

LEAD WITH A NETWORK THAT PUTS EXPERIENCE FIRST

Self-driving networks built for the AI era

“In the era of AI, customers need networks that are purpose-built with AI and for AI.”

— Rami Rahim, EVP & GM, Networking, HPE

Standing still is no longer neutral. **It's expensive.** To succeed in the AI era, organizations need a new foundation: a self-driving network that delivers exceptional user and application experiences, operates intelligently, and scales without adding operational burden. **That foundation is HPE Networking.**

When everything accelerates, your network can't hesitate

The pace of change across the enterprise is accelerating, driven by explosive data growth, more users and devices, and rising expectations for always-on performance. As AI becomes part of everyday operations, workloads move closer to the edge and environments become more distributed by design.

Most networks were not built for this moment. IT teams are still stuck managing devices instead of outcomes, relying on manual workflows, siloed tools, and reactive troubleshooting.

The result is slower AI adoption, inconsistent user experiences, increased risk, and rising costs as teams are stretched to their limits.



A vision for networks that fix themselves

Self-driving networks don't replace IT teams—they multiply their impact. HPE envisions a network that runs itself, anticipating demand, optimizing performance, and resolving issues before they impact users. This autonomous foundation delivers seamless, uninterrupted experiences by design, becoming an intelligent engine for the business.

Transforming today's networks

The challenges facing IT teams are not incremental. They require a fundamentally different approach.

HPE Networking is at the forefront of helping teams transform network operations, delivering solutions that simplify management and improve efficiency at scale.

For over a decade, we've been advancing our self-driving network vision, converging networking, AI, and security to usher in a new era of secure-by-design, self-optimizing networks that meet the demands of an always-on, always-connected world.

Agentic AI is the latest innovation powering this evolution, shifting IT teams from managing devices to delivering exceptional user experiences. By combining intelligent automation with autonomous, self-healing capabilities, the network proactively maintains performance, resolves issues before they impact users, and continuously adapts in real time.

HPE is the only networking vendor delivering true self-driving actions today, not just recommendations or assisted workflows.

As organizations advance along the self-driving journey, they are supported by a foundation built on three pillars:

1. Experience-first agents
2. AI-native infrastructure
3. Integral security



1. From available to exceptional

As AI adoption accelerates and digital transformation deepens, networks can no longer just be up. They have to be good. A network can be available, yet still deliver poor experiences.

HPE's self-driving network builds on this principle by leading with **experience-first agents**. Purpose-built to capture specialized, real-time Service Level Expectations (SLE) data from every part of the network, it measures what truly matters: whether users can successfully access and use their applications. Instead of relying on device health or green indicators, it reveals the reality of the user experience, where performance issues often hide in plain sight.

This rich SLE data is continuously streamed into an agentic framework, where autonomous agents perceive, reason, and act in real time. Operating as an experience-first agentic mesh, they correlate real-time and synthetic data to anticipate issues, adapt as conditions change, and, increasingly, operate the network without human intervention.

The result is a shift from basic observability to actionable insight, where autonomous operations reduce tickets, speed deployments, and deliver consistently exceptional network experiences at scale. HPE's solution, as the only one powered by a Large Experience Model, is capable of resolving 80% of support tickets even as AP deployments double.

The difference a self-driving network makes

What matters	Traditional networks	Experience-first, self-driving networks
Autonomy	Recommendations only	True self-driving actions available today
User experience	Inconsistent across environments	Optimized from client to cloud, with AI that continuously learns and improves over time
Operations	Reactive troubleshooting across silos	Proactive detection and self-driving resolution across domains
Scale	Complexity increases with growth	AI automates and simplifies operations
Efficiency	High operational overhead	Up to 85% lower IT operating costs ¹



¹ Data retrieved from HPE customer case study: ServiceNow network transformation with Mist AI, 2025

2. Built for self-driving: an AI-native foundation

Self-driving networks don't happen on top of legacy infrastructure. They require an **AI-native foundation** designed to support continuous learning, real-time decisions, and autonomous action.

HPE offers a complete, gap-free platform built as a unified, AI-native foundation, bringing together networking, security, compute, and storage on a shared cloud and AI engine. This foundation fuels consistent AIOps and self-driving capabilities across every domain, from edge to data center.

Engineered for autonomy

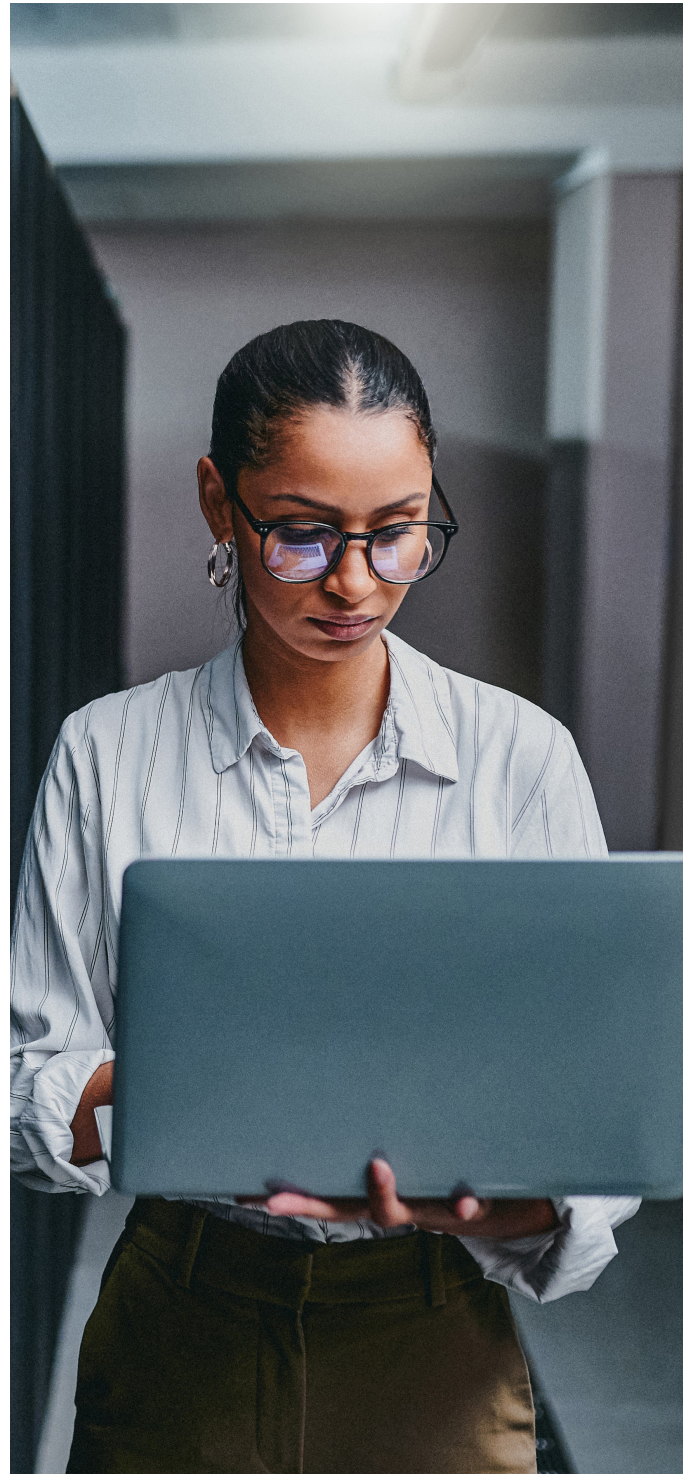
At the heart of this platform is a cloud-native microservices architecture that allows intelligence to scale, adapt, and evolve in real time. Unlike monolithic systems, microservices enable continuous innovation and embed agentic AI directly into the network rather than layering it on after the fact.

Real-time data flows across this architecture, powering autonomous agents that coordinate across domains and execute dynamic workflows while continuously refining outcomes through feedback loops. This is how the network moves beyond automation to true self-driving operations.

One platform, anywhere

With flexible deployment across on-premises, cloud, and hybrid models, organizations can run AI-driven operations where it makes the most sense while maintaining a single operational model.

An open ecosystem built on REST APIs, webhooks, and emerging standards enables seamless integration with third-party platforms. At the same time, client-to-cloud agency connects user experience insights with automated actions across the full infrastructure stack.



3. Security that never takes a back seat

In a world where data is always moving, security must be continuous, consistent, and integrated into the network.

HPE delivers security that is built in, not bolted on, embedding protection directly across routers, switches, firewalls, and access points. Zero trust is enforced consistently across every user, device, workload, and location, from edge to data center, with global policies applied everywhere and in real time. Organizations can now:

- Continuously verify trust for every connection
- Secure IoT, BYOD, and third-party devices with AI-driven profiling
- Apply consistent zero trust policies across all environments, without operational complexity
- Detect and stop threats before they escalate

Backed by a full SASE and Universal ZTNA portfolio, HPE extends end-to-end protection through centrally managed firewalls and AI-driven SecOps. With proven results including 99.16% threat efficacy, 99% accurate device profiling, and visibility across 10,000+ applications and 300M web domains, organizations gain security that scales globally and adapts instantly.

Real-world impact

A self-driving network is not a future concept—it's already delivering measurable value across the enterprise. The following use cases illustrate how AI-native, autonomous operations translate into real-world outcomes across key environments.

Enterprise data center

In the enterprise data center, self-driving networks enable continuous validation, real-time visibility, and automated resolution of issues that impact application performance. By leveraging AI-driven insights and closed-loop automation, the network can identify misconfigurations, performance bottlenecks, or anomalies and resolve them before they disrupt important services. This ensures consistent, predictable performance for new AI workloads and other business-critical applications.

Campus experience

Across campus and branch environments, self-driving networks deliver consistent, high-quality user experiences by continuously monitoring and optimizing connectivity. Issues such as rogue devices, congestion, or degraded performance are detected and resolved automatically, often before users are impacted. The result is a network that proactively ensures seamless access for users and applications without manual intervention.

Routing infrastructure solution

Across WAN and routing infrastructure environments, self-driving networking brings agentic AI-driven automation to day 0, day 1, and day 2 operations. By grounding AI in real-time topology, telemetry, service state, compliance data, and historical analytics, the network can detect issues, identify root causes, validate changes, and recommend or execute corrective actions within the full-lifecycle workflow. This helps reduce complex operational tasks from hours to seconds while improving routing performance, resiliency, and service reliability for AI-native routing.

Security

Self-driving networks embed security directly into operations, enabling continuous monitoring, policy enforcement, and adaptive response across distributed environments. Threats are detected and mitigated in real time, with policies applied consistently across edge, data center, and cloud. This integrated approach reduces risk while simplifying operations and improving overall security posture.



Leading organizations choose our secure, AI-native network²

- **50** of the top Forbes 2000
- **9** of the top 10 global retailers
- **10** of the top 10 global universities
- **20** of the top 20 global banks
- **9** of the top 10 global healthcare providers

² Data retrieved from Forbes 2024, 650 Group 2023 Rev., Forbes 2023 Revenues, and US News 2024

Autonomy built on trust

Moving to a secure, self-driving network is not a leap. It's a journey built on transparency, control, and proven outcomes.

By delivering explainable AI and human-in-the-loop controls, our solutions provide full visibility into every autonomous action. Teams can start with intelligent recommendations, progress to assisted actions, and adopt full autonomy whenever they feel ready. Confidence grows with every step as the network consistently delivers faster resolution and fewer tickets.

A bold vision with proven results

As organizations navigate increasing complexity and rising user expectations, HPE's self-driving network provides a clear path forward: simplifying operations, strengthening security, and elevating user experience as a measurable business outcome.

With a proven agentic architecture and real-world results, HPE is helping organizations move beyond reactive IT and into a future of autonomous operations, all at their own pace.

Start your journey to a self-driving network today.

Learn more at

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