

Riverbed NetIM

Infrastructure management, monitoring, and troubleshooting

The Business Challenge

Maintaining a high-performing and secure network across today's complex hybrid infrastructure requires holistic visibility. At 36.2%, network infrastructure is the second leading root cause of war room events, just behind hybrid cloud.¹ Infrastructure teams often have difficulty managing proactively while performance blind spots make troubleshooting difficult and time consuming across their multi-cloud hybrid infrastructure.

Unfortunately, disruptive technology is only increasing this pressure. DevOps causes servers to be quickly added and retired, cloud adoption causes new network challenges, and IoT places increased burden on network bandwidth and performance. Without a new, holistic approach to ITIM, companies will fall behind, failing to deliver the initiatives and services that drive the business.

¹ EMA, Network Management Megatrends 2024, May 2024

The Riverbed Solution

Riverbed® NetIM is a holistic solution for discovering, mapping, monitoring, and troubleshooting your infrastructure. It enables companies to capture infrastructure topology, detect performance and configuration issues, map application network paths, diagram your network, and troubleshoot infrastructure problems. NetIM is built on a modern, containerized architecture to provide expansive horizontal scalability, ultra-high performance, and cloud deployment for operational agility. As an integrated component of the Riverbed NPM platform, customers can manage infrastructure issues in the context of overall, blended performance management.

- **Comprehensive Visibility:** As a part of the Riverbed Network Observability suite, NetIM adds critical infrastructure data and analysis. This complements other performance domains (application performance, network performance, UC, and end-user experience management), and provides context to infrastructure management. It enables companies to holistically manage performance and rapidly troubleshoot problems.

- **Real-Time Monitoring:** Riverbed NetIM leverages multiple approaches (e.g., synthetic testing, SNMP, CLI, IP SLA metrics, syslog, and traps) to continually discover and identify new and changed infrastructure components.
- **Automated Analytics:** Powerful analysis enables users to establish performance baselines, measure current performance, and identify anomalies and violations. Configuration information is also captured, and similar analytics are applied to detect and identify configuration changes, which may impact the infrastructure.
- **Rich Visualization:** Riverbed NetIM provides a rich set of tailored information, from real-time topology with information overlays and dashboards for level 1 operations, to advanced reporting for heads of IT operations.
- **Troubleshoot Performance:** Search-based workflows, event management, and on-demand network paths enable companies to quickly identify and troubleshoot infrastructure performance issues. In addition, Portal-based blended views enable organizations to analyze infrastructure issues in the context of applications, network, and end-user performance.
- **Capacity Planning:** Right-size IT infrastructure capacity to support growing traffic needs. Analyze network usage to identify trends, threshold violations, inefficiencies, and other atypical behavior. NetIM provides evidence of when you'll need to upgrade devices, interfaces, and tunnels to meet service level objectives.
- **Automated AIOps with Riverbed IQ:** NetIM delivers the ability to forward infrastructure alerts directly to Riverbed IQ, enabling automated incident response through IQ runbooks. This creates a seamless bridge between infrastructure data and broader observability workflows.

Riverbed NetIM is designed to meet the scale, performance, and security demands of the largest enterprises. Built from the ground up with webscale technologies such as containerized microservices, Kafka messaging framework, and Cassandra big-data database, NetIM ensures superior fault tolerance, ultimate operational agility, and the highest data security through multi-tenancy.

To further enhance its capabilities, NetIM incorporates infrastructure updates, including advancements in Docker, Postgres, and Tomcat, delivering improved scalability, performance, and reliability. The modernized SNMP layer ensures compatibility and robust security for evolving network environments. With support for FIPS 140-3 compliance and USGv6-r1 IPv6 certification, NetIM meets stringent regulatory standards, making it an ideal solution for secure, scalable deployments across diverse environments.

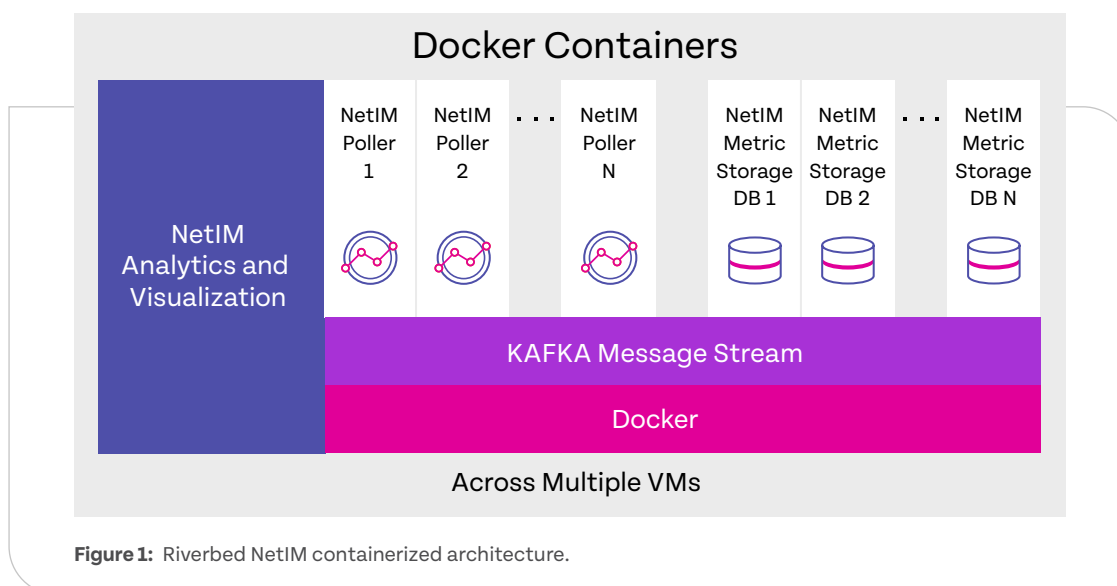


Figure 1: Riverbed NetIM containerized architecture.

Key Benefits

Riverbed NetIM dramatically reduces the workload associated with managing and monitoring your infrastructure. It maximizes network availability by reducing performance blind spots, empowering proactive infrastructure management, and improving troubleshooting.

Increasing IT infrastructure visibility and understanding

- Discover and map infrastructure devices
- Identify changed devices
- Leverage real time network topology views to monitor infrastructure performance

Alerting and anomaly detection

- Alert filtering and site suppression
- Automatically set performance baselines
- Identify performance deviations
- Streamline hand-off between infrastructure and network teams

Troubleshoot infrastructure issues with actionable intelligence

- Drill-down from high-level blended performance views to application specific topology maps
- Quickly identify infrastructure elements that are underperforming or misconfigured
- Understand application path as it travels throughout the network



Figure 2: Home page enables you to visualize infrastructure performance by site, device, and by type.

Get started rapidly and easily

- **Horizontal Scale:** Highly distributed with a horizontal scale architecture to meet enterprise needs for large and complex infrastructures
- **Deployment Options:** Available as virtual or cloud deployments
 - ESXi 7.x, 8.x
 - AWS, AWS GovCloud, and AWS C2S
 - Azure and Azure Government
 - Microsoft Hyper-V 2019, 2022
 - Nutanix AOS 6.5.2 LTS (AHS version 20220304.342)

Key Features In Depth

Real-time network topology

- Riverbed NetIM leverages multiple approaches (e.g., SNMP, WMI, streaming telemetry, IP SLA metrics, CLI, traps, syslog, and synthetic testing) to identify new and changed components within the infrastructure topology
- Topology views that are updated in real-time providing instant insight into the health and performance of the managed infrastructure
- Riverbed NetIM now supports Streaming Telemetry which is a real-time, push-based mechanism that removes the inefficiencies of polling

Reporting

- Reports including performance, inventory, availability, capacity planning, and more
- Interface group tagging enables you to create custom attributes and assign attribute values

Proactive performance management

- User-defined metrics (UDM) that support automatic conversion of string data to numeric values, enabling more advanced alerting capabilities

- Optimized performance and scalability for Windows servers through WMI filtering, reducing polling traffic and improving operational efficiency
- Curated views provide drilldown details into site, group, device, interface, and IP SLA metrics
- Out-of-the-box reports provide insight into your managed infrastructure and operational issues
- Automated health index scores help identify poor performers
- Synthetic testing allows you to proactively monitor application availability and performance remotely from various locations in your network

Efficient troubleshooting

- Riverbed NetIM now includes NetAuditor's powerful rules engine, allowing users to create a "golden configuration template" and check a running network config against it, helping ensure best practices are being followed
- Troubleshooting Toolbox empowers IT operations managers with the ability to triage and troubleshoot issues that relate to network availability, performance, and configuration information
- AppNetwork Path shows how application data traverses the network, making performance troubleshooting easier

- Metrics navigator provides in-depth visibility and troubleshooting into the performance issues by letting users mix and match multiple metrics from different devices in a single view and compare them

Wireless LAN monitoring

- Provides visibility into which controllers are being accessed and which clients are connected to which access points
- WLAN Monitoring delivers the following performance data:
 - Access Point status and statistics (e.g. quantity by model, OS version, type)
 - WLAN Controller statistics (e.g. aggregated WAP health, total active client count, AP status percentage)

AIOps & Observability Integration

- NetIM integrates with Riverbed IQ to forward alerts and events, enabling automated incident response through pre-defined runbooks that streamline operations across infrastructure and application domains
- IQ correlates infrastructure alerts for commonality and causality, identifying patterns like upstream switch failures causing widespread device unreachability, enhancing root cause analysis and reducing mean time to resolution (MTTR)

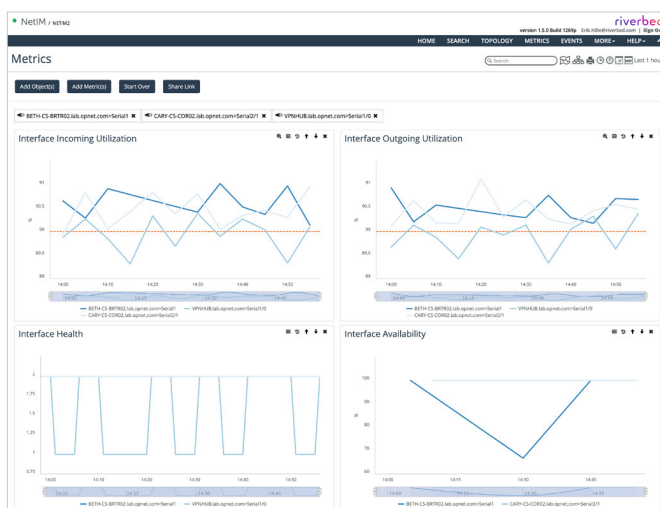


Figure 3: Metrics navigator lets you analyze metrics from multiple devices in a single view.

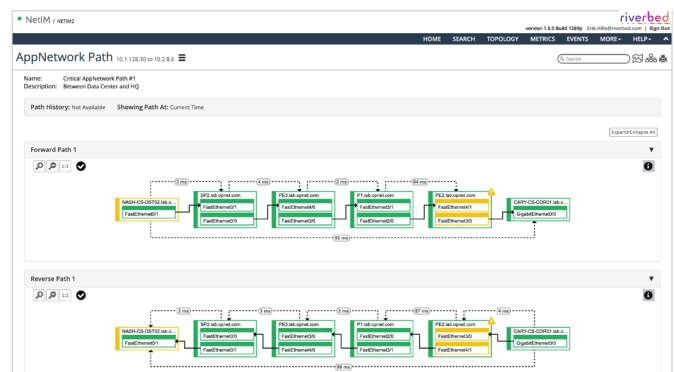


Figure 4: AppNetwork path lets you view application data as it traverses the network.

Integrations

- **Cloud Marketplace Integration:** Simplified deployment with pre-configured clusters and support for Bring Your Own License (BYOL) environments.
- **Riverbed NetProfiler:** One-click drill down between Riverbed NetProfiler and Riverbed NetIM combines network traffic information (flow visibility) with infrastructure health (SNMP) in a single pane of glass to enable application-aware infrastructure visibility.
- **Riverbed Portal:** Through REST APIs, Riverbed NetIM integrates with Riverbed Portal which collects and analyzes data from multiple sources, including network flows, packets, device metrics, application transactions, user experience, and synthetic tests. It presents all analysis in one console to find the source of trouble and correct it quickly.
- **Splunk:** Easily integrate with Splunk data platform to consolidate infrastructure alerts. Riverbed NetIM simplifies integration with out-of-the-box Splunk notification template or customize the template to meet your specific needs.

Supported Vendors

Riverbed NetIM supports devices from a variety of vendors and vendor families.

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|--------------------------|-------------------------------------|-----------------------------|
| • Alteon | • Cisco | • F5 |
| • Arista Networks | – Cisco ACI | • Fortinet |
| • Bluecoat | – Cisco ASA/PIX Security Appliances | • HP |
| • Checkpoint | – Cisco Firepower | – HP Aruba |
| | – Cisco IOS based devices | • Huawei |
| | – Cisco IOS-XE based devices | • Infoblox |
| | – Cisco IOX-XR based devices | • Juniper |
| | – Cisco Meraki | • Palo Alto Networks |
| | – Cisco Nexus (NX-OS) | • Riverbed SteelHead |
| | – Cisco Viptela | |
| | – Cisco WLCS | |

Learn More

To learn more about Riverbed NetIM, please visit riverbed.com/NetIM.



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.