ESG BRIEF

Aruba Edge Services Platform (ESP): AI-powered Automation and Protection at the Edge

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ABSTRACT: With the edge adding to the complexity of IT, organizations need a simple, cost-effective solution to extract valuable insights from immense amounts of data and, at the same time, protect the business. Aruba's recently announced AI-powered, unified edge services platform (ESP for short) incorporates intelligence and security, helping improve agility and network visibility, boosting security at the edge, and enhancing the user experience.

Overview

With the IT pendulum swinging toward highly distributed environments, organizations are no longer solely focused on the data center and the cloud. Now, it's also about the edge—and how leveraging data at the edge can aid business agility, flexibility, and the user experience—as well as the bottom line.

Unfortunately, the edge is getting especially complex due to increasing numbers of connectivity protocols, additional sensors and devices, and enormous amounts of data. Further complicating things, the definition of the edge is also changing and expanding. This is evident in the recent surge of employees working from home due to the COVID-19 pandemic.

So where does that leave businesses? They need a highly performant, secure, and available edge environment. They need the ability to view the entire network in real time—plus the means to automate *and resolve* problems before they can damage the business—all while offering a trouble-free user experience.

Aruba Networks ESP

At the recent ATM Digital (the virtual Aruba Atmosphere conference, which more than 40,000 people attended), Aruba Networks announced Aruba ESP, the new AI -powered, cloud-native, edge services platform (branded as "a network with a sixth sense") that aims to automate, unify, and secure the edge, handling potential issues before they can negatively impact the business. In essence, Aruba ESP was developed to help organizations drive innovation and generate business value at the edge (rather than just maintain the status quo).

With Aruba ESP, the vendor has enhanced its Aruba Central network management platform, offering single-pane-of-glass network management at scale. Leveraging a common data lake in the Aruba ESP platform, Aruba Central correlates and displays multiple dimensions of information in context, automates root cause analysis, and provides improved networking analytics. Policies are easily deployed and enforced across the network, streamlining and enhancing security.

That centralized visibility is especially important given the current work-from-home initiatives. Aruba customers can take advantage of Aruba Remote Access Point (RAP) Networks (developed for the Asia Pacific region during the first SARS epidemic) to enable cloud-native network management and zero-trust security in individual homes and remote worker locations with ESP.

To accelerate adoption and integration with existing solutions, Aruba also introduced Aruba Developer Hub, a consolidated set of developer resources, which includes Aruba APIs and documentation. Rather than forcing developers to hunt for resources in various locations, Aruba is ensuring that they can easily locate and access the tools they need without issue or delay (boosting productivity, mitigating frustration).

Aruba ESP is based on three key pillars:

- **AIOps (artificial intelligence for IT operations).** This is the "sixth sense" of the solution. AIOps provides the predictive capabilities of Aruba ESP (quickly identifying root causes and resolving issues), freeing up IT to work on more value-added activities rather than focusing on manual troubleshooting tasks. In essence, AIOps helps to reduce mean time to resolution, while increasing network utilization.

  AIOps offers data-driven insights and recommendations, supporting network performance optimization. AI and machine learning work together with network telemetry to ensure that user service level agreements are being met. A central control panel allows IT to view all users, devices, and access points (APs), immediately indicating any issues (like a dynamic host configuration protocol [DHCP] failure) that could prevent users from connecting to the network.

  Additionally, Aruba ESP has the ability to make recommendations, or automatically take action to mitigate a potential issue. Aruba ESP also promotes extensibility, enabling organizations to use their existing tools, as well as third- party solutions via APIs.

- **Unified infrastructure**. To reduce the complexity and increase operational efficiency, Aruba is unifying previously disparate wired, wireless, and WAN infrastructure management at the edge. This eliminates siloed management solutions and manual correlation efforts. With Aruba Central and Aruba ESP unified network operations capabilities for branch, campus, data center, and remote worker locations, operations teams can reclaim time currently used to keep the lights on and instead use it to focus on driving innovation.

- **Zero-trust security model**. Using Aruba ESP's integrated VPN, companies can automatically enforce appropriate access across the organization via role-based policies. With Aruba Dynamic Segmentation, IT can employ the principle of least privilege (i.e., users receive only those privileges necessary to complete their jobs). This means businesses can enjoy zero-trust security wherever users connect to the network (e.g., data center, home, the edge), reducing risk, and reinforcing IoT device security—without adding cost or complexity.

A Variety of Protocols

ESP supports a number of different wireless protocols including Bluetooth Low Energy (BLE operates at 2.4 GHz, remaining in sleep mode until a connection is made) and Zigbee (two-way communication between a sensor and control system, e.g., electronic hotel door keys controlled by personal Wi-Fi).

Flexible Deployment and Consumption Options

Organizations can consume Aruba ESP several ways, including as cloud-based or on-premises software-as-a-service (SaaS) or via network-as-a-service (NaaS). Aruba ESP can be implemented in physical and virtual form factors (where possible). Customers can connect to and secure physical locations, private clouds, or public clouds, enabling them to deploy secure, remote work solutions—eliminating the time, resources, and expense of transporting physical resources to edge and remote locations.

With the pandemic impacting organizations' financial resources, HPE Financial Services is offering flexible financing to ensure organizations can continue down the transformation path. GreenLake for Aruba (a NaaS solution) combines Aruba ESP and fully managed services, enabling organizations to scale infrastructure as needed. This option is billed monthly, giving organizations the flexibility to allocate funds to support other business initiatives.

The Bigger Truth

Edge locations continue to increase in importance for many organizations across virtually all industries. However, the inherently distributed nature of the edge adds to the complexity of managing these environments effectively. Therefore, organizations require a simple, secure, and cost-effective solution to enable operations to leverage the data generated at the edge and then extract valuable insights in real time—while ensuring the business is protected. Aruba ESP provides centralized management for unified wired, wireless, and WAN; zero-trust security; and the intelligence for organizations to optimize their edge locations—from branch offices, through manufacturing sites, to retail outlets—or even home offices.

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