

Riverbed NPM+

Holistic network observability for Cloud, Zero Trust, and Remote work environments

The Challenge: Network Landscape is Changing and Evolving

In today's digital landscape, effective network observability has become crucial for organizations aiming to ensure seamless digital experiences and robust security. With the proliferation of remote work, cloud services, and complex network architectures, traditional monitoring tools often fall short in providing comprehensive visibility and actionable insights.

The Vanishing Network Perimeter: How It Breaks Legacy Network Visibility

Traditional network monitoring solutions, designed for data center-centric architectures, struggle to provide visibility into today's distributed IT environments. With the rise of remote work, cloud services, and SaaS applications, a significant amount of enterprise traffic bypasses the corporate network entirely, creating blind spots that legacy monitoring tools cannot address. Remote users connect directly to SaaS platforms and cloud applications, often through home networks or public Wi-Fi, making it impossible for traditional network performance monitoring (NPM) solutions to capture and analyze this traffic. As a result, IT teams lose visibility into user experience, network performance, and potential security threats outside the traditional perimeter.

The Encryption Paradox: How Zero Trust Secures—and Obscures—Network Traffic

Zero Trust networking fundamentally changes how traffic is secured and accessed, creating new challenges for traditional network monitoring. By enforcing strict identity verification and least-privilege access, Zero Trust architectures often route traffic through encrypted tunnels, micro-segmentation policies, and software-defined perimeters. While this significantly enhances security by preventing lateral movement and unauthorized access, it also disrupts conventional monitoring tools that rely on deep packet inspection (DPI) or network taps to analyze traffic flows. Encrypted connections obscure packet payloads, making it difficult to detect performance bottlenecks, security threats, or application issues using traditional methods. Additionally, with Zero Trust dynamically controlling access at the user, device, and application levels, network paths are no longer predictable, further complicating visibility.

Without modern visibility solutions that extend beyond the corporate WAN and data center, IT teams are left in the dark, unable to diagnose performance issues or security risks. Organizations need a modernized observability strategy that integrates network intelligence across the distributed environment, enabling end-to-end visibility regardless of where traffic flows. Organizations must adopt modern observability strategies that leverage endpoint telemetry, metadata analysis, and AI-driven anomaly detection to maintain visibility without compromising Zero Trust security principles.

Packets: The Most Reliable Source for Network Analysis

Packets are still the optimal source for “what-did-the-network-do” analysis. How and where you collect packets has shifted though. Encryption and tunneling lowers the forensic value of captured packets using on-premises appliances, so organizations need an approach that sees the data packets before they are encrypted or tunneled.

A better and newer approach is needed for visibility into blind spots. Network Operations teams:

- Cannot solely depend on appliance-centric approaches and can't presume centralized, data center-based only systems will see everything IT requires.
- Need an approach that analyzes packets where the data is readily available and provides the value expected each and every time, i.e. at the endpoint.
- Require simplicity and AI-driven automation to cut through the noise and accelerate remediation.

Riverbed's New Approach to Network Observability with NPM+



Figure1: The NPM+ Core module provides next-gen network observability, delivering expert-level network and application analysis.

Riverbed NPM+ provides advanced network observability solution that combines powerful modules into a single, cohesive SaaS offering. The NPM+ Core and NPM+ UC modules are currently available, while the NPM+ Packet Capture module will be accessible soon. Designed for today's complex IT environments, Riverbed NPM+ delivers a deep, endpoint-driven approach to observability that eliminates network blind spots and enables IT teams to streamline operations, proactively resolve issues, and ensure maximum up time.

Riverbed NPM+ leverages the Riverbed Unified Agent to streamline the deployment, updates, and management of supported NPM+ modules with unprecedented efficiency across client and server and delivering optimal performance while simplifying lifecycle management. By consolidating endpoint-based monitoring into a single, lightweight footprint, Unified Agent eliminates

the need for multiple, siloed agents on endpoint devices. This reduces complexity, minimizes resource consumption, and accelerates the rollout of critical observability capabilities. It also ensures new features, security patches, and performance enhancements are deployed seamlessly, eliminating manual intervention and reducing operational overhead. With centralized control and policy-driven management, IT teams deploy new modules with fine-grained control, where and when they are needed. This unified approach enables enterprises to scale their network monitoring capabilities dynamically, ensuring continuous observability supported NPM+ modules with unprecedented efficiency across client and server and delivering optimal performance while simplifying lifecycle management.

Inside NPM+: Modules & Functions

NPM+ Core Module: Expert-Level Network and Application Monitoring

NPM+ Core Module is the foundation of Riverbed's next-generation endpoint-based network observability, delivering expert-level analysis across both network and application domains. It provides deep packet-based visibility enabling IT teams to pinpoint performance degradations with forensic precision. By correlating network telemetry with application-layer insights, NPM+ Core quickly helps IT distinguish between network and application issues and speeds troubleshooting with a wealth of network metrics, as well as client insights.

Using deep traffic inspection, the NPM+ Core ensures organizations maintain full control over their network, optimizing performance across edge, cloud, and hybrid environments. Its scalable architecture supports enterprise-wide observability, empowering IT to proactively manage service quality, dramatically reduce mean time to resolution (MTTR), and drive continuous performance improvements.

NPM+ UC Module: VoIP & Video Monitoring Without the Guesswork

The NPM+ Unified Communications (UC) Module provides real-time, high-fidelity monitoring of voice and video performance across leading conferencing platforms, including Microsoft Teams, Zoom, WebEx, Google Meet, and more. By leveraging deep packet inspection from endpoint devices, it delivers end-to-end visibility into call quality, including jitter, MOS, packet loss, and other critical metrics that impact call experience.

Advanced AI-driven analytics proactively detect and diagnose performance degradations, distinguishing between network, endpoint, and application-related issues. This enables IT teams to rapidly troubleshoot and optimize UC performance as the calls are occurring, minimizing disruptions. Comprehensive real-time and historical insights help enterprises maintain consistently high-quality voice and video communications across distributed environments.



Figure2: The UC Module offers real-time monitoring of voice and video performance metrics for all major collaboration platforms.

Unified Visibility

- This broad data collection capability allows NPM+ to monitor endpoints wherever they are, from traditional data centers to modern cloud environments and remote work setups, and even tunneled or encrypted Zero Trust networks.
- Unified management dashboard that consolidates views from across the network, applications and devices.

New Deployment Paradigm

- Allows customers to deploy a single visibility agent on any user or server endpoint and select the desired DEX, network, acceleration, or network module
- Flexible, easy, and scalable approach to instrumentation

Intelligent Workflow Insights

- Intelligent insights to understand all aspects of network behavior
- Measure app performance for all users of your critical apps
- Extends visibility into network environments that are otherwise unattainable – public cloud, private cloud, SaaS, remote work, and encrypted environments
- Break down application response time into contributing sources and launch troubleshooting of root causes
- Measure traffic by application, user, business division, and location
- Analyze historical information for trending and capacity planning
- View device metrics, such as usernames, processes, applications, and system names to streamline troubleshooting

Related Products

NPM+ is part of a seamless, full-stack observability ecosystem:

- NPM+ is integrated with [Aternity Employee Experience](#) dashboards, providing IT and service desk teams with end-to-end visibility—linking network conditions to actual user experience. This integration helps distinguish whether performance issues stem from the network, application, or endpoint, accelerating root cause analysis.
- [Riverbed AppResponse](#) provides deep packet-based analytics to deliver enterprise-wide network observability across edge, on-premises, and multi-cloud environments.
- The [Unified Agent](#) simplifies deployment and management by consolidating monitoring capabilities into a single, lightweight footprint, ensuring easy deployment and management of NPM+ Modules across client and server endpoints.
- [Riverbed Portal](#) complements NPM+ by providing a centralized, role-based dashboard that integrates observability data from NPM+ and other Riverbed tools—including AppResponse, NetProfiler, NetIM, and Aternity. This synergy enables IT teams to visualize network, application, and user experience metrics in one unified view, accelerating root cause analysis and improving cross-team collaboration.

Learn More

For more information on Riverbed NPM+, please go to riverbed.com/npm-plus.



About Riverbed

Riverbed, the leader in AIOps for observability, helps organizations optimize their user's experiences by leveraging AI automation for the prevention, identification, and resolution of IT issues. With over 20 years of experience in data collection and AI and machine learning, Riverbed's open and AI-powered observability platform and solutions optimize digital experiences and greatly improves IT efficiency. Riverbed also offers industry-leading Acceleration solutions that provide fast, agile, secure acceleration of any app, over any network, to users anywhere. Together with our thousands of market-leading customers globally – including 95% of the FORTUNE 100 – we are empowering next-generation digital experiences. Learn more at riverbed.com.

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