



INSIGHTS | TECH BRIEF

Transforming Healthcare Networking with AI-Native Infrastructure for Connected Care

Across healthcare, networks have become clinical lifelines. Patient care now depends on digital reliability. Electronic health records, connected devices, imaging data, and telehealth applications all compete for bandwidth and uptime. For IT leaders, maintaining this ecosystem is no longer about keeping the lights on. It is about ensuring every digital touchpoint supports quality of care, clinician proficiency, and delivering a strong patient experience.

According to a recent healthcare survey from HPE Juniper Networking, 52 percent of healthcare CIOs list patient engagement as a top IT priority, while 50 percent of IT time is spent on upgrades and patching. Seventy-five percent of patients wish their healthcare experiences were more personalized. These statistics reflect the same truth: networks must evolve to intelligently predict, protect, and perform at scale.

An AI-native foundation from HPE Juniper Networking, implemented through WEI's healthcare IT experts, gives hospitals and health systems the ability to deliver that outcome. By applying real-time intelligence from client to cloud, these networks ensure that every connection is reliable, measurable, and secure — across every care setting.

AI-Native Networking: Designed for the Modern Healthcare Experience

AI-native networking is built with artificial intelligence at its core. Unlike traditional add-on analytics, AI-native architectures continuously learn from data across the entire environment, automatically predicting issues, validating performance, and ensuring security. For healthcare organizations, this approach delivers measurable improvements in uptime and service delivery.

Healthcare leaders need networks that:

- Assure predictable connectivity for critical care applications.
- Simplify day-to-day operations through automation and insight.
- Protect patient and operational data with built-in security controls.

52%

of healthcare CIOs said patient engagement is top priority.¹



HPE

The Juniper AI-Native Networking Platform, powered by the Mist cloud and integrated by WEI, fulfills these needs through a closed-loop architecture that lowers MTTR and strengthens clinical reliability. Together, WEI and HPE Juniper Networking deliver intelligent infrastructure that helps healthcare IT teams focus on patient outcomes instead of network firefighting.

Enhanced Patient Outcomes through Reliable Connectivity

When connectivity fails, care quality suffers. That was the challenge faced by one large elder-care organization operating 175 facilities across Europe. Modernizing nurse call systems, wireless telemetry, and digital health tools required a network that could deliver consistent performance at every site. Centralized configuration and zero-touch provisioning enabled rapid deployment and assured wireless coverage for caregivers and residents.²

This type of modernization is directly relevant to U.S. healthcare environments. Whether supporting voice-driven nurse communications, EHR workflows, or connected infusion pumps, AI-native wireless networking creates a predictable environment where staff can depend on the network as confidently as any other clinical system.

For hospitals focused on patient experience, AI-native Wi-Fi with integrated IoT and BLE enables real-time indoor location services. Patients can receive turn-by-turn navigation from parking to exam rooms, while staff locate medical assets instantly. A national healthcare provider recently implemented a patient navigation solution that combined these capabilities, allowing visitors to receive mobile alerts, indoor guidance, and proximity-based notifications while maintaining secure connectivity.

According to Gartner, Juniper is recognized as a Leader in both the Magic Quadrant for Indoor Location Services and Enterprise Wired and Wireless LAN Access Infrastructure, underscoring the platform's ability to integrate location, engagement, and automation into one AI-native system.³

Together, these innovations translate to improved on-time arrivals, reduced missed appointments, and measurable gains in patient satisfaction — outcomes that directly align with quality-of-care goals.

Simplifying Day-to-Day Operations with Automation

Healthcare networks are some of the most complex in any industry. Mergers, acquisitions, and rapid service expansions add layers of complexity that strain IT teams. Many healthcare organizations still rely on manual network management, which increases the risk of misconfiguration and downtime.

A leading healthcare revenue management provider faced similar challenges. Rapid growth exposed data center reliability issues that impacted service delivery. By adopting an automated data center fabric using Juniper QFX Series switches and Apstra intent-based networking, the organization gained reliable and scalable performance. Predictive insights now help avert outages and shorten resolution time.⁴

This model offers clear lessons for hospital IT leaders. Automation reduces the burden of configuration and troubleshooting, allowing limited staff to focus on innovation rather than maintenance. With AI-native insights, healthcare IT teams can visualize performance from client to cloud and take proactive actions before users experience issues.

WEI complements this technology with its integration expertise, including zero Dead-on-Arrival validation, on-site staging, and 24x365 support. These practices ensure that every network element is pre-tested, documented, and ready for immediate deployment, minimizing disruption in patient-care environments.

Modernizing Data Centers and Strengthening Security

For healthcare IT directors, data center transformation demonstrates how modernization can free staff time and reduce operating expenses. Automation eliminates repetitive tasks such as manual controller updates and allows IT to meet strict service-level expectations.

Security is equally critical. The Juniper AI-Native Networking Platform integrates Zero Trust security with deny-by-default policies, multi-hop authentication, and path selection that protects sensitive medical records from eavesdropping. AI-driven analytics detect and mitigate botnet and ransomware threats before they impact clinical systems.

WEI extends these protections through managed services that provide 24/7 monitoring, patching, and incident response for healthcare environments. This partnership ensures continuous reliability without requiring customers to build and staff their own network operations center.

The WEI and HPE Juniper Networking Advantage

Hospitals and health systems face a dual mandate: advance patient outcomes while reducing operational complexity. The combination of WEI's engineering expertise and Juniper's AI-native technology delivers measurable progress toward both objectives.

Key Benefits:

- **Predictable Performance:** Reliable connectivity for critical healthcare applications.
- **Operational Simplicity:** Automated configuration, monitoring, and resolution reduce MTTR.
- **Integrated Security:** Zero Trust architecture safeguards patient data.
- **Enhanced Experience:** AI-driven insights elevate clinician and patient satisfaction.

As a Juniper Elite partner and an HPE award-winning integrator, WEI brings decades of experience in designing, testing, and deploying high-availability infrastructure across healthcare, finance, and public sector environments. Each engagement follows a four-step methodology — assess, consult, design, and implement — supported by proof-of-concept validation in WEI's integration and testing labs.

Talk to WEI Today

AI-native networking is no longer an innovation project. It is the foundation of a connected care ecosystem. With HPE Juniper Networking and WEI, healthcare IT leaders can modernize their infrastructure to deliver the secure, intelligent, and adaptive network that clinical operations demand.

Sources:

1. Ellison, A. (2023, April 6). 52% of healthcare CIOs said patient engagement is top priority: 4 other report findings. Becker's Hospital Review. <https://www.beckershospitalreview.com/healthcare-information-technology/52-of-healthcare-cios-said-patient-engagement-is-top-priority-4-other-report-findings/>
2. Juniper Networks. (2024). AI-driven network is smart choice for elder care homes [Use case]. Juniper Networks, Inc. <https://www.juniper.net>
3. Juniper Networks. (2024). Experience-first healthcare: Connecting patients to improved outcomes [Solution brief]. Juniper Networks, Inc. <https://www.juniper.net>
4. Juniper Networks. (2024). Healthcare revenue management provider in need of reliable data center network [Use case]. Juniper Networks, Inc. <https://www.juniper.net>

About WEI

WEI is an innovative, full service, customer centric IT solutions provider.

Why WEI? Because we care. We go further.

WEI is an expert in business technology improvement, helping clients optimize their technology environments and work efficiently. WEI works with clients to understand goals, integrate strategy with technology solutions, and leverage their current IT environment into one company-wide model to increase utilization and efficiencies around their unique business processes.