aruba

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Enterprise company

ARUBA CAMPUS AND BRANCH SWITCHING SOLUTION

The foundation of the modern digital workplace

The surge in IoT devices and the increased speed of doing business on mobile are leading us to the question — is the network infrastructure ready? Legacy network infrastructures were designed before mobility and IoT became prevalent. Today's campus and branch network needs to ensure that connectivity, security and smart network management complement each other so that all of these devices can securely connect. And although most users will connect via wireless, the increase in network density requirements and the need for IoT devices to connect via wired means that the wired infrastructure remains critical.

Aruba's campus and branch switching portfolio spans the access layer to the core and creates the foundation of the new digital workplace. Aruba's switches integrate seamlessly with the wireless network as well as with Aruba's industry-leading security and network management solutions.

CURRENT BUSINESS LANDSCAPE

Network traffic is increasing

The shift to digital has disrupted every piece of the network from the edge to the core. As the mobile workforce uses video, voice, and cloud applications to better collaborate, the amount of data crossing campus and branch networks and being aggregated at the core is increasing exponentially.

IoT means more device types and new security concerns

In addition to mobility, the increase in the number of IoT/headless devices connecting to the network has resulted in an avalanche of data pouring through the core of the network. The network must be secure – the company's reputation is on the line. By 2020, there will 20 billion IoT devices connected to enterprise networks. (Source: Gartner)

The network is business critical—from the edge to the core

From the LOB or CIO's standpoint, it's not an option for the network to go down, or for it to not be running optimally. User experience – whether they are employees, guests, shoppers, or students – impacts business success.

KEY BENEFITS

- **Unified wired and wireless** – Aruba's wired and wireless solutions are designed to integrate seamlessly for simple deployment, provisioning and management. Save time with Zero Touch Provisioning and switch autoconfig for VLAN, PoE priority, and CoS with Aruba APs.

- **Layered security from edge to core** – Robust security to protect your network and devices. Unmatched Dynamic Segmentation for secure switch to Aruba Mobility Controller or Gateway traffic policy enforcement, authentication and services. Unique Aruba ClearPass support for Captive Portal and User Role, private VLANs, 802.1X, Web and MAC authentication, ACLs, virus throttling and ready for software defined networks with REST APIs and OpenFlow support.

- **Scale and performance for mobility and IoT** – Industry leading performance, scalability and resiliency deliver high performance wireless aggregation for a superb user experience. Better throughput and wire speed of 40GbE/100GbE uplinks means no traffic bottlenecks. High density PoE+ and HPE Smart Rate multi-gigabit Ethernet provide plenty of speed and power for access points and IoT devices.

- **Flexible management** – Choice of on-prem Aruba AirWave and cloud-based Aruba Central streamline support of Aruba wired access and WLAN devices, whether it's a large campus or small remote branch, with no change in hardware required.

- **Investment protection** – No software licensing required. No keeping track of complex licenses or licenses for features like stacking. Industry leading warranty for access switches. Includes lifetime phone support with NBD replacement shipments.

IT AND BUSINESS CHALLENGES

Increasing traffic means bottlenecks

There's a pressing need for organizations to maximize throughput across the distributed network, from large campuses to branch offices, but it will take more than adding traditional boxes.

Increasing device types means security vulnerabilities

IT needs visibility into what's on the network and they need to be able to segment traffic, automatically, for a greater number of device types.

While complexity has increased, IT resources are flat or shrinking

Essentially, IT must do more with less. More troubleshooting, more remediation, more everything. How can they scale given that network complexity has increased.

ARUBA'S SWITCHING SOLUTION

Aruba's entire portfolio is designed to meet the challenges of the mobile-cloud and IoT era where visibility, automation, and security have become table stakes for survival. Aruba's modern, programmable switches easily integrate with our industry leading network management solutions, either cloud-based Aruba Central or on-prem with Aruba AirWave. These switches come with built-in security features designed for mobile and IoT and integrate with Aruba ClearPass for advanced policy management.

Aruba campus core switches—game-changing innovation

The core has seen very little innovation in the past few decades and the disruptive storm of mobility and IoT is necessitating a change in status quo. Aruba's game-changing solution offers a flexible and innovative approach to dealing with the new applications, security and scalability demands of the mobile-cloud and IoT era.

Aruba 8400 Core and Aggregation Switch Series

High density modular Layer 3 campus core chassis with a modern, fully programmable OS and 19.2 Tbps of switching capacity and carrier grade hardware. This series ensures high performance and availability with line rate 10/40/100GbE for plenty of back haul capacity and runs on the new Aruba OS-CX, a modern programmable software system for the core that automates and simplifies many critical and complex network tasks with the Aruba Network Analytics Engine. The advanced Layer 3 feature set includes IPv4, IPV6, BGP, and VRF.

Aruba 8320 Core and Aggregation Switch Series

High performance Layer 3 campus core switching with a modern, fully programmable OS and 2.5Tbps switching capacity. This series ensures high performance and availability with line rate 10/40GbE for plenty of back haul capacity and runs on the new ArubaOS-CX, a modern programmable software system for the core that automates and simplifies many critical and complex network tasks with the Aruba Network Analytics Engine. The advanced Layer 3 feature set includes IPv4, IPV6, BGP, and VRF.
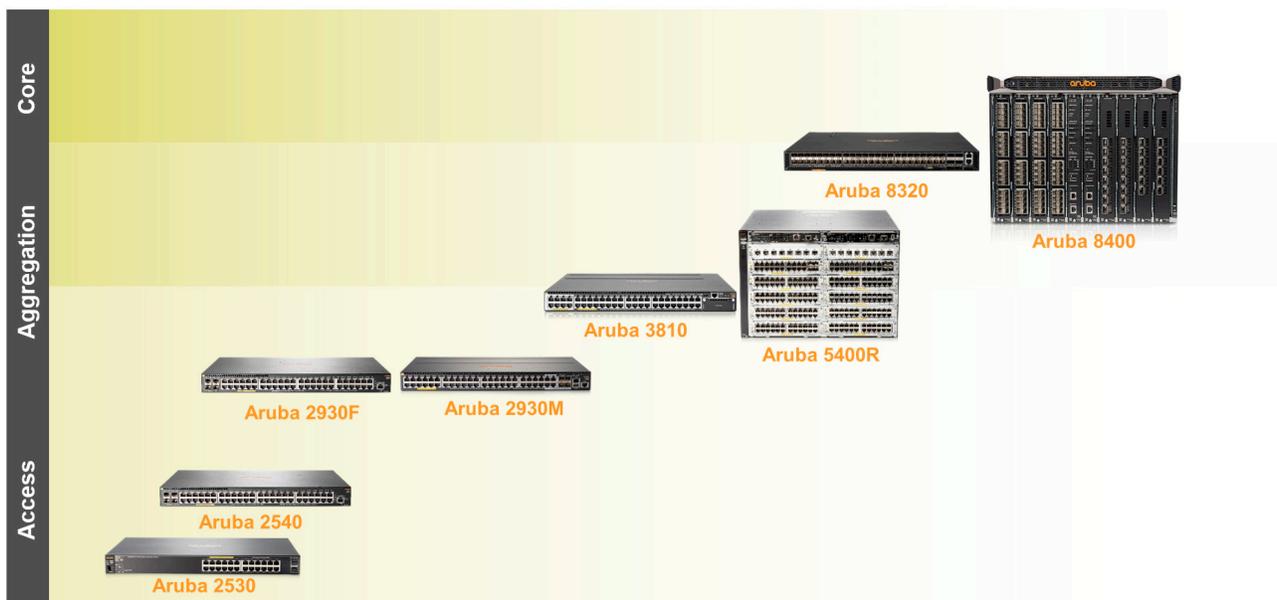

Figure 1: Aruba's campus and branch switching portfolio, from access to core

Aruba access switches—high performance, secure connectivity

Aruba's access switches provide an integrated wireless-wired foundation with scalability, security and high performance for campus and branch networks. Programmable Aruba ProVision ASICs and ArubaOS-Switch software enable fast wireless aggregation and simplicity with unified role-based access across wireless and wired networks using the ability to identify and assign roles to users and IoT devices to prioritize business critical applications while securing the network.

With advanced security and network management tools — Aruba ClearPass Policy Manager, Aruba AirWave and cloud-based Aruba Central — this portfolio is simple to deploy, secure and centrally manage. Zero Touch Provisioning helps customers with remote branch sites with little or no IT support to quickly deploy with assurance of valid configurations.

Unique Dynamic Segmentation on Aruba's Layer 3 switches provides user and port-based traffic tunneling to an Aruba Mobility Controller or Branch Gateway so that policies can be applied, advanced services can be extended to users and IoT devices, and traffic can be encrypted to secure and protect the network.

Aruba 2530 Switch Series – A cost-effective, reliable and secure Layer 2 access switching solution that delivers entry-level features for small-to-midsize businesses.

Aruba 2540 Switch Series – A robust and easy to deploy Layer 2+ access switching solution that offers enhanced security and 10GbE uplinks, RIP and static routing, and flexible management.

Aruba 2930F Switch Series – High performance and cost-effective Layer 3 access switching solution with virtual stacking (VSF) for increased performance and redundancy to support the mobile campus. The series offers built-in 1GbE or 10GbE uplinks, PoE+, Access OSPF, static and RIP routing, Dynamic Segmentation, IPv6, ACLs, sFlow and ready for software defined networks with Rest APIs and OpenFlow support.

Aruba 2930M Switch Series – High performance and scalable Layer 3 access switching solution with modular power (up to 1440W), modular uplinks (10GbE, 40GbE and up to 24 ports of HPE Smart Rate) and modular stacking for high performance and resiliency. The series offers Access OSPF, static and RIP routing, Dynamic Segmentation, IPv6, ACLs, sFlow and ready for the software defined network with REST APIs and OpenFlow support.

Aruba 3810 Switch Series – A powerful advanced Layer 3 switching solution with backplane stacking, low latency and resiliency. Supports HPE Smart Rate multi-gigabit Ethernet, virtualization with resilient backplane stacking technology, full PoE+ over 48 ports, REST APIs and OpenFlow Support and line rate 40GbE for plenty of back haul capacity. The advanced Layer 2 and 3 feature set includes OSPF, IPv6, IPv4 BGP, Dynamic Segmentation, robust QoS and policy-based routing with no software licensing required.

Aruba 5400R Switch Series – A scalable and versatile modular advanced Layer 3 aggregation and access switching solution with Virtual (VSF) stacking, low latency and enterprise-class resiliency. Supports HPE Smart Rate multi-gigabit Ethernet, full PoE+ up to 288 ports, Fast Software Upgrades, Rest APIs and OpenFlow support and line rate 40GbE for plenty of back haul capacity. The advanced Layer 2 and 3 feature set includes OSPF, IPv6, IPv4 BGP, Dynamic Segmentation, robust QoS and policy-based routing with no software licensing required.

TO LEARN MORE

http://www.arubanetworks.com/products/networking/switches/