

The background of the slide is a dark blue, futuristic digital environment. It features a perspective view of a long, glowing corridor or data stream that recedes into the distance. The walls and floor are composed of various digital elements, including binary code (0s and 1s), network diagrams with nodes and lines, and abstract light patterns. The overall aesthetic is high-tech and data-driven.

LiveAction®

Application Performance and Network Troubleshooting Solution Overview

Challenge

Digital transformation has fundamentally changed how businesses operate and the value that they deliver to their customers. This new paradigm puts application performance front and center for digital business success. When applications are the business, application performance becomes table stakes; and when business processes freeze, or revenue-generating transactions fail, employee productivity decreases, and customer satisfaction suffers.

The network dictates application performance. As applications traverse the network, network health and performance have an impact on application performance. Network slowness and downtime disrupts revenue generation, business processes, and customer relationships. Once a problem is detected, IT teams must race to solve it.

The path forward to minimize the impact of poor application and network performance is twofold. Network operations teams must optimize networks for application performance and accelerate network troubleshooting. To do this the NetOps team must take advantage of every data source possible:

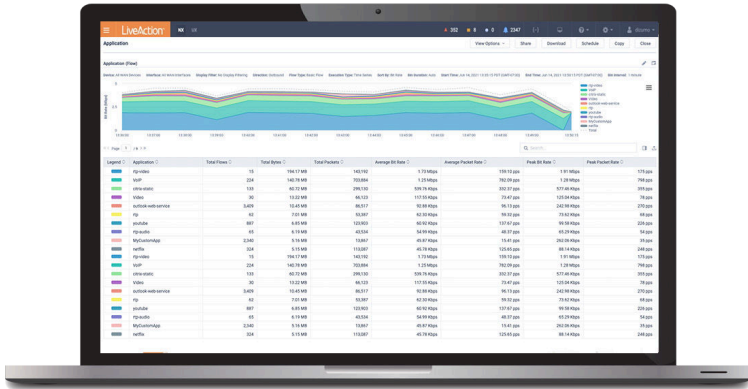
- ▶ Flow data (NetFlow, sFlow, IPFIX, etc.)
- ▶ SNMP
- ▶ Packet data
- ▶ APIs

And all this data needs to be aggregated, analyzed, stored, and presented in dashboards that include exactly what network engineers need, and most importantly, all within a single pane of glass.

LiveAction has what you need.



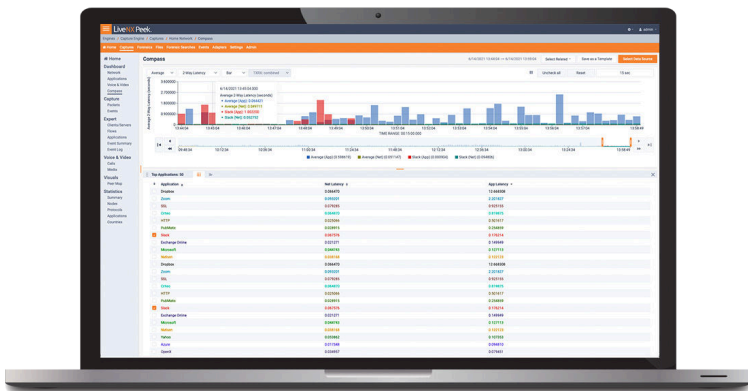
Solution



LiveNX provides both real-time and historical KPIs on application usage, with alerts to notify you when application behavior falls outside set parameters.

LiveNX

LiveNX collects and analyzes data directly from network devices to analyze and present insights to design, policy verification, and operations across the enterprise to deliver peak performance for an optimal customer experience. LiveNX also provides a direct link to network packets (when available via LiveWire) for detailed, root-cause analysis, all from the same platform, significantly decreasing the mean time to resolution (MTTR). LiveAction is the only solution to provide end-to-end network visibility in a single pane of glass across campus, branch, datacenter, public cloud, WAN and SD-WAN.



LiveWire provides detailed application analysis, on a per-packet basis if needed, for detailed root cause analysis of application performance issues.

LiveWire

LiveWire generates flow data directly from packets, adding visibility to areas where none existed previously. Flow data generated directly from packets provides more detail than any flow-based standard, adding to the rich network monitoring data that already exists in LiveNX. LiveWire makes it easy to transition from packets to flow data and back to packets for detailed analysis when needed, all with a single network monitoring dashboard. LiveAction provides a unified solution that deals with flow and detailed root cause analysis with an easy integration between reporting level and root cause from a single pane of glass.

Advantages

A LiveAction solution for network and application performance monitoring provides the following key advantages over competitors.



▶ **Adds visibility where none exists today.**

Visibility is lacking when network infrastructure devices don't generate flow in key areas you need to monitor, or when these devices are oversubscribed, and by turning on flow generation, network functions degrade, possibly causing data loss on the network. Visibility is also difficult in virtual environments. Flow generation is often unavailable within virtual network infrastructure, but with LiveWire Virtual you can generate flow from packets, whether north-south or east-west traffic.

▶ **Root-cause analysis based on packets.**

Many, but not all, network and application problems can be solved with flow data. But when flow data just aren't enough, root-cause analysis based on the packets that generated the flow data is just a click away, and all within the LiveNX application.

▶ **The best flow data available.**

Because LiveAction can generate flow data directly from packets, flow data can be enhanced beyond what is available via NetFlow and IPFIX from network infrastructure devices. This enhanced flow data, which includes TCP metrics, packet retransmission details, and VoIP metrics like jitter and phone numbers, provides advanced data to streamline network and application alerting and troubleshooting to significantly reduce mean time to resolution (MTTR).

Use Cases

Together LiveNX and LiveWire help to address the following use cases:

▶ **SD-WAN Optimization and Troubleshooting**

As more organizations look to SD-WAN for improved network performance and reduced costs across their remote locations, IT professionals need advanced performance and analytics capabilities to gain insights into performance. LiveNX and LiveWire provide application performance visibility that validates SD-WAN performance and business investment.

▶ **VoIP, Video, Application Performance Optimization and Troubleshooting**

Critical applications are highly sensitive to problems with network readiness such as jitter, packet loss, and latency. LiveNX and LiveWire operationalize packet analysis for visibility into key application performance.

▶ **Visibility at Remote Locations, Campus, Data Center, Cloud**

Organizations struggle to gain unified visibility across the entire network. LiveNX and LiveWire enable application aware Netflow visibility where traditional visibility gaps may exist with legacy or evolving vendor landscape.

▶ **Security Incident Response**

Once an intrusion is found, you need a recording of the activity – the network packets – to determine both the fingerprint and the extent of the breach. LiveWire provides the capability to capture and store every packet it receives. Armed with the packet data, you can respond quickly and confidently. LiveNX provides the additional packet data retention to meet security compliance requirements.

▶ **Monitoring and Troubleshooting Hybrid IT**

Most IT teams don't have the visibility they need to map end-to-end paths for applications that go from the on-premises network to the cloud and vice versa. LiveNX and LiveWire provide a hop-by-hop analysis for end-to-end application path examination, analysis on KPIs such as application and network latency, utilization, packet loss, QoS configuration, and VoIP performance, for alerting and detailed forensic analysis.

Summary

LiveAction can significantly increase your network and application visibility, especially in areas where NetFlow or IPFIX is not available from routers and switches. It also provides the ability to navigate with a single click from flow back into packets for analysis when flow data is just not enough to get to the root cause of a problem. And lastly, the flow data created by LiveWire is much richer than that typically found from typical NetFlow devices, greatly increasing visibility for network and application performance and troubleshooting while reducing your MTTR. Rely on LiveAction for digital business success.

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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