ArubaOS 10 AT A GLANCE

Next-generation, Distributed Operating System for Enterprise Wi-Fi

HPE aruba networking

Key Benefits

- Simplify the deployment and upgrade of wireless networks using a unified operating system that meets the needs of remote workers, branch offices, and large campus environments

- Optimize radio frequencies operation and deliver reliable and high-performing connectivity with AI-automation and machine learning insights

- Provide the highest levels of security with policy enforcement across wired and wireless environments and secure segmentation

- Unify the management of wired, wireless, and SD-WAN using Aruba Central to create a single pane of glass as part of Aruba's Edge Services Platform (ESP)

- Future-proof your wireless investment using a cloud-native, microservices architectural model while leveraging existing hardware.

[1] IDC, Five Key Enterprise Networking Trends to Watch in 2020, April 2020

[2] Gartner, "Use AIOps for a Data-Driven Approach to Improve Insights from IT Operations Monitoring Tools," May 11, 2020

ArubaOS 10 (AOS 10) is the distributed network operating system working with Aruba Central that controls Aruba Access Points (APs) and optional gateways. With its flexible architecture, network teams can deliver reliable and secure wireless connectivity for small offices, mid-sized branches, even large campus environments, and remote workers. Working in tandem with cloud-native Aruba Central, AOS 10 provides the WLAN management and control to deliver greater scalability, security, and AI-powered optimization.

EMERGING MARKET TRENDS

Three trends are shaping network management: cloud-based architectures , hybrid workplaces, and artificial intelligence for IT operations (AIOps). According to IDC, half of all new deployments will offer cloud-based management[1] in order to simplify operations, accelerate innovation, and provide greater scalability. More enterprises are allowing employees to work remotely. This means providing secure, high-performing connectivity and access to collaboration tools for a much larger remote workforce. Organizations are also relying more on AI and machine learning (ML) to help automate, streamline and improve IT and business decision making. This new focus on AI/ML to improve operator efficiency and user experience is expected to increase dramatically. According to Gartner, 30% of enterprises will adopt AI-enabled tools to augment traditional monitoring approaches in 2023, up from 2% in 2018[2].

With these market trends in mind, AOS 10 has been designed to deliver scalability, greater reliability, embedded AI and machine learning optimization, and simplified licensing and consumption. It also provides greater flexibility to support new use cases such as remote work and IoT. AOS 10 requires Aruba Central, a core component of Aruba's ESP strategy to convert data at the Edge into meaningful business and IT outcomes.

EASE OF DEPLOYMENT AND MAINTENTANCE

With its cloud-native, microservices architecture, AOS 10 provides greater scalability and accelerated innovation for wireless networks. It works with Aruba Central to deliver WLAN control and management services that are unified across branch, campus, and remote networks. Enterprises can opt to use gateways for SD-WAN tunnel and routing capabilities or for enhanced Wi-Fi capabilities that offer greater scalability, security, and manageability.

With AOS 10, onboarding, configuring, and provisioning APs and gateways is simpler and requires no manual CLI configuration or maintenance windows. Once the AP is plugged in, the device connects and receives its running configuration from the cloud using zero touch provisioning, which allows remote workers and offices to onboard and configure wireless connectivity without any on-site IT support. It's also easier with the AirGroup feature to use Apple, Google, and third-party services with multicast DNS proxy capabilities to prioritize services and add policy controls.
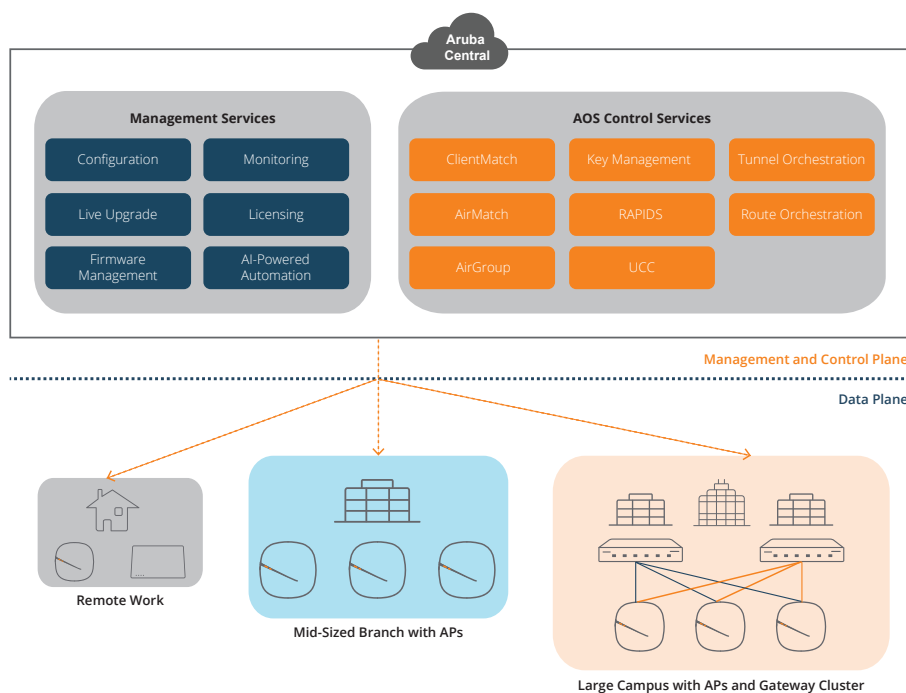
To avoid downtime or loss of service caused by upgrades, AOS 10 offers Live Upgrade functionality. Live Upgrade reduces maintenance windows and ensures continuous wireless operations.

Figure 1. Distributed ArubaOS 10 supports APs and optional gateways.

INTELLIGENT OPTIMIZATION

To optimize radio frequencies operation and deliver reliable and high-performing connectivity, AOS 10 includes advanced AI and machine learning capabilities that keep Wi-Fi networks performing at peak levels. For critical unified communications applications, AOS 10 provides a consolidated view of how voice and video applications are performing with insights into potential performance and capacity issues and prioritization of UCC traffic for higher quality of experience.

OPTIMIZE CLIENT CONNECTIVITY

To improve the experience for roaming mobile users, ClientMatch monitors the radio frequency environment around each client and uses advanced analytics to dynamically provide ongoing band steering and spectrum load balancing to enhance the experience for every client in the network. ClientMatch automatically reassigns APs as needed to avoid sticky client issues, which occur when the client remains tethered to a specific AP despite low signal levels.

AUTOMATE RF MANAGEMENT

To support growth in client device density and in data volumes, AirMatch uses machine learning techniques to provide automated radio frequency optimization. By analyzing the entire wireless network, AirMatch determines the optimum radio configuration and enables the network to automatically adapt in real time to changing RF conditions such as high noise and radar. It also adjusts for higher density, co-channel interference, and coverage gaps.

DELIVER SLA-GRADE APPLICATION QOS

With Air Slice, organizations can provide application assurance to their users that goes beyond the traditional capabilities of airtime fairness. After the SLAs are configured, Air Slice monitors network usage, automatically allocates radio resources, and dynamically adjusts radio resources as new users connect and applications sessions begin or end. Air Slice helps guarantee stringent application performance for latency-sensitive and high-bandwidth uses including voice and video.

ELIMINATE CELLULAR GAPS

Enterprises can automatically and securely authenticate guests with public cellular network credentials on private enterprise Wi-Fi networks using Air Pass3 . Built on the technical foundations of Passpoint® and Wi-Fi Calling, Air Pass creates a roaming network across the Aruba enterprise customer footprint, extending cellular coverage and enhancing the visitor and subscriber experience to deliver a great experience for your guests while eliminating costs and management overhead needed for DAS.

AI-POWERED AUTOMATION

AIOps capabilities delivered through Central include AI Insights to automatically surface and quickly troubleshoot issues by using dynamic baselining and anomaly detection; Client Insights to profile each endpoint connecting to Wi-Fi and detect rogue devices; AI Search to pinpoint help documentation and guide remediation steps to minimize guesswork; and AI Assist to collect diagnostics, alert IT, and automatically generate service tickets. The result is that IT can quickly see and correct Wi-Fi coverage holes and other issues that impact the user experience. In fact HPE Aruba Networking customers experience 50-95% fewer issues after moving to Aruba Central.

BUILT-IN SECURITY

AOS 10 extends the security capabilities in Wi-Fi 6 /6E (802.11ax) such as WPA3 And Enhanced Open for secure guest access to strengthen enterprise security postures. Built-in deep packet inspection classifies thousands of applications for granular, per-app traffic enforcement, allowing IT to block, prioritize, and rate-limit bandwidth for an individual or groups of apps. Web Content Classification classifies websites by content category and rates them by reputation and risk score, enabling IT to block malicious sites to help prevent phishing, DDoS, botnets, and other common attacks.

POLICY ENFORCEMENT AND SECURE SEGMENTATION

To improve security and ease of management, IT can centrally configure and automatically enforce role-based policies that define proper access privileges for employees, guests, contractors, and other user groups– no matter where users connect on wired and WLANs. Dynamic Segmentation eliminates the time consuming and error-prone task of managing complex and static VLANs, ACLs, and subnets by dynamically assigning policies and keeping traffic secure and separated.

MultiZone architecture provides data separation for multi-tenancy, guest/visitor access, IoT devices, and other use cases. As the name implies, MuliZone allows each zone to be configured and managed separately with individual role-based access and policy enforcement per zone to meet the specific policy requirements of that zone. A single AP can connect to multiple gateways to tunnel trafic for isolation so that there is no need to deploy additional access points or deploy and manage another wireless network.

SECURE REMOTE WORK

HPE Aruba Networking makes it simpler to provide secure, reliable connectivity for remote workers, especially when using contact center and other mission-critical applications. AOS 10's microbranch capabilities combine Wi-Fi and SD-WAN to extend the WAN to remote workers – without requiring gateways. Using a single access point, IT can secure the home office by applying unified policy-based routing and cloud security inspection. IT gains comprehensive visibility into campus, branch and remote work environments in a combined dashboard to streamline operations and accelerate problem resolution.

Remote workers benefit from an office-like experience, accessing the same corporate resources or plugging into VoIP devices from home. Route and tunnel orchestration and policy-based routing combine to deliver users the highest levels of performance and availability, ensuring the productivity of remote workforces while maintaining a lean IT footprint.

SIMPLIFIED, FLEXIBLE CONSUMPTION

Cloud-native AOS 10 is included with Aruba Central subscription-based licenses, which are purchased on a per-device basis for APs and Gateways. Customers can also purchase subscription licenses on a per-device basis for switches in Central. Licenses are available in 1-, 3-, 5-, 7-, and 10-year increments, making it easy for customers to align requirements for AIOps, security, and other desired management features. Foundation licenses provide all primary enterprise features and functionality; while advanced licenses include all foundational features plus enhanced AIOps, WAN Health dashboards, security and other premium features to deliver an end-to-end solution for managing and optimizing enterprise networks. APs starting with 3xx Series (802.11ac Wave 2) and newer and 7xxx Series and 9xxx Series Gateways are supported with AOS 10.4.

GETTING STARTED

Our next-generation, distributed operating system, AOS 10, is generally available for use with Aruba Central. For more information on how to get started with AOS 10 to take advantage of AI-powered automation, built-in security, and seamless connectivity or to shift to AOS 10 and Central from Instant or Controller-based deployments, contact your HPE Aruba Networking or partner sales representative.

**Make the right purchase decision.
Contact our presales specialists.**

✉ **Contact us**

HPE aruba
networking