depend on Network Instruments' Observer product line for unparalleled network visibility to efficiently solve network problems and manage deployments. By combining a powerful management console with high-performance analysis appliances, Observer simplifies problem resolution and optimizes network and application performance. The company continues to lead the industry in ROI with its advanced Distributed Network Analysis (NI-DNA™) architecture, which successfully integrates comprehensive analysis functionality across heterogeneous networks through a single monitoring interface. Network Instruments is headquartered in Minneapolis with sales offices worldwide and distributors in over 50 countries. For more information about the company, products, technology, NI-DNA, becoming a partner, and NI University please visit www.networkinstruments.com.

Solution Bundles
Contact a Network Instruments representative or dealer to ask about product bundles that cover all of your network management needs.

NETWORK INSTRUMENTS®

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