AVAYA

Engage The Power of We™

Top 10 reasons Avaya Networking and Wireless LAN should be selected for your IP Office Deployment

1 A History of Technology Leadership and Innovation

Did you know that Avaya has a rich 20 year history in Ethernet Switching? We've proven ourselves as a technology innovator, and we have been first to market with a number of innovations that have brought Ethernet networks to new levels of reliability and performance.

Avaya has been first to market with:

- Resilient Stacking
- Stacking over a Terabit of Capacity
- Sub 50 millisecond recovery without Spanning Tree (with our Switch Clustering technology)
- Standards-based Fabric Technology (based on enhanced Shortest Path Bridging [SPB]) that extends across the entire network

And we haven't stopped innovating. Avaya's SDN Fx architecture is one of the most differentiated in the industry. It's foundation – Fabric Connect – is transforming the enterprise, delivering 11x faster implementation, 7x faster configuration & troubleshooting, 2553x faster failover time (from 14 minutes to 320 ms) and 100% improvement in human caused errors (from 3 per year to 0)[1].

2 Faster, Risk Free Deployments and Technician-Free Upgrades

When deployed with IP Office and Avaya IP handsets, Avaya Ethernet Routing Switch (ERS) 3500 and 4800 support a **single command quick start installation script** that automatically configures the switches according to Avaya best practices. Set-up can be done either on an ERS 3500 / 4800 stack configuration (i.e., across multiple switches) or on a standalone unit. For maximum flexibility, two modes are supported including fully automated or user-prompted.

To simplify upgrades, Avaya's Access Ethernet Switches support automatic software and configuration downloads for new units in a stacked configuration. You can also hot-swap failed units in a stack without impacting overall availability. We call this virtualization capability "Avaya's Stackable Chassis" solution, and you can find out more online. Furthermore, Avaya Wireless LAN enables you to transition from current (802.11n) to emerging (802.11ac) standards with just a simple software upgrade. Unlike competitive solutions where you need to swap out each individual access point, Avaya enables upgrades without manual IT or technician intervention.

IT staff today are continually being asked to do more with less. At Avaya we are committed to building networks that are easier to design, deploy and maintain – eliminating the manual provisioning that is common in today's networks. From automating switch set up with a single command, to enabling zero touch provisioning of end points, our networking solutions will allow you to do your jobs done faster, with less chance of error.

3 Less Manual Configuration at the Edge

Avaya's Access Ethernet Switches support auto-detection, auto-configuration and auto-QoS for IP handsets (both Avaya and third party), simplifying deployments as well as moves, adds and changes. Add Avaya Identity Engines and all devices (wired and wireless) are authenticated first, then auto-configured. These plug and play features mean that IT no longer has to pre-assign each switch port to specific VLANs, filters, etc., or manually re-configure [each switch port] after devices move.

For the ultimate in simplicity, Avaya Fabric Connect technology reduces manual configuration by 7x. Services are enabled at the edges of the network only - without touching critical core devices. Add Fabric Attach (and or Identity Engines) and enable plug and play support for non-fabric enabled devices such as IP cameras, wireless access points etc.

4 Greater Uptime

Avaya offers a number of innovations to bring increased uptime and availability to both Ethernet and Wireless networks:

- **At the Wired Edge**: Our innovative resilient stacking technology, allows multiple edge switches to function as a single unit (or a modular chassis). Features such as dedicated stacking cables, return cables and hot-swapping capabilities protect against any unit or cable failures, providing a highly available edge network.

- **At the Wireless Edge**: Avaya WLAN 9100 supports a controller-less architecture eliminating the single point of failure concerns that are associated with a traditional controller based wireless networks.

- **In the Core**: Avaya was the first vendor to deliver cost-effective active / active networking. Our

Switch Cluster technology is the most mature in the industry, having been deployed in thousands of customer networks worldwide. Switch Cluster eliminates the need for the inefficient Spanning Tree protocol and enables true active, active networking with sub 50 millisecond recoveries. Switches in this configuration also support in service software upgrades.

- **End-to-End**: Avaya is the first vendor to be able to transform the end to end enterprise network through a single fabric network that can extend across the enterprise. This enables greater uptime and performance by having a completely load balanced, streamlined network (single protocol as opposed to overlays) where configuration changes are enacted only at the Edge – eliminating the need for risky configuration changes in the Core.

5 Application Performance

Applications such as video require sufficient bandwidth from both the Wired and Wireless networks. Avaya's Access Ethernet Switches offer 3-5x stacked bandwidth capacity over leading competitors – ensuring that your network is ready for current and future applications. Avaya Wireless LAN 9100 offers **70% greater bandwidth capacity over competitive solutions**[2] through the ability to program/ customize radios to suit the customer's needs. Avaya also supports advanced wireless roaming capabilities ensuring that your critical applications will not drop while your users are on the move.

6 Application Control and Optimization

Avaya WLAN 9100 ensures your mobile business applications are not compromised by personal and recreational applications. Capable of

detecting **over 1400 applications**, you can block, throttle or permit (or apply priority) to applications directly at the network edge, reducing network load and ensuring that your most important applications come first. Many competitive solutions either do not offer this capability at all (leaving it to corporate firewalls to do the job) or only recognize a limited number of applications.

Adding to this, Avaya Ethernet switches offer an automated QoS functionality ensuring the highest priority for real-time applications. For larger customers who take advantage of Avaya's unique fabric networking capability, we offer the unique ability to very easily segment the network to isolate critical applications for visibility and control. For example, you can isolate imaging traffic from other traffic on the healthcare network.

7 More Secure Network Access

Control network access for guests and BYOD employees with Avaya Identity Engines. Avaya Identity Engines gives you granular control of both users and devices. It allows you to enforce "who gets on, with what, and to go where." Offering device fingerprinting, profiling and onboarding for wireless devices, it increases network security so that IT stays in control. Avaya Identity Engines also simplifies the creation of guest networks enabling non-technical staff to provision guest accounts in **less than 10 seconds**. It also integrates with Mobile Device Management (MDM) solutions to provide a complete BYOD offering

8 Compelling Evolution Path to Fabric

Avaya Fabric Connect transforms the entire network from data center to desktop into a more agile one that is easier to configure, manage and

maintain. Based on an enhanced implementation of Shortest Path Bridging, Avaya Fabric Connect allows customers to gradually phase out multiple complex legacy technologies and instead, enable all L2/3 network services through a single, next-generation technology. Services can be deployed using simple end-point provisioning that accelerates time-to-service and reduces the potential for error.

This technology has been deployed in hundreds of live networks, including high profile implementations such as the Sochi 2014 Olympic Winter Games. It is providing our customers with a dramatically simplified network that can accommodate moves, adds and changes without delay or risk, and is resilient and stable enough to handle the most demanding applications such as video surveillance.

9 Single Vendor Support

One Avaya contact, one services group, and consistent technology can end the vendor finger pointing game and can accelerate Mean-Time-to-Repair.

10 Lower Total Cost of Ownership

Through a combination of compelling price points, reduced power consumption of our edge switches attached devices, a comprehensive lifetime warranty and by having one of the most competitive pricing for support in the industry, we are committed to reducing total cost of ownership for our customers.

Avaya's Mid-Market Networking portfolio

Ethernet Routing Switches (3500, 4800, 5900)

ERS 3500 with IP Office

• Single command switch set up with IP Office

• Certified one minute plug and play for IP phones

• Zero touch IP end point deployments (with Identity Engines / Fabric)

• Best in class resilient stacking

  – Improved availability

  – Linear scaling

  – Simplified management

  – Hot-swapping of units with auto unit replacement features

  – Optimal path forwarding

• Intuitive CLI; Industry aligned

• Simple web based GUI with centralized management tools

Wireless LAN 9100

• Next Generation 802.11ac Wireless LAN solution with cost effective, two-tier architecture (distributed controller in every Access Point [AP])

• Granular Visibility and Control for 1400+ applications

Avaya AP 9122, 9123, 9132 and 9133

• Software Upgradeable from 802.11n to 802.11ac

• Intuitive management for simplified deployments

• Advanced Radio Frequency (RF) Management

• 70% more bandwidth per AP; 4 radio APs for high density environments

• Software Programmable Radios to optimize WLAN to end user environment

• Plug and Play APs (Avaya Fabric to the wireless edge)

Identity Engines

• Comply with regulatory requirements

• Control who enters the network

• Deliver differentiated access based on user roles

• Provide data privacy and restricted access to applications

Identity Engines Ignition Access Portal

• Provide true network protection, mitigating the risk of data loss and the exposure to vulnerabilities

About Avaya

Avaya is a leading, global provider of customer and team engagement solutions and services available in a variety of flexible on-premise and cloud deployment options. Avaya's fabric-based networking solutions help simplify and accelerate the deployment of business critical applications and services. For more information, please visit **www.avaya.com**.

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[1] Research commissioned by Avaya and conducted by Dynamic Markets in 2015. A copy of the report is available at: http://www.avaya.com/usa/documents/fabric-connect-customer-experience-research-report.pdf

[2] 70% more bandwidth is based on the following:

 • Industry-standard 802.11ac, 3x3 AP: Radio 1 = 225Mbps (2.4GHz); Radio 2 = 1.3Gbps (5GHz) = Max Bandwidth = 1.525Gbps

 • Avaya 802.11ac, 3x3 AP: Radio 1 =1.3 Gbps (5Ghz) and Radio 2 (5GHz) = 1.3 Gbps = Max bandwidth = 2.6 Gbps

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