

## SOLUTION OVERVIEW

# SOFTWARE DEFINED BRANCH

Revolutionizing the branch for today's digital era

Distributed organizations such as retail, hospitality and healthcare are undergoing a digital transformation to better meet evolving business objectives and compete within their industries. This frequently means that IT must improve operations, deploy new services faster and deliver an enhanced and secure user experience.

Cloud-based services are driving rapid change across industries, especially as organizations transition to software-as-a-service applications in greater volume. The influx of mobile devices and Internet of Things (IoT), and the increasing demand for bandwidth also changes how the LAN and WAN must be managed moving forward.

By 2023, 70% of enterprises will rely on the Internet for branch and remote office connections<sup>1</sup> to the head office – just as 20 billion IoT devices enter the mainstream market.<sup>2</sup> These are daunting challenges for IT, whose budgets are only expected to grow 3.5% in 2018.<sup>3</sup> In addition, they now need to securely manage direct-to-Internet (DIA) traffic that is bypassing the corporate perimeter.

This potentially exposes the business to security risks, and increases the burden on IT to maintain consistent access layer policies. They must approach the branch network holistically, which will allow them to easily manage the onboarding of new devices, segmentation of traffic and the ability to meet SLA demands across WAN links.

This is where IT requires an architecture flexible enough to scale with the pace of business demands today, as well as meet tomorrow's growth opportunities. All this while reducing costs and moving from a capital expense (CAPEX) to operating expense (OPEX) model.



## THE SOFTWARE DEFINED BRANCH

Aruba's answer is a software defined branch (SD-Branch) that combines best-in-class wireless and wired infrastructure and management orchestration features with cost saving SD-WAN capabilities. IT organizations can now utilize a common model, designed with cloud-based management in mind to simplify the deployment, configuration, and management of everything within a branch location.

Aruba Central's Cloud management platform provides a single pane of glass for wireless, wired and WAN management, enhancing IT's ability to proactively see what is happening in each branch and troubleshoot issues more easily. In turn, leveraging Aruba's extensive portfolio of security and analytics solutions provide the needed context to customize access and bandwidth policies accordingly.

## BEST IN CLASS LAN INFRASTRUCTURE

Aruba's industry leading wireless and wired LAN solutions and software helps IT deliver the performance and reliability required for today's mobile-first environments. Built-in features keep mobile and IoT devices connected and performing at their best regardless of type, applications being used, or connection method.

<sup>1</sup> Gartner, "SD-WAN: CSPs Must Seize the Internet Opportunity", Apr. 2018

<sup>2</sup> Ericsson Mobility Report, Nov. 2017

<sup>3</sup> ZDNet/Gartner, "IT budgets 2017-18: What the surveys tell us", 2017

Branch Gateways allow IT to deploy and manage WAN connections, which in addition to wired and wireless management is a third and critical IT responsibility. The Aruba Branch Gateways support multiple WAN connections, software defined role based policy enforcement and the ability to easily define best paths for Internet and data center destined traffic.

Zero Touch Provisioning (ZTP) offers IT the ability to quickly and accurately configure and deploy all access infrastructure within a branch. A simple to deploy mobile app allows any non-technical employee to barcode scan an AP, switch, or SD-Branch Gateway and bring devices up, for reduced deployment timelines.

### THE SD-WAN GATEWAYS

While the role of the traditional router has reliably served distributed enterprises for decades, many IT organizations are looking for a new solution that takes advantage of today's broadband connection alternatives.

The Aruba Branch Gateway offers organizations a reliable, high performance option that supports broadband, MPLS, and LTE WAN connections. From a routing standpoint, this provides IT with greater insight into the traffic flowing in and out of each branch, regardless of the uplink.

A Headend Gateway is needed for VPN concentrator (VPNC) termination in hub-and-spoke topologies for IPsec VPN tunnels, and in data center and campus routing scenarios.

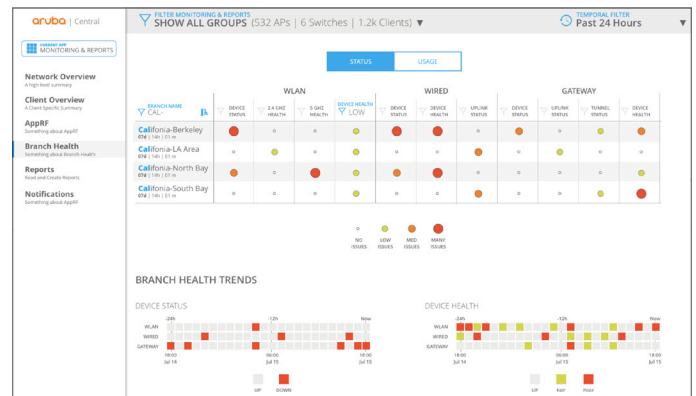
A Virtual Gateway is needed for branch gateways to connect to cloud-based applications through a virtual private cloud (VPC), like Amazon Web Services (AWS).



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### CLOUD-MANAGED SIMPLICITY AND SCALE

To simplify the remote management of various hardware within a branch, Aruba Central provides a single pane of glass that includes wireless, wired and WAN configuration and visibility dashboards, traffic optimization features and built-in troubleshooting tools.



Aruba Central dashboard for WLAN, LAN, and WAN management

Multiple levels of IT administrator privileges help distribute the workload for environments that can span multiple time zones or responsibilities within IT. It's easy to set up who can see and make changes to the hardware in each branch, or assign read-only privileges to those with only help desk roles.

### INTEGRATED, BEST-IN-CLASS SECURITY

The lack of visibility by IT in branch environments is of utmost concern. IoT devices get connected without IT's knowledge. Users find ways to bypass security controls where distance between corporate and the branches is usually a factor. It's hard to easily unplug a device with behavior that has changed for the worse.

Aruba wireless and wired solutions support role-based access security that allows for dynamic segmentation of devices and traffic. The branch gateway then includes a built-in stateful firewall that protects the branch from internal threats using deep packet inspection (DPI), and Aruba Central can be used to enforce web and content filtering rules.

For dynamic device profiling, granting real-time access privileges and granular policy enforcement, with the ability to quarantine a device without physical interaction, Aruba ClearPass offers enterprise scalability for any type of environment.

### **CLOUD-BASED SECURITY PARTNERS**

As more and more applications and solutions move to the cloud, a robust partner program offers customers the ability to leverage third-party defenses that sit in the cloud. Instead of sending all traffic to the data center, real-time threat correlation, inline content inspection and other cloud firewall controls make it easy to protect today's mobile perimeter.

### **AN OPTIMIZED BRANCH EXPERIENCE**

To deliver the same experience to users in the branch as those in corporate, leveraging context about each user, connected device, and the types of applications that are being used allows IT to easily enforce access, bandwidth and security policies based on roles and other contextual data.

This unique contextual-awareness can help enforce WAN policies within the Branch Gateway, like ensuring a specific group of users that utilize Skype for Business have a higher priority than others. Policies can also be enforced within the gateway for inbound traffic and intra-branch traffic.

The gateway is also capable of monitoring the health of WAN links, which allows for seamless failover from one link to another. These capabilities are possible due to Aruba's ability to offer wired, wireless, WAN and security context and enforcement across the entire branch network.

### **SUMMARY**

As organizations explore options for transforming their branch locations, Aruba's key differentiator is an open, software-based solution that is flexible, scalable and easy to deploy. Customers can choose from industry leading wireless, wired, and WAN technologies, cloud management and security solutions that ensure IT and users are receiving the best experience possible.