

CASE STUDY



THE WI-FI PERFORMANCE COMPANY

Multinational Enterprise

Re-tools network to embrace power of mobile communications and BYOD

With nearly \$3 billion in annual revenue, this progressive Midwest multinational is a world leader in home and garden products. Now it has set its sights on exploiting Wi-Fi to fuel efficiencies from the headquarters campus to the field offices and warehouses.



Situation

In 2014 the company boldly laid out a mobile-first vision to cut the cord and exploit wireless technology in every corner of the company's operations, in order to improve employee productivity and reduce operating costs. The management team recognized that employees did not want to be tethered to their desks, and wanted the ability to conduct business on the move with laptops, tablets and phones. In addition, the company wanted to embrace the BYOD movement without relinquishing the quality of communications used for business transactions.

Challenge

This ambitious mobile-first strategy did not come without challenges. The company realized that Wi-Fi would now be the primary access to the network, and its reliability and quality had to match that of the wired network. The company was moving both voice and data to Wi-Fi, so client Wi-Fi performance would need to be monitored closely. The IT team wanted a way to measure Wi-Fi performance against service level agreement (SLA) metrics so they could report on the quality of the network. Traditional network management and WLAN monitoring tools offered little capability in this area.

Furthermore, the IT team wanted to shift from a reactive to a proactive method of addressing issues. They hoped that by measuring performance against SLA targets, they could detect performance degradation and network issues before the end-users would, thereby giving them time to look at historical trends and drill down to isolate whether the problems were affecting an entire section of the network or a subset of particular clients. The goal was to identify and fix issues before someone called to complain.

Benefits Realized from the Sapphire Wi-Fi Performance Management System

- Able to monitor end-user Wi-Fi experience against SLAs and get notifications on degraded performance
- Ability to assure 3.6+ MOS scores enabled smooth migration to mobile VoIP
- Gained the performance visibility, to intelligently forecast and plan future capacity upgrades
- Shifted from a reactive support mode driven by complaints, to data-driven proactive support

Solution

After an initial trial with 7SIGNAL's Wireless Network Monitoring platform, the IT team realized they had uncovered the right platform to guide them in their transition to a mobile-first environment. 7SIGNAL provided the historical and real-time performance visibility on network and client performance. In particular, the specific data and voice quality metrics provided the visibility the IT team was looking for to complement the information gathered from their WLAN management system.

They went ahead and deployed 25 Sapphire Eye sensors in strategic locations in three buildings at their HQ campus. With the 7SIGNAL platform in place, they could evaluate the user experience in every area of the network. The active tests provided not only a measurement of Wi-Fi performance, but also critical end-to-end visibility into DHCP responsiveness, wired network throughput and latency and http / web accessibility. The passive monitoring of the client interactions with network provided key insights into the quality of experience for each client on the network.

Results

The 7SIGNAL team provided assistance with the installation of the Sapphire Eye sensors, and the IT Team began using the 7SIGNAL dashboard and SLA reports to monitor performance with the visibility they had hoped to achieve. They set the SLA thresholds to match the environment and configured the system to send SNMP traps and alerts when performance of a metric such as downlink throughput fell below their desired service levels.

When they saw issues, the IT team was able to drill down to look at attach rates, retransmissions, signal levels and other metrics to isolate root cause and identify ways to improve performance. 7SIGNAL can suggest configuration changes that will likely fix the issue. Initial results showed packet loss in certain areas was too high for reliable voice services. After a series of network-wide configuration changes, they raised average MOS scores above 3.6 which gave them the confidence to safely roll out mobile voice services on VoIP handsets and softphones.

The IT management team also receives automated reports showing performance stats and trends, so they know first-hand how well the network is performing against SLAs. When changes occur in the network, such as software upgrades to networking equipment or devices, the team can use 7SIGNAL to verify the impact of those changes by comparing "before" and "after" trends. Just as important, the team is now able assess the network's ability to handle more applications, more devices and more traffic as the company implements its mobile-first plans, allowing them to make smart, timely decisions in capacity planning.

As the transition to mobile-first fans out from headquarters to the field, 7SIGNAL will enable the company to remotely monitor and manage the performance at any location, centrally from a single platform - shortening issue resolution time and removing the need for Wi-Fi expertise in remote locations.

“The intelligence we get from Sapphire is incredible. When it comes to troubleshooting, it has removed a lot of guesswork from the equation”

Senior Network Engineer

“Sapphire had given us the visibility we needed to confidently move forward with our Mobile-First initiative”

Chief Information Officer

