



Mist, an AI-native solution built with AI and for AI

Leverage advanced AIOps to streamline network operations and build infrastructure optimized for AI workloads



80%

of organizations believe the network is more/much more complex than just two years ago¹

The challenge: limited resources, growing complexity, increasing security risks

IT leaders like yourself are expected to deliver greater value from their networks with the same or lower budgets and limited staff. You must also manage rising complexity from exponential growth in data and the proliferation of network devices and users. And as user expectations for exceptional network experiences continue to grow, security is critical as bad actors constantly probe for any opportunity to breach your network defenses.

What you need: a secure, AI-native network optimized for performance

Simplicity: Reduce network complexity and streamline operations so operators can focus on more strategic initiatives and innovation

Productivity: Automate routine tasks, gain real-time insights into user experiences, and enable proactive, self-healing network operations

Reliability at scale: Ensure consistent performance and high availability across all network devices, demanding workloads, and modern enterprise applications

Zero trust security: Protect users, devices, applications, and data wherever they are with built-in security, greater visibility, and simplified policy control applied and enforced at a global scale

Mist: delivering on the promise of AI

Mist utilizes a common cloud and the Marvis AI engine across all networking domains—wireless, wired, SD-WAN, WAN, data center, and security.

¹ 2024 ETR Technology Spending Intentions Survey (TSIS)



This end-to-end approach simplifies IT operations—from deployment to proactive troubleshooting and rapid issue resolution—to boost productivity with fewer trouble tickets, reduce OpEx, and optimize end-user experiences. It also lays the foundation for high performance, adaptive network infrastructures, purpose-built to support mission-critical AI workloads.

Purpose-built with AI and for AI

Networking is essential to how we live, work, and play, which is why in today's digital landscape, network performance can no longer be defined by uptime alone. Simply being connected is not the same as exceptional network experiences, and AI is the key to unlocking the full potential of network performance. At HPE Juniper Networking, our experience-first approach to AI-native networking is leading the convergence of AI and networking to drive flawless, personalized end-user experiences. We do this by leveraging the three key pillars: AI-native operations, comprehensive client-to-cloud portfolio, and integral security.

The Mist AI networking solution

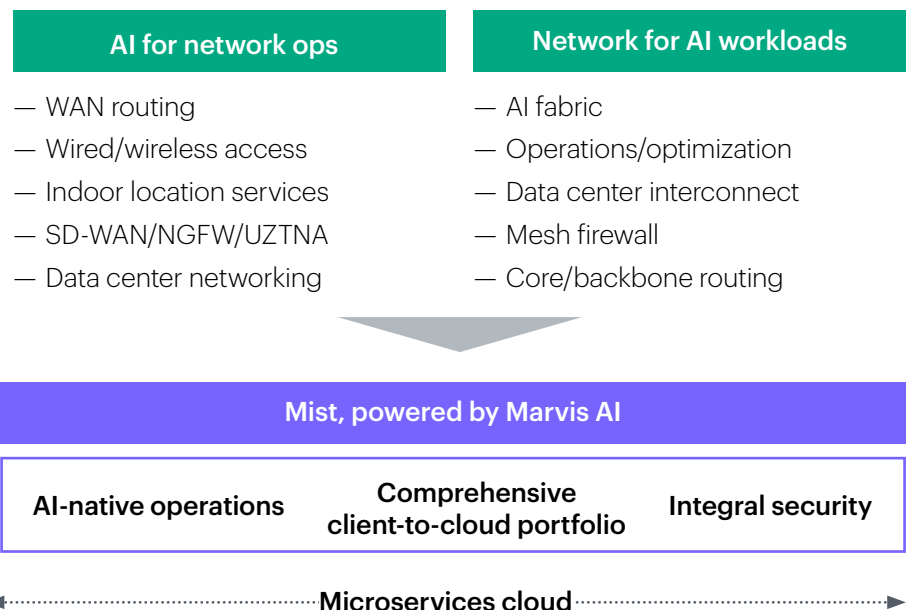


Figure 1. Mist, HPE Juniper Networking's AI-native networking solution

93%

Organizations stating that integrated AI and automation solutions meet or exceed their expectations for increased network team productivity²

AI-native operations: Success in today's digital landscape hinges on having both the right data and the right response. By leveraging high-quality, real-time telemetry gathered with deep domain expertise, organizations can answer experience-first questions with precision and clarity. This foundation enables real-time insights and actions that accelerate root cause identification, deliver smart recommendations, and drive automated resolutions—ensuring seamless operations and exceptional user experiences.

Comprehensive client-to-cloud portfolio: Digital transformation demands both the right networks and the right cloud. With an end-to-end networking portfolio spanning enterprise, service provider, and cloud provider domains, enriched by AI-enabling telemetry and insights, organizations gain the visibility and intelligence needed to optimize performance. Paired with cloud-native and AI-native hybrid cloud platforms, businesses unlock speed, agility, and scale—delivering innovation with the simplicity and cost-efficiency of the cloud.

Integral security: In a world of evolving cyber threats, unified protection is essential—safeguarding users, systems, and data across the entire client-to-cloud environment. With AI-native security at its core, this approach delivers an intelligent defense that continuously learns and adapts to emerging threat vectors, ensuring resilience and proactive risk mitigation at every layer of the digital ecosystem.



² Ibid

97%

Organizations citing they are open to evaluating new network vendors if they have superior AIOps technology³

AI for network operations

Mist offers advanced AIOps across all networking domains to simplify operations for IT teams and deliver exceptional experiences to end users. Marvis AI provides proactive insights and actions to ensure issues are rapidly identified and actioned. This enables your IT team to spend less time troubleshooting and more time on strategic initiatives while end users enjoy seamless connectivity with no interruptions or slowdowns.

With a cloud-native unified platform, Mist provides exceptional visibility and control while drastically simplifying operations. Consolidated management also breaks down network silos, enabling more efficient and streamlined operations, as well as exponential time and cost savings.



WAN routing

Secure, reliable, and scalable routing connectivity between campuses, branches, data centers, and cloud



Wireless and wired access

High performance, secure, and scalable connectivity for mobile and wired devices across enterprise environments



Indoor location services

Accurate, real-time indoor location tracking using Wi-Fi, BLE, AI and cloud based analytics



SD-WAN/NGFW/UZTNA

Cloud networking and security solutions offering secure, reliable, and application-aware connectivity across enterprise environments



Data center networking

Comprehensive hardware, software, and AIOps for secure, scalable, automated data center infrastructures



³ Ibid

Networks for AI workloads

Maximizing AI investments requires specialized networking infrastructure that powers AI data centers built for high-speed data processing. HPE Juniper Networking's AI data center networking solution leverages highly scalable, AI-native WAN and industry-leading AIOps to support the unique needs of AI training, inference, and storage clusters. This innovative solution brings together the highest performing routers and switches, simplified management, and zero trust security to optimize AI data center networking performance. It delivers fast job completion times (JCTs), maximizes GPU utilization, and achieves optimal ROI with minimal demand on limited IT resources.

HPE Juniper Networking also makes multivendor management solutions available for data center networks, giving you complete freedom with no vendor lock-in. Intent-based networking automates and validates operations for streamlined deployments and day-to-day operations. And by leveraging standards-based Ethernet, you gain a more flexible and cost-effective alternative to proprietary solutions like InfiniBand.



AI fabric (switching/routing)

AI-native network fabric that integrates automation, AI, and ML to optimize network operations at scale



Operations and AI optimization

AI, ML, and automation optimize network performance, simplify operations, and improve service delivery



Data center interconnect (DCI)

Ensures high performance, scalable, and automated data transport between and within data centers



Mesh firewall

Mesh firewalls and distributed services architecture deliver industry leading scale. AI-native threat detection, advanced analytics tools, and automation enhance security



Core/backbone routing

High-performing routing infrastructure that ensures scalability and network performance

43%

of organizations identified network security as their top connectivity-related challenge⁴

Comprehensive security, visibility, and control

As cyberattacks rapidly grow more sophisticated, network security must quickly evolve to protect increasingly complex infrastructures. Traditional siloed security approaches, which separate network and security management, struggle to keep up with modern threats.

Mist seamlessly integrates networking and security functions, enabling zero trust security via unified management, a common Junos OS, and single policy framework. By consolidating security, networking, and AIOps under a single UI, routers, switches, firewalls, and full network access control (NAC) work together to coordinate effective threat protection and consistent policy enforcement across all domains—for all users—regardless of location.

⁴ IDC's Future of Connectedness Survey (06/23)

Embedding security natively into the platform empowers organizations to respond more effectively to incidents, minimize downtime, and optimize network performance.

Core capabilities

Routine task automation	Allows IT teams to deploy faster and focus on strategic initiatives instead of day-to-day maintenance
Proactive insights	Enables operators to quickly identify and resolve issues through event correlation, anomaly detection, and root cause analysis
The Self-Driving Network	Autonomously identifies and resolves network issues, optimizing performance with minimal IT intervention
Integrated zero trust security	Unifies networking, security, and AIOps, delivering greater visibility and control with consistent policies for effective threat protection
Microservices cloud	Offers optimal performance and agility and 100% open APIs for seamless third-party integrations with applications like Microsoft Teams, ServiceNow, and Zoom
Advanced AI assistant	Marvis AI Assistant provides simple natural language answers on par with a human expert; performs automated actions that save time and money while optimizing user experiences
Scalable AI infrastructure	Delivers high-bandwidth, low-latency connections to ensure the fastest JCTs and maximized GPU utilization for AI workloads



Designed from the ground up with AI at its core

HPE Juniper Networking takes an experience-first approach to networking. From the beginning—over 10 years ago—we designed Mist with AI and for AI to simplify operations and boost productivity for operators, while providing seamless, secure, and reliable connectivity for end users.

The modern approach to networking

HPE Juniper Networking believes that connectivity is not the same as experiencing a great connection. Mist, HPE Juniper Networking's AI-native solution, is built from the ground up to leverage AI to deliver exceptional, highly secure, and sustainable user experiences from the edge to the data center and cloud.

Learn more at

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