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Transforming Healthcare experiences

How healthcare providers can enhance patient care and boost operating efficiency with the latest digital infrastructure

OPEN INFOBRIEF

Introduction

Super-fast, highly reliable network infrastructure is the lifeblood of today's healthcare organisations. With the ability to connect thousands of staff, devices and patients, these kinds of networks support a range of next-generation medical applications that enhance health outcomes for patients; enable clinicians and administrators to work effectively from anywhere; and dramatically reduce IT complexity and costs based on automated network provisioning and AI-powered troubleshooting and fault-fixing.

In the healthcare sector, organisations are constantly striving to optimise patient-care outcomes, while also improving operating efficiency. To achieve these goals, healthcare providers are investing heavily in digital technologies that connect staff, patients and devices on campus, or across multiple locations.

In particular, healthcare organisations are looking to:

- **Provide the best possible health services and outcomes for their patients**
  by connecting staff, devices and patients, and by delivering the latest generation of medical applications and services, including remote working applications for staff, and telehealth and virtual health services for patients.

- **Deliver convenient, personalized healthcare experiences**
  including the ability to welcome patients visiting health facilities with a personalised message to their mobile device, or to use 'wayfinding' technology to help them navigate large sites and reach their appointment on time.

- **Using IoT technology to track healthcare assets and equipment efficiently and accurately**
  based on the ability to locate devices and ensure they are available where and when they are needed most. frictionless shopping and more

- **Improve IT operating efficiency**
  based on automated provisioning, configuration, and troubleshooting across wired and wireless network infrastructure and services, with AI and ML-based capabilities for IT process automation.

- **Protect sensitive data from end to end**t
  Including effective defence against ransomware that puts highly sensitive research and clinical data at risk.

- **Enhance the application delivery experience**
  Accelerate healthcare and data delivery through agile fabric management and intent-based automation with closed-loop assurance.

When it comes to achieving these goals, legacy network infrastructure can be a significant barrier. This is especially the case for organisations running legacy networks that are built on ageing multi-vendor routers and switches, and which are unable to scale to meet the bandwidth requirements of thousands of connected IoT devices, connected hospital campuses, and the latest generation of healthcare applications.

In this short infobrief, we explain how healthcare institutions can accelerate their digital transformation journeys with Juniper's AI-powered wired and wireless access solutions. These reliably support the digital apps and services healthcare providers need to deliver the best patient outcomes; to help clinicians and administrators work effectively from anywhere; and to maximize IT efficiency based on automated network configuration, management and troubleshooting.

Read on to learn how Juniper Networks helps healthcare facilities and providers maximise network reliability and deliver the best experiences for patients, staff, and guests

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How it works: Juniper's Experience-First Network for Healthcare

Juniper helps healthcare providers to optimise patient care and increase operating efficiency with its comprehensive range of AI-driven wired and wireless access solutions. These provide the reliability, scalability, and performance needed to connect thousands of patients, staff members, and devices – both on hospital campuses and across distributed locations.

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The Juniper portfolio for Healthcare includes:
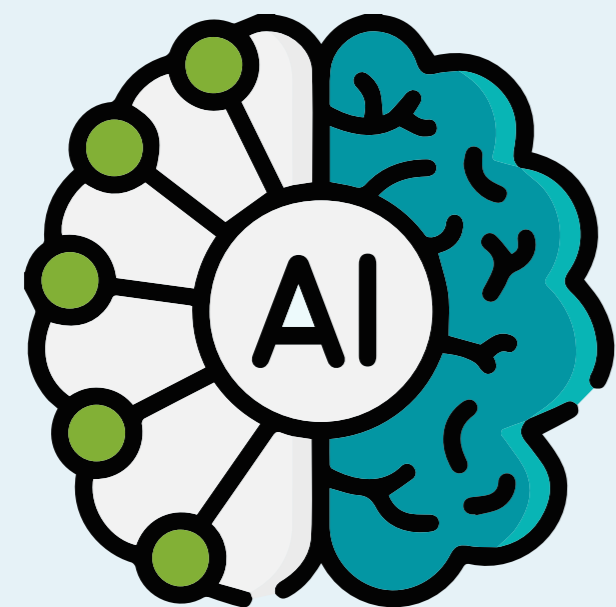
AI-driven wired-access solutions

Healthcare providers can deploy Juniper switching and routing solutions in the cloud from a single, unified cloud interface, allowing IT staff to work smarter and faster. With zero-touch provisioning and proactive troubleshooting, IT operations also become more efficient and reliable.

AI-driven wireless access solutions

WIFI

Juniper wireless access networks use a cloud-hosted microservices architecture and Wireless Access Points to provide highly reliable, scalable, efficient Wi-Fi coverage on hospital campuses, supporting both medical and administrative applications and services – including on-campus wayfinding that helps patients navigate large sites and get to find consultation rooms and other facilities more easily. .

AI-driven SD WAN

Juniper SD-WAN enables healthcare providers to assure excellent performance for even the most demanding and bandwidth-hungry clinical and administrative applications and services based on Session Smart Routing and the Juniper Mist Cloud.

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Mist AI (and the Mist Cloud)

Mist AI automates troubleshooting across both wired and wireless network environments to help IT teams to identify missing VLANs, faulty network cables, and any number of other potential technology issues, delivering major time and cost savings.

Indoor location services

Using the Mist Cloud Architecture, Juniper allows healthcare providers to converge Wi-Fi and virtual Bluetooth LE (vBLE) data for accurate, real-time indoor location services. This means it is possible to locate members of staff, inpatients, and medical equipment – from mobile defibrillators to wheelchairs – to a distance of just three metres.
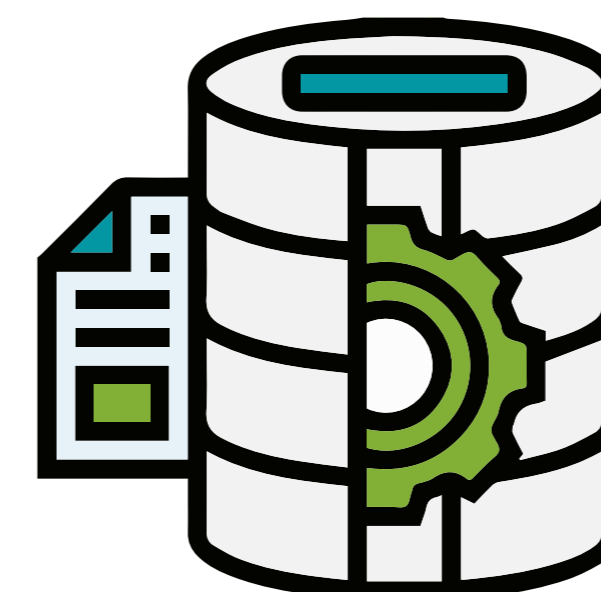
Enhanced application delivery experiences

Juniper Connected Security uniquely safeguards healthcare organisations, unifying all network elements into a threat-aware network. Juniper's built-in defences automatically protect users, devices, applications, and data across the healthcare system. Security policies are dynamically enforced at every point of connection.

Threat-aware networks that protect sensitive data

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The 6 top benefits of Juniper's Experience-First Network for healthcare providers

With Juniper's AI-driven access solutions, healthcare providers can deliver convenient, personalised services for patients and give staff the technology tools they need to work efficiently and deliver the best patient health outcomes. At the same time, network operations are simplified, delivering major time and cost savings for the IT team. .

Based on these key network attributes, Gartner has named Juniper 'furthest in Vision and Highest in Execution' in its 2021 Gartner® Magic Quadrant™ for Enterprise Wired & Wireless LAN Infrastructure.s

Fast, reliable Wi-Fi connectivity for patients and staff on hospital campuses

Juniper healthcare solutions, driven by Mist AI, automate configuration and troubleshooting across Wi-Fi networks for a great, always-on experience. Guest Wi-Fi is easy to setup with just a few clicks, and cloud-hosted operations provide seamless day-to-day management with virtually no downtime.

Always-on remote and virtual services for patients and staff

Juniper networks provide the reliable, scalable WAN connectivity radiologists, cardiologists, oncologists, and other clinicians need to read diagnostic images remotely and to collaborate virtually. Additionally, Juniper provides the always-on connectivity required for patients to access virtual health and telehealth services – increasing accessibility to critical healthcare services in remote areas and for patients who find it difficult to physically attend appointments.

Personalised, engaging communications with patients

Juniper technology allows healthcare providers to personalise patients' care experiences. It becomes possible to send a personalised messages to patients when they arrive for an appointment, to remind them to schedule vaccinations, or to let them know their test results or prescriptions are ready to be collected – all adding up to a richer, more convenient, better overall care experience.

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The 6 top benefits of Juniper's Experience-First Network for healthcare providers continued.

Improved asset and equipment tracking and management

With Juniper indoor location services, staff can track IoT devices such as ventilators and other equipment such as infusion pumps and wheelchairs – all within a distance of three metres. This ensures that staff can find the equipment they need quickly and easily, saving time and helping them work effectively and deliver the best patient outcomes.

Reduced network costs

Juniper's AI-driven networks help healthcare providers to minimise network costs by replacing manual troubleshooting with automated operations. The Marvis Virtual Network Assistant provides AI-assisted troubleshooting and network performance analysis through an intuitive conversational interface, empowering IT teams from the service desk to engineering to speed problem resolution.

Network security and data protection from end to end

Jupiter networks enable healthcare providers to implement, detect, adapt, and enforce security policies faster with network-wide visibility, orchestration, and control. With a unified platform for creating, deploying, and replicating common security policies across the healthcare enterprise, Jupiter simplifies management and delivers significant time and cost savings for the IT team.

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Contact us

To find out more about Juniper solutions and how they can help healthcare organisations to enhance patient care and boost their operating efficiency, please contact Nuvias, Juniper Networks' EMEA Distributor of the Year.

You can also visit the website for more information on why the top hospitals are choosing Juniper networks solutions from Nuvias to run their operations, and to serve their customers better.

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