THE CONNECTED RETAIL BANK BRANCH

IMPROVED OPERATIONS, SERVICES DELIVERY AND
ENHANCED EXPERIENCES

aruba

a Hewlett Packard
Enterprise company

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Today's banking customers are looking for convenience and personal services that go beyond mobile applications. This is forcing banks to evaluate the retail experience to ensure that customers receive prompt and secure service within the branch and at ATMs – at any location. Or risk them shifting their loyalty to other brands if expectations aren't met.

What this means is a transformation of the branch into full-service banking centers that offer financial and business planning, mortgages, loans and traditional teller services. Improved operational insights within the branch are needed to ensure that different services within business units and their traffic are secure and prioritized accordingly.

How does IT support a diverse and digital retail branch, and distributed locations have little to no technical staff on site? Where regulatory requirements warrant a Zero Trust framework that focuses on securing resources, regardless of network infrastructure. And, there's a medley of IT managed resources, IoT and a constant influx of customer's devices.

A BRANCH BUILT FOR THE FUTURE

Banking IT operations require a cutting-edge approach that modernizes and transforms the branch. An architecture that supports high-performance connectivity, trust is based on real-time authentication and enforcement, and is flexible enough to scale with today's cloud, IoT and traffic demands– as well as meeting tomorrow's growth opportunities.

Aruba's SD-Branch solution allows banking institutions to centrally design and deploy a secure, high-performance network infrastructure across all branches – regardless of location. Where best-in-class wireless, wired, SD-WAN and network security features enable IT operations to address density, performance and regulatory objectives.

A combination of zero touch provisioning, simple to use operations capabilities and built-in AI-powered assurance and automation help simplify and reduce operational costs.

A DEEPER LOOK AT ARUBA SD-BRANCH

As organizations transition modernize their branches, the Aruba SD-Branch solution is designed to address legacy shortcomings within retail branch. Components of the Aruba solution work together to offer value across the portfolio or can be deployed as needed to satisfy and future-proof a specific user, IoT or operations challenge.

Wireless that just works

For mobility, a reliable connectivity and simplicity are key, Aruba's portfolio of Wi-Fi 6 (802.11ax) and Wi-Fi 5 (802.11ac) access points deliver a high level of performance, built-in AI experience assurance capabilities and the latest employee

and guest authentication standards. Available options satisfy any coverage, quality of service and user experience needs.

Common features include automated role-based decision making, deep packet inspection for over 2000 applications, native 802.1X support, automated RF optimization features and cloud management. Other features of value:

- The only built-in policy enforcement firewall (PEF) that is Cyber Catalyst designated by Marsh for its risk management capabilities.
- Location-based services for Wi-Fi, Bluetooth and Zigbee solutions
- Operational time-savings AI insights and analytics
- Per session Skype, Microsoft Teams and Zoom QoS optimization
- ClientMatch, a patented feature that automatically steers mobile devices to the best available access point

Aruba's Wi-Fi 6 Certified portfolio addresses increasing density concerns and the growing number of Wi-Fi 6 capable Apple and Samsung devices connecting to networks today. In addition to 5G like performance and Wi-Fi 6 Alliance standards such as OFDMA (orthogonal frequency-division multiple access) to solve density contention issues, the following features are also supported:

- Upgraded MU-MIMO for Wi-Fi 6 (from 4 to up to 8 simultaneous connections)
- Target wake time (TWT) for improved battery life of user and smart-building IoT devices
- WPA 3 support for enhanced employee password protection
- Wi-Fi Enhanced Open and OWE (opportunistic wireless encryption) for per session guest access security

Features unique to the Aruba Wi-Fi 6 portfolio include:

- Wi-Fi 6 aware ClientMatch
- Aruba Air Slice, for the assignment of specific traffic streams to a designated number of OFDMA resource units (i.e., sub channels) or MU-MIMO transmission streams
- Aruba Green AP, which utilizes TWT to dynamically put some APs into a sleep mode and wake them up when needed, for a 70% power savings.

Modern switching

Aruba's next-gen switching is built on cloud-native principles that deliver performance, automation and analytics from edge access, to the data center. Scalable layer 2 and layer 3 fixed chassis and modular options deliver the power and future-proofing needed for growing user, IoT and app performance demands.

Intuitive cloud-management, options for emerging IoT devices with higher PoE usage requirements and robust 802.1X capabilities help cut IT complexity by reducing time spent on deployment, implementation changes and the remote enforcement of access security requirements. Notable branch features include:

- The unique ability to leverage standard-based VLAN and ACL Dynamic Segmentation or leverage the Aruba Policy Enforcement Firewall for converged and automated role-based access on wired and wireless
- Simplified quality of service (QoS) with port and VLAN prioritization of real-time traffic
- IPv6 host support for future-proofing
- Ideal compact and fanless models for quiet work places

MPLS replacement options for the branch

Aruba's SD-WAN solution offers secure and flexible cloud access options that include SaaS optimization of services such as Office 365, SAP HANA, and voice and video applications. A portfolio of Branch Gateways is available for small to large locations, without any recurring charges for the amount of traffic generated. A definite competitive edge.

Each Gateway supports MPLS, Internet and LTE cellular connectivity, as well as built-in role-based access and firewall features to enhance the ability to manage traffic going directly to the Internet or to a data center. Other software features include dynamic path steering, intrusion prevention and Web/URL content filtering. Additional features include:

- Active/Active or Active/Backup interfaces and virtual router redundancy protocol (VRRP) to load balance traffic based on WAN link utilization
- Dynamic path selection (DPS) and synchronization of DHCP state for a smooth cutover upon a failure or degradation of links

- Aruba's SD-WAN Orchestrator for quick and efficient set up of routes and tunnels based on business policy across the entire WAN
- Seamless and secure connectivity to private application workloads in the AWS cloud

Security that branches out

To create a Zero Trust network within the branch, Aruba's ClearPass portfolio offers visibility, real-time authentication and authorization, and context-based enforcement. ClearPass solutions are designed to work in Aruba and mixed networking vendor environments, are centrally managed and help to address regulatory requirements.

The Aruba ClearPass Policy Manager delivers device visibility, AAA policy adherence and enforcement, as well as industry-leading Guest access, BYOD onboarding, RADIUS and TACACS+ support and open third- party integration.

To better manage potential compliance and security risks, Aruba's SD-Branch solution leverages the entire Aruba portfolio as a single entity, or components can be used independently. Each network component offers the ability to leverage Aruba's role-based policy and micro-segmentation features, or Dynamic Segmentation capability.

Regardless of user, device type or location, Dynamic Segmentation aims to automate security processes and simplify the use of SSIDs, VLANs, ACL configuration and static controls. Context regarding users and devices when connecting to wireless and wired can be used within the branch, as well as for traffic destined for WAN links. Examples of Aruba value:

Use Case	Aruba	Multivendor
Automated device connectivity	Any wired or wireless device in a branch automatically receives access based on role and authentication privileges. The policy enforcement firewall and centrally initiated ClearPass rules leverage context and change of authorization enforcement capabilities.	ClearPass is used to initiate the proper placement of devices per the capabilities of the third-party vendors equipment. Traditionally, this is basic VLAN and ACL enforcement.
Employee and IoT access	Role-based access provides the ability to minimize the number of required SSIDs. As devices connect, roles and PEF are used to determine proper access. No need to create separate work, BYOD, IOT specific or context-based SSIDs. This can easily be extended to Aruba wired infrastructure to minimize the need for VLANS. All context can be used to determine best path for WAN traffic if using Aruba Branch Gateways.	This often leads to separate policy enforcement points and management capabilities. Again, the capabilities of the third-party vendors equipment must be considered. Traditionally, WAN capabilities are dependent on separate management and decision- making silos.
Customer access	Role-based access and PEF keep customer traffic separate from internal traffic. Aruba ClearPass offers a customizable portal, usage acknowledgements, device caching and context-based enforcement (i.e., based on time-of-day, day-of-week, device type)	ClearPass can be used in a non-Aruba environment. Roles and PEF capabilities are lost.

Full-time user experience assurance

Aruba's User Experience Insight is key to delivering a reliable branch network for Aruba and multivendor environments. On-site sensors are used throughout the day to perform synthetic testing of wireless, wired connections and traffic destined for the cloud. This real-time data allows IT to proactively resolve issues before people or IoT are impacted.

A cloud-hosted dashboard quickly shows hot spots and where in a transaction, problems are occurring. A built-in troubleshooter isolates issues and provides insights for further analysis and problem resolution. Tests can be built to measure DHCP and AAA responsiveness, as well Microsoft Skype and Teams performance, Dropbox, the ability to reach internal servers and more.

- There is a standalone web option or integration of the dashboard within Aruba Central
- All results and data are securely stored in the cloud and are viewable for 30 days
- A built-in cellular interface provides for "zero touch" deployment and transmitting data in the event of local power outages or complete network failures

Operational simplicity at every step

Aruba's SD-Branch solution includes Zero Touch Provisioning (ZTP) for wireless, wired and SD-WAN infrastructure for the simple, fast and accurate deployment of equipment in any location. Cloud or mobile app flexibility allow for centralized setup, regardless of the technical expertise of on-site personnel.

Aruba Central offers cloud-based operations and management via a single page of glass for complete network visibility across all locations. Built-in analytics and assurance features provide data and troubleshooting information related to users, devices and wireless, wired and SD-WAN infrastructure and links. Other notable features include:

- Automatic software updates that simplify operations and creates an environment that allows IT to take advantage of the latest features
- Optional built-in Presence Analytics that display dwell times, paths most taken and floorplan data pertinent to customer experience
- AI Insights for real-time machine learning performance baseline, anomaly and troubleshooting guidance
- The ability to easily launch Aruba User Experience Insight and Aruba ClearPass dashboards for faster application and network assurance response, and policy management.
- A robust API, for the inclusion of existing third-party applications where needed

SUMMARY

As banks and financial organizations transform their branches, they need a simple, smart, and secure network solution that is flexible, scales, and is easy to deploy. Aruba's SD-Branch is an industry leading wireless, wired, and SD-WAN cloud-managed solution that delivers performance, reliability and security that ensures IT and users are receiving the best experience possible.

Learn more at:

https://www.arubanetworks.com/solutions/sd-branch/

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