

Challenges

Update the hospital network to support a plan to replace paper-based records with electronic health records and introduce the use of mobile devices.

Value Created

Deployed new networking equipment to provide clinicians with around-the-clock connectivity and the ability to transfer diagnostic images from remote locations.

Strong, Stable Network Underpins Sydney Adventist Hospital



Sydney Adventist Hospital upgraded its network, based on Avaya technology, to support growth and provide around-the-clock connectivity to doctors and other hospital staff.

Company Profile

Sydney Adventist Hospital (SAH) is a not-for-profit facility of the South Pacific Division of the Seventh-day Adventist Church. An acute-care private hospital with 358 licensed overnight beds, it is the largest single-campus private hospital in NSW and the first to be accredited by the Australian Council on Healthcare Standards. In 2006, the hospital won the prestigious Australian Private Hospitals Association Award for Clinical Excellence (70 beds and over).

SAH is the largest employer in the Hornsby Ku-ring-gai council area. Each year, more than 2,200 staff and 700 accredited medical practitioners care at the hospital for around 50,000 inpatients and 170,000 outpatients, and deliver more than 2,100 babies. The emergency department (ED) admits around 20,000 patients annually, making it the busiest ED of any private hospital in NSW.

“We’re consistently impressed with the reliability and performance of Avaya networking products.”

—Chris Williams,
Chief Information Officer, Sydney
Adventist Hospital

Challenge

SAH’s network must always be available so doctors and other staff can access patient records and medical images at any time of the day or night.

Recently, the hospital realised that its plan to replace paper-based patient records with electronic medical records would put pressure on its existing network infrastructure.

Its biomedical and clinical equipment was also becoming network-enabled, and departments such as the intensive care unit were capturing and uploading data in real time for use by clinicians and medical staff with mobile devices.

The adoption of smartphones and tablet devices was also contributing to increased demand for bandwidth.

As a result, the hospital developed a plan to update its network to ensure clinicians and other hospital staff had access to patient records at all times. The network would also be deployed in new buildings, which will provide an additional 200 inpatient beds, 12 operating theatres, a new arrivals area, an integrated cancer centre, a multi-deck car park and a teaching facility for healthcare professionals. These buildings will be completed in 2014.

Solution

SAH runs Avaya Ethernet Routing Switch (ERS) 8600 modular core switches and Avaya ERS stackable switches as the basis for its local area network (LAN). The hospital has used an Avaya Virtual Private Network (VPN) Gateway 3050 for several years to give staff remote access to critical resources. The core network has remained the same since 2002 and been “rock solid”, according to Chris Williams, Chief Information Officer, SAH.

Switch clustering has been a key feature of the network architecture as it ensures nothing falls over if links are lost. It does this by providing multiple links to all parts of the network—if one link fails, the rest keep the hospital’s information flowing.

In recent years, SAH has also deployed around 5,500 Ethernet ports across the hospital to create the foundations of the network. The ports include a mix of Avaya Ethernet Routing Switches 4500 and 5000 Series switches to provide internet connectivity to more doctors and other medical staff than ever before.

To prepare for future growth, SAH also recently upgraded its network by purchasing two Avaya Virtual Services Platform (VSP) 9000 core switches. These will become the backbone of the network for the next decade.

“We’re choosing Avaya again because we have confidence in the product

and because Avaya is embarking on this journey with us,” said Williams.

“We’re consistently impressed with the reliability and performance of Avaya networking products,” he said. “The decision to use Avaya was an easy one, made simpler by the impressive account service provided.

“I have a small team and that team must work with the expanding services here. Working with Avaya’s hardware makes that easy to accomplish,” Williams added.

Results

Around-the-clock connectivity

The Avaya network delivers around-the-clock connectivity to doctors and other hospital staff, and a high level of network resiliency. This is achieved through Avaya switch clustering technology that manages routine maintenance operations.

Increased network speeds allow hospital staff to be more productive by quickly transferring diagnostic images to remote locations.

Faster network upgrades

The hospital’s IT staff use split multilink trunking to upgrade core network switches without having to schedule any downtime. The remaining switches can carry the entire load and there is no outage while switching between them.

This approach is more effective than a spanning-tree-based core network where the upgrade would require a full outage to be scheduled. Link or switch failures are in turn better managed because they do not result in any loss of overall application availability.

Time to service reduced with intelligent network

The Avaya network provides true ‘plug and play’ telephony service and switch replacement without manual re-configuration. Plug and play provisioning allows a new user to be set up within one minute by simply plugging a phone into the switch. These capabilities greatly reduce the time to service and increase uptime.

Energy consumption reduced

SAH can reduce the energy consumption of its access switches during a scheduled period while maintaining network connectivity.

According to a recent test conducted by Miercom, the Avaya access solution provides an energy saving of up to 50% compared to competitors’ solutions. The hospital can further reduce energy consumption by using fewer devices, which reduces the amount of power used to run the network equipment.

Scalable networking equipment

The Avaya networking products used by SAH are scalable, providing up to five times better performance than

competitors’ products, according to tests by Miercom and Tolly.

Designed for the future, Avaya’s solutions feature a variety of innovative technologies, including the split multilink trunking discussed above and a fast-stack architecture to enable scaling as demands evolve and grow.

Learn More

For more information on how Avaya can take your enterprise from where it is to where it needs to be, contact your Avaya Account Manager or a member of the Avaya Connect channel partner program, or access other collateral by clicking on Resource Library at www.avaya.com.

Applications, Systems & Services

Applications	Systems	Services
	<p>Avaya Ethernet Routing Switch 8600 modular core switches</p> <p>Avaya ERS stackable switches</p> <p>Avaya Virtual Private Network</p> <p>Avaya Ethernet Routing Switch 4500 and 5000 Series switches</p> <p>Avaya Virtual Services Platform 9000 core switches</p>	<p>All design and implementation services provided by Avaya.</p>

SYDNEY ADVENTIST HOSPITAL

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