AT A GLANCE

EDGE-TO-CLOUD SECURITY IN RETAIL

Today's shopper is demanding – and willing to shift loyalty to another brand when expectations aren't met. Compacted by evolving shopping methods, retailers are challenged to not only attract customers, but retain customers.

Mobility driven experiences and touch-free services, many enabled through applications on smart phones, are becoming common-place among small and large retailers alike. Additionally, store associates are using smart devices and tablets to deliver exceptional customer service, enabling front-line workers to help customers find the perfect item, answer questions, check inventory and even process and place orders without leaving the customer's side.

IoT is also playing a big part in evolving retail services and efficiencies. Video cameras, people sensors, building technology, robotics, real-time inventory data, and energy systems are transforming stores and in some cases, help to collect increasing amounts of data about shoppers and their habits. Information about time spent in a store, what products shoppers view and purchase and a variety of other pertinent data can now be collected by wireless networks and IoT and delivered to retailers.

BROAD ATTACK SURFACE

Merchants who are on a digital transformation journey want to take advantage of the productivity and efficiency benefits of mobility and IoT, but above all else, they need to protect their networks and their customers' sensitive credit and debit card data in order to meet compliance demands and safeguard their brand. Distributed locations, remote workers, digital tools and cloud applications mean more security concerns. Before retailers can deliver experiences and benefit fully from the possibilities of digitally enabled new services, they need a network that can go beyond connectivity and securely and seamlessly addresses the needs of associates, smartphone-carrying customers, store operations and payment card industry (PCI)-compliance auditors. These capabilities need to be enabled from the edge of the network where users and devices are - stores, warehouses, corporate headquarters - to the cloud, where applications live.

> Approximately 65 percent of retailers indicate that no-touch payment services are moving cybersecurity and data privacy to their top concern.
>
> *- National Retail Federation and Forrester*

CLOSING THE GAPS

Although retailers are increasing investments in cybersecurity, new touchless and app-based payment methods indicate that retailers must stay vigilant with their security initiatives.

Let's investigate how edge to cloud security solutions from Aruba can help retailers better:

- Gain visibility into everything connected to both wired and wireless networks
- Ensure that the appropriate IT access policies are applied to users and devices, and dyanmically segment traffic, from the edge of the network across the WAN
- Stay ahead of issues with advanced threat detection features
- Leverage ecosystem partners for even richer context and security

ARUBA SECURE SOLUTIONS FOR RETAIL

Secure Infrastructure

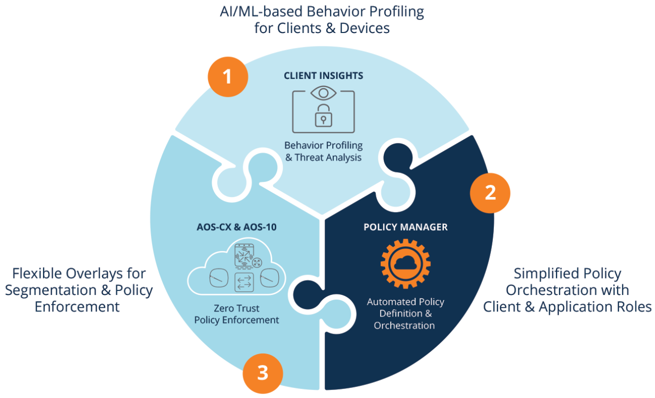
For over 20 years, Aruba has delivered high performance networks that include many built-in security features. This includes:

- Wi-Fi certified protocol WPA3™, co-authored by Aruba experts and delivers a range of security and ease of use features.

- Secure boot delivers anti-tampering features for access points.
- Military grade encryption and VPN ensure traffic is secure.
- The Aruba Policy Enforcement Firewall (PEF) enables user/application visibility and policy enforcement based upon user, role, application, device and location.

Automate and Simplify Global Security Operations

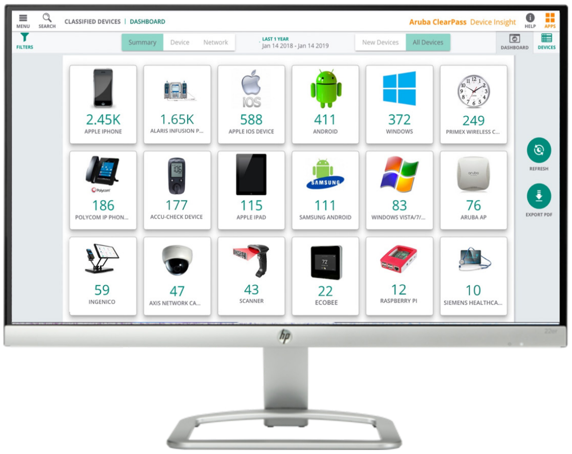
Aruba Central NetConductor is the next-generation solution for increasingly complex networks, enabling organizations of all types and sizes to automatically configure LAN, WLAN, and WAN infrastructure to deliver optimal network performance while enforcing granular access control security policies that are the foundation of Zero Trust and SASE architectures. Central NetConductor comprises services delivered by Aruba Central, the platform that is the foundation of the Aruba Edge Services Platform (ESP).


AI/ML-based Behavior Profiling for Clients & Devices
1
CLIENT INSIGHTS
Behavior Profiling & Threat Analysis
2
POLICY MANAGER
Automated Policy Definition & Orchestration
Simplified Policy Orchestration with Client & Application Roles
AOS-CX & AOS-10
Zero Trust Policy Enforcement
Flexible Overlays for Segmentation & Policy Enforcement
3

Know What is on the Network

Security starts with visibility of who and what is connected to your network with insights to what they are accessing at all times. Many IoT devices are built on standard hardware platforms, making it extremely difficult to know exactly what is connected. For example, a security camera and smart thermostat could both be built on the same Linux platform. ClearPass Device Insight uses advanced machine learning and crowdsourcing intelligence to identify devices based on multiple attributes, traffic destination, and communication frequency. Knowing what is on the network is the first step in protecting it.

Central NetConductor utilizes artificial intelligence to automatically detect network performance and reliability issues while identifying opportunities for optimization based on local and peer-based best practices.



2.45K APPLE IPHONE	1.65K ALARIS INFUSION P...	588 APPLE IOS DEVICE	411 ANDROID	372 WINDOWS	249 PRIMEX WIRELESS C...
186 POLYCOM IP PHON...	177 ACCU-CHECK DEVICE	115 APPLE IPAD	111 SAMSUNG ANDROID	83 WINDOWS VISTA/7/...	76 ARUBA AP
59 INGENICO	47 AXIS NETWORK CA...	43 SCANNER	22 ECOBEE	12 RASPBERRY PI	10 SIEMENS HEALTHCA...

Zero Trust Access to the Network

Aruba ClearPass NAC (Network Access Control) delivers discovery, profiling, authentication and authorization of users, their devices and IoT devices before letting them on the network or giving them access to resources. These pre-admission controls are critical because cybercriminals are adept at quickly advancing and moving laterally within seconds after gaining access to a network.

For retail organizations, that use Aruba Central, Central NetConductor provides customers the flexibility to pick their NAC solution of choice, whether that is ClearPass, our market-leading on-premises Network Access Control (NAC) solution, or Cloud Auth, the first integrated and cloud-native NAC and identity management solution, which builds on ClearPass NAC market leadership and streamlines the protection of distributed enterprise networks by working seamlessly across wired, wireless, and WAN connections.

Precise Control and Dynamic Segmentation

But defining policy is not enough. ClearPass provides adaptive, granular policy-based access controls by user, device, role, location, and applications. Aruba Dynamic Segmentation automatically enforces these consistent policies across wired and wireless networks to keep traffic for any user or device separate and secure, regardless of the application or service. These controls ensure that each user, device or IoT only has access to the network and IT resources and assets they are approved for, especially important when trying to ensure PCI compliance.

If using Aruba Central NetConductor, retail organizations can extend the capabilities of Aruba's market-leading Dynamic Segmentation across multiple network overlays, making it easier to adopt comprehensive Zero Trust and SASE security.

Unified Branch Security and Threat Protection

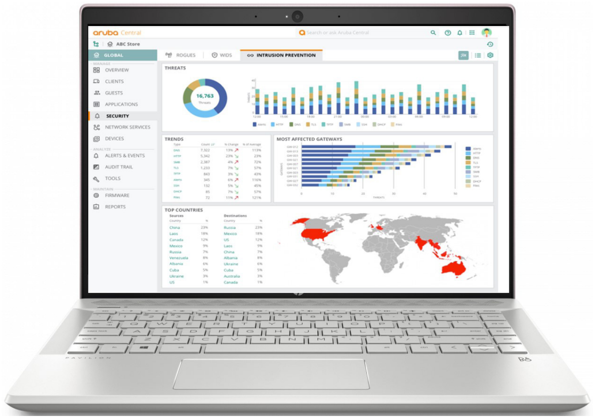
With shoppers and contractors coming in and out of environments and credit card data being high-value to criminals, retailers are at high risk and need advanced threat detection capabilities. Aruba solutions defend against a myriad of threats, including phishing, denial of service (DoS), and increasingly widespread ransomware attacks. Supported Aruba SD-WAN gateways perform identity-based intrusion detection and prevention (IDS/IPS), working together with Aruba Central, ClearPass Policy Manager, and the Policy Enforcement Firewall. Identity-based IDS/IPS performs signature- and patternbased traffic inspection on both the branch office LAN (east-west) traffic as well as the SD-WAN (north-south) traffic flowing through the gateway to deliver embedded branch network security.

WAN, Cloud Security Orchestration, and Secure Access Service Edge (SASE)

Distributed retail locations require security solutions that can can be adopted across the WAN. Additionally, as retailers migrate many of their applications to the cloud, it is critical that SD-WAN and security solutions adapt, providing advantages both on the networking and the security side. The Aruba EdgeConnect solution provides best-of-breed SD-WAN capabilities combined with seamless orchestration with best-of-breed cloud security vendors. This significantly reduces the amount it takes to incorporate cloud-based security services into the existing network and security infrastructure and puts security closer to their cloud-hosted infrastructure where it belongs.

Security Management Dashboard

Aruba Central as well as Central NetConductor provide IT teams with network-wide visibility, multi-dimensional threat metrics, threat intelligence data, as well as correlation and incident management. Insights include threats over time, threat trends, threat metrics by category, type, and severity, and impacted users and services. Threat events are sent to SIEM systems and ClearPass for remediation.



ADOPT A HEALTHIER SECURITY POSTURE

Aruba is here to help. Ensuring visibility, authentication, role-based access controls, threat detection and defense, and enforcement and attack response, can help you adopt an edge to cloud zero trust and SASE approach for your organization. With advanced access controls and interoperability with over 150 multi-vendor network and security solutions, you can rest assured with the visibility and confidence that your security posture is in a much healthier state.

LEARN MORE

- https://www.arubanetworks.com/assets/so/SO_Edge-To-Cloud-Security.pdf
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