



## NetAnalyst™ Test Management Software

Automated, Centralized Network Testing

NetComplete® Service Assurance Solutions Portfolio



# Ensure High Quality of Service with NetAnalyst



As telecommunications networks continue to evolve, in the fast-paced Internet protocol (IP) broadband service environment, service providers must differentiate themselves from the competition by rapidly deploying services, minimizing network downtime, and providing excellent customer care. Reliability, efficiency, and cost-effectiveness are crucial. As networks expand to offer a wide range of services, providers rely on operational support systems (OSSs) to efficiently manage their networks. Today's powerful new OSSs must offer best-in-class capabilities to ensure high-quality service throughout the network service life cycle.

NetAnalyst Test Management Software, an integral part of the JDSU NetComplete Service Assurance Portfolio is a powerful OSS that resides at the core of a successful service fulfillment and assurance strategy. NetAnalyst supports the testing of traditional time division multiplexing (TDM) network private line services and optical transmission facilities with next-generation packet-based IP broadband services. This unique combination enables service providers to efficiently manage service delivery, maintenance, and end-customer quality of experience (QoE) on legacy, converged, or new broadband networks. In addition, NetAnalyst protects investments in OSS integration infrastructure via Web services-based architecture and open-use application programming interface (API) that integrates easily and inexpensively with other OSSs and back office systems. NetAnalyst stands ready to enable service providers to pull out ahead of the competition—for current and future network services. This brochure discusses the benefits, capabilities, and advantages of NetAnalyst.

## Highlights

- **Streamlines Network Test and Monitoring**  
Provides 24 x 7 automated test and monitoring from a centralized location.
- **Point and Click for Rapid Turn-Up and Recovery**  
Reduces service turn-up and recovery time from hours to minutes—dramatically improving customer service and minimizing revenue losses associated with service outages.
- **Flow-through Turn-Up Verification**  
Supports integration of turn-up testing with service activation and work-flow management OSS applications, accelerating time to revenue.
- **Simultaneous Testing of Multiple Services**  
Supports centralized testing of private line services, synchronous optical network/synchronous digital hierarchy (SONET/SDH) optical facilities at rates from DS0 to OC-192 and E1 to STM-64, as well as broadband and IP data services, Ethernet business class and backhaul services, various Digital Subscriber Loop (xDSL) access technologies—all from a single platform.
- **Remote Test Resource Administration**  
Provides a common graphical interface for remote operations, administration, and maintenance (OAM) activities, resulting in effective equipment management of NetAnalyst-enabled test resources.
- **Flexible, Scalable Architecture**  
Distributed, UNIX-based system enables expansion from an entry-level to a carrier-class system allowing NetAnalyst to scale as the service provider's network evolves.
- **Designed for Evolving Network Operations**  
Utilizes services-oriented architecture (SOA) with Web service and Java APIs to simplify and accelerate the addition of new features while protecting investment in network management infrastructure.

# The Value of Automated, Centralized Test Management



*NetAnalyst lets  
service providers  
improve workforce  
productivity and  
reduce mean time  
to repair*

## **Automated Service Turn-Up Verification for Faster Provisioning**

NetAnalyst enables automated service fulfillment by combining acceptance testing with provisioning workflow. By integrating acceptance testing with order management, circuit design, and service activation processes, service providers can drastically reduce time to complete the provisioning process.

## **Automatic Trouble Management Testing**

To be efficient, service providers must integrate customer, inventory, and services data with their trouble management systems. NetAnalyst enables streamlined trouble management by integrating testing with third-party trouble ticketing and fault management OSSs. With NetAnalyst, service providers can drastically improve workforce productivity by accelerating trouble ticket resolution, minimizing costly “no trouble found” dispatches, and reducing mean time to repair (MTTR).

## **Standardization of Best Practices Testing**

The NetAnalyst powerful script generator, scheduler, and test library functions allow service providers to establish best practices for deploying service. With the ability to schedule testing and automatically distribute results by e-mail, providers can standardize enterprise-wide test and monitoring procedures to accommodate specific business practices.

## **Integrated Test Management of Multiple Services**

NetAnalyst simplifies complex service delivery and service handoff testing for multiple technologies from all points within the network. Its single efficient platform provides common workflow and transparent test access for multiple network elements, vendors, and technologies.

## **Network Boundary Sectionalization**

Service providers know that many customer trouble tickets are caused by faults that reside outside of the provider's network. NetAnalyst enables network operations center (NOC) and customer-care technicians to quickly determine if faults lie within customer premises equipment (CPE), the service provider's network, or beyond service handoff points. Network fault isolation allows service providers to reduce finger-pointing issues and restore service faster.

## **Organized, Phased Approach to Systems Deployment**

The NetAnalyst distributed, UNIX-based architecture supports scalable, well-coordinated systems implementation. By enabling the solution to expand from an entry-level system to a sophisticated carrier-class installation, NetAnalyst supports seamless, extendible test capacity.

# Benefits

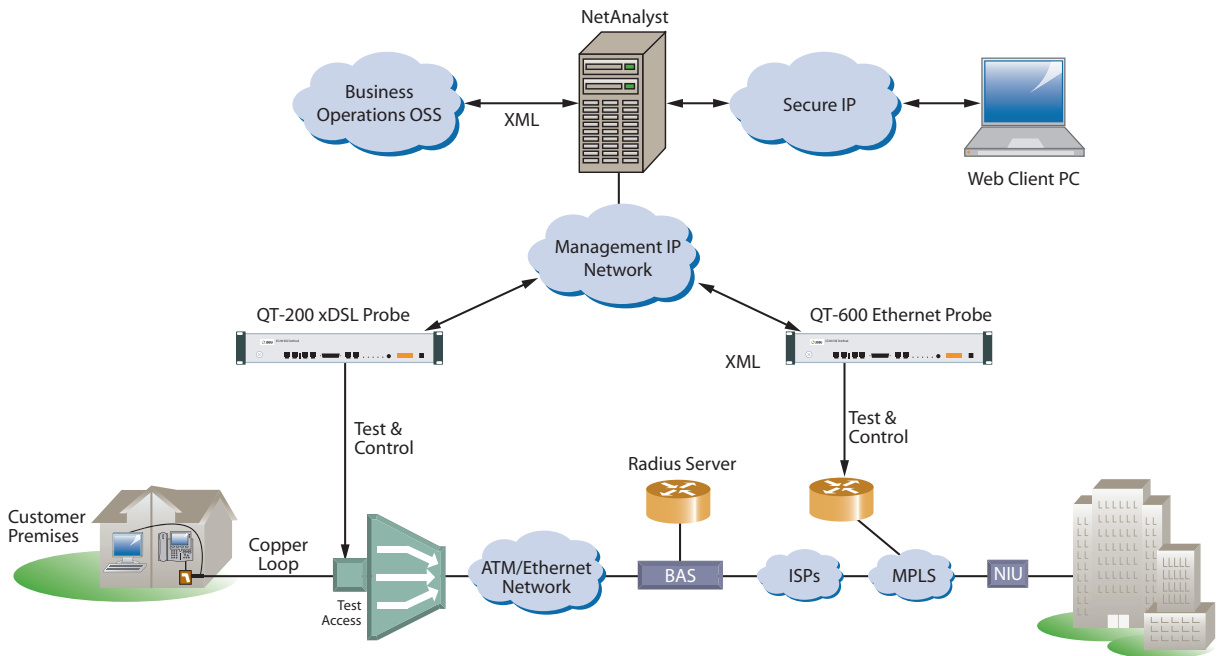
*NetAnalyst  
maximizes  
operational  
productivity  
making efficient  
use of resources*

## Grow Revenue Quickly

NetAnalyst allows service providers to shorten the long provisioning cycles typically associated with deploying services. Automated, flow through provisioning lets service providers provide rapid acceptance testing on new services, expediting the billing process.

## Use Resources More Efficiently to Reduce Operating Expenses

Maximizing operational productivity requires efficient use of resources. The robust, easy-to-use graphical user interface (GUI) of the NetAnalyst provides the tools for technicians of all skill levels to quickly identify and understand service quality problems. NetAnalyst allows service providers to reduce training, maintenance, and support costs, and still maintain high-quality service. NetAnalyst eliminates operational bottlenecks caused by the scarcity of skilled IP technicians with its powerful Tier 1 technician GUI and test automation tools for new broadband service offerings. NetAnalyst significantly reduces MTTR and maintenance costs by verifying, isolating, and finding the root cause of the problems without field dispatch, allowing a service provider to dispatch only when necessary.



NetAnalyst Broadband Testing

# Benefits

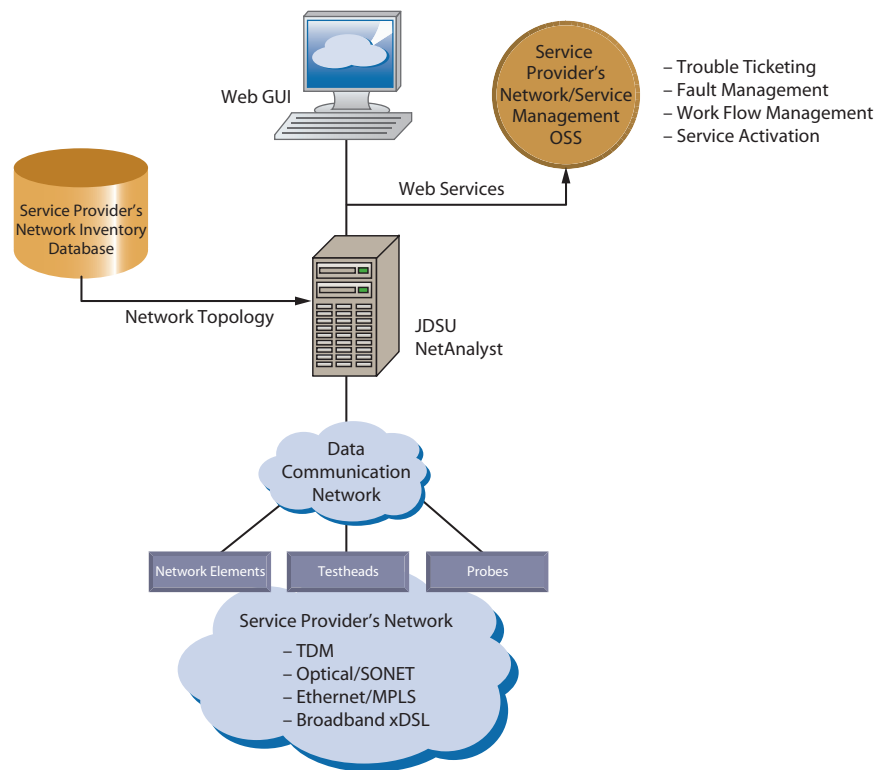
*NetAnalyst enables superior customer care by decreasing response time and minimizing service and network downtime*

## Ensure Competitive Advantage with Higher Quality Service

In a competitive environment, service providers must continually increase market share by adding new customers and services while retaining the existing customer base. As network product and service portfolios grow, providers can differentiate themselves by how quickly they deploy services and minimize network downtime. NetAnalyst offers testing capabilities that facilitate immediate responses to customer inquiries and superior customer care—a competitive advantage for the service provider.

## Protects Your Investment

As networks and technologies evolve, NetAnalyst protects your network infrastructure investment. An open architecture API allows for easy and inexpensive integration with other OSS and back office systems. Together with NetOptimize™ performance management OSS suite and the JDSU QT family of probes, NetAnalyst and JDSU offer continual support for current and future networks.



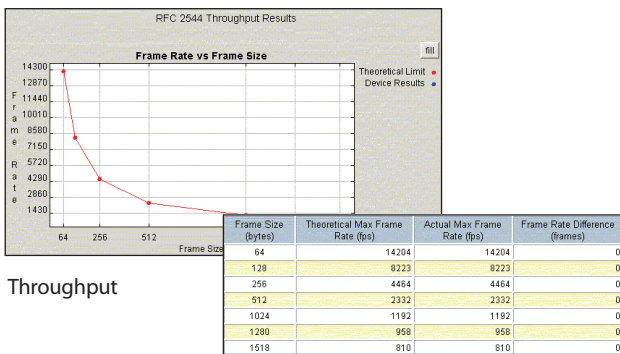
NetAnalyst Deployment Architecture

# Next-Generation Network Testing

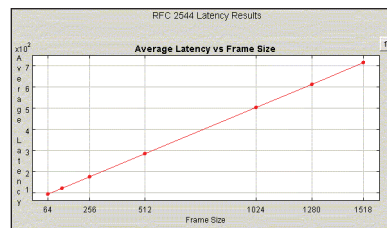
NetAnalyst lets technicians effectively maintain and troubleshoot both legacy TDM and IP broadband services, including testing applications for xDSL and 10/100/1G Ethernet business and mobile backhaul services.

## Access Technologies Testing: Ethernet/xDSL

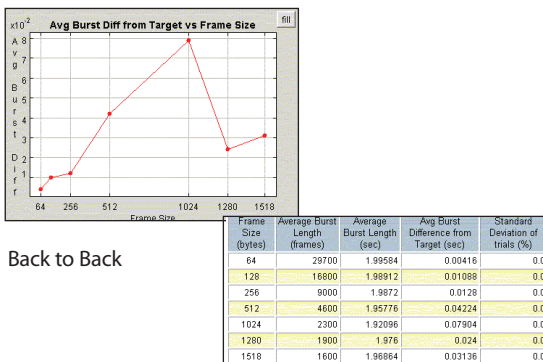
Ensuring the successful deployment and profitability of IP services over Ethernet and xDSL networks requires remote visibility into the customers' connections and service quality. With the extensive experience of JDSU with centralized test systems, its NetAnalyst provides the ability to perform the necessary testing and controlling of network elements and test access devices in the network to streamline the turn-up and trouble resolution processes. By integrating industry standards, such as RFC-2544, and establishing partnerships with network interface unit (NIU) and network equipment (NE) manufacturers, JDSU is able to remotely verify network performance from the core of the network to the customer premises. For xDSL networks, similar integration and partnerships allow JDSU to seamlessly integrate with NEs to automatically and remotely access and test the desired copper loops and verify the operational status of service provider and Internet service provider (ISP) networks.



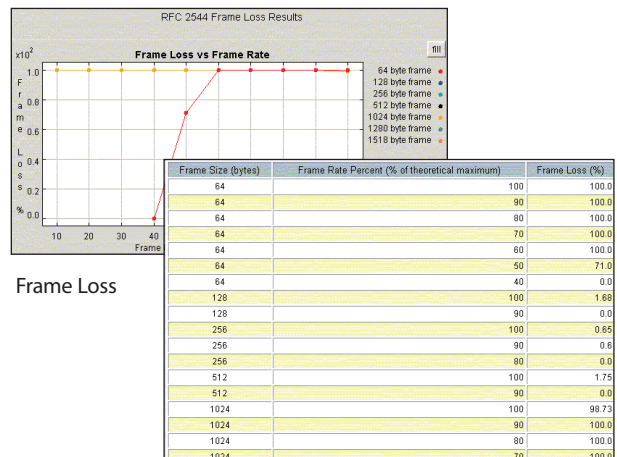
Throughput



Latency



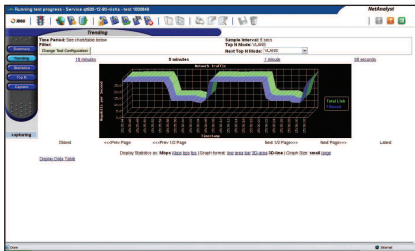
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Frame Loss

Sample NetAnalyst Turn-Up Test Results

# Next-Generation Network Testing



Sample NetAnalyst Ethernet Test Results

## Ensuring IP Data Services Quality and Availability

For many triple-play implementations, IP connectivity provides the transport mechanism for voice and video services in addition to data connectivity. As a result, ensuring IP network operability is critical. NetAnalyst, in conjunction with the JDSU QT family of probes, provides critical IP service assurance for xDSL and Ethernet networks. For xDSL services, NetAnalyst provides both look-in and look-out testing from Digital Subscriber Line Access Multiplexer (DSLAM), clearly sectionalizing problems. xDSL testing includes copper qualification and bit rate prediction to the end user and asynchronous transfer mode (ATM), Point-to-Point Protocol (PPP), and IP connectivity verification. For 10 Mbps, 100 Mbps, and Gigabit Ethernet services, NetAnalyst monitors a host of Ethernet and IP parameters, including RFC-2544 conformance, link status, bandwidth utilization statistics, IP conversation analysis, robust filtering with capture, and integrated expert analysis of data and control plane faults.

## Conclusion

NetAnalyst is a breakthrough test and management solution. An integral part of the JDSU NetComplete Service Assurance Portfolio, NetAnalyst lets service providers offer automated centralized testing from the NOC, saving time, money, and driving quality service. The NetAnalyst open API facilitates integration with existing OSSs, test systems, and back-office systems to enhance the service fulfillment and service assurance business processes. Because NetAnalyst simplifies the testing process, providers can quickly boost revenue by turning up service faster and with higher quality.

The JDSU NetComplete portfolio provides comprehensive Service Assurance Solutions—including industry-leading test probes, software, and systems—that support worldwide communications providers delivering next-generation network services. Developed with extensive JDSU test and measurement knowledge, NetComplete offers best-in-class performance monitoring and test and troubleshooting for broadband IP services, providing meaningful quality metrics for understanding and guaranteeing service performance. Incorporating innovative troubleshooting and analysis features, NetComplete greatly facilitates fault isolation and troubleshooting for even the most complex customer-impacting issues. The result—reduced operating costs, high-quality IP services, and true customer satisfaction.



### Test & Measurement Regional Sales

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