savvius™ | Distributed Wireless Analysis

Savvius Ensures WiFi Reliability Across Multiple Campuses for Large University

"We're seeing seemingly exponential growth in the number of users and devices connecting to the WiFi network. This growth, and users' heightened expectations for performance, require us to be able to conduct acute analysis. That's where Savvius Omnipliance WiFi and Savvius Omnipeek bring value."

UNIVERSITY NETWORK ARCHITECT

With more than 54,000 enrolled students and more than 25,000 faculty and staff, one of Washington State's largest universities relies heavily on its robust WiFi network to enable everyday activities across it's three main campuses and many subsidiary locations.

The Challenge

The school's wireless network spans three main campuses and many distributed locations, and serves as the primary network to fulfill a variety of functions including education, research, and community involvement. At peak times, up to 62,000 unique devices are connected to the WiFi network, all requiring reliable connectivity to facilitate the everyday activities of students and staff.

Users of wireless networks today expect large enterprises to deliver a fast, powerful, and uninterrupted experience. But at this school's scale, with so many users spread across multiple locations, and with a wide range of needs and specific use cases, even minor issues can present significant challenges. In the case of this vast WiFi network, users demand strong coverage, quality

savvius Omnipliance WiFi

Savvius Omnipliance WiFi enables network engineers to monitor, analyze and troubleshoot full Gigabit-speed 802.11ac enterprise-wide WLANs. It is the first and only solution to capture and store wireless data at multi-Gbps speeds.

savvius Omnipeek

Savvius Omnipeek, best-in-class network diagnostics software, delivers intuitive visualization and effective forensics for faster resolution of network and application performance issues. Savvius packet intelligence enables Omnipeek to provide rapid analysis and trouble-shooting of wired and wireless networks, local and remote.

throughput, and superior wireless services across many locations, without extended disruptions.

With student education and academic research both reliant on WiFi performance, network dependability is a top priority for the university's mobile communications team. In the past, the group employed open source and freely available tools such as Wireshark to manage and troubleshoot the wireless network. But, as the demands of users changed the role of WiFi from a convenience to a daily necessity, this team began to look for more powerful network performance management solutions.

The Solution

With previous experience using Savvius products, the mobile communications team decided to deploy Savvius Omnipliance® WiFi hardware paired with Savvius Omnipeek® software. This powerful combination gives the team access to the critical packet data necessary to quickly identify, triage, and troubleshoot network and application problems across many locations.

"With the Savvius solution, we're now at the point where we can actively engineer the network, rather than just continuing to build it," said the network architect. "When devices inexplicably drop connection at critical times or there's an issue with an important VoIP phone on the WiFi network, we don't have to just install an additional access point or patch the network with other rudimentary solutions like we typically would have in the past. We now have the power to dive down into the protocols with Omnipeek and gain a deeper understanding of the wireless network's most challenging issues and have a clear path to resolving them."

The Omnipliance WiFi appliance serves as a centralized repository for long-term packet capture for WiFi issues that occur periodically or sporadically throughout the school. With connectivity issues occurring as often as multiple times a day, the team is able to use Omnipeek to capture information from the exact APs or IP addresses related to the particular problem area. The packet data related to the incident is automatically streamed to Omnipliance WiFi, where it can be stored long-term and recalled whenever needed so that the team can examine the timeframe associated with a reported issue, and analyze the data with Omnipeek to find a resolution.

The desktop and the standalone versions of Omnipeek have been effective for quick fixes and minor WiFi network issues at specific locations, but the mobile communications team finds the bulk of the products' value in their remote capture features.

SAVVIUS™

Benefits

With such a dense and distributed wireless environment – and thousands of devices constantly traversing APs and channels throughout the university's many locations – efficient solutions for WiFi issues are a must. With Savvius, when the mobile communications team needs to troubleshoot a problem, they don't need to pick up their laptops and make tedious trips to problem areas across campus or from city to city in order to gather data. The ability to capture network data remotely allows the team to pinpoint specific APs at any location and retrieve the exact packets they need. Without leaving their central office, the team can quickly analyze the data using Omnipeek software running on a laptop, or send it to Omnipliance WiFi for storage and analysis.

"Troubleshooting and resolving previously complex wireless network issues has become a lot more practical with our Savvius tools," the network architect said. "Savvius' remote capture and other visibility features have been a game changer, because the solution enables our team to capture data from multiple locations and devices at the same time, from one location, which allows us to save precious time and resources."