

A woman with curly hair, wearing a yellow shirt and a dark apron, is looking down at a tablet computer in her hands. She is in a grocery store, with various vegetables like green bell peppers and cucumbers visible in the background. The image is partially obscured by a large orange circle on the right side of the page.

aruba

a Hewlett Packard
Enterprise company

SOLUTION OVERVIEW

Enable amazing retail digital experiences from edge to cloud

BUILD A PREDICTABLE
AND SECURE NETWORK
INFRASTRUCTURE WITH
ARUBA EDGECONNECT
SD-WAN



As we move into the new decade, retailers are highly focused on new ways to not only attract customers but to retain them. Competitive pressures and maintaining loyalty are two of the primary factors driving customer experience initiatives. The COVID-19 pandemic has increased the gap between retailers with a strong digital footprint and the others thanks to online shopping as well as the digitization of the supply chain and logistics. Retailers are now focused on bringing customers back into their stores safely and in many instances, fighting to keep their businesses open. IT will need to have solutions and tools that will allow them to manage hundreds of stores with ease. Retailers also need to move quickly to accelerate digital transformation with online shopping and automated supply chain, pursue an omnichannel strategy across various channels including websites, mobile apps, physical stores with personalized experiences, increase security and customer data protection.

To offer an improved experience, retail is also transforming into “smart retail” with inclusion of the best selection of goods instore, supply chain automation and IoT to drive efficiencies in the warehouse. Modern-day operations include robots, voice-picking order systems, and driverless forklifts. All these systems promote simplified processes, costs savings and improved outcomes.

Additionally, the retail sector is migrating their business applications to the cloud, including supply chain and customer management systems, so that the data center is no longer the central hub of all network connections. The need for more networking bandwidth is also increasing with the use of Internet-connected devices to understand space utilization and contact tracing control as well as point of sales and electronic payment transaction. Retailers also need to provide network security to their customers when ordering online while ensuring compliance with PCI-DSS to secure credit card transactions and other relevant regulations.

The retail sector has specific networking requirements that traditional WAN struggles to meet, such as distributed footprint over shops and kiosks.

The digital transformation in retail now requires enhanced networking capabilities that traditional MPLS lines can no longer sustain. Private lines are often complex and expensive compared to internet broadband and 5G connections.

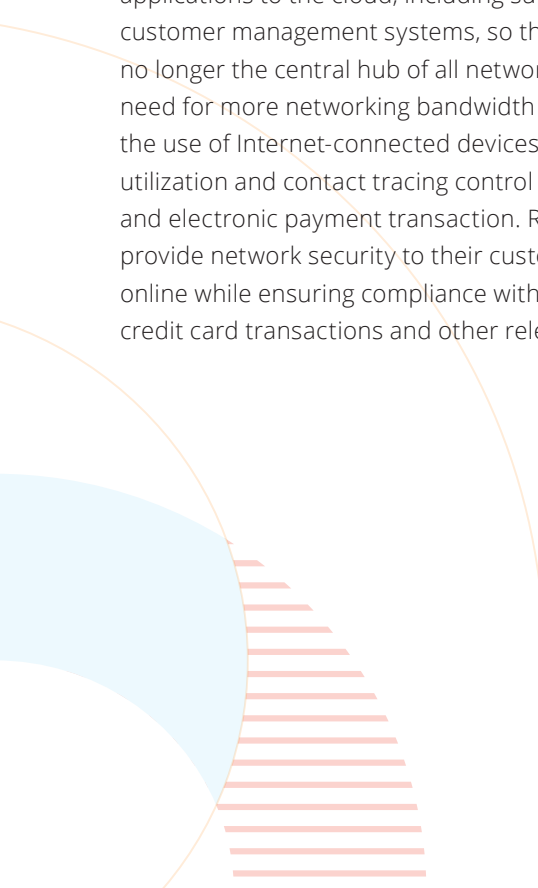
Aruba EdgeConnect can help!

ARUBA SOLUTIONS FOR AMAZING DIGITALLY CONNECTED CUSTOMER EXPERIENCES

Based on these above challenges, let’s look at how adopting an advanced SD-WAN platform can help the retail industry tackle these challenges.

Improved network experience and cost reduction

Aruba EdgeConnect tunnel bonding feature combines multiple WAN transport services including MPLS, internet broadband and 5G to create a single, higher bandwidth logical link. It enables retailers to use internet instead of expensive and complex MPLS and get a similar performance as private lines. Internet and wireless links indeed often suffer from packet loss and jitter and are more prone to outages. With Aruba’s EdgeConnect Forward Error Correction (FEC) feature, lost packets are automatically reconstructed. In addition, when load-balancing traffic between multiple WAN transport services using tunnel bonding, Packet Order Correction (POC) re-orders any packets that arrive out of sequence at their destination. Aruba Boost WAN Optimization also significantly accelerates the transmission of data by applying TCP protocol acceleration as well as data deduplication and compression.



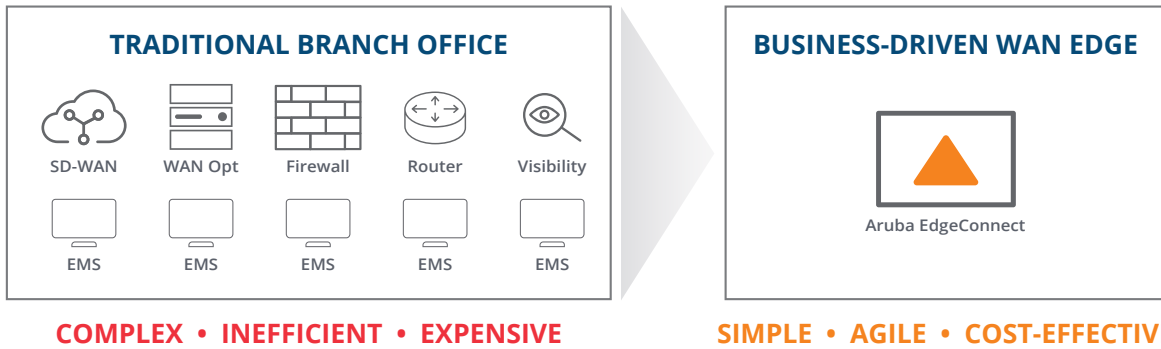


Figure 1: Aruba EdgeConnect enables retail organizations to move from a complex architecture to a simple cost-effective network infrastructure

Simple deployments

Aruba EdgeConnect SD-WAN helps reduce equipment sprawl in retail organizations, as it integrates a certain number of features that are generally scattered in multiple devices such as WAN optimization, routers and firewall devices. Additionally, Aruba SD-WAN is centrally orchestrated. With its zero-touch provisioning feature, settings, as well as security parameters are automatically sent to remote locations so that it doesn't require any experienced IT staff to configure Aruba EdgeConnect at a local facility.

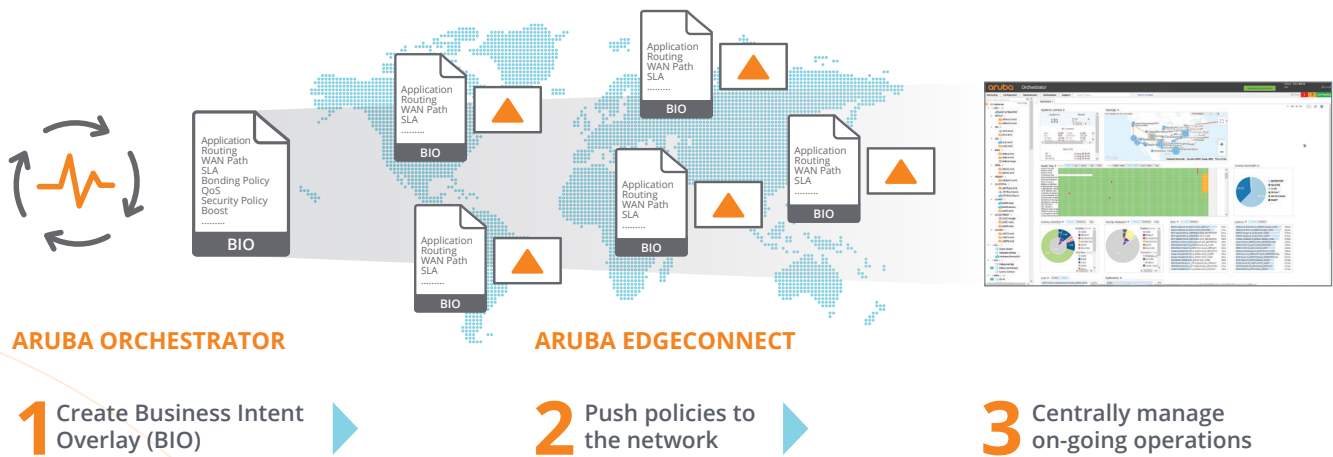


Figure 2: Simplify and accelerate deployments and improve with a top-down model and business-driven policies



Advanced security

With secure internet breakout, the EdgeConnect First-packet iQ™ feature identifies and classifies applications based on the first packet, enabling automatic traffic steering to the internet or to the data center according to security requirements.

With this feature, retailers can build security policies that:

- send trusted cloud application traffic, such as Office 365 or UCaaS traffic, directly to the internet,
- send internet-bound traffic, including Salesforce, Facebook, YouTube, and web browsing traffic, to a third-party cloud-delivered security solution before it is handed off to the SaaS provider
- backhaul untrusted applications to the data center for advanced security inspection

Additionally, Aruba EdgeConnect embeds an app-user aware firewall, providing stateful capabilities that controls incoming traffic and blocks packets that do not belong to a valid session. The built-in firewall also uses deep packet inspection that checks both data packet headers and the packet payload.

SUMMARY

Traditional and inefficient MPLS lines are no longer relevant to support digital transformation efforts in the retail sector. The COVID-19 crisis has reshaped the retail industry and retailers now need to fully adopt a digital-first and omnichannel strategy to create a distinctive customer experience and beat the competition. Aruba EdgeConnect is the foundation of this improved experience by virtualizing network links and providing private line like performance over the internet and wireless connections. In addition, Aruba provides a unified network infrastructure by centrally managing and monitoring WLAN, LAN and SD-WAN. Through central orchestration and zero-touch provisioning, the solution is easy to deploy and manage. It helps retailers ensure a secure experience for customers and employees.

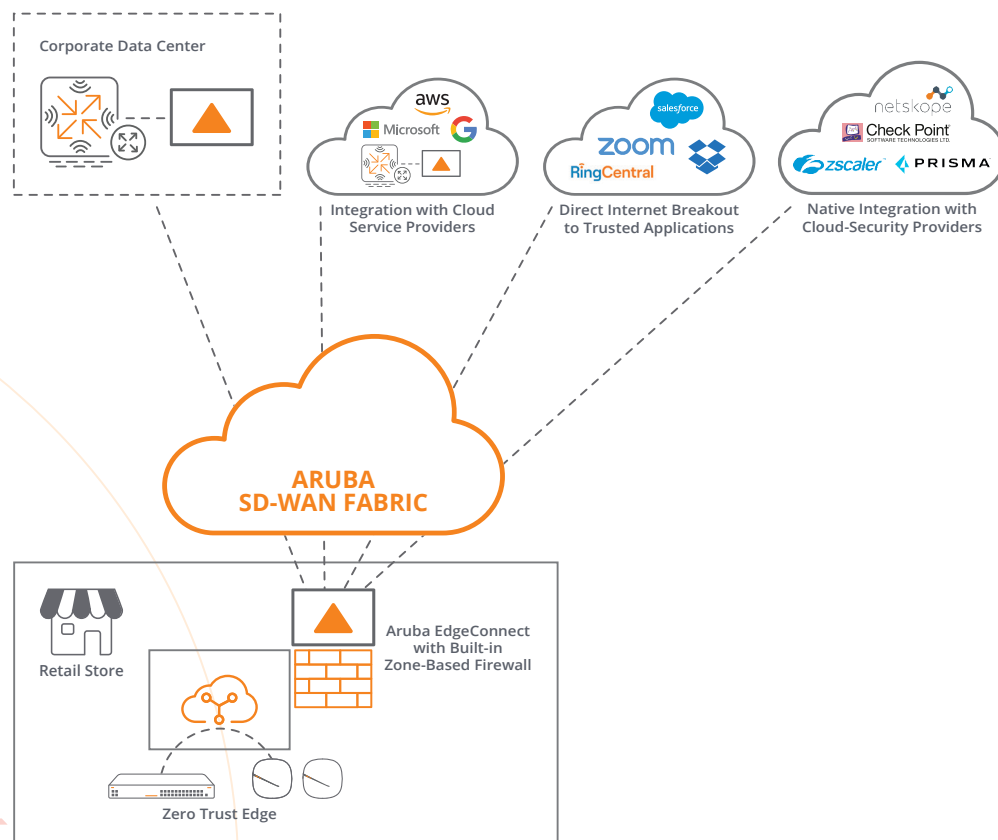


Figure 3: Automate security orchestration based on application type and threat with Aruba EdgeConnect



KEY FEATURES & BENEFITS	
Provide an advanced network experience while reducing costs	
Higher performance and cost reduction	Aruba EdgeConnect SD-WAN combines multiple line protocols including MPLS, internet, 4/5G in a virtual link. It enables the use of efficient and flexible internet and 4/5G lines, instead of rigid and expensive MPLS lines at a lower cost and higher flexibility.
Use in limited bandwidth store locations	With its WAN optimization feature, data is compressed and deduplicated reducing the amount of data to be transferred. This is especially useful for remote store chains that don't have access to large bandwidth connections.
Unified wireless and wired network experience	Completely integrated with Aruba Central that monitors Aruba access points and the wired network, Aruba Unified Infrastructure simplifies and improves IT operations with a cloud-native, uniform console for WLAN, LAN, and SD-WAN across local stores and corporate data center locations.
Easily deploy new locations and monitor network activity	
Quick deployments	With zero-touch provisioning, Aruba EdgeConnect is easy to install and doesn't require an experienced IT staff in retail organizations. It is centrally orchestrated so that configurations and security policies are easily deployed in minutes to remote locations.
Full visibility	Aruba EdgeConnect provides specific details into SD-WAN health and performance. A health map provides an aggregated view of EdgeConnect appliance status and network health based on configured thresholds for packet loss, latency and jitter. Network operations are centrally monitored bringing a quick response to potential issues.
Cloud ready	Aruba EdgeConnect provides end-to-end connectivity to any of the public cloud providers by extending the SD-WAN fabric and deploying a virtual instance of EdgeConnect in any or all of the four public cloud providers. It avoids backhauling the internet traffic to a headquartered data center providing predictability and application performance.
Improve security and comply with regulations	
SASE at your own pace	Aruba EdgeConnect provides native integrations and automated orchestration with multiple cloud security vendors. It enables retailers to choose the best-of-breed SASE capabilities including CASB, SWG and ZTNA to build the best SASE architecture with Aruba EdgeConnect as the foundational element.
Micro-segmentation with zone-based firewall	Aruba EdgeConnect includes a zone-based firewall that segment the traffic into zones. Segmentation improves security and protects data by splitting the network into subnetworks, limiting the spread of cyberattacks and malwares. It also helps reduce congestion and improve operations. For example, the customer network can be separated from the store operational network, or control systems such as HVAC, can be separated from supply chain applications.
Compliance with PCI DSS	Aruba EdgeConnect helps comply with the PCI DSS standard (Payment Card Industry Data Security Standard) by providing an embedded firewall and encrypted transmissions.

ADDITIONAL RESOURCES:

- Retail Networking Solutions
- Why Retailers Choose Aruba
- Edge to Cloud Security in Retail
- Smart Digital Retail: Deliver digital and IoT innovation that matters
- Aruba ESP in Retail



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