TECHNOLOGY BRIEF

ARUBA INSTANT WI-FI

Enterprise-grade, simple, and affordable

The need to offer fast and reliable wireless anywhere within an organization is a growing concern. This is driving organizations to look for simpler ways to enhance the performance of their networks and deliver new services to improve the experience for users.

Aruba Instant combines simplicity with business-class networking to meet the needs of IT and the business. By integrating controller functionality directly within the access point, Aruba delivers a solution that is easy to deploy and manage, with advanced InstantOS features such role-based access controls and AI-powered client connectivity optimization.

Access points can be managed locally, in the cloud or on-prem. In local or distributed environments, cloud-based Zero Touch Provisioning (ZTP) and management offer the flexibility to quickly deploy and manage new access points in days versus weeks or months. For more centralized configuration and control, the same access point can also be re-purposed to operate in a controller-based environment to maximize deployment flexibility and offer investment protection.

ENHANCED USER AND APPLICATION PERFORMANCE

To meet the growing demand for improved mobility, voice and video traffic optimization and secure access, Aruba APs in Instant mode provide business-class features that deliver performance, security and ease of operation. InstantOS wireless software includes the following capabilities:

- **Adaptive Radio Management (ARM) technology** – Automatically ensures that RF interference across Aruba APs does not affect Wi-Fi performance, resulting in a more reliable, higher-performing wireless network.
- **Multi-user capabilities** – For 802.11 ax access points, supports both Orthogonal Frequency-Division Multiple Access (OFDMA) and Multi-User, Multiple Input, Multiple Output (MU-MIMO). Mu-MIMO is supported on both 802.11ac wave 2 and 802.11ax APs.

KEY FEATURES

- Available in 802.11ax (Wi-Fi 6) and 802.11ac (Wi-Fi 5) Wave 2
- Supports cloud, on-prem and local management options
- Includes internal RADIUS-based server for local authentication
- Built on Aruba InstantOS with enterprise-grade Wi-Fi performance
- Includes better security with Wi-Fi Alliance WPA3 and Enhanced Open support
- Cost-effective solution includes built-in firewall and WIPS
- APs can easily be converted to controller-based mode for centralized configuration and control

- **Patented ClientMatch technology** – Continuously gathers session metrics from each connected mobile device to intelligently steer individual devices to the best AP based on Wi-Fi signal strength, traffic load and other real-time performance characteristics.
- **Ax- aware ClientMatch** (for 802.11ax APs), and MU-MIMO-aware (for 802.11ac wave 2 APs) groups clients to their respective access points to take advantage of simultaneous connectivity and transmission efficiencies, increasing overall network capacity.
- **Spectrum load-balancing** – Evens out client loads across channels in a dense deployment so that everyone gets faster access through more the efficient use of the available wireless spectrum.

BUILT IN SECURITY WITH SMART APPLICATION HANDLING

With today's growing use of mobility, IT is tasked with ensuring that the network and user behavior is being monitored regardless of location, time or device type. Access points require hardware and software security that is easy for IT to implement and manage. InstantOS supports user, device (mobile and IoT) and application security features that include:

- **Role-based access –** Policy Enforcement Firewall (PEF) feature allows simple to define and manage policies to segment traffic based on application, user or device roles. IT can easily allow users to reach services that match their jobs or status (student or guest) and state if access is identical for IT managed devices or BYOD. IoT devices can also be easily segmented, and policies can be written on what they can send traffic to or who can manage them.
- **Application visibility** – A feature in PEF, AppRF provides a deep packet inspection capability that has signatures for over 2,500 applications such as GoToMeeting, YouTube, Skype for Business, SharePoint, and Salesforce.com. Application usage and performance is monitored, allowing IT to optimize the network based on real-time bandwidth, priority and network path data – even for apps that are encrypted or appear to be web traffic.
- **URL filtering** – Web Content Classification (WebCC) is an optional PEF subscription feature that provides the ability to control which sites users can browse on the Internet. Web URL requests are redirected to a cloud database that contains up-to-date content and reputation information about millions of web pages. This data is used to determine what types of web browsing and apps are allowed for different users or different times of day.
- **Built in Wireless Intrusion Prevention Solution and spectrum analyzer** – RFProtect software prevents denial-of-service and man-in-the-middle attacks, and mitigates over-the-air security threats.
- **Stronger authentication** – Includes Wi-Fi Alliance WPA3 and Enhanced Open standards to deliver peace of mind for users with more robust encryption and authentication.

THE INDUSTRY'S MOST DEPENDABLE WI-FI ACCESS POINTS

Aruba APs in Instant mode offer real-time failover and hardware features that keep networks up and running. Key capabilities include:

- **AP network survivability** – The integrated virtual controller functionality is distributed among all the APs deployed within the cluster. Thus, there is no single point of failure. A master AP is dynamically elected to act as the interface for local visibility and configuration. If the elected master AP becomes unavailable for any reason, a new AP is elected as the master dynamically. Client connectivity, roaming and other services are not impacted during this process given the distributed nature of the architecture.
- **Cellular connectivity** – Supports a variety of 3G/4G USB modems that can be plugged into the Aruba APs. Cellular uplink can be used as a primary connection in hard-to-connect areas, for initial deployments or as a backup for mission-critical applications.
- **Flexible image upgrades** – Allows you download firmware and setup a reboot during off hours. Schedule the upgrade during the day, preventing disruption of the business until everyone goes home.

FLEXIBLE DEPLOYMENT AND MANAGEMENT

Finding the right wireless solution often starts with how fast and efficiently the network can be deployed and how simple it is to manage. Aruba Instant APs can be installed using local and remote solutions to quickly get a location up and running, and then managing them from anywhere. Aruba Instant supports a unique configuration model where a primary AP is configured and it automatically pushes a configuration to subsequent APs as they connect the network. It's really that simple.

- **Local configuration and management** – Built-in GUI provides access to configuration and visibility into how the network is operating. SSIDs, roles, guest access privileges and more are easy to configure without the need for Internet access.
- **Zero Touch Provisioning (ZTP)** – A cloud-based option that lets IT upload a configuration. Once the AP is brought up, it calls home and downloads its image and configuration automatically. Any location with Internet access can be up and running without the need for local IT expertise.

- **Cloud management** – For simplicity, Aruba Central delivers flexible Cloud management to remove the need for appliances and their associated maintenance. In addition to Aruba Instant APs, Central can be used to manage Aruba switches, branch gateways. Visibility dashboards provide user, application and performance analytica insights and reporting information.
- **On-premises management** – For environments that are not Cloud-ready, Aruba AirWave provides the ability to manage Aruba Instant APs as well as Campus APs from a single platform. In addition to Aruba controllers and switches, AirWave can also be used to manage multi-vendor wireless and wired infrastructure.

SUMMARY

Aruba Instant is one of the most cost-effective, fastest performing wireless solutions available. 802.11ac and 802.11ax options are designed to handle high-density environments (mobile and IoT) and voice and video traffic. Industry-leading hardware and business-class software satisfy use cases for small to large organizations where mobility, handling traffic for a growing number of devices and simplified management are at the top of IT's wish list.

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