NETSCOUT

Isolate Wi-Fi Issues for Faster Problem Resolution

47% of all employees expected to be Wi-Fi only by 2020[1]

Even with the potential Wi-Fi issues, many problems that get reported as Wi-Fi problems are not actually due to the Wi-Fi network. Issues misdiagnosed as a "Wi-Fi" problem can occur on the wired network - from the LAN and WAN all the way to the application on the server in the cloud or data center. Waiting for people to complain, and then convening all the teams together for a finger-pointing meeting is not an option. Quickly detecting real problems that impact users and devices and then determining what part of the complex end-to-end service delivery network is at fault, saves critical minutes of service downtime or slow-down.

[1] HIS Markit™ WLAN Strategies and Vendor Leadership North American Enterprise Survey 29 June 2018.

Organizations in today's digital economy rely on Wi-Fi 24/7 for communication and to deliver business services, so anytime those services are not available or not performing at optimal speed; collaboration, effectiveness and productivity are negatively impacted. And it is not just an occasional situation. The pervasiveness and criticality of Wi-Fi can be seen with people in remote offices or on warehouse floors or wherever they need to work. Internet of Things (IoT) devices that depend on Wi-Fi, such as medical devices and monitors in hospitals, robots and sensors in plant or forklifts and scanners in a distribution center, are changing the business world.

Businesses in retail, hospitality, healthcare, education or any industry with face-to-face customer interactions have embraced the use of Wi-Fi to draw in and engage with customers. Wi-Fi availability can be a differentiator when people choose where to spend their time and money. Using business-specific applications on Wi-Fi connections can result in longer visits, multiple purchases and higher sales for a store or restaurant offering Wi-Fi to their customers.
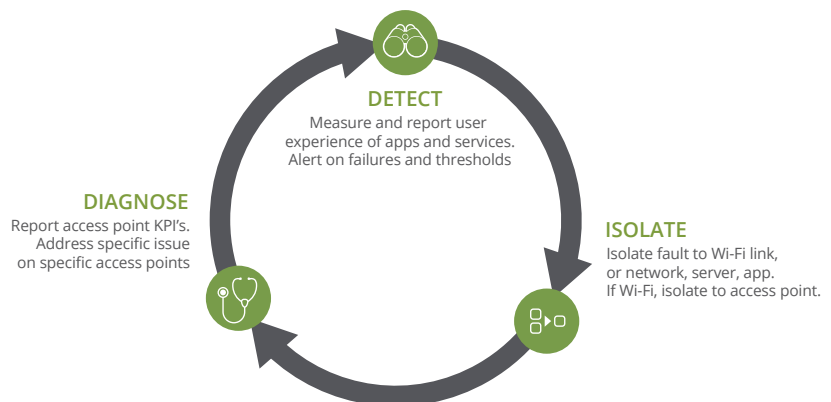
For all these people and devices depending on Wi-Fi to use business applications, it is more than just frustrating when an application won't open or runs slowly. It can mean work doesn't get done, sales don't get made or even that life-saving information isn't processed and shared. For IT, managing Wi-Fi can expose multiple issues that commonly occur within these environments. From radio frequency (RF) issues with co-channel or adjacent channel interference, to device issues with misconfigured access points (APs), Wi-Fi problem solving is complicated.

DETECT
Measure and report user experience of apps and services. Alert on failures and thresholds

ISOLATE
Isolate fault to Wi-Fi link, or network, server, app. If Wi-Fi, isolate to access point.

DIAGNOSE
Report access point KPI's. Address specific issue on specific access points

Figure 1: NETSCOUT approach enables the Wi-Fi expert to focus on solving issues that are due to the Wi-Fi.
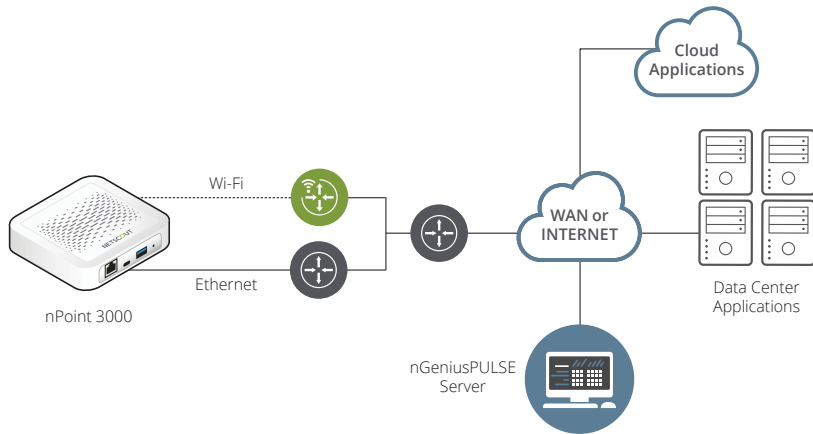
Figure 2: nPoint 3000 deployment model for testing via Wi-Fi and Ethernet.

Our Approach

The NETSCOUT® service assurance platform is based on a top down-approach, providing clear insights into service performance across the entire IT environment from the network, application, and user perspective. This approach continues when monitoring business service availability and performance from a Wi-Fi connection using synthetic testing.

Our Solutions

NETSCOUT's nGeniusPULSE® solution is an always-on and automated solution that uses synthetic testing to monitor business service availability and performance. Providing 24/7 monitoring of critical applications and services from anywhere in the enterprise, nGeniusPULSE give IT visibility to the edge of the network, while correlating service delivery with the health of the supporting infrastructure. With nPoint deployment options to fit multiple scenarios, tests can be run from the above-mentioned locations or wherever people need access to services.

The nPoint 3000 supports advanced service testing over Wi-Fi and Ethernet connections that provides IT a way to compare the trended results for fault isolation and determine if any service impact is, or is not, due to Wi-Fi. Tests can also measure the difference in latency over Wi-Fi and Ethernet on the same nPoint 3000. These tests will help identify the cause of the issue as the Wi-Fi network, a device or the wired network.

If the tests do isolate a problem with Wi-Fi, IT can also use nGeniusPULSE to provide further diagnosis and fault isolation by using wireless infrastructure monitoring to collect access point metrics such as channel utilization, retry rate, and error frame rate. These key performance indicators shed light on common issues such as co-channel interference and RF interference. With the problem isolated to Wi-Fi and a specific access point, the problem can be quickly fixed, and service can be restored.

Delivering Value to Enterprises

For any organization using Wi-Fi for employees, customers, or IoT, NETSCOUT's nGeniusPULSE provides the visibility IT needs to ensure that critical business services are available and performing over the Wi-Fi connection. nGeniusPULSE makes Wi-Fi problem solving easy and gives IT the visibility they need to:

- Improve Wi-Fi user experience by detecting problems based on indicators from the service they are using.
- Proactively address issues before users are impacted - run tests 24/7, even when no one is on the system.
- Improve productivity of Wi-Fi experts by detecting and isolating user-impacting Wi-Fi issues up front.
- Reduce MTTR and troubleshooting complexity by diagnosing root-cause using service test results and identifying Wi-Fi infrastructure causing the issue.

NETSCOUT®