

SOLUTIONS BRIEF

HEALTHCARE

Healthcare providers are introducing a wide range of new network-based technologies to improve clinician productivity. Telemetry monitors, streaming cameras for patient monitoring, purpose-built smart phones for voice communications as well as custom EHR applications are all now inextricably linked to the access infrastructure. For these investments to pay off, the performance of these tools over the network is critical to the success of any organization. Voyance is the only client performance management platform specifically developed to address this problem. Voyance automatically measures every client network transaction, surfacing actionable insights into the health of IoT devices, applications and network services. Voyance tracks how devices and applications are performing with all other parts of the network. Now IT staff has a single source of truth for user performance problems and the ability to quickly find and fix individual device or systemic client issues impacting patient care.

QUANTIFIABLE BENEFITS

- Performance management of IoT devices
- Single source of analysis for siloed IT groups
- Increased clinician productivity
- Application and network service assurance
- Seamless integration with ticketing systems
- Proactive network capacity planning
- Custom application performance monitoring
- Faster remediation of client/network incidents

KEY ISSUES

- HIPAA compliance for data privacy
- Managing performance of wireless-attached devices
- Reduce time to find and fix user/device config issues
- Measure, track and quantify EHR application health
- Reduce network operations costs
- Validate device impact on network capacity planning
- Improve user experience

USE CASES

- Performance analysis of telemetry monitors
- Track IP video camera behavior with network
- Measure call quality of critical UC voice apps
- Quantify device impact on network capacity
- Ensure EHR application health

RESULTS AND RETURN ON INVESTMENT

- 10-50% increase in production/operational efficiency
- 40-50% reduction in time to find and fix network issues
- 45-55% improvement in device and client productivity
- Ability to demonstrably improve top line revenue
- ROI validation of infrastructure changes and upgrades

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IMPROVED PATIENT RESPONSE TIMES

- Automatic baselining of network services, EHR applications and IoT performance tells IT pros what's happening, where, when and why to ensure best possible patient experience for customer-facing staff.

INCREASED CLINICIAN PRODUCTIVITY

- Eliminate erratic behavior of clinician devices, UC voice systems, critical healthcare applications and Internet-based telemetry and patient monitoring equipment with the network to improve the productivity of clinicians, doctors and patient care staff.

BETTER WI-FI STABILITY AND PERFORMANCE

- Quickly find and fix roaming issues, dropped connection and other Wi-Fi problems causing user service disruption. Wi-Fi performance is measured and analyzed across a variety of dimensions to pinpoint where problem are hiding. And proactive remediation suggestions help network staff stay ahead user issues.

UNPRECEDENTED VISIBILITY INTO IP-BASED DEVICES

- Automatically track and characterize the real-time behavior of Internet-based telemetry devices, patient monitoring cameras, and medical equipment with other parts of the network without having to access discrete monitoring tools.

SINGLE SOURCE OF TRUTH FOR ALL NETWORK TEAMS

- All user performance, application health and network service behavior across the entire network are analyzed within Voyance so different network and IT teams are working from the same facts without costly and cumbersome manual data analysis or cross-stack correlation.



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CASE STUDY: IoT insights from network analytics help improve clinician productivity

For a 14,000 staff, healthcare system, improving the productivity of clinicians and patient care staff was no longer a nice to have.

As more network-attached medical devices are introduced into its hospitals, ensuring the highest level of performance of these critical-care tools is paramount. Meanwhile, applications accessible to staff must all run perfectly with the best possible user experience over an increasingly sophisticated access network.

THE BIG CHALLENGE

One of the biggest challenges IT and network staff faced was managing and monitoring the performance of an influx of wireless, network-attached medical devices such as telemetry monitors, streaming patient cameras, sensors, well as electronic health record (EHR) applications all of which depend on other parts of the network infrastructure to perform properly.

Network operations was under pressure. Siloed IT staff each dealt with their own respective responsibilities. There was no single source of network truth that each group could access and use to identify the root cause of various network issues impacting client performance.

Another major problem was capacity planning.

As the organization planned to upgrade its wireless LAN infrastructure it needed quantifiable data to plan for increase capacity demands.

How many streaming cameras should be connected to a given wireless access point (AP)? What's the requisite response time for good wireless voice communications on new wireless smart phones?

With limited staff, budget and time, network operations staff are stuck scouring through logs of data, packets and other network data to figure out where and when problems would rear their ugly head.

Conventional monitoring tools didn't address such a modern healthcare network environment littered with so many moving pieces.

What was desperately needed was a platform that could quickly and easily analyze and track every client device and its behavior with the network in real-time and over time. But no platform existed.

ENTER VOYANCE FROM NYANSA

Voyance was deployed to tackle these device and user performance management issues with a view toward gaining actionable insights into client behavior across the entire network.

With Voyance, every client device network transaction is automatically analyzed, measured and tracked.

For instance the connectivity health of an Ascom Myco™ smart phone used for inter-staff voice communications can be determined from direct data feeds of the Ascom system and correlated across the IP stack.

THE BIG PAYOFF

Now network operations can cut in half the time to resolve any device network issues impacting patient care and clinician productivity.

When network and client incidents impacting patient care or clinician productivity can be surfaced with specific remediation recommendations to take to recover lost client hours of connectivity.

With Voyance, the organization now has in place a central platform that works with existing management, monitoring and ticketing systems that can be used as a single source of truth for all network operations.

What's more, Voyance provides detailed traffic measurements to help network operations make better capacity planning decisions as it deploys new hospital technologies on the hospital network.

With Voyance, hospital networks just got a whole lot healthier.

