

A new approach to assessing Wi-Fi health

The performance of wireless client devices and applications on the network at any given time is a crucial element of Wi-Fi that is constantly overlooked. And, significant deficiencies exist with today's available wireless LAN (WLAN) assessment tools to analyse these.

Current monitoring tools view problems from the vantage point of the access point (AP) rather than the client device or application. An analysis can be done to produce heatmaps to highlight signal coverage, interference and channel overlap, but they don't reveal anything about the performance of network devices and applications. Factors like rogue APs, radio frequency (RF) contention, beam forming and hidden service set identifiers (SSIDs) combine to make for incredibly complex issue resolution.

Ilan Rubin, managing director, Wavelink, said, "Most vendors focus only on assessing the performance of their branded devices, while others focus solely on the network itself with little to no regard for the client devices running on it. Organisations are either using a combination of tool sets or hiring a professional services firm with wireless specialisation to troubleshoot their WLAN.

"Because most wireless troubleshooting is reactive by nature, network teams are often under tremendous pressure to restore a service that has already reached a compromised state. Yet often, there is no clear trail of the problem and frequently the problem cannot be recreated. This results in numerous wireless support tickets, many of which go unresolved."

A [client-first approach](#) that focuses on both the device and application performance, rather than just network performance, can help address these shortfalls.

This involves identifying the type, variety and density of the expected client device and undertaking a thorough evaluation of the physical environment, which includes assessment of signal-to-noise ratio, multi-path propagation, RF contention / collision domains and air contention. These findings can then be combined to identify the network requirements that will provide effective and reliable connectivity for the most demanding client devices. These requirements are then modelled to arrive at a recommendation of the best hardware solution and the installation design that supports the devices and applications in the unique WLAN environment under assessment.

With a client-first approach, organisations can realise key benefits that improve their overall Wi-Fi health and business outcomes, including:

- enabling reliable and consistent interoperability between devices, applications and systems, regardless of wireless network or client devices
- increasing and optimising network airtime use, without adding additional wireless APs or other hardware)
- proactively identifying network issues prior to an outage.

Ilan Rubin said, "For organisations and environments where mobility is mission critical, optimising Wi-Fi health and wireless device and application performance is essential."