Anticipating Network and Application Performance Issues

There is a real cost associated with any kind of operational downtime, so avoiding or at least minimizing issues is always an IT priority. As networks have become such a central part of business success, it is critical that you maintain a high-quality end-user experience for employees and customers as they use your network and key applications.

The powerful tools available today allow IT teams to anticipate network and application performance issues. Rather than waiting for complaints or trouble tickets, it is possible to monitor every aspect of network traffic and performance at an incredibly granular level, making network problems much more visible even as the speed and volume of network traffic rises dramatically. Effective network monitoring quickly pinpoints the location and cause of latency and other application performance issues, empowering IT professionals to take action whenever trouble is detected.

Savvius Spotlight provides actionable, network transaction-based monitoring, rapid root-cause analysis, and integrated packet-level forensics. Spotlight enables IT professionals to proactively display the worst-ranked individual transactions on their network, for the whole network, or for the traffic for a specific user or server, to quickly troubleshoot issues in real time on networks up to 20 Gbps. Spotlight also allows real-time visibility into specific traffic, enabling IT professionals to pick specific problems out of incredible amounts of data. It also analyzes network transactions by a host of individual metrics, on an intuitive, browser-based interface.

The strength of Savvius Spotlight is its ability to monitor networks in real time. With active updates every five seconds, Savvius Spotlight can be paused at any time using the pause icon to allow for real-time analysis. By using the display's horizontal scroll bar located above the charts, users are able to view the network up to four hours in the past. Spotlight prioritizes the worst client flows, making it easy to drill down into that client's individual flows.

The Savvius Spotlight Dashboard

For network engineers to become truly proactive in managing their networks, they require dashboards that not only identify that there are issues, but also quickly provide critical points to investigate and resolve without burdening them with separate steps.

Using a default screen that includes six panels, flows with worst application latency and flows with the worst network latency are highlighted. Also displayed are the Worst TCP/IP Quality and Worst VoIP Quality and all active flows and count by protocol of displayed flows.
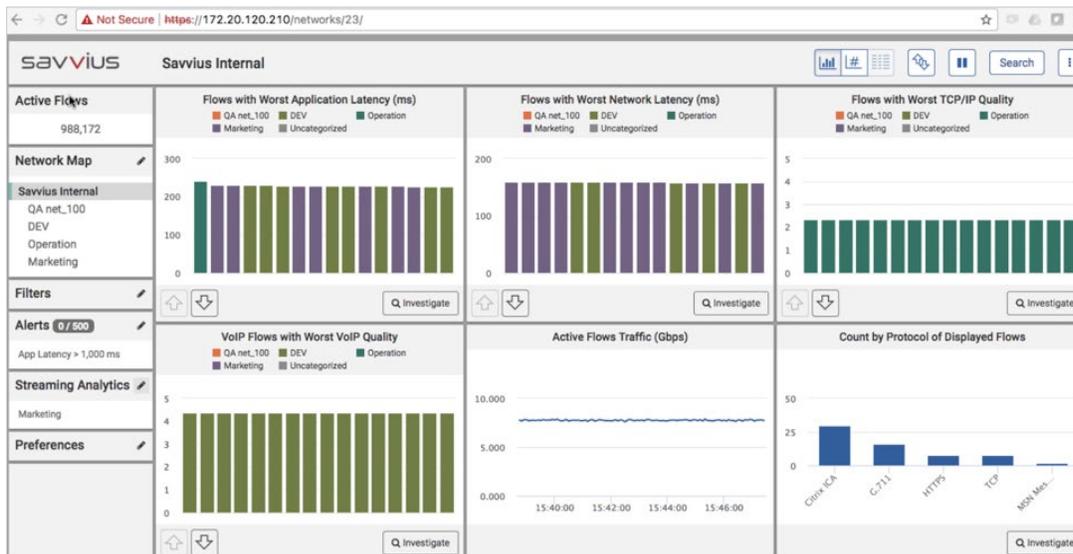
Using Savvius Spotlight

Investigations

Spotlight makes it easy to perform a detailed investigation on any flow on your network. When you notice a problem, it's easy to drill down using Savvius Omnipeek to perform a packet-based forensic search. By clicking on the Investigate button, the associated packets can be analyzed in Omnipeek for fast access to the details of every bit in every packet of the flow, along with the detailed expert analytics, reporting, and visualizations that help to understand the root cause of an issue.

Specifying a Network Map

By defining different network segments, users have the ability to 'spotlight' the worst performing areas on the network. The network map defines what is in and outside of your network, and a basic definition is required to populate flow data in Spotlight. More detailed definitions are simple to configure, and makes it easy to see the performance of the network hierarchy.

Creating Filters

Spotlight's filters are incredibly powerful and useful to narrow down specific flows within the network traffic. Filtering allows you to focus on specific traffic in your network, or omit specific traffic from the Spotlight views. This allows you to isolate the traffic for a particular test that is being performed, for example for a new product, or a disaster recovery exercise. You may also need to omit traffic that is known not to be a real network issue, such as load testing.

Streaming Analytics

Streaming analytics lets you gain insight into what is going on with your network over time, and to focus specifically on things that are the most important to you. You can stream specific network analytics into Savvius Spotlight's long-term reporting dashboards.

In Savvius Spotlight, you have up to five independent streams with which to work. You can have some of the streams configured for long periods of time, likely weeks or months. Other streams may be configured for hours or days. In any case, a correctly configured stream continues to output analytics until its configuration is either modified or the stream is made inactive. Some streams can look broadly across all or a portion of the network. Others can look narrowly because they are heavily filtered or because the network map segment associated with a particular stream is tightly defined.

Setting Alerts

If you aren't continuously monitoring Spotlight, you can set alerts to notify you when specific thresholds are breached. Users can create a threshold that tracks network flows when it surpasses a pre-determined limit, such as when application latency is greater than 100 milliseconds, or when TCP/IP quality degrades significantly.

Locating Specific Network Flows

The IP search function lets you see flow analysis for one or more IP addresses or CIDR ranges. For example, if a user is reporting issues with their network connection, you can immediately search for a user's IP address and perform flow analysis on just that address. If you want to find out if there is any traffic going to a rogue IP address, simply type in that address and see information in real time all the flows that contain that address. This powerful capability is useful for security and network troubleshooting.