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SOLUTION OVERVIEW

Rapid Expansion of New Clinics

BACKGROUND

Retail health clinics are a convenient option for patients to locally access walk-in healthcare services. Local healthcare clinics usually operate seven days a week for convenient access and typically have shorter wait times, and appointments are not required. Flexible operating hours help patients easily access healthcare services in nearby locations like retail stores, supermarkets and department stores. In addition, services and costs are often displayed and are sometimes less expensive in comparison with visits to primary clinics or hospitals.

According to the latest research by Future Market Insights (FMI) , the market value for global retail clinics will exceed $8B USD by 2028, reflecting a robust CAGR of more than 10 percent between 2018 and 2028. Quality of care, lower costs and added convenience are just a few of the factors that have contributed to the rise of retail health clinics. And technology continues to be a key enabler in this unprecedented growth. Cloud and virtualization technologies have benefited healthcare practices, such as telemedicine, by providing more efficient access to shared medical records, improved security along with providing an easier transition to mobile services.

The wide area network plays a pivotal role in ensuring the success of retail clinics. The performance and reliability of the network is essential to enable fast and reliable communications between clinics, applications and medical data to deliver the highest quality of experience for patients and medical professionals. The use of electronic health records (EHR) along with the ability to access/share data in these clinics is especially critical in order to ensure continuity and coordination of care across different health care locations.

In addition, healthcare professionals and organizations alike are required to maintain compliance with government regulatory mandates, such as HIPAA, that set privacy information and usage standards for patient healthcare records. Security policy enforcement and segmentation of applications and data across the WAN is imperative in enabling organizations to maintain HIPPA compliance, by ensuring that the right security measures and policies have been implemented to control access to all health-related information.

CHALLENGES OF TRADITIONAL WIDE AREA NETWORK ARCHITECTURES

Conventional router-centric WAN architectures do not provide the agility to facilitate fast expansion of new clinics to meet modern, regional healthcare provider and patient needs. Traditional WAN architectures face the following challenges:

- **Highly complex and time consuming to deploy** and configure new clinics' IT infrastructure, requiring disparate devices such as firewalls, routers and WAN optimization appliances, typically requiring onsite manual deployment and configuration by specialized engineers
- **Complex and costly security implementations** to maintain HIPAA compliance
- **Inability to quickly provision WAN connectivity services** at new locations in days using broadband internet services instead of private circuits which can take months
- **Inability to leverage and logically bond multiple transport links including MPLS, broadband and LTE** to speed network and application performance; the prohibitive cost of MPLS and circuit provisioning delays often inhibit deploying the amounts of bandwidth required to support transmission of large medical files such as imaging records
- **Lack of differentiated quality of service (QoS) support or security policies** over broadband internet connections for different types of applications such as EHR, VoIP, lab systems, drug ordering, IoMT, telemedicine and virtual reality

[1] https://www.futuremarketinsights.com/reports/retail-clinics-market

ARUBA EDGECONNECT SD-WAN EDGE PLATFORM AND BENEFITS

Aruba empowers digital healthcare services and is revolutionizing WAN architecture for healthcare providers with a business-first networking model. The Aruba EdgeConnect™ SD-WAN edge platform delivers the requirements needed at the WAN edge to expedite the expansion of new clinics to connect caregivers and patients and enhance the overall quality of experience for patients, providers and for IT:

- **Enables rapid onboarding of new care clinics in days vs. months with secure, zero-touch provisioning —** A plug-and-play deployment model enables rapid installation, without the need for a specialized IT presence at remote locations. Centralized orchestration with Aruba Orchestrator™ empowers network administrators to centrally define and orchestrate granular application QoS and security policies and create secure end-to-end zones to newly onboarded clinics in accordance with healthcare business requirements.
- **Secures access to EHR systems and the transfer of sensitive patient health records —** By combining the power of zone-based firewalls and network micro-segmentation, EdgeConnect helps organizations achieve and maintain HIPAA compliance. The EdgeConnect platform automates the configuration of cloud-hosted security services like Zscaler and Check Point in minutes to maintain network security policy compliance without compromise.
- **Reduces WAN transport costs —** With EdgeConnect, healthcare organizations can dramatically lower connectivity, equipment and network administration costs. Savings are achieved through a reduction in bandwidth costs by actively using broadband connectivity as well as a reduction in the time and expertise needed to deploy and manage WAN infrastructure at clinics.
- **Increases available bandwidth —** By fully utilizing all available bandwidth from multiple transport services like MPLS, broadband and LTE, an EdgeConnect business-driven SD-WAN facilitates healthcare providers to expand and run their businesses on shared, public broadband, even running voice and video applications, without compromising performance or security.
- **Improves** network performance **—** Features such tunnel bonding and real-time traffic steering over multiple WAN links improves application performance and therefore the services that the medical staff delivers to patients. In addition, optional unified WAN optimization accelerates the transfer of patient data between regional clinics and hospitals or data centers. WAN optimization may be applied on-demand with a single mouse click for those sites and applications that benefit from it.

The agile, centrally orchestrated EdgeConnect SD-WAN architecture makes retail health clinic expansion easier and less expensive, dramatically accelerating time-to-revenue. High application performance and continuous availability of healthcare services translates to a superior patient-staff quality of experience.

CUSTOMER SUCCESS STORIES

Nuffield Health deployed an SD-WAN across 189 sites in just four months, an average of 15 sites per week, peaking at 27 sites in a single week. As a result of the Aruba deployment, Nuffield Health is now able to run dual internet links to its sites, with some sites able to operate solely on 4G LTE for connectivity until fiber internet services become available. Aruba Boost™ WAN Optimization enabled the company to reduce WAN traffic by up to 75 percent providing an effective four to six times increase in bandwidth.

USANA deployed an EdgeConnect SD-WAN at 23 sites in 17 countries in just six weeks. EdgeConnect enabled USANA to continue using its existing MPLS links while still under contract by combining multiple transports like MPLS, commercial broadband and 4G LTE. Over the long term, USANA anticipates being able to decommission MPLS and rely solely on broadband.

> ***"It was easy to get a couple people at each site to swap out the old edge routers and switches with EdgeConnect and connect to the network. It's just plug-and-play. Because everything is managed through Orchestrator, we could then apply policies and routing overlays remotely. This approach saved us at least six weeks of project time."***
>
> **— Mark Taylor, Network Manager**
> **USANA Health Sciences**

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