

## SOLUTION OVERVIEW

# ARUBA CX SWITCHING

A next-gen, cloud-native portfolio spanning from the edge access to data center

The growing use of IoT, the demand for cloud-based services, and business critical mobility are crushing legacy networks. Today's enterprise network must be able to quickly and safely connect new devices, scale to handle new traffic loads, and provide smart, automated insights to help IT more efficiently operate, manage, and secure the network.

Switches still create the foundation of modern networks, yet their role has moved beyond purely providing high-performance wired connectivity. Switches must now offer high-performance Wi-Fi aggregation and also act as an IoT gatekeeper for everything from surveillance cameras to medical devices – all while delivering uninterrupted 24x7 network availability.

Aruba's next-gen CX switching portfolio is purpose-built for today's digital world, satisfying the most demanding use cases from the access layer, to the core, and to the data center. Built on cloud-native principles, our portfolio gives IT the flexibility to deploy a single platform from edge access to the data center that includes intuitive management tools and distributed analytics that transform the IT network operator experience.

## NETWORK CHALLENGES

### Operational complexity

Dealing with disparate network operating systems, oversubscribed hardware, and complex software licensing overburdens IT teams. The increasing number of IoT devices connecting to the network bring new security concerns, which raises the importance for better visibility into what's running on the network and an easier way to segment traffic. Limited IT resources also require that networks should be easy to deploy, provision, and manage with a simple way to unify roles and privileges across wired and wireless.

### Legacy networks can't keep pace

The shift to digital has disrupted every portion of the network from the edge to the core. As mobile users demand high-performance video, voice, and cloud applications

## KEY BENEFITS

- **Simplified operations with a single operating model**  
A single operating system from edge access to data center delivers consistency and ease of management.
- **Time savings via smart automation**  
Smoothly, safely and quickly coordinate switch provisioning and changes using intelligent automation to search, edit, validate, deploy, and audit configurations.
- **Proactive troubleshooting and resolution**  
Enhance troubleshooting with real-time, network-wide visibility via distributed, embedded analytics in each switch to help detect and resolve issues before operations and users are impacted.
- **Secure and easy enforcement of unified policies**  
Deploy unified wired and wireless role-based policies to keep traffic segmented and ensure security.
- **Reliable, always-on networking**  
A microservices architecture provides full programmability and automation to create an always-on high availability network, even during upgrades.
- **A world class user experience**  
An enterprise network that scales to deliver non-blocking performance from edge to data center for the best user experience possible.

to better collaborate, conduct business, and learn, the amount of data crossing enterprise networks is increasing exponentially. Aging networks are inhibited by closed system architectures with highly manual, hard-coded configs that restrict the adoption of new technologies needed to support time-sensitive networking services and 24 x 7 access.

### Limited control and visibility

Quickly determining the root cause of an application or network slowdown is challenging. Existing network analytic tools, typically performed by external devices running separately purchased software, provide fragmented data with limited actionable insights. High network traffic volumes and mission critical network access puts growing pressure on IT teams to diagnosis and resolve issues instantly.

### ARUBA'S CX SWITCHING SOLUTION

Aruba simplifies the complexities of managing today's networks with AI-powered automation and policy-driven segmentation. Built from the ground up with a combination of cutting-edge hardware and powerful AOS-CX operating system, our family of switches are designed for today's most demanding enterprise campus, branch, and data center networks.

Aruba's switching ASICs create the basis for unparalleled performance, innovative software feature advancements, and deep network visibility. These programmable ASICs, now in the 7th generation, are purpose-built for a tighter integration of switch hardware and software in campus and data center architectures to maximize network performance and bring new innovations to life more quickly.

Flexible ASIC resources deliver benefits such as high-performance Virtual Output Queuing (VOQ) which optimizes the use of all switch ports by preventing head-of-line blocking, allowing Aruba Network Analytics Engine (NAE) to inspect all data for improved troubleshooting and analytics.

By combining a modern, fully programmable network operating system with NAE, Aruba switches provide industry-leading monitoring and troubleshooting capabilities across the network. Deep visibility with contextual analytics helps simplify network operations, reduces network complexity, and enables faster response times.

### FEATURES BUILT FOR ENTERPRISE NETWORKS

Carrier-class  
High Availability



Automated  
Configuration



Built-in Monitoring  
and Diagnostics



# ARUBA CX



Simple Secure  
Segmentation



One-touch  
Deployment



Programmability

### Single OS for edge access to data center

Aruba's AOS-CX is a modern, database-driven network operating system that automates and simplifies many critical and complex network tasks. A built-in time series database (TSDB) enables customers and developers to utilize software scripts for historical troubleshooting, as well as analysis of past trends. This helps predict and avoid future problems due to scale, security, and performance bottlenecks.

### Built-in monitoring and diagnostics

For industry leading visibility and troubleshooting, NAE provides real time insights that automatically interrogates and analyzes events that can impact a network's health. Advanced telemetry and automation provide the ability to easily identify and troubleshoot a network, the system, application, and security-related issues easily, through the use of python agents and REST APIs. The TSDB stores configuration and operational state data, making it available to network operators to quickly triage and resolve problems. The data may also be used to analyze trends, identify anomalies, and predict future capacity requirements.

### Automated configuration and management

The Aruba CX switching portfolio empowers IT teams to orchestrate multiple switch configuration changes for smooth, end-to-end service rollouts. Aruba NetEdit introduces automation that allows for safe, rapid network-wide changes and ensures policy conformance post network updates. Intelligent capabilities include search, edit, validation (including conformance checking), deployment, and audit features. Tight integration with NAE means powerful monitoring and troubleshooting analytics from across the network can be quickly visualized, analyzed, and acted on within NetEdit, simplifying and speeding operations.

### Carrier-class high availability

Requirements for 24 x 7 network availability leaves no windows for upgrades and important configuration changes. Aruba Virtual Switching Extension (VSX) has been designed from the ground up to deliver the availability, virtualization, and simplicity requirements for a non-stop, carrier-class network. With unique control plane synchronization for multi-chassis high availability and an architecture that's redundant in both hardware and software, Aruba VSX offers a better way to ensure business success with a network that is always available.

### One-touch deployment

An easy-to-use mobile app simplifies connecting and managing Aruba CX switches for any size network project. Switch information from the Aruba CX Mobile App can be imported into Aruba NetEdit for simplified configuration management and to continuously validate configuration conformance anywhere in the network.

### ARUBA DYNAMIC SEGMENTATION

For enhanced security, Aruba Dynamic Segmentation automatically applies and enforces user, device, and application-aware policies on Aruba wired and wireless infrastructure. Automated device profiling, role-based access control, and Layer 7 firewall features deliver enhanced visibility and performance for a better overall experience for both IT and end users alike.

The latest release of AOS-CX introduces a policy-driven, segmented network solution with higher performance and scale with switch-to-switch tunnels using VXLAN and BGP EVPN. This offers the choice of tunnelling to the controller to use L4-L7 services or tunnelling to another Aruba switch for low-latency and high-performance use cases.

## Meet the new members of the Aruba CX portfolio – the Aruba CX 6300 and 6400 Switch Series



Aruba CX 6300 Switch Series

Aruba CX 6400 Switch Series

### SWITCHES FOR ANY ENTERPRISE ENVIRONMENT

#### Data center, campus, and branch

From small to large enterprise environments, Aruba's comprehensive portfolio includes solutions ideal for access, aggregation, core, and data center deployments. The power of the Aruba CX switching portfolio provides a choice of fixed ports or modular chassis with non-blocking speeds from 1GbE to 100GbE. This gives you the flexibility to start with a low port count and scale to full-density switches – all with built-in automation and analytics – as your business requires. Features include high availability platforms with redundant management, fabric, power, and fans and high-density industry-standard high power PoE and HPE Smart Rate multi-gigabit ports.

To schedule a 30 minute consultation visit, [click here](#).

No extra software licensing or subscriptions are required for the Aruba CX switches. All software enhancements and features, such as stacking or BGP protocol support, are included. Aruba also offers industry-leading warranty and global support services.

#### TO LEARN MORE

please visit: [www.cspitechsolutions.com](http://www.cspitechsolutions.com) or call your CSPi representative at 800-940-1111 or email [tech\\_solutions@cspi.com](mailto:tech_solutions@cspi.com).



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