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a Hewlett Packard Enterprise company

SELECTION GUIDE

CHOOSING THE RIGHT ARUBA SWITCH FOR YOUR SMB NETWORK

Small and mid-size business (SMB) network environments are quickly changing as the adoption of mobile, cloud and multimedia collaboration applications continues to accelerate. With wireless networks hitting gigabit speeds and high bandwidth cloud and UCC applications pushing the limits of the network – your switches need to keep up with the performance demands of new devices and applications.

SMBs planning a switching refresh need to ensure that their new switches can support not only current application requirements as well as those you are planning for the future. Here's what to consider when determining the best switch for your business.

ACCESS OR AGGREGATION

The first consideration is whether the switch is for network access only or access and aggregation. Because your switches provide the network foundation through which users, printers and other devices connect on the network – you need to understand how many users and devices will be connecting as well as the type of applications and traffic volumes your network will need to support. Switching features vary from basic Layer 2 (local communication) to advanced Layer 3 capabilities that support advanced routing protocols that communicate with users across different buildings. Here are the key areas to consider as you review your requirements for selecting a switch:

- Scalability: Number of ports/users and PoE+ power requirements for your access points and other IP devices
- Performance: Traffic volumes, application types and data transfer speeds will determine the switch capacity you need
- Network reliability: Do you need stacking for redundancy and/or redundant power
- Routing: Layer 2 only with no routing or basic Layer 3 routing such as static or open dynamic routing or more advanced routing protocols
- Manageability: determine if you need monitoring and remote management for your network via cloud management or multi-vendor network management support

PERFORMANCE AND PORT SPEED

Determine what port speeds your network requires. You should consider primary access port speeds as well as uplink speeds. Most SMBs will be shifting to 1 Gbps on edge switch ports, while servers and uplink ports may require much faster port speeds such as 10GbE to handle increased traffic and multiple ports for redundancy.

Consider the type of applications you are deploying such as rich media collaboration applications and WLAN access points. They will need additional throughput as wireless speeds continue to rise. The latest 802.11ac Wave 2 wireless access points (APs) can now process more than 1 Gbps to connected clients – which means a standard Gigabit Ethernet link may become a throughput bottleneck. To eliminate potential bottlenecks, you should consider switches that support HPE Smart Rate multi-gigabit ports which allow you to increase speeds to 2.5 Gbps, 5 Gbps and even 10 Gbps over existing cabling.

PORT DENSITY

Evaluate port requirements based on the number of users and devices and whether they are connecting via Wi-Fi or wired. VoIP and the Internet of things (IoT) are going to increase your port consumption

POWER OVER ETHERNET (POE)

Many devices such as VoIP phones, WLAN APs and IP video cameras that connect to the access switches can be powered using a PoE interface. New generations of devices such as 802.11ac APs require PoE+, which offer a higher power rating per device. Therefore, it's important to know how much power your end devices will actually require so you can select a switch that provides adequate PoE+ power.

STACKING AND REDUNDANCY

Stackable switches are desirable where fault tolerance and bandwidth availability are critical. Whether using virtual or physical stacking, your network can recover quickly if a single switch fails. Stacking allows multiple switches connected to each other through Ethernet connections or dedicated modules to behave as a single switch, which means you are managing just one IP device instead of many. This reduces the number of devices you need to manage while increasing network redundancy – thus better utilizing switching capacity.

Also, consider your requirements for network availability. Hardware components such as redundant, hot swappable power supplies and management modules can provide additional protection for important aggregation switches.

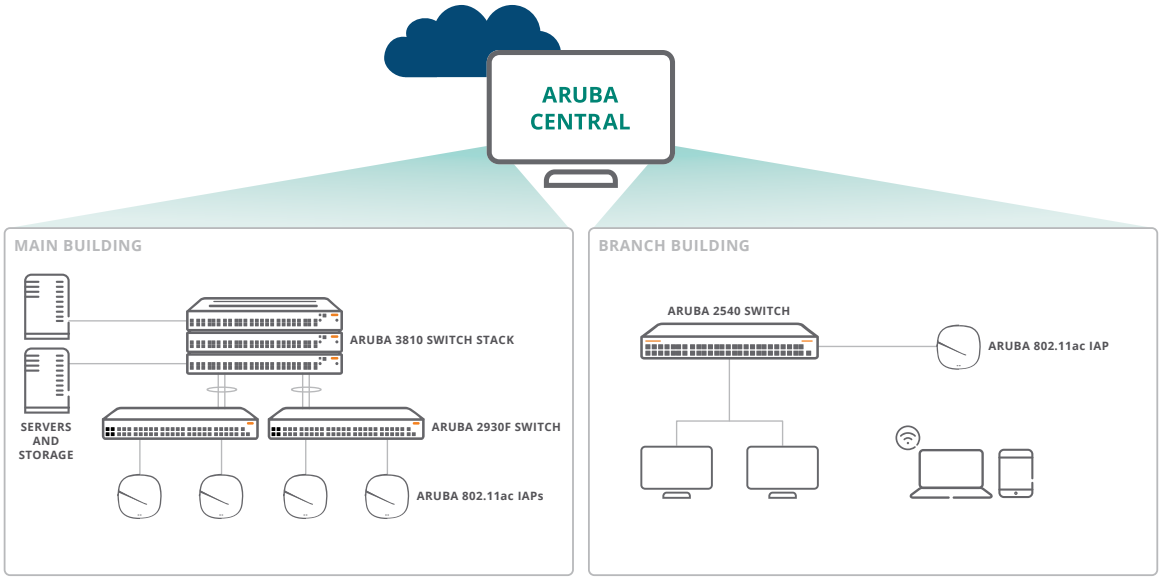
FUTUREPROOF YOUR CUSTOMERS NETWORK FOR IOT AND SDN

Perhaps the biggest technological transition for most networks is making sure your network is ready for IoT and software defined networking optimized with OpenFlow v.1.3.

MANAGABILITY

When selecting management options, consider what models and brands are being used in your network. For intuitive Aruba wired and wireless network management, consider cloud-based with Aruba Central or for multi-vendor wired and wireless networks you can opt for on-premises with Aruba AirWave.

SMB ACCESS LAYER DEPLOYMENTS



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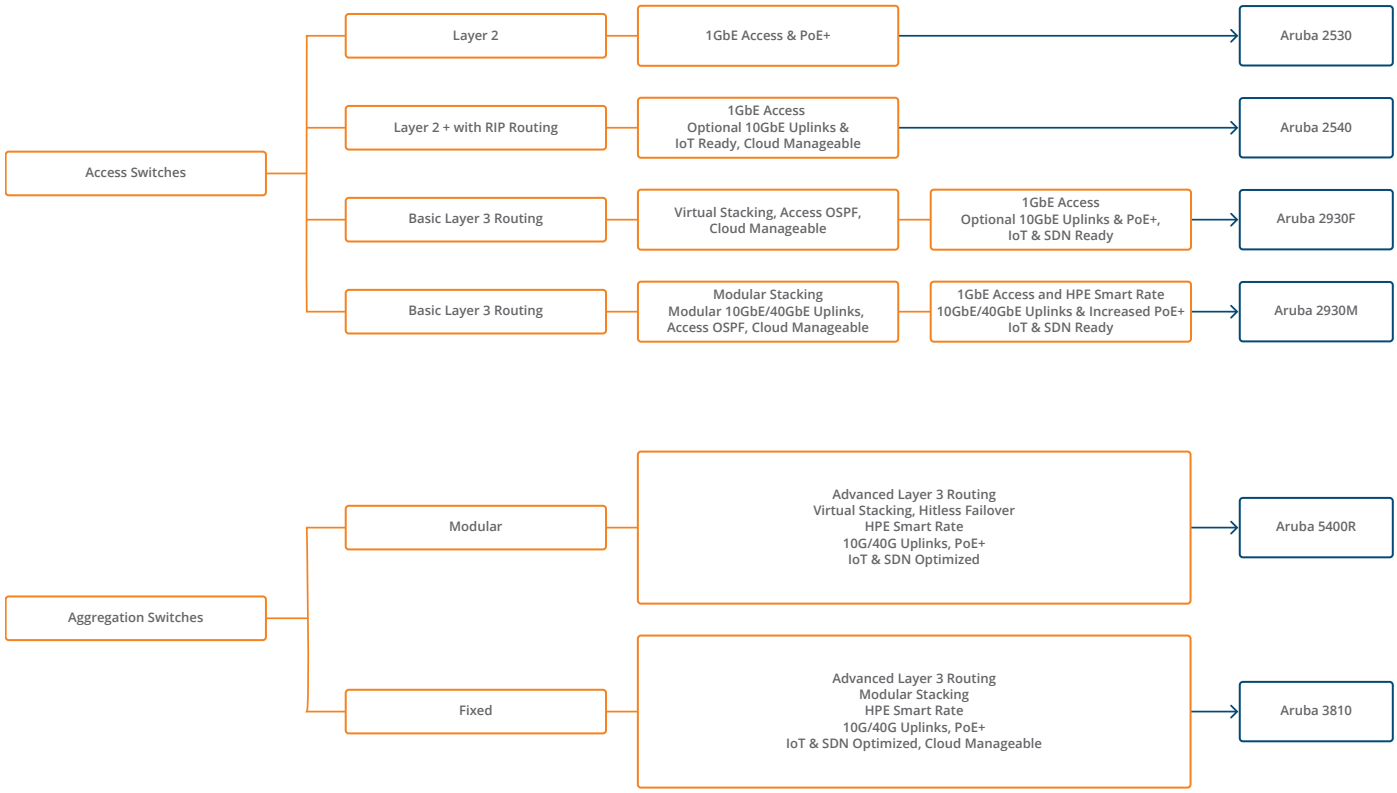

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www.arubanetworks.com

3333 SCOTT BLVD | SANTA CLARA, CA 95054
1.844.473.2782 | T: 1.408.227.4500 | FAX: 1.408.227.4550 | INFO@ARUBANETWORKS.COM