riverbed®

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. Over 58% of enterprises report blind spots in their digital delivery chain, which is a significant challenge[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] Digital Enterprise Journal - April 2020

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 Unified NPM, 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.

Modern Application Architecture

Riverbed NetIM is designed to meet the scale and performance demands of the largest of the large enterprises. Designed from ground up with webscale technologies such as containerized micro services, Kafka messaging framework, Cassandra big-data database and multi-tenancy, IT teams can expect:

- High degree of horizontal scale
- Microservices for superior fault tolerance
- Ultimate operational agility with cloud deployment
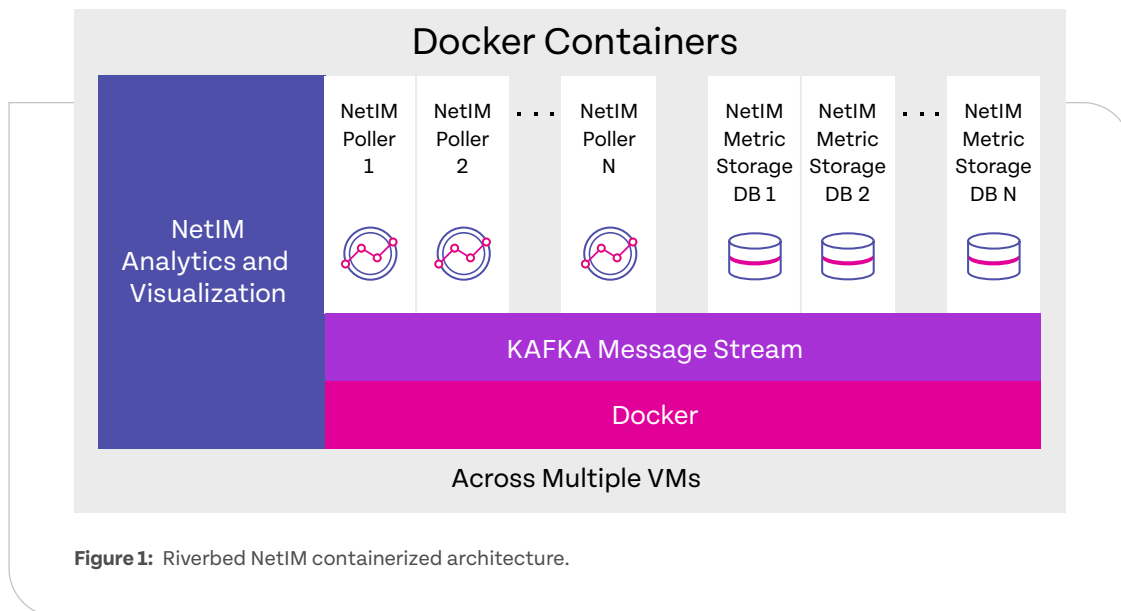- Highest data security with multi-tenancy

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

Get started rapidly and easily

- **Horizontal Scale:** Highly distributed with 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

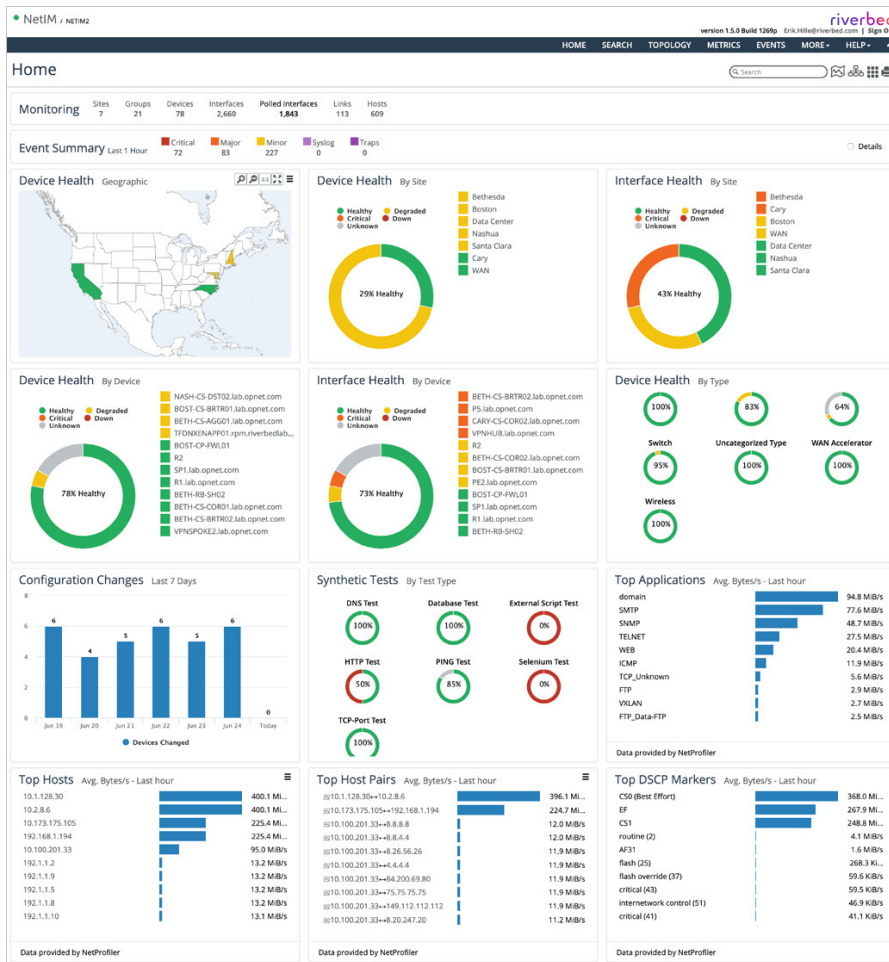 – Nutanix AOS 6.5.2 LTS (AHS version 20220304.342)

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

Key Features In Depth

Real-time Network Topology

- Riverbed NetIM leverages multiple approaches (e.g., synthetic testing, SNMP, IP SLA metrics) 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 creates custom attributes and assign attribute values

Proactive performance management

- 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

- Troubleshooting Toolbox empowers IT operations managers with the ability to triage and troubleshoot issues that relate to network availability, performance and configuration information

- 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

- AppNetwork Path shows how application data transverses the network making performance troubleshooting easier

- One-click drill down between Riverbed NetProfiler and Riverbed NetIM combines network traffic information with infrastructure (availability, performance and configuration)

- Riverbed NetIM now includes NetAuditor's powerful rules engine. This allows users to create a "golden configuration template" and check a running network config against it, helping ensure best practices are being followed.

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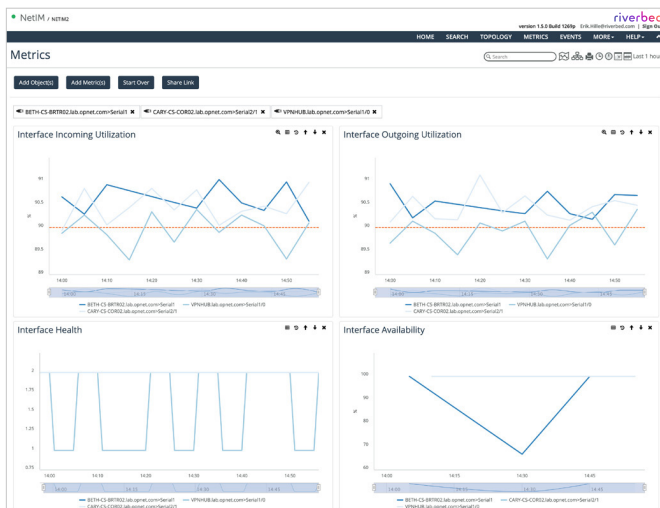
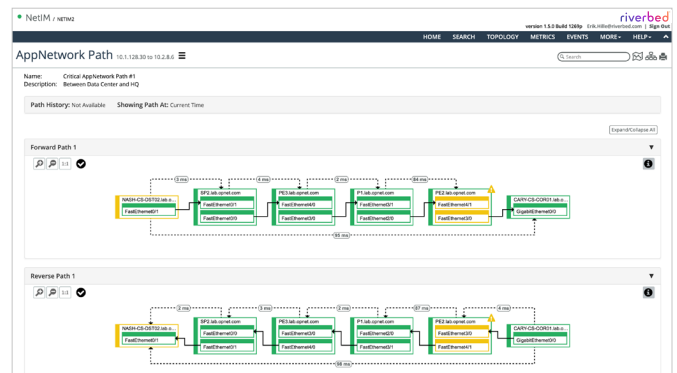**Figure 3:** Metrics navigator lets you analyze metrics from multiple devices in a single view.

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

Integrations

- **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.

- **Cisco**
  - Cisco IOS based devices
  - Cisco IOS-XE based devices
  - Cisco IOX-XR based devices
  - Cisco Nexus (NX-OS)
  - Cisco ACI
  - Cisco ASA/PIX Security Appliances
  - Cisco Viptela
  - Cisco Meraki

- **Juniper**

- **HP**
  - HP Aruba

- **Arista Networks**

- **Palo Alto Networks**

- **Checkpoint**

- **F5**

- **Fortinet**

- **Huawei**

- **Riverbed SteelHead**

Learn More

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

Riverbed — Empower the Experience

Riverbed is the only company with the collective richness of telemetry from network to app to end user that illuminates and then accelerates every interaction so that users get the flawless digital experience they expect across the entire digital ecosystem. Riverbed provides two industry-leading solutions: the Riverbed Unified Observability portfolio, which integrates data, insights, and actions across IT to enable customers to deliver seamless digital experiences; and Riverbed Acceleration, which offers fast, agile, and secure acceleration of any application over any network to users, whether they are mobile, remote, or on-premises. Together with our thousands of partners, and market-leading customers across the world, we empower every click, every digital experience. Learn more at riverbed.com.