

AI-Powered Network Management: The HPE Aruba Networking Way for Network Ops

For a network administrator, it's a tough time to be at the top of their game. It's a game of time and agility – a constant pursuit to ensure uninterrupted uptime, optimal performance, and high-quality service. Networks are spanning across various infrastructures and architectures, such as large campuses, multiple branch sizes from large to the micro branch / home office, data centres and the cloud, making management more challenging than ever. The pandemic has only exacerbated the situation where hybrid work is now the norm but there is an increasing appetite to return to the office. It is therefore crucial for network administrators to adapt and find a comprehensive solution to manage their changing networks effectively.

Network challenges that affect business operations

If you catch hold of a network operator and inquire about the existing network management challenges, you would probably yield a response that includes at least one of the following issues: identifying the individuals connected to their network, ensuring network security, or managing day-to-day network operations. In my opinion, they are still being humble because I realise there is much more to it than meets the eye. Some of the common challenges that network admins currently face include:

- Adapting to hybrid networking demands: Networks now span across various environments, requiring administrators to handle a mix of on-premises, remote, and cloud-based infrastructures. This complexity adds a layer of difficulty to network management.
- Strategic planning with an understanding of network capacity and emerging requirements: Network administrators need to have a deep understanding of the present network capacity and its ability to adapt to new use cases whilst maintaining optimal performance and user experience.
- Reinforcing security and reliability of dynamic networks: With the growing complexity of networks, ensuring consistent network security and reliability becomes a top priority for network administrators.
- Eliminating network blind spots: It's crucial to have a comprehensive view of the network to avoid blind spots and identify potential issues before they cause disruptions.
- Visualising the IT infrastructure and establishing a network management strategy that automates, connects, and integrates: Network administrators require a centralised and customisable network management solution that offers control over the entire network infrastructure while allowing integration of newer technologies.

While these challenges require a detailed discussion, it's evident that network administrators need the right management tools to handle the demands of hybrid networking models. They need a comprehensive and customisable network management solution that offers centralised control over their network and the ability to integrate newer technologies.

AI-powered network management: The way forward

The scope of Artificial Intelligence for IT operations (AIOps) is much explored these days, as it combines big data and machine learning to automate IT operations processes, including event correlation, anomaly detection, and causality determination. In the context of network management, AIOps enable centralised visibility and automation across various infrastructures, including cloud environments and on-premises IT infrastructures. AI-powered network management simplifies network administration by unifying management efforts and providing a centralised view of the entire network.

In the realm of network management, I firmly believe that AI-powered solutions can address the current challenges faced by network administrators. Automation, a key tool for network managers, reduces human errors and speeds up the deployment of new infrastructure and configuration changes. With the right network management platform, business and security policies can be mapped to rules deployable through automation tools, streamlining operations and reducing errors.

Having a single view of the entire network is crucial for efficient troubleshooting. An AI-powered network management solution offers the ability to drill down into any part of the network infrastructure, whether it's the WLAN, wired network, data centre, or WAN, providing network administrators with consistent insights across the board. Additionally, user experience monitoring should be integrated into the network management platform, ensuring a holistic approach that aligns with the demands of today's business environment.

Exploring AI-powered Network Management with HPE Aruba Networking

HPE Aruba Networking, with its vision of seamless automation, has developed an ecosystem called HPE Aruba Networking Central that creates a single pane of glass for network management. At its core is AI. Internally developed networking focused machine learning models provide a range of new insights and recommendations to ensure the network is always operating at an optimum level. The AI Insights and recommendations provided to the network operator are tailored for their specific operational environment. They provide dynamic service level baselining and performance assurance for WLAN, switching, and WAN and features natural language search for faster troubleshooting. HPE Aruba Networking's AI-powered network management combines network, security, and user-centric analytics to identify anomalies and provide prescriptive actions with high accuracy.

In the context of network management, AIOps refer to the use of AI to analyse and optimise network performance. Machine learning models are trained on telemetry data from the network infrastructure, allowing for baselining and peer comparisons to detect anomalies specific to each environment. AIOps provides continuous insights and anomaly detection, recommending actions to fix issues and reducing the need for manual troubleshooting.

It can also gather troubleshooting data automatically, streamlining issue resolution. Furthermore, AI-powered management platforms can categorise devices connecting to the network and assess their risk profile while also offering recommendations for firmware, configuration optimisations, and performance improvements.

Network management is critical to the ongoing success of any business, and HPE Aruba Networking aims to enable straightforward and simple network management with practical solutions. With its AI-powered network management capabilities and the HPE Aruba Networking Central ecosystem, we can provide the network administrators with the tools they need to overcome challenges, streamline operations, and ensure a reliable and secure network infrastructure. As the network management landscape continues to evolve, HPE Aruba Networking remains committed to advancing the field and delivering innovative solutions to its customers.

Together, let's conquer the challenges of network management and embrace the power of AI to build a resilient and efficient network infrastructure.

