



# Observer® Probe Family

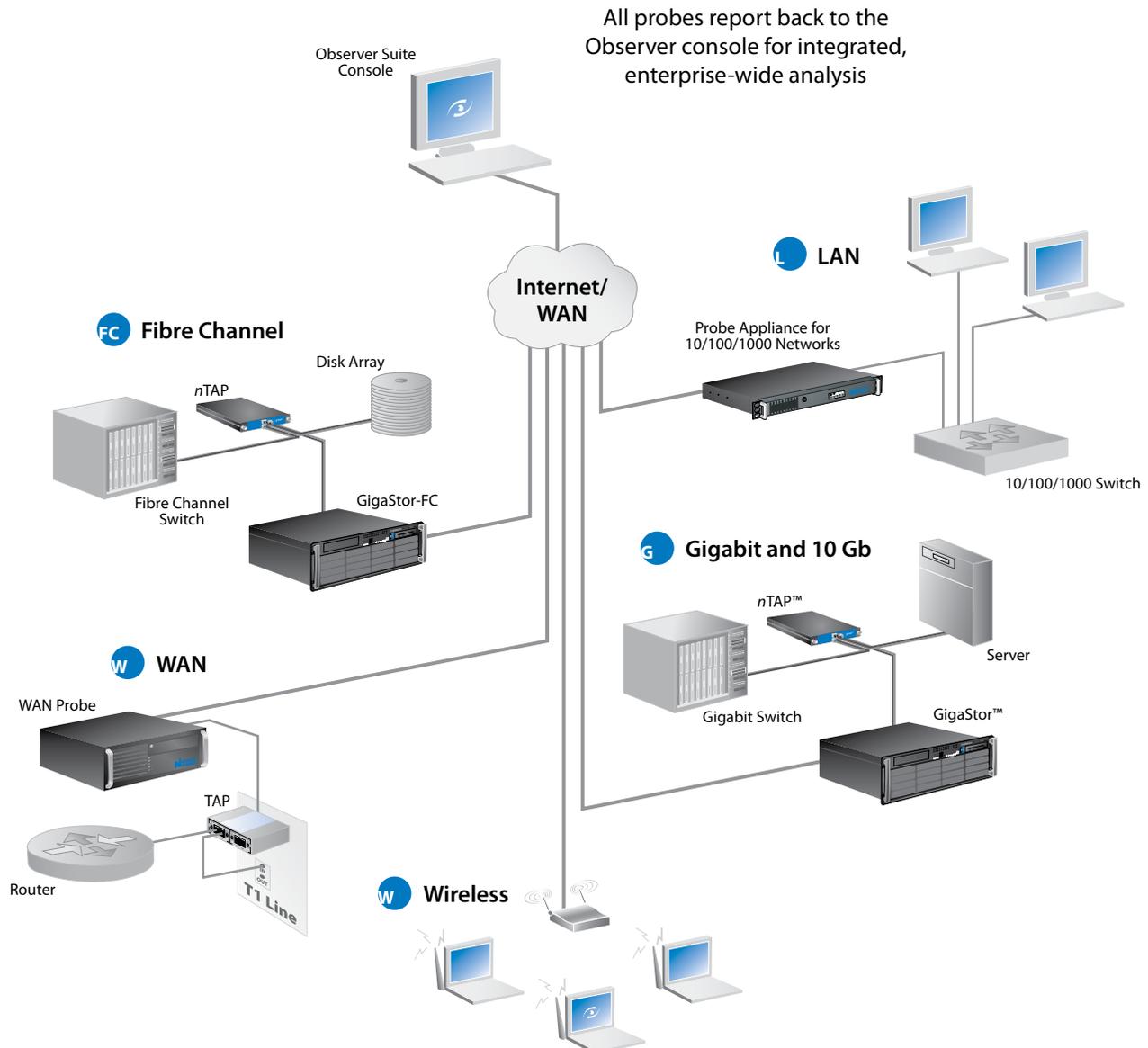
Distributed analysis for local and remote networks

## Monitor and troubleshoot vital network links in real time from any location

Network Instruments® offers a complete line of software and hardware probes for monitoring network activity across multiple topologies. Choose from a diverse range of probe options to meet your specific network needs. Network Instruments probes support LAN, WAN, gigabit, 10 gigabit Ethernet, Fibre Channel, and 802.11. Additional options include RMON and HCRMON support. Use probes for troubleshooting, collecting NetFlow data, proactive monitoring, long-term data collection, or for network forensics. Probes report to Observer consoles located anywhere on the network for complete, distributed visibility.

### Probe Advantages:

- Gain insight and visibility into every part of the network
- Manage remote networks as easily as local networks
- Eliminate the time and expense of traveling to remote sites
- Speed troubleshooting by sharing probe-collected data with others



## Observer Console Options

All Network Instruments probes report to Observer consoles located anywhere on the network for distributed visibility. Three levels of Observer consoles are available:

### Observer

Observer Standard analyzes data in real time, providing packet captures, decodes, statistics, triggers and alarms, trending and reporting, error tracking, and router usage metrics.

### Observer Expert

Observer Expert provides all the functionality of Observer Standard, plus a real-time and post-capture Expert system, which identifies network issues and offers immediate solutions. It also includes an extended level of VoIP analysis, conversation tracking, NetFlow and sFlow® data collection, performance predictions, application analysis, and the ability to reconstruct files and transactions from data streams.

### Observer Suite

Observer Suite provides all the functionality of Observer Expert plus SNMP device management, RMON and HCRMON management consoles, and a built-in web-based reporting service. Additional features include SOAP support, a switch station locator, and automated report delivery.



Observer Suite Main Console

## Software Probes

Network Instruments offers software probes to monitor network activity across Ethernet, gigabit, and 802.11 links and has the option to support RMON and HCRMON. Three levels of software probes are available:

### Advanced Single Probe

The Advanced Single Probe reports to Observer consoles located anywhere on the network for distributed visibility, and provides decodes, real-time statistics, and long-term trending. Network data is encrypted before transfer to the console, and probe access is password protected.

### Advanced Multi-Probe

The Advanced Multi-Probe provides all the functionality of the Advanced Single Probe, plus the ability to setup and monitor multiple interfaces concurrently, allows multiple administrators access for real-time collaboration from any remote location, and supports the industry's largest capture buffer.

### Advanced Expert Probe

The Advanced Expert Probe includes all the functionality of the Advanced Multi-Probe, plus displays remote Expert Analysis in real time for faster troubleshooting, performs packet captures and real-time decodes. All data is analyzed on the probe itself delivering only results to the Observer console. This functionality conserves network bandwidth by eliminating the need to transfer data packets over the wire.

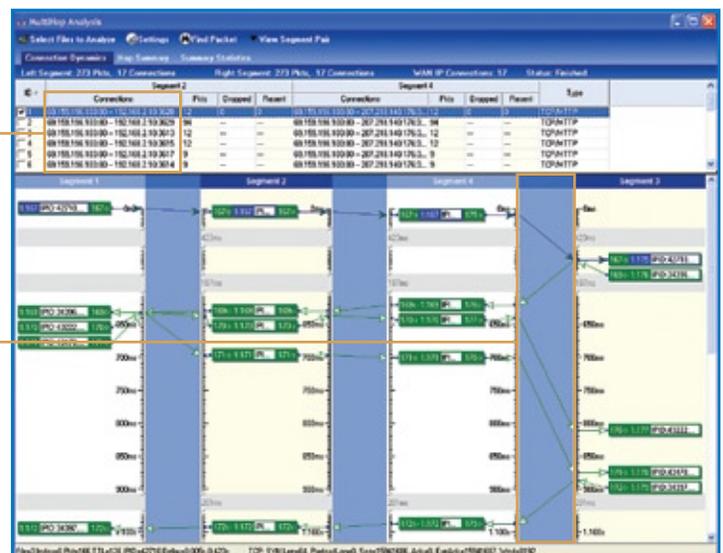
Grant or deny permissions based on user

Access	User Accounts	Encrypt Data	Configure	Redirect	Select Adapter	Capture Packets	Network Trending	Internet Patrol	WAN Configuration	Modify Packet Capture Size
<input type="checkbox"/>	admin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	omnis (Administrator)	<input checked="" type="checkbox"/>								
<input checked="" type="checkbox"/>	jdavison	<input checked="" type="checkbox"/>								
<input checked="" type="checkbox"/>	july	<input checked="" type="checkbox"/>								
<input checked="" type="checkbox"/>	lindner	<input checked="" type="checkbox"/>								
<input checked="" type="checkbox"/>	trammson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Probe Security Options

Track individual network segments

Pinpoint transaction delay



MultiHop Analysis

## 10/100/1000 Ethernet Analysis

Monitor Fast Ethernet and 10/100/1000 network links by deploying Ethernet probe appliances throughout the enterprise.

### Probe Appliance for 10/100/1000 Networks

The probe appliance for 10/100/1000 networks can monitor one or two links. This probe permits multiple sessions by users, includes user-based security options, and performs real-time Expert processing on the probe itself to conserve bandwidth. Use the 10/100/1000 Probe Appliance to monitor VLAN activity at remote sites.



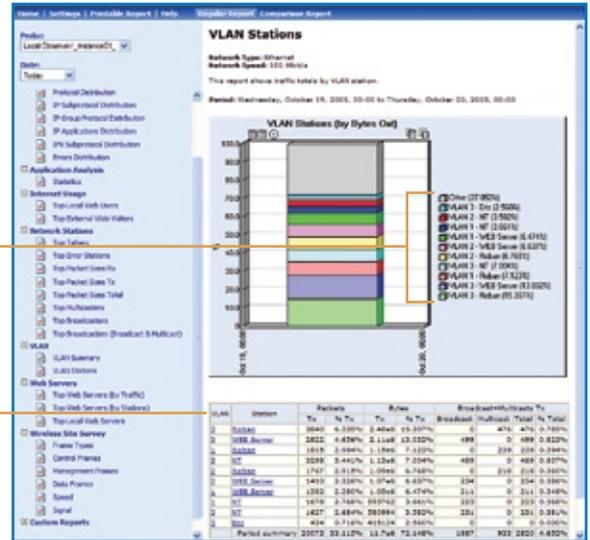
10/100/1000 Probe Appliance

### Multi-Port Probe Appliance for 10/100 Networks

The Multi-Port probe appliance for 10/100 networks can monitor up to four Fast Ethernet links simultaneously and speeds problem solving with its multi-session support. It performs Expert analysis and packet decodes on the probe itself to conserve bandwidth.

### 10/100 Full-Duplex Probe Appliance

The 10/100 full-duplex probe appliance monitors full-duplex Fast Ethernet networks, helping reduce dependence on a SPAN or mirror port, reducing switch load, and ensuring data integrity. The probe offers options to perform real-time Expert processing on the probe itself to speed troubleshooting and conserve bandwidth, as well as user-based security options.



VLAN station traffic totals

Detailed VLAN packet information

VLAN Stations Report

## WAN Analysis

WAN-specific probes offer complete inline monitoring, decode and statistics for WAN traffic, and all header and payload data for WAN links.

### WAN Probe Appliance

The WAN Probe Appliance (a 4U rack unit) monitors all header and payload data on serial and digital WAN links. Monitor up to 16 links individually or in aggregate, obtain metrics in real time, and solve issues immediately with a comprehensive Expert system. The probe also displays DCE/DTE traffic individually or in aggregate, shows CIR (Committed Information Rate) to compare with an SLA (Service Level Agreement), and tracks conversations through up to 10 segments or hops.

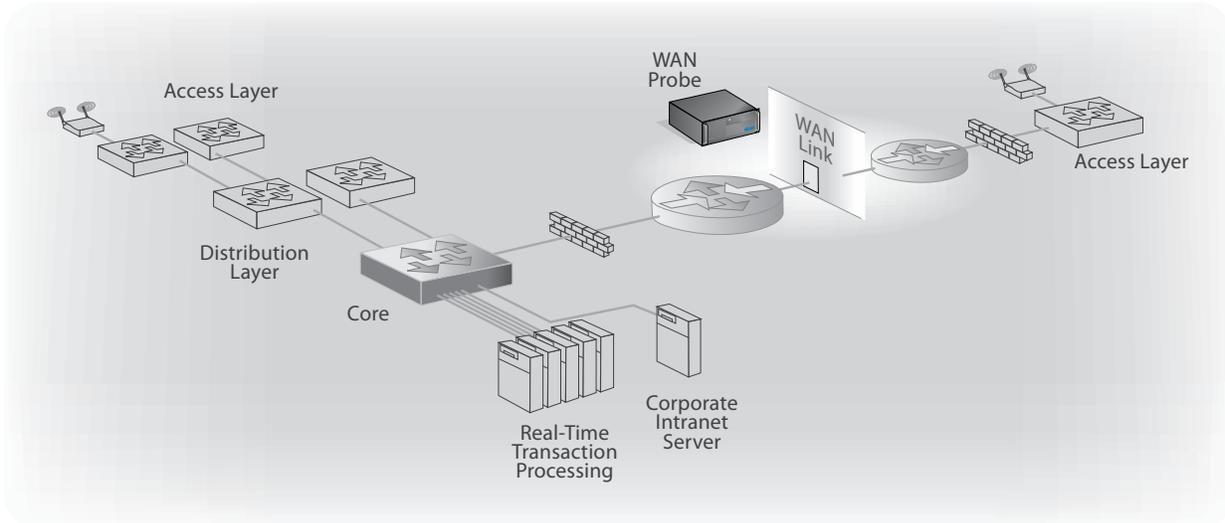
Summary of bandwidth usage on a WAN link

Spot unusual link activity



WAN Bandwidth Utilization

### An Example of a WAN Probe Deployment



## Gigabit and 10 Gigabit Ethernet Analysis

Gigabit and 10 Gb probes provides a direct, passive link into the data stream, offering an independent, proven, and trusted view of gigabit and 10 Gb traffic.

### Exclusive Gen2™ Capture Technology

All full-duplex gigabit and 10 Gb probes include Gen2 capture card technology. This card, designed by Network Instruments, takes full advantage of 64-bit Observer to guarantee the fastest real-time Expert processing, and supports the largest capture buffers in the industry.

For full-duplex gigabit networks, the Gen2 card provides analysis port flexibility with the ability to monitor up to 8 ports for any combination of SPAN sessions, full-duplex connections, and trunked links. The card also uses SFP technology to easily switch between monitoring copper or optical links.

For 10 Gb networks, the Gen2 card is capable of sustaining 10 Gb full-duplex captures at line rate. Critical functions such as filtering and statistics are performed directly on the card.

### Gigabit Probe Appliance

The Gigabit Probe Appliance is a 4U rack unit that monitors up to four full-duplex gigabit links at wire speed. This probe offers visibility into individual or trunked links, real-time Expert processing at the probe to speed troubleshooting and conserve bandwidth, multiple sessions by users, user-based security options, and support for the industry's largest memory buffer (up to 24 GB).

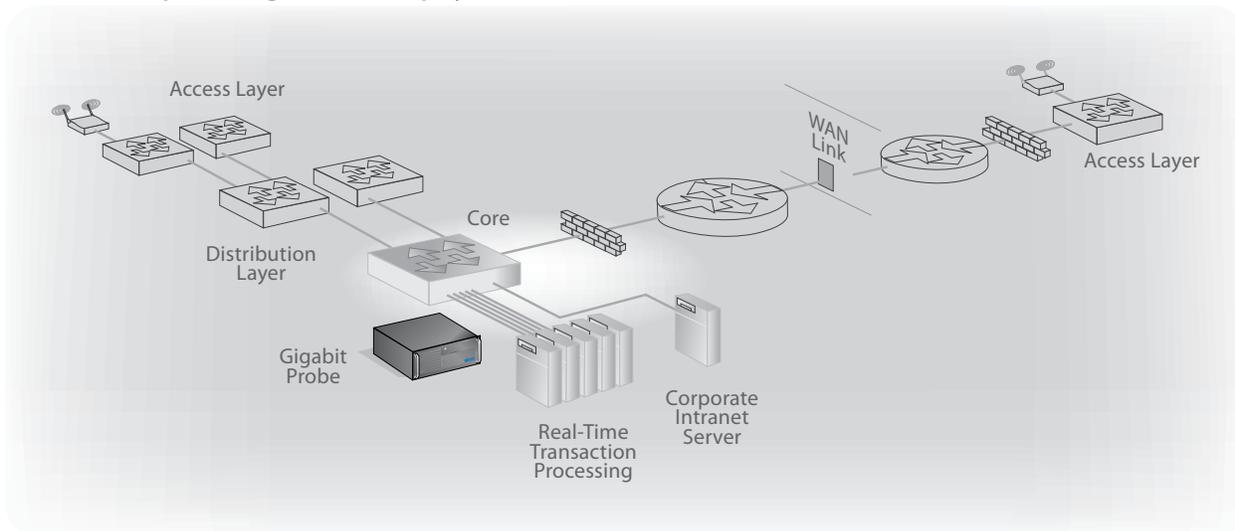
### 10 Gb Probe Appliance

The 10 Gb Probe Appliance is a 4U rack unit that can monitor a single full-duplex link at line rate, provides real-time Expert analysis, and hardware-based filtering and statistics.



10 Gb Probe Appliance

### An Example of a Gigabit Probe Deployment



## Fibre Channel Network Analysis

Network Instruments' Fibre Channel product family brings together award-winning analysis technology with hardware appliances for monitoring and troubleshooting storage area networks.

All Network Instruments SAN analyzers rely on Gen2 capture card technology. Gen2 greatly augments Observer's SAN analysis capabilities by providing analysis port flexibility, upgradeable firmware, and ensuring accurate time-stamping across multiple Fibre Channel links.

### Fibre Channel Probe Appliance

The 64-bit, 4U rack Fibre Channel probe appliance is the ideal solution for ensuring complete and accurate real-time captures on your SAN. Monitor up to four ports for any simultaneous combination of SPAN sessions, full-duplex connections, and trunked links. The appliance can configure as a local console for on-site analysis and also reports to any Observer Expert or Observer Suite console on the network.



Fibre Channel Network Conditions Summary

# Retrospective Network Analysis – GigaStor™ Appliances

High-end performance systems for large-scale analysis, data mining, compliance, and network forensics

Network Instruments provides a full line of probe appliances that can perform back-in-time or retrospective network analysis. Known as the GigaStor, these units offer massive amounts of storage capacity, a unique time-based navigation system, and fast write-to-disk speeds for continuous wire-speed capture.

## Use the GigaStor to:

- Perform high-level application views and deep packet analysis from one device
- Utilize a time window to quickly isolate problems
- Enforce internal and external corporate compliance
- Supply forensics data with packet reconstruction
- Monitor Gigabit, 10 Gb, Fibre Channel, WAN, Ethernet, and WLAN
- Eliminate the laborious task of having to recreate or duplicate network problems

## GigaStor Advantages

### High-Performance

- Resolve events down to the nanosecond with time-based navigation
- Real-time Expert processing on the probe - eliminating unnecessary data transfer
- Flexible filtering technology helps immediately pinpoint the problem
- Gen2™ technology optimizes data capture for analysis

### High-Capacity

- Capture up to 12 TB of network data (or write to SAN)
- 64-bit core permits up to 24 GB memory buffer
- For more storage, GigaStor Expandable scales up to 48 TB

### Easy-to-Deploy

- Reports back to any Observer Expert or Observer Suite console
- Can be configured as a local console for on-site analysis

### Network Forensics

- Capture and reconstruct data to maintain compliance
- Ideal for transaction-heavy organizations

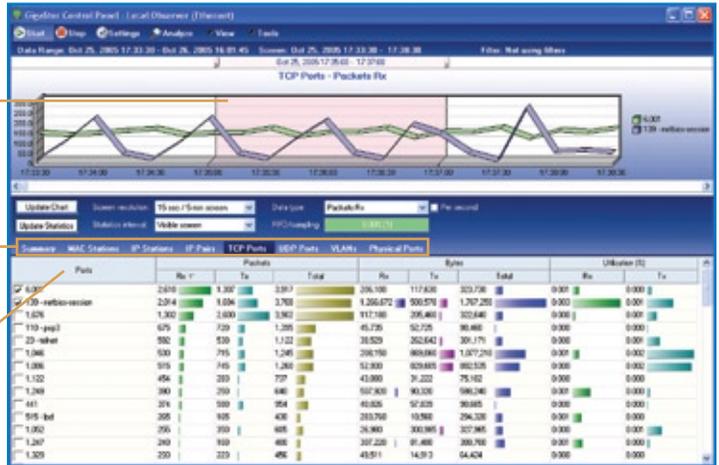
### The GigaStor is applicable for:

- 10/100 networks
- Gigabit networks
- 10 Gb networks
- WAN links
- Fibre Channel networks
- WLAN links

Isolate down to the nanosecond

Review individual or aggregate statistics

Segment to individual port or station

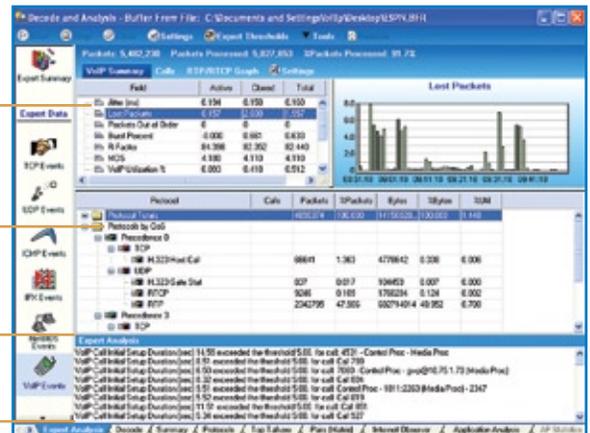


GigaStor Interface

Resolve jitter issues

Obtain Quality of Service metrics

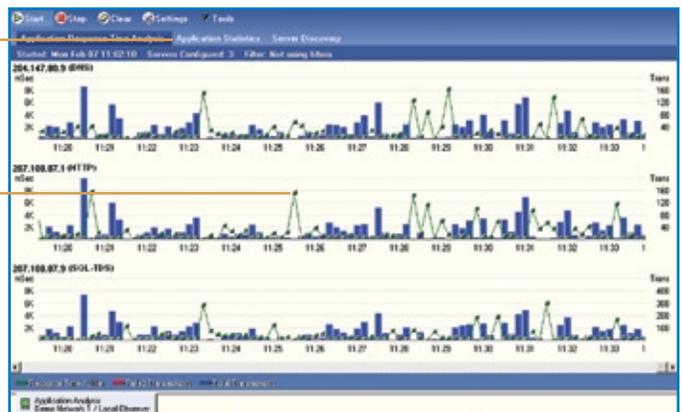
Breakdown with Expert Analysis



VoIP Analysis

Drill down to individual statistics

Track application response time



Application Metrics



GigaStor Appliance

## Portable Analysis Systems

For field locations, choose a Network Instruments Portable Analysis System. These luggable analyzer systems are all-in-one units that can provide real-time packet capture, analysis, detailed statistics, retrospective analysis, reporting and more—at targeted places on your network.

Portable Systems are available to monitor the following links:

- Wide Area Networks
- Full-Duplex Gigabit
- Full-Duplex 10 Gb
- Fibre Channel Links

Completely passive, the portable analysis system will not interfere with or add unnecessary traffic to your network. Each unit comes with a Network Instruments nTAP™ to ensure continuous data delivery to the analyzer. For additional capability, every field service solution can connect to any Observer Expert or Observer Suite console on the network allowing you to share statistics, analysis, and reports with others or providing you with the capability to monitor other network segments simultaneously. GigaStor versions also available.

Each unit contains:

- Observer Suite console software
- Capture card (Gigabit, 10 Gb, Fibre Channel, or WAN)
- 10/100/1000 Ethernet management port
- All required cabling
- nTAP
- Built-in display, keyboard, trackpad, and DVD-RW drive
- Durable, hard case appropriate for airline travel



Portable Analysis System

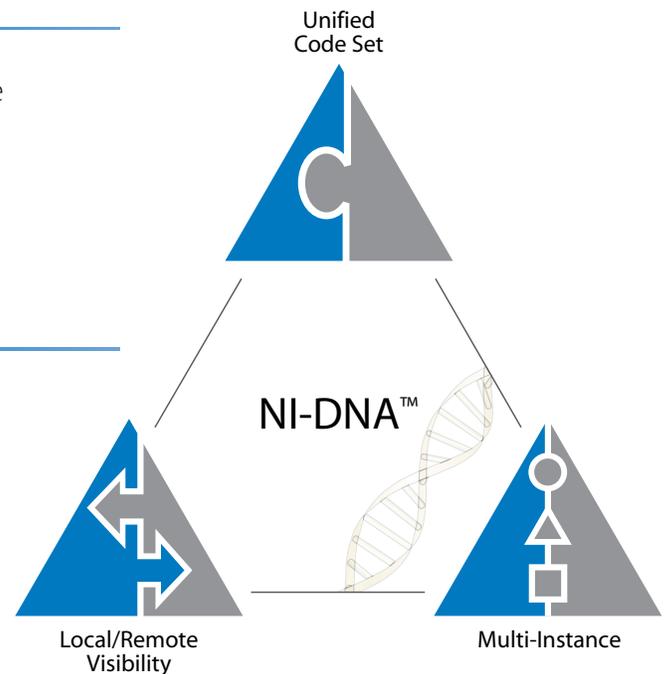
## Probe Management

### Network Instruments Management Server (NIMS™)

NIMS retains a list of usernames, passwords, and permission levels for multiple probes on the network to globally authenticate users. It can link a local Windows system, Active Directory server, or RADIUS system to consolidate user account lists. For the network manager, NIMS provides centralized licensing, security, and an update system as well as failover redundancy for more efficient probe management. For network administrators, NIMS provides shared access to analysis tools, including Observer's filter library.

## Driven by Distributed Network Analysis (NI-DNA™)

Network Instruments has a unique competitive edge in the network analyzer market with its Distributed Network Analysis (NI-DNA) architecture. All Network Instruments products are built from a **unified code set** that ensures the user experience and product functionality are identical regardless of topology or location. Observer consoles analyze local networks and connect to distributed probes to provide both **local and remote visibility** across the entire organization. With **multi-instance support**, Observer can simultaneously monitor up to 64 unique network sessions across any topology, offering incredible analysis flexibility.



### 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](http://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.



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