

AI networking: Revolutionizing IT operations

5 ways to gain new efficiencies and insights

Without a change, IT's complex issues won't get easier.

When was the last time a project went so smoothly you didn't have to ask for help? When everyone was happy? When you had extra time to do something fun for you and your team?

Businesses ask a lot of their IT teams. On top of supporting a complex hybrid work model, new IoT initiatives, and a user community with little patience for slow applications and services, they're also tasked with driving innovation and addressing security concerns. Coupled with outside influences—from recessions to ever-changing technology and a lack of skilled IT resources—it's no wonder organizations are struggling to stay afloat.

But the future of IT could look drastically different.

In this guide, learn how Artificial Intelligence for IT Operations (AIOps) changes the IT game. We'll explain what AI networking is, and what to look for in a solution to gain new efficiencies, insights and time back.

What is AI networking, and how does it help?

Originally coined by Gartner¹, AIOps combines big data and machine learning to automate IT processes, including event correlation, anomaly detection, and causality determination. In short, AIOps is like DevOps. It brings together service and performance management—along with automation—to provide continuous insights and enable improvement.

However, because AIOps is such a broad term (whose definition often doesn't include networking), Gartner introduced the term **AI Networking**². You can think of AI networking as a subset of AIOps, as it defines a more efficient way to manage Day 2 network operations. In other words, AIOps refers to a broader information and operations (I&O) focus, while AI networking is specific to wired, wireless, and SD-WAN concerns.

AI networking provides you with the intelligence and automation to quickly see and respond to issues—or even prevent network outages—faster than is humanly possible, given the proliferation of cloud and private services, users, and IoT devices across the various locations your network supports.

¹ Market Guide for AIOps Platforms, Gartner, August 3, 2017

² Innovation Insight: AI Networking Has the Potential to Revolutionize Network Operations, Gartner, May 15, 2023





Choose a solution that tackles bottlenecks

While most network solutions today include AI and automation, some provide significantly more capabilities than others. The most innovative solutions assist with Day 0 and Day 1 tasks, as well as Day 2 responsibilities.

Look for a management solution that has built-in, natural language search to assist with basic Day 0 activities, such as configuring a service set identifier (SSID), defining an access policy, or setting up a guest network. This empowers your entire team—from early career to the most senior IT team members. Timelines are nearly impossible to keep when you rely on your most senior IT staff for everything. Natural language search enables all IT members to participate in the setup of the network, without missteps or delays.

At a more advanced level, the best management solutions automatically baseline the performance and behavior of your network—without requiring IT to manually configure service level expectations. Imagine trying to guess how a network will perform without users connecting, roaming, and generating actual traffic in a real environment? Automatic baselining a network helps ensure you won't be surprised by an overwhelming number of alerts.

Resolve anomalies before they're found

One sign of an impending problem or security issue is a behavioral change. Choose an AI networking solution where the AI and machine learning are trained to quickly identify everything, from wireless RF problems to cabling or port issues on a switch that cause intermittent Wi-Fi connections. Your network should perform as a unified entity, and so should AI networking features.

You'll also want an AI solution that automatically collects logs and packet captures when encountering intermittent issues. It is equally important that a packet capture includes more than just header information, as more robust data speeds up time to resolution. When issues take hours or days to resolve, it leaves little time for other important tasks and initiatives.





Insist on alerts that include actionable insights

Have you ever purchased a product whose assembly instructions were so bad that you walked away in frustration?

Look for a network solution that simplifies networking. You want unified infrastructure with an AI-powered management solution that provides actual recommendations on how to solve a problem, not one that just lists possible problems with next steps. Delivering actionable recommendations requires data gathered from thousands of deployments and millions of devices and endpoints. When you're responsible for hundreds or thousands of users and IoT devices, actionable insights are extremely valuable.

Again, the most advanced AI networking solutions present their analysis as actionable recommendations that can range from changing Wi-Fi access point (AP) settings for better connections to replacing a suspect cable between a specific AP and switch to solve intermittent wireless issues. Actionable insights eliminate troubleshooting guesswork and lengthy forensics tasks—keeping IT staff from walking away in frustration.

Choose a full-stack plus Zero Trust AIOps approach

To maximize efficiency and security, the best solutions use AIOps and AI networking methods across the entire network, and include security insights. This includes AI-powered Zero Trust features for accurate client information or profiling, visibility into which applications laptops, phones, IoT, and guest devices are accessing, and whether these devices exhibit behavioral anomalies. Not every user experience issue starts with a configuration or network infrastructure problem.

If a stationary wireless point-of-sale (POS) device or mounted surveillance camera that is plugged into a switch exhibit roaming behavior—or start communicating with unknown resources—today's leading AI networking solutions can detect such behavioral anomalies and rapidly pinpoint the source. This is important because most organizations must support hybrid work models and a growing number of IoT devices and users connecting from anywhere.

Insist on optimization in addition to troubleshooting guidance

So far, we've primarily focused on using AI networking to resolve problems, which is fantastic if your office environment is perfect. But, what if it's not? Many IT organizations run their network using default configuration settings with the intention of tuning variables over time. However, higher priorities emerge, people leave, resources become constrained, and optimizing the network never happens.

Look for a solution that includes site comparisons and optimization guidance based on your locations and those of comparable peer organizations with similar characteristics. You'll be able to leverage changes you've implemented within your environment and learn from the best practices of others. Newer APs, firmware, or a default configuration change running on your existing APs can mean the difference between satisfied users or a sleepless night.

The solution you choose should also provide simple AI-powered firmware recommendations. IT teams often run old software on APs, which translates into security gaps, exposure to known bugs, and missing out on new features that enhance the user experience. AI networking algorithms track how long a software version has been in use, on which APs, its known issues, and more, to recommend the best version for your environment.



AI networking is here to stay

New technology can be daunting, but it's important to understand that AI networking is here to stay, and it can greatly enhance IT operations and efficiency. Outcomes range from automatically finding PoE related issues to reducing troubleshooting times by 50% to gaining more than 15% performance improvements by implementing optimization guidance.

AI networking is built into management solutions like HPE Aruba Networking Central and provides the optimization and insights many IT organizations demand.

Take the hard work out of networking with HPE Aruba Networking Central

AI-powered HPE Aruba Networking Central simplifies Day 0 to Day N activities to give your IT team more time to spend on more strategic projects and initiatives. In addition to automated anomaly detection, troubleshooting guidance, and trusted optimization recommendations, security related insights are built-in and not bolted on. In today's working world, security features and AI-powered insights should never be an afterthought.

For more info, visit arubanetworks.com/AIOps.

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