

JUNIPER AND ZEBRA PARTNER TO DELIVER INTELLIGENCE AT THE EDGE

Gain real-time insights, remotely manage devices, and make AI-driven decisions at the edge

Challenge

Remotely managing a network with a mix of large scale IoT, data, and voice devices can be a challenge. Troubleshooting wired and wireless network performance issues without immediate resolution can lead to overall bad user experiences.

Solution

Juniper Networks and Zebra Technologies offer an integrated solution that delivers intelligence at the edge. Powered by AI and managed through the cloud, the solution provides actionable insights for resolving network issues and integrates Wi-Fi with vBLE technology for real-time, accurate location and asset tracking—all delivered through a secure, high-performance, wired and wireless network experience.

Benefits

- AI-driven, predictable, Wi-Fi voice quality and data services
- Remote troubleshooting of Wi-Fi issues through a virtual network assistant
- High accuracy, indoor location services, delivered through virtual BLE array and machine learning technology

The Challenge

In the past several years we have seen a vast increase in the adoption of Internet of Things (IoT) devices in consumer, edge enterprise, and industrial environments. As of early 2021 more than 35 billion¹ active devices were in use, and over 80%² of organizations stated that they are making use of IoT in many ways. Digital transformation—the convenience of mobile and cloud access—combined with faster wireless and use of AI has deepened the roots for IoT use cases in our lives.

In heterogeneous Wi-Fi networks, connecting IoT and mobile data or voice devices can be problematic if not managed effectively. Delay in data delivery to and from IoT devices can lead to inconsistent or loss of valuable real-time metrics, while packet loss on voice communication mobile devices can lead to poor user experiences. Without full visibility of the network and devices, IT and operation teams often face challenges delivering and managing a reliable network that delivers the desired user experiences.

The Juniper Network and Zebra Technologies Joint Solution

Juniper Networks, a leader in AI-driven networking, prides itself on delivering user experiences that transform the way people connect and work with IoT and mobile communication devices.

Zebra Technologies, an innovator at the edge of the enterprise, develops Wi-Fi connected solutions used to sense, analyze, and act on data in real time. Its vertical expertise spans from healthcare, retail, manufacturing, and logistics markets to government, field service, and sports and entertainment.

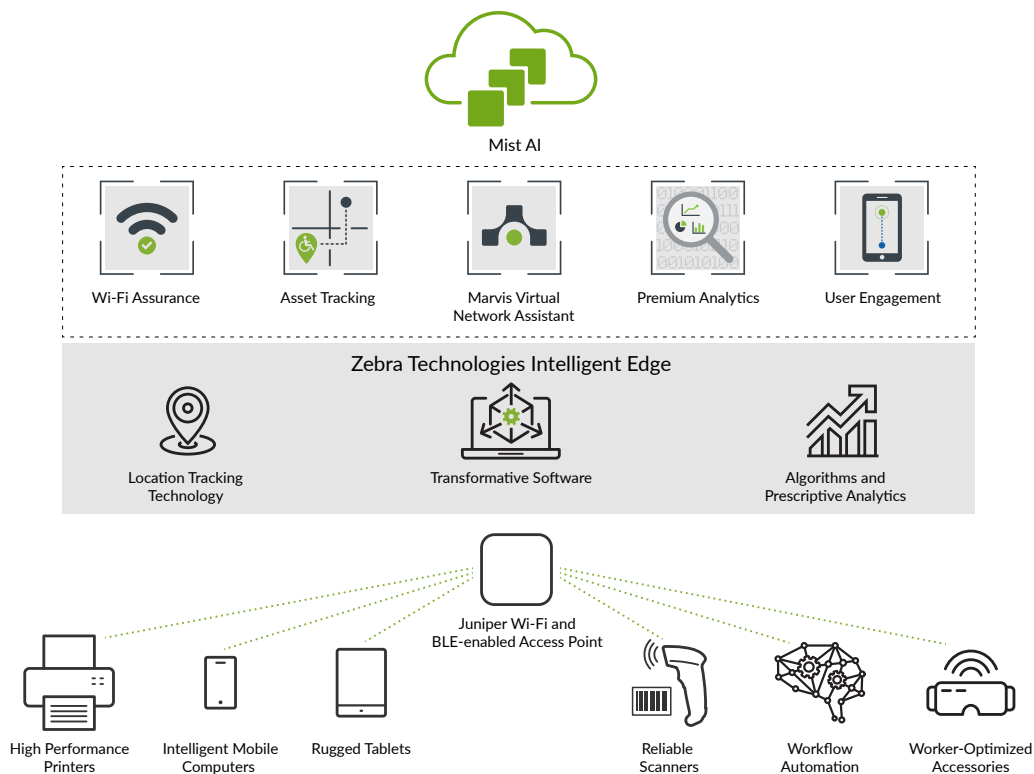
Together, Juniper Networks and Zebra have partnered to close the gap between wireless network performance and user experience by designing a joint solution that addresses these challenges.

Solution Highlights and Benefits

- Actionable insights with rich telemetry data from Juniper Wireless Services, driven by Mist AI, and Zebra Wireless Insights Clients.
- Correlation of network and client events to easily identify the root cause of each issue and pinpoint the exact location of performance degradation.
- vBLE and Wi-Fi support better enables Zebra offerings, such as Zebra Device Tracker, which helps retrieve missing devices.

¹ Reference link: <https://findstack.com/internet-of-things-statistics/>

² Reference link: <https://techjury.net/blog/internet-of-things-statistics/>

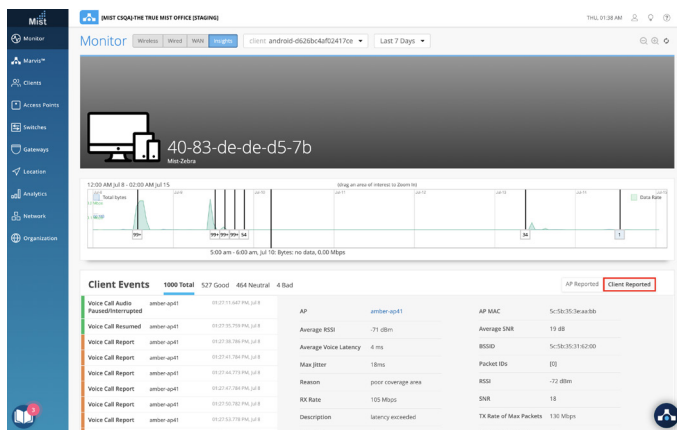


Juniper Networks Solution Components

- **Juniper Mist micro-services Cloud Architecture** with AI-driven operations and management at scale of Wi-Fi and BLE services.
- **Juniper access points** with vBLE array deliver highly accurate location services including asset visibility and way-finding.
- **Wi-Fi Assurance** provides user service levels, anomaly detection, automated event correlation for troubleshooting, dynamic packet capture, policy configuration, guest WLAN, and more.
- **Asset Tracking** of Wi-Fi and vBLE technology, and Zebra Device Tracker devices, using Juniper dynamic vBLE enabled access points.
- **Marvis Virtual Network Assistant**, supporting natural language queries with integrated help desk functionality for rapid and simple AI assisted actions, enabling the Self-Driving Network™. Marvis client provides complete network and device visibility.
- **User Engagement**, pushing accurate turn-by-turn location based information to Zebra Networks intelligent mobile computers.

Zebra Technologies Solution Components

- **Wireless Insights** provides client-based visibility into roaming events, data, and voice performance.
- **High-performance mobile printers** provide on-the-spot printing of labels and more for on-the-go productivity.
- **Intelligent, configurable mobile computers**, including wearables and rugged tablets, are primed for everywhere connectivity.
- **Reliable cordless scanners** capture data from the most challenging barcodes the first time, every time.
- **Strategic workflow automation** liberates workers from repetitive tasks and transforms operations to raise sales and customer satisfaction.
- **Worker-optimized accessories** such as voice headsets, wearable scanners, and head-mounted displays help maximize the benefits of intelligent edge devices and software.



Warehouse Use Case

Today's modern warehouses strive to optimize operations and business workflows through the use of mobile and intelligent IoT devices. IT staff in such environments are almost non-existent, while deployment of multiple networking equipment is minimized (through consolidation) in order to reduce "truck rolls" and operational costs. With such restrictions, it's no wonder that warehouse businesses look to vendors who can provide wireless and networking solutions that are reliable, remotely manageable, and offer zero touch configuration where possible. But support of such functionality and features is only the starting point for today's modern warehouses. The rapid growth and adoption of intelligent mobile and IoT devices introduces a whole new set of challenges when trying to remotely diagnose issues in the network. Remote IT staff, who use traditional remote monitoring and diagnostics tools, spend lengthy time analyzing large amounts of complex data, resulting in network downtime, with sometimes little to no resolution of the issue. These challenges call for a new approach to the problem.

While Zebra Technologies prides itself on delivering the promise of intelligence at the edge with its mobile warehouse devices, Juniper Networks helps Zebra Technologies realize the user experience of that promise with its AI-driven, cloud managed, wireless solution.

AI-driven Access for The Modern Warehouse

Juniper Wireless Services, driven by Mist AI, deliver network experiences that transform the way people connect in the modern warehouse. The wireless solution streamlines IT remote operations by providing AI-driven automation, actionable insights, and simple, scalable, and elastic provisioning of wired and wireless networking through its Juniper Mist Cloud platform.

Mist AI and Marvis Virtual Network Assistant support AI-driven operations and proactively resolve on-site warehouse issues before they occur, while Wi-Fi Assurance replaces manual troubleshooting tasks with automated wireless operations to make Wi-Fi predictable, reliable, and measurable. Finally, Juniper high-performing Wi-Fi 6 access points and EX Series switches deliver secure wired and wireless networking connectivity for warehouses.

Healthcare Use Case

The healthcare community has driven the rapid evolution and adoption of IoT. Healthcare environments, like hospitals, pharmacies, and elderly care facilities have enabled smarter edge devices to be able to connect medical personnel with patients, allowing them to monitor—in real-time—the patient's health and well-being. Most healthcare professionals in hospitals now carry mobile handheld devices, such as rugged tablets, to check up on patient records, or wireless voice communication devices to communicate with other healthcare professionals onsite. Inside the patient's room, remote patient monitoring automatically collects health metrics like heart rate, blood pressure, and temperature of the patient, sending this data back to healthcare professionals to analyze and make recommendations. Location tracking of patients, IoT devices, and healthcare workers is also vital in such environments.

These complex and sensitive environments depend strongly on having a reliable network and user experience allowing medical professionals to worry about more important matters, like patient care. Fortunately Juniper understands these challenges, and strives to provide reliable, high-quality wired and wireless solutions that deliver the required user experiences in these environments.

Partnering with Zebra Technologies and connecting their intelligent edge devices, such as mobile computers and rugged tablets, Juniper Network's wireless solutions deliver healthcare professionals the unmatched network performance and user experiences they need. Using AI-driven insights, healthcare professionals can be assured that a self-driving network, with actionable steps to re-mediate network issues, will keep them always connected to patients and other healthcare professionals in the network. With vBLE-enabled, high-performance Wi-Fi 6 access points, Juniper Networks can assure delivery of real-time patient and location data between healthcare professionals and Zebra intelligent edge devices.

Together, Juniper Networks and Zebra Technologies unburden the delivery of patient care in three ways: 1) Positive patient identification 2) Secure high-performance communication and collaboration 3) Real-time location and asset tracking.

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

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