Five Criteria for Choosing an Enterprise Network Performance Management (NPM) Solution

LiveAction®



### Five Criteria for Choosing an Enterprise Network Performance Management (NPM) Solution

Enterprises understand that their network is no longer a collection of technology assets but a critical component of their business strategy. In order for IT to provide strategic value to the business, you need tools that proactively ensure the reliability of network service while simultaneously boosting user experience. This requires a new approach to network management, including selecting a network-management vendor that can meet modern IT and business requirements.

To select network performance management (NPM) solutions, enterprises must push beyond the traditional selection criteria, which focus on threshold-based alerts and alarms.

If your team is considering an NPM platform—including LiveAction, SolarWinds, Riverbed, or NetScout before deciding on your vendor, consider these five criteria.

**1. Comprehensive end-to-end network visibility and performance management** – Is the solution able to monitor the entire network, including SD-WAN, LAN, cloud, wireless, campus, and datacenter, or only specific categories and environments?

**2. Network traffic analysis** – Does the platform have deep packet capture and analytics to monitor realtime network traffic and application performance?

**3. Application visibility and performance monitoring** – Can the platform analyze and correlate data from network devices, applications, and cloud environments to manage the entire digital experience?

**4. Enterprise-scale** – Can the solution monitor enterprise networks in organizations with more than 20,000 devices without performance issues or latency?

**5. AIOps, analytics, and visualizations** – Does the solution incorporate AIOps for advanced anomaly detection and correlation and visualizations that enable easy understanding of monitored environments?

## 1. Is the solution able to monitor and manage the entire network or only specific categories or environments?

Does the platform manage the entire digital experience and monitor and manage the cloud, wireless, SD-WAN, LAN, application, campus, and datacenter environments?

The modern IT infrastructure is more complex than ever and encompasses a range of components that work individually and collectively to improve network performance, support productivity, and ensure a positive digital experience. While local technology stacks have increased in density, companies have also expanded their infrastructure into third-party SaaS applications that make it a challenge to maintain comprehensive visibility. Let's suppose a single component is suffering from performance issues. The effects can be widereaching, and the catalyst of the resulting problems can be challenging to pinpoint across such a wide range of moving parts. This is why modern NPM solutions must be able to not only monitor these individual components and environments in a single solution but also correlate collected performance data to quickly identify root causes and understand their potential effects on individual environments and the overall digital experience.

An effective modern NPM solution needs to collect and correlate performance data from the entire network, often from highly complex hybrid environments. This includes monitoring all types of network devices used, wireless components, SD-WAN, LAN, cloud environments, customer and enterprise applications, VoIP devices, and the datacenter. The solution needs to collect and analyze data not only for root-cause and performance analytics but also proactive health metrics. Key health analytics include top network users, availability, common traffic patterns that contribute to performance issues, application jitter, latency, and loss. Finally, NPM solutions should automatically create baseline and trending metrics to ensure that capacity issues do not contribute to downtime or performance issues.

## 2. Does the vendor's platform support granular, correlated network-traffic insights?

Does the vendor's platform have the ability to correlate traffic insights with application performance and user experience?

Whether users are accessing applications hosted internally or in the cloud, an NPM tool should correlate traffic data in real time with application performance and end-user experience. Doing this enables network operations teams to be much more efficient. Rather than analyzing every fault that the monitoring tools detect, engineers can focus their attention on problems that affect end users. This correlation can also reduce false positives and alarm storms.

The platform you choose should deliver insights into application performance and end-user experience through deep real-time processing and packet-by-packet analysis. A tool should present network transactions with performance indicators, including the ability to support views into complex, multi-tiered applications. These transactions should be correlated with end-user sessions and applications. Ideally, the solution will show the engineer how critical applications perform on the network and how users are experiencing individual sessions. This visibility should enable network operations teams to quickly isolate problems, particularly if the tool combines insight into end-user experience with awareness of the network domain.

## 3. Does the solution enable complete application visibility and performance monitoring?

Does the solution analyze and correlate data from network devices, applications, and cloud environments in a single platform? Does the solution support monitoring the complete digital experience, including the synthetic

#### user experience?

Today's solutions are required to support a seamless, high-performance digital experience. Solutions need to gather network-performance metrics from infrastructure devices, including routers, firewalls, load balancers, switches, and application-performance enriched flow data to create a comprehensive applicationimpact analysis. The solution should support integrated application visualizations, including application-path analytics, by having the ability to alert on application-performance issues caused by network-device issues. The NPM solution should also be able to:

- Visualize packet-by-packet to perform detailed application-performance analysis.
- Analyze packet data to identify application errors in packet payloads.
- Pinpoint the source of latency as network versus application.
- Provide application usage and performance data at the site level.
- Report top application performance highlighting average application and network delays.

# 4. Can the solution monitor enterprise networks in organizations with more than 20,000 devices without performance issues or latency?

Does the solution complete large-scale performance management across numerous types of devices and environments without latency and in a highly secure manner? Can the solution analyze capacity to help plan for future requirements to ensure that the network is not over- or under-provisioned?

Modern NPM platforms need to analyze devices and environments at scale without latency and grow into monitoring new computing environments, including SD-WAN, multi-vendor WAN, and public and private cloud environments. NPM should also support capacity planning to avoid both over- and under-provisioning of resources and predict whether a network can support growing business-critical traffic.

### 5. Does the solution incorporate AIOps to enable advanced anomaly detection and correlation and visualizations that aid easy understanding of monitored environments?

Because scale-related performance is critical, modern NPM solutions should incorporate machine-learning techniques to enable the platform to continuously learn and apply knowledge based on big-data trends. This includes the ability to create dynamic baselines and identify anomalous behavior from multiple sources of raw data. Machine-learning algorithms should support critical performance corrections, including determining which voice traffic to prioritize, when to throttle bandwidth, and whether a user's access should be blocked.

### **Conclusion and Findings**

To better determine how four vendors' NPM solutions ranked against the five NPM selection criteria, Apprize 360 interviewed current and former users of the LiveAction, Riverbed, NetScout, and SolarWinds platforms. The interviewees were asked to rate each solution according to the five criteria outlined above. The interviews and our internal assessment focused on the abilities of each solution to fulfill the five selection criteria.

Apprize360's assessment found that LiveAction's LiveNX, LiveWire, and LiveNA solutions best meet all five criteria and are among the most robust NPM solutions on the market today.<sup>1</sup>

**1. Complete NPM solution:** LiveAction gathers real-time data from multi-vendor network elements to monitor the digital experience, VoIP & video, SD-WAN, cloud and manage application and datacenter performance. Unlike NPM solutions that require users to identify issues, LiveAction's LiveNA platform automatically identifies anomalies and surface the most critical ones to address. LiveAction's LiveNX supports real-time visualization of end-to-end application flows, quickly identifying performance metrics and highlighting path changes routing changes to enable rapid diagnosis and correction. LiveAction supports the need for immediate troubleshooting of multi-domain performance issues as well as proactively optimizing network performance.

2. Granular traffic and packet analysis: LiveAction's LiveWire includes detailed network traffic analytics that support real-time troubleshooting, detection of anomalous behavior, and analysis of emerging performance issues. LiveNX's network traffic analytics provides complete visibility across the network through ingesting packet data, flow data, Wi-Fi data, and device data. With LiveNX's deep "packet-by-packet" analysis, users can conduct real-time troubleshooting across the network, especially for VoIP and video root cause analysis. LiveNX ingests flow data, including NetFlow, IPFIX, sFlow, jFlow, and data generated by LiveWire, for visibility into network performance across multi-vendor, multi-domain and multi-cloud networked environments. LiveNX leverages Wi-Fi and device data to troubleshoot and resolve network issues quickly across specific devices. LiveAction's newest product, LiveWire, extends functionality to include capturing packets that are traversing the wire into flow data, which is then consumed by LiveNX for in-depth performance analytics and visualization. This ultimately allows organizations to examine traffic behavior, application usage and performance within cloud infrastructure the same way they do on-premises.

**3. Application visibility and performance monitoring:** LiveAction is able to gain a deep understanding of application traffic with its full visibility into protocol and application types, including video, voice, instant messaging, and file transfer. This enables users to rapidly troubleshoot applications deployed in the datacenter, public cloud, or hybrid network. This also enables users to understand how a network is being used, how applications are performing, and which sanctioned or unsanctioned applications are being used. Using LiveAction's Application Path Analytics (APA) feature, users can identify precisely where application performance issues originate and correlate the impact of those issues on other applications and network devices.

<sup>1</sup> This analysis did not include a detailed pricing analysis due to the variability and availability of vendor pricing. The assessment was based solely on users' opinions of the solutions, and users' opinions and assessments can change based upon new information.

**4. Enterprise-scale:** One of LiveAction's top differentiators is its ability to handle large enterprise deployments without performance or latency issues. Even in large multi-site and multi-region deployments, LiveAction supports real-time, detailed monitoring and network-performance management. In addition to supporting scale, LiveAction supports a company's growth by analyzing and supporting capacity planning to ensure that the proper number and type of resources are included to enable the required performance.

**5. AIOps, analytics, and visualizations:** LiveNA is LiveAction's AIOps platform, which applies machine learning and heuristics to network datasets to enable advanced anomaly detection and predictive analytics, which deepen network understanding. LiveNA uses proprietary machine-learning algorithms to establish baselines for applications and the network to detect deviations from the baseline, anomalies and correlate events. Finally, LiveAction's patented visualization engine is another differentiator, providing visual insights into the entire network, including visual packet analysis, visual path analytics, transport view, virtual overlay view, and site-specific details.

For organizations seeking an enterprise-scale agile platform, LiveAction fulfills all the recommended criteria and provides a complete modern NPM solution. The next page contains a comparative table that better illustrates LiveAction's benefits.

	LiveAction	SolarWinds	NetScout	Riverbed
Categories of Assessment	LiveNX, LiveWire, & LiveNA	Network Performance Monitor (NPM),	nGeniusOne & Infinistream NG	Riverbed NPM & Riverbed AppResponse
End-to-End Network Performance Management Able to monitor the entire network without use of numerous modules, add-ons, and integrated partner solutions for: • Network traffic & pack analytics • SD-WAN, LAN, & Datacenter monitoring • Cloud and Application performance, wireless & UC monitoring • End-User Experience (EUE) monitoring		NetFlow Traffic Analyzer (NTA)		
<b>Digital Experience Monitoring</b> • Real-Time insight into application & user-level activity • Synthetic user experience analysis				
<b>SD-WAN Monitoring</b> • Visibility into underlays & overlays, tunnel performance, & lifecycle monitoring • Real-time visualization of end-to-end application performance				
<b>Cloud monitoring</b> • Visibility into multi-cloud environments • Ability to analyze bandwidth utilization of applications & services				
Application Performance Monitoring Traceability & analytics on network performance metrics from devices with application performance insights • Application path analytics • Packet-by-packet ladder analysis for detailed APM				
Unified Communications Analysis & Troubleshooting Monitoring & root cause analysis of VoIP, video, & UC				
<b>Cisco QoS</b> Ability to monitor Cisco QoS class per service with real-time visualization into QoS anomalies				
Advanced anomaly detection & correlation Leverage machine learning algorithms to create dynamic baselines & identify anomalous behavior from multiple sources of raw data				
<b>Alerting &amp; Notifications</b> Support for multi-threshold alerting rules customized by site, device, & region				
<b>Capacity Planning</b> Analyze & plan for additional bandwidth & processing power needs				
Advanced Analytics and Reporting • Easy-to-build dashboards & reports • Visualizations of network, transport, virtual overlay, packet analytics, & site-specific details				
<b>AIOps</b> Machine learning for next-generation baselining & predictive insights on network & application performance				
<b>Enterprise Performance</b> Proven security & performance with greater than 20,000 devices				

Fully Present

### **About LiveAction**

LiveAction provides end-to-end visibility of network and application performance from a single pane of glass. This gives enterprises confidence that the network is meeting business objectives offers IT administrators full visibility for better decision making and reduces the overall cost of operations. By unifying and simplifying the collection, correlation and presentation of application and network data, LiveAction empowers network professionals to proactively and quickly identify, troubleshoot and resolve issues across increasingly large and complex networks. To learn more and see how LiveAction delivers unmatched network visibility, visit www.liveaction.com.

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