



Observer® Product Family

Analysis Solutions for Complex Networks

Supporting: LAN • 10/100 • Gigabit • 10 Gb • Wireless • WAN • DS3/E3 • OC3c/OC12c • SAN • Fibre Channel

Observer Standard

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

Observer Expert

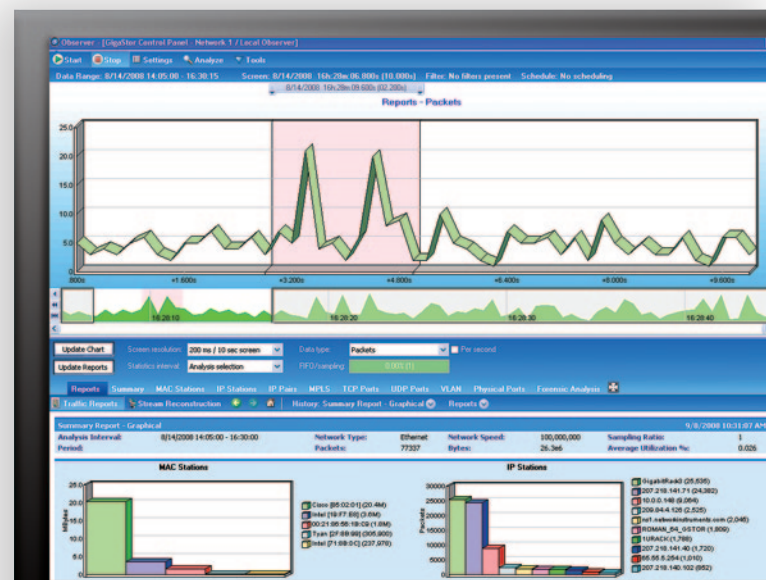
Manage application performance through expert analysis

Observer Suite

The most feature-rich network management and analysis solution

The NI-DNA™ Advantage

Network Instruments® designs its solutions in house, so you can be confident they'll work together seamlessly. Our distributed architecture makes it easy to simultaneously monitor all network segments through one interface.



OBSERVER[®] STANDARD

The first stage of network control is understanding network health. With Observer Standard, administrators gain the insight they need to make network adjustments for improved efficiency.

Key Features

Superior Packet Capture and Decode

- Decode over 610 protocols and countless sub-protocols (including wireless)
- Nanosecond resolution provides precise analysis
- Schedule automated packet captures to solve recurring issues

Network Reporting and Trending

- Collect and store data for long-term reporting and analysis
- View and analyze Internet traffic over time
- Justify capacity upgrades with Comparison Analysis Reports

Complete Vital Signs Display

- Comprehensive snapshot of error conditions ranked by severity
- Wireless-specific errors (e.g. retries, CRC, short PLCP, transmit errors)

Powerful Packet Filtering Features

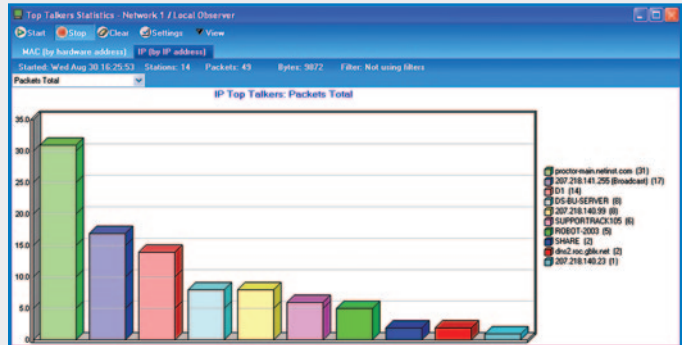
- Include/exclude packets by address, address range, protocol offsets and presets; use Boolean logic to create complex filters
- Design filters visually with enhanced graphical interface
- Instantly create protocol filters selected from Protocol Distribution list
- Execute multiple filters concurrently
- Share complete filter libraries with other Observer users
- Utilize data mining capabilities to search multiple files for any user-defined filter

Over 30 Real-Time Statistics for Deeper Understanding

- View comprehensive snapshot of network health with Network Summary
- Use Internet Observer to track conversations of interest
- View access point utilization with Wireless Access Point Load Monitor
- 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 utilization rates
- See bandwidth usage by host with Top Talkers

Access Points/Stations	Channel	Type	SSID	Security	First Seen	Last Seen	AP Up Time
Alorinet [26:01:D0]	6	Access Point, Bridge	No WEP		Nov 6, 2003 15:35:08	Nov 6, 2003 15:37:12	107 days 09h:57m:31s
Alorinet [46:E5:15]	6	Access Point	lpauu	Extended WEP	Nov 6, 2003 15:35:09	Nov 6, 2003 15:37:12	21h:52m:41s
3Com [F8:62:12]	6	Wireless Station			Nov 6, 2003 15:35:10	Nov 6, 2003 15:37:10	---
Cisco [B9:21:84]	6	Wireless Station			Nov 6, 2003 15:35:09	Nov 6, 2003 15:37:10	---
Netel [03:2A:60]	6	Wireless Station			Nov 6, 2003 15:35:10	Nov 6, 2003 15:37:11	---
Cisco [30:FC:9E]	6	Wireless Station			Nov 6, 2003 15:35:09	Nov 6, 2003 15:37:12	---

Wireless Site Survey



Top Talkers



OBSERVER EXPERT

All the features of Observer Standard, plus problem identification and suggestions for resolution. Dramatically reduce troubleshooting time with over 610 real-time experts.

Key Features

Application Transaction Analysis

- Real-time and post-capture analysis, trending
- Receive statistics on errors and monitor response time
- Track HTTP by URL
- Gain in-depth metrics on common applications such as:
 - Citrix
 - E-mail
 - UC/VoIP
 - Financial
 - Web
 - Oracle
 - SQL

as well as network management protocols such as LDAP, DNS, DHCP, and more. For the complete list please visit the Application Analysis section of the website.

VoIP and Unified Communications Performance

- 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

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 packets out of order

Expert Summary Problem Analysis

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

TCP/UDP/ICMP Events

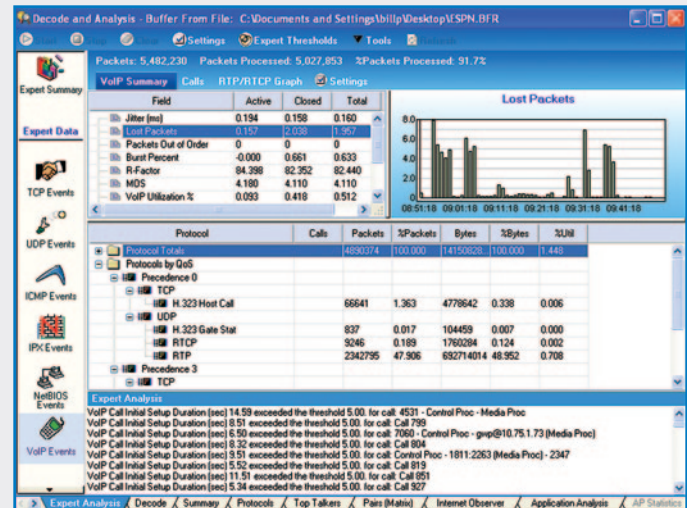
- Common services responses sorted and flagged by severity
- TCP expert tracks port-based protocols for connection issues
- See all conversations
- View volume, response time, network delay, etc.

Extra-Large Memory Buffer

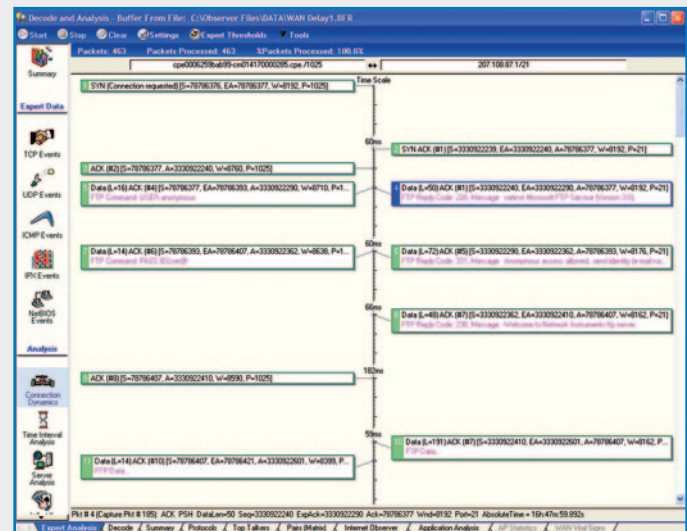
- Allows for increased packet capture size and extended time frames for Expert Analysis
- User-defined memory model lets each administrator fine tune Observer's individual memory mode usage

Multi-Instance Support

- Access multiple simultaneous workspaces
- Allow several users to troubleshoot same link
- Monitor multiple topologies at once



VoIP Analysis



Connection Dynamics

MultiHop Analysis

- Track conversations through multiple segments
- Pinpoint and eliminate transaction delay

NetFlow and sFlow®

- Collect data from many devices to one console
- Analyze traffic statistics over weeks or months
- Up to 512 NetFlow devices per instance

Stream Reconstruction

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

Expert Wireless Events (802.11 a, b, g, n)

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

“What-If” Modeling Analysis

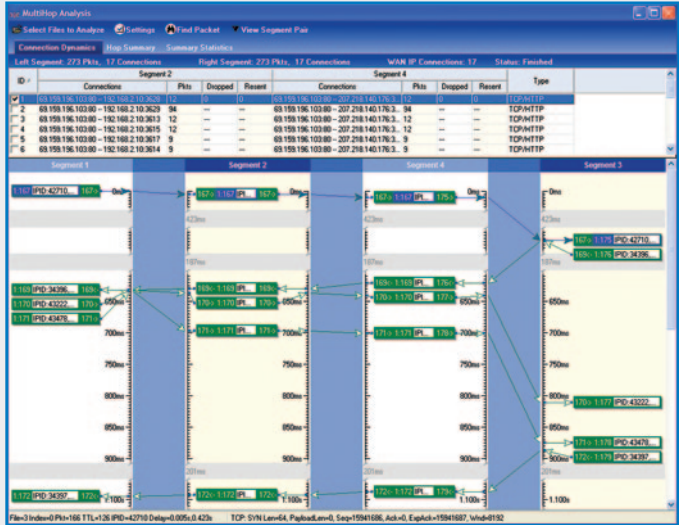
- Track bandwidth capacity changes (e.g. 100 Mbps to 1000 Mbps)
- Review variable changes (e.g. packet size, latency, server load, number of users)
- Measure based on actual client, server, or peer-to-peer conversations
- Plot possible response time, bandwidth utilization, and packet flow

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 by time frequency to learn whether a problem is sporadic or consistent
- Show if slow response is due to network load



MultiHop Analysis

Client IP	Server IP	Type	Start Time	End Time	Description
10.0.0.20	10.255.0.10	HTTP	2009-09-14 14:09:22.213	2009-09-14 14:09:22.428	http://www.google.com
10.0.0.20	10.14.207.109	HTTP	2009-09-14 14:09:25.432	2009-09-14 14:09:25.207	http://www.iamtaylor.com
10.0.0.20	106.18.125.50	HTTP	2009-09-14 14:09:27.188	2009-09-14 14:09:28.562	http://www.redhat.com
10.0.0.148	104.107.1.65.28	HTTP	2009-09-14 15:03:46.803	2009-09-14 15:03:22.889	http://www.fox.com
10.0.0.148	10.0.0.125	HTTP	2009-09-14 15:04:09.228	2009-09-14 15:04:09.228	http://update.mcafee.com
10.0.0.148	109.84.4.126	HTTP	2009-09-14 15:04:09.902	2009-09-14 15:04:16.509	http://www.update.com
10.0.0.148	107.46.209.132	HTTP	2009-09-14 15:05:20.214	2009-09-14 15:05:20.725	---
10.0.0.148	107.46.209.252	HTTP	2009-09-14 15:05:30.119	2009-09-14 15:05:30.191	---
10.0.0.148	10.142.122.46	HTTP	2009-09-14 15:05:19.789	2009-09-14 15:05:26.203	http://www.download.com
10.0.0.148	109.7.46.190	HTTP	2009-09-14 16:04:04.673	2009-09-14 16:04:05.740	http://www.mcafee.com
10.0.0.148	10.142.122.64	HTTP	2009-09-14 16:05:25.493	2009-09-14 16:05:14.462	http://www.download.com
10.0.0.148	10.0.0.125	HTTP	2009-09-14 16:05:25.493	2009-09-14 16:05:17.918	http://www.update.com
10.0.0.148	10.142.122.81	HTTP	2009-09-14 16:05:41.829	2009-09-14 16:05:50.619	http://www.update.com
10.0.0.148	10.142.122.102	HTTP	2009-09-14 16:11:36.100	2009-09-14 16:11:32.125	http://www.download.com



Stream Reconstruction

OBSERVER SUITE

All the functionality of Observer Standard and Observer Expert plus full SNMP and RMON device management and web reporting.

Key Features

Web Publishing and Reporting

- Share reports with non-Observer users
- Generate reports dynamically
- Configure reports based on time, station or SNMP data
- Obtain current and historical trends
- Define different access permissions for users

Complete SNMP Device Management

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

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

Extensive Reporting and Trending

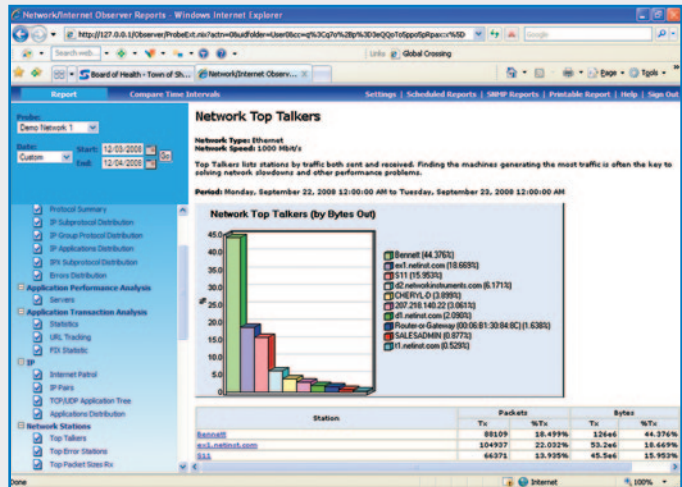
- Report SNMP data in real time
- Collect data for baseline comparisons later
- Share findings with custom charts, tables, lists, and graphical objects (forms)

RMON Device Management

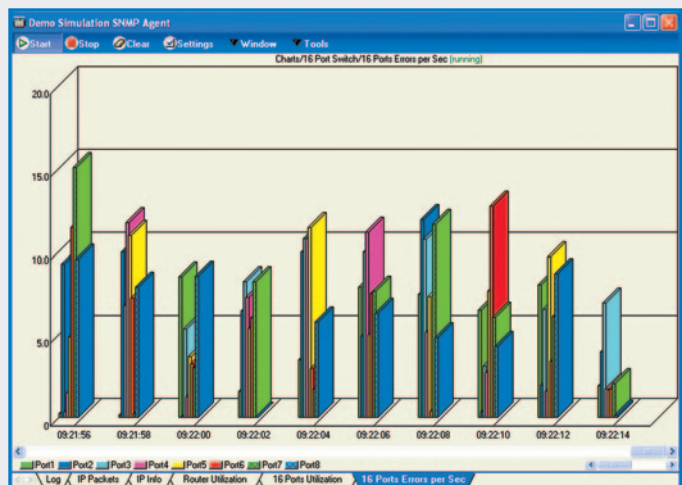
- Fully compliant with RMON and HCRMON standards
- Configurable alarms to warn of impending problems
- Monitor and control any RMON device

Other Great Features

- Full XML/SOAP support
- Custom decode kit for additional/proprietary protocols



Web Reporting



Switched Port Errors per Second

OBSERVER STANDARD

Packet Capture and Decode

Decode over 610 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

Network Trending and Reporting

Network Trending Dashboard Display
Efficiency History
Comparison Analysis Reports
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 security alerts
Choose alert method and schedule response

Error Tracking

Network Vital Signs
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

OBSERVER EXPERT

All the features of Observer Standard plus:

Over 610 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

Extra-Large Memory Buffer

Designed for enterprise-level traffic
Guarantees no dropped packets

Stream Reconstruction

E-mail, 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
FIX, 29 West, NASDAQ decodes

VoIP Analysis

Aggregate statistics
In-depth call metrics
QoS reporting
Quality Scoring

Third-Party Support

Cisco NetFlow
sFlow®

OBSERVER SUITE

All the features of Observer Expert plus:

SNMP Device Management

Review readable, 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 RMON/HCRMON
Enhanced RMON Filtering
WAN RMON

Web Publishing Service

Publish health reports to web

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

About Frederick Engineering, Inc.

With more than 24 years experience selling globally, FE provides a wide range of cost-effective network management, security, and analysis products for 10/100/Gigabit, ADSL, Fiber, VoIP, IPTV, Wireless, and Wide Area Networks. From handheld test tools for field service technicians to enterprise-wide analyzers for network managers, FE has the best solution to meet your network requirements.

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