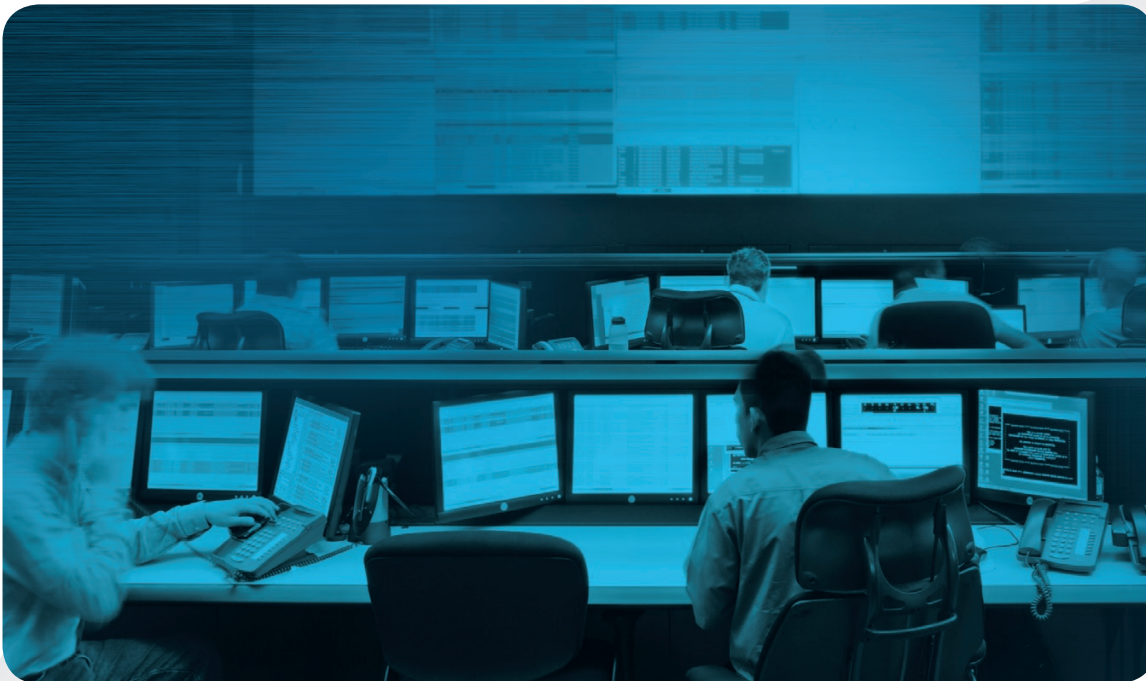


BrixNGN Solution Overview



Continually monitors the performance and quality of real-time IP services.

KEY FEATURES

Provides a quality advantage through scalable, converged service assurance solutions for next-generation networks

Supports proactive monitoring of IP/MPLS core for mobile backhaul, Ethernet business services and metro Ethernet networks

Monitors service quality, performance and availability 24/7 from the network core to customers

Validates installation of services with turn-up tests and reports

Improves mean-time-to-repair (MTTR) by segmenting the network to quickly isolate problems

Establishes multiple service levels and manages service-level agreements (SLAs)

END-TO-END SERVICE ASSURANCE STARTS AT THE NETWORK CORE

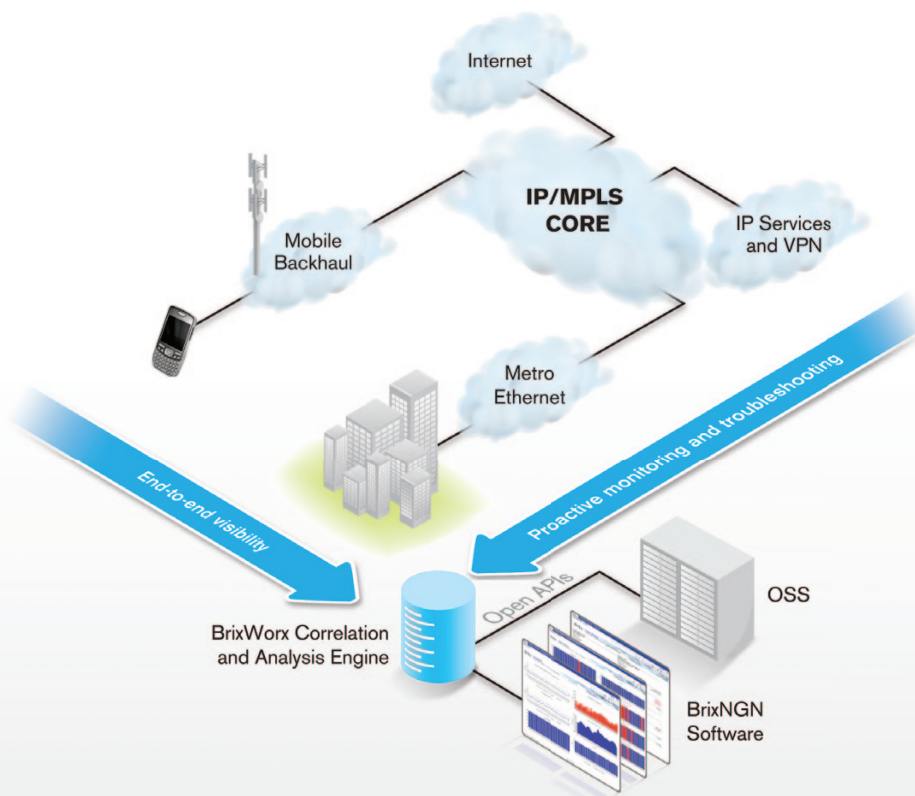
The future of business and residential communications and entertainment is based on the convergence of IP-based voice, video and data services. Both wireline and wireless service providers are transitioning to next-generation IP/MPLS networks. These next-generation networks provide the foundation for converged services, such as voice-over-Internet protocol (VoIP), IP video, enterprise connectivity and metro Ethernet.

Providers see many benefits in transitioning to next-generation networks, including lower capital and operational expenses, a more efficient delivery of dynamic service packages that increase the average revenue per user (ARPU), and less customer churn. However, providers face new service management challenges as they must focus on service quality and meeting high customer expectations. Adding to these challenges, providers increasingly need to monitor the performance of each service across the network to validate they are meeting technical, business and customer needs, and to ensure that the interaction of these revenue-sensitive services are properly managed and adjusted to accommodate demand and service anomalies.

To succeed, providers have to differentiate their service offerings on quality, rather than merely competing on price. End-to-end network and service visibility is a requirement for meeting performance and quality objectives and ensuring stringent SLAs. Without the necessary visibility, providers are at serious risk for crippling service degradations and outages, which lead directly to an escalation in customer care costs, eroding profit margins, increased customer churn and severely damaged reputations.

The network core is the heart of the service delivery network and where successful providers' service assurance strategies start. To effectively guarantee end-to-end SLAs and meet customers' requirements, providers must implement a service assurance solution that provides visibility from the provider edge and to end-users, while allowing segmented views of service quality for problem isolation. By continually monitoring the performance and quality of real-time IP services, and not just the physical network devices, EXFO Service Assurance's BrixNGN provides the most effective service assurance solution.

With BrixNGN, providers can continuously collect, correlate, analyze and visualize critical quality of service (QoS) and quality of experience (QoE) data from the network core to the customer endpoint for capacity planning, verifying service turn-ups, and identifying, diagnosing and quickly resolving network as well as service performance issues before customers are impacted—thereby guaranteeing quality.



NETWORK AND SERVICE PERFORMANCE MONITORING

EXFO Service Assurance's highly scalable and modular converged service assurance solution, the Brix System, is designed to support the most demanding service provider networks. Leveraging a comprehensive family of measurement sources (Brix Verifiers), as well as third-party devices and industry standards, the Brix System provides 24/7 network and service performance monitoring.

The BrixNGN software module performs continuous, proactive monitoring of the network core, extended Ethernet and IP networks between partners and customers as well as data services, including e-mail, web-based applications, file transfers, etc. With BrixNGN, providers have the required visibility into their network and the service performance and quality to prove service-level objectives. BrixNGN evolves network monitoring and engineering functions from a break/fix reactionary method to a proactive approach, enabling early detection and quick resolution of service affecting issues.

When layering additional voice and video services on the service delivery network, providers can also seamlessly implement the optional BrixCall™ and BrixVision™ modules, respectively, to monitor the performance and quality of all of their converged IP services from a single, unified platform.



TROUBLESHOOTING AND PROBLEM ISOLATION

Starting at the core and moving out to the edge and then to customers' endpoints, BrixNGN allows providers to establish strategic points of demarcation that can be used to quickly identify and isolate problems. By continually monitoring critical key performance indicators (KPIs), such as availability, latency, packet loss and jitter, providers can set thresholds and alarms to alert them of potential service degradations and indicate where in the network they are occurring. BrixNGN collects this information from Brix Verifiers, other devices and industry standards, such as 802.1ag, Y.1731 and TWAMP, to isolate problems through network segmentation and provide a cost-effective method of measuring service quality. With BrixNGN, providers have the information they need to significantly improve MTTR, reduce trouble tickets, and provide more effective and efficient customer care.



NETWORK CAPACITY PLANNING AND TURN-UP VERIFICATION

BrixNGN enables providers to proactively monitor and baseline network traffic patterns, throughput and link paths to ensure new services can be properly supported over next-generation networks. When the service goes live, providers can also use BrixNGN to conduct on-demand and scheduled tests to generate instant "birth certificate" reports for turn-up validation and detailed troubleshooting results when a problem is identified. This affords providers the assurance that the service(s) worked as promised from the onset and provides a benchmark for future potential service issues.



SERVICE LEVEL MANAGEMENT

When providers leverage best-effort data delivery systems such as Ethernet for their services, real-time SLAs are a requirement. The BrixNGN module feeds the BrixWorx™ correlation and analysis software engine with the performance and quality information to produce the advanced analytics and visualization (real-time dashboards, historical reports and customer portals) to manage and continually prove SLAs. Reports address the needs of a broad audience from technical to executive levels to provide the business intelligence required for the organization to be successful. With EXFO Service Assurance delivering high-level, at-a-glance, audience-appropriate reports, deep diagnostic capabilities, and customer facing portals, providers can simplify SLA management as well as provide customer visibility into their SLAs.

The open architecture of the Brix System also allows providers to seamlessly integrate this award-winning converged service assurance solution with their existing operational support systems (OSS) and business support systems (BSS) to provide a complete unified view of network and service performance.

EXFO Service Assurance offers a suite of monitoring options to provide effective, end-to-end service assurance.

AVAILABLE TESTS

Carrier Ethernet Test:

- >Loopback
- >Linktrace
- >Frame Delay
- >Throughput

VPN

- >Site-to-site availability and performance
- >Monitor per-site traffic distribution
- >Quality of service
- >DiffServ, VLAN

One-Way Performance

- >One-way latency, jitter, loss

Infrastructure Services

- >DHCP
- >DNS
- >LDAP
- >RADIUS
- >SNMP

Network and Connectivity

- >Ping, traceroute
- >Treno—TCP bandwidth
- >UDP bandwidth
- >TCP/Echo, UDP/Echo

Traffic Monitoring

- >TCP application performance
- >Network utilization, packet size distribution
- >Top clients, top servers

E-Mail Servers

- >Send and receive e-mail performance
- >SMTP, POP3, IMAP4

Web-Based Applications

- >HTTP, HTTPS, application scripts
- >File transfer, FTP, FFTP

EXFO SERVICE ASSURANCE

EXFO Service Assurance is a global provider of converged service assurance solutions that allow the world's largest service providers and enterprises to offer reliable and high-quality experiences in voice, video, data and mobile services to their customers, partners and employees. The company brings a proven heritage of IP expertise unique to the service assurance marketplace and collaborates closely with its customers and partners to assure the delivery of any IP-based service, over any network, to any endpoint. EXFO Service Assurance's seamlessly integrated hardware and software products, collectively called the Brix System, are converged service assurance solutions that proactively monitor IP service and application quality. Network operators use the Brix System to guarantee the successful launch and ongoing, profitable operation of their various IP services.

The Brix System improves the overall effectiveness of networks, and allows organizations to maximize their investment in, and increase the value of, their business-critical IP services.

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EXFO is certified ISO 9001 and attests to the quality of these products. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit www.EXFO.com/recycle. **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.**

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In case of discrepancy, the Web version takes precedence over any printed literature.