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Case Study

Digital Healthcare Services Company

e&'s end-to-end reliable and secure SD-WAN solution digitally empowers the healthcare services company and the partner clinics and pharmacies by offering an integrated user experience and consistent technology implementation.

Customer Background

A digital healthcare services company started an initiative that aims to digitise health information through a centralised platform that will benefit authorities and the associated clinics.

This is the region's first health information exchange platform that will safely and securely connect all public and private healthcare providers across the emirate of Abu Dhabi. The initiative enables healthcare facilities and professionals to access and share patients' medical information to significantly improve patient care. The digital healthcare technology will provide a standardised platform, designed to streamline healthcare connectivity in the Emirate, and create a secure database that centrally and efficiently stores and allows the exchange of clinical data in a meaningful way.

This initiative will empower healthcare professionals and government authorities to make real-time informed decisions, improve patient outcomes and ultimately create a happier and healthier society.

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Challenges

The UAE is distinguished as one of the nations that invests heavily in improving the quality of the healthcare sector and introducing the most advanced ways to streamline the overall experience for healthcare providers and patients. The most recent development by many hospitals and clinics is the storage of patients' records and information on the cloud, thus enabling quicker evaluation and diagnosis by doctors and healthcare providers regardless of the patients' location or previous medical history.

Under the initiative proposed by a digital healthcare services company, the health authority requires all healthcare providers across the emirate of Abu Dhabi to connect securely and privately to a centralised database.

The gap between the access technologies used by small clinics versus big hospitals had to be bridged by deploying a consistent solution that's cost-effective and aligns with the government guidelines. For the seamless incorporation of the programme, it was essential to analyse the diverse setup, network configurations and overall ICT infrastructure of the clinics and pharmacies and deploy a simplified, seamless solution that integrates with the new or existing infrastructure.

It was imperative to have a future-proof infrastructure that would have the flexibility to incorporate updates and avoid network downtime. The digital healthcare services company wanted to onboard an end-to-end managed service partner that can provision, deploy, proactively support, and provide rapid connectivity and accessibility to the portal for authorised pharmacies and clinics.

CHALLENGES

- ◉ The complexity of connecting diverse network infrastructure of multiple clinics/pharmacies to a central database
- ◉ The vulnerability of data leaks due to open public internet connectivity
- ◉ Keeping the cost low without compromising on security
- ◉ Absence of a future-proof solution at clinics/pharmacies for a better return on investment
- ◉ Multiple vendors for end-to-end solutions with minimum scope for future add-ons
- ◉ Lack of tools and skillsets for managing and monitoring the complete network performance.

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▌ Solution Details

Keeping patient health records 'centralised' and 'accessible' with Managed SD-WAN

The digital healthcare services company was looking for a strategic partner that understands the criticalities of the digital health data project and fulfils all the requirements adeptly. e& proposed a turnkey, fully managed, resilient and secure SD-WAN solution with internet underlay connecting authorised clinics/pharmacies to a secure and central database. e&'s widespread network reach and expertise in evaluating IT infrastructure and accomplishing key healthcare projects were fundamental for this alliance.

The solution is designed keeping in mind the guidelines of the government health authority, standardisation of technology and network complexities. The set up comprises a fully redundant underlay network that promises the required uptime along with e&'s Managed SD-WAN edge at the data centre of the digital healthcare services company. Once the connectivity was established at the digital healthcare services company, e& implemented a Managed SD-WAN solution at the other associated clinics and pharmacies to connect over Business Broadband Internet links. The deployment ensures round the clock network availability, in case of a network device or path failure or unavailability.

e&'s pre-configured SD-WAN edge serves as the ideal way for clinics and pharmacies to connect to the database and keep a track of patients' information, tests and procedures. e& offers comprehensive project governance for quick and smooth migration with existing or new infrastructure. As part of the partnership, e& provides a consolidated dashboard to the digital healthcare services company for accessing patients' details of all the clinics/pharmacies that are connected to this private WAN network on the internet.

With 24/7 proactive monitoring from the state-of-the-art Central Network Operations Centre (CNOC) and Managed Support Service (MSS) division of e&, the digital healthcare services company and the associated clinics/pharmacies experience quality service levels through an eminent support model. Guaranteeing a quick response time for high availability, the participating clinics/pharmacies have the access to a team of certified experts for troubleshooting and resolution.

The Managed SD-WAN platform offers enhanced scalability by connecting to EMR service providers that deliver these services through the Public Cloud. The platform also lets the government authority connect to the future database by integrating it with different application service providers. Through this turnkey solution implementation, the digital healthcare services company and the participating clinics/pharmacies have the option of subscribing to future add-on digital services at a minimal additional cost.

BUSINESS RESULTS & BENEFITS

- Secure and reliable connection to authorised clinics and the digital healthcare services company for accessing the central database

- Consistent technology implementation and usage by healthcare providers under the initiative of the digital healthcare services company

- Cost-effective solution that aligns with the commercial requirements of healthcare providers

- Visibility of the network and visualisation of network performance by the digital healthcare services company

- High uptime and quick resolution

- Compatible with future virtual network add-ons resulting in a better return on investment

- The solution is scalable to add 2,000+ clinics/pharmacies on the same private network

- The configurations at the clinic will enable public cloud providers to be connected to the same overlay network

- Access to a team of certified experts offering 24/7 proactive monitoring, troubleshooting and support services

TECHNICAL DETAILS

The solution for the SD-WAN set up for the customer project comprises the following elements:

- **Connectivity** – Main and backup dedicated Internet connectivity at the DC/DR of the digital healthcare services company

- **SD-WAN edge at the digital healthcare services company** – SD-WAN edge will terminate the WAN link at the DC/DR of the digital healthcare services company

- **SD-WAN edge at clinics/pharmacies** – SD-WAN edge over Business Broadband connection provided by e& or any other licensed UAE telecom service provider

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