HEALTHCARE

South Australian Health Optimizes Data Center with CommScope Infrastructure Solutions

SYSTIMAX® GigaSPEED® X10D, LazrSPEED®, TeraSPEED®, VisiPatch® 360 and InstaPATCH® Plus Solutions set new standards for performance and ease of management

When South Australian Health planned a new Performance Optimized Datacenter in Adelaide, it looked for the best available copper and fiber connectivity infrastructure. In addition to highly reliable performance at 10 Gb/s and 1Gb/s, flexibility and ease of management were top priorities. CommScope provided a complete solution from its SYSTIMAX portfolio of products. This included the elegant, cost saving VisiPatch 360 Solution that eliminated “patch cord Spaghetti” to make moves adds and changes much faster and easier.

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SYSTIMAX® SOLUTIONS

South Australian (SA) Health has over 30,000 employees providing healthcare to a population of 1.6 million people. To help run its ICT services efficiently, the organization has a network of 380 sites servicing over 18,000 PC's.

At the heart of the SA Health network is a data center located in Adelaide, the capital of South Australia. This single floor, 868m^2 building, built in the 1980's, also provides datacenter facilities to other departments of South Australia's government.

One hundred square meters of the purpose-build center are dedicated to the needs of SA Health. Within this area, the organization's ICT Infrastructure Division has recently completed a new Performance Optimized Data center (POD) with a range of innovative, performance-improving and cost saving features.

Advanced connectivity infrastructure is a key part of the POD design. To provide connections between servers, switches and SANs, SA Health chose solutions from CommScope's SYSTIMAX range. Both 10G fiber and copper solutions are used in combination with state-of-the-art SYSTIMAX VisiPatch 360 patching hardware.

The overall result is a high performance infrastructure that is easy to manage and beautifully organized. It delivers best-in- class 10G and 1G performance, and its ergonomic 'reverse' patch cord connectors eliminate the mass of hanging cords that obscures the connectors in traditional panels.

"VisiPatch 360 is a next generation patching solution that really performs" said Lincoln West, Manager - Network Services at SA Health. "Its high connector density and scalable design gave us great flexibility in the way we arranged the ports. And, in operation, moves, adds and changes are now much quicker and less error prone because of the clear access to connectors. The compact design and reverse connectors, combined with integrated vertical and horizontal patch cord management, make the whole installation look neat and tidy."

Connections to the SAN (Storage Area Network) environment are supported by the SYSTIMAX LazrSPEED InstaPATCH Plus solution. This multimode fiber solution is also used to support both 10G and 1G applications between servers and switches, and in connections between servers.

The InstaPATCH Plus Solution is a high-density, factory terminated and tested modular solution that enables installers to connect system components together simply and quickly. Up to 96 fibers can be ready for service in the time it takes to make a single connection using traditional methods. At the same time, the InstaPATCH solution simplifies design, configuration and ordering of fiber equipment.

The VisiPatch 360 Solution forms the crossconnect for both fiber and copper infrastructure linking servers and switches. The 10G copper infrastructure chosen for the POD was the SYSTIMAX GigaSPEED X10D Solution. This comfortably exceeds all the specifications of the Category 6A, Class E_A standard for 10G copper cabling.

"This is the first time we have used the cross connect approach to linking devices in data centers - so we had to be sure we were using the best equipment from a supplier we could trust," said Lincoln West. "The SA Health data center is absolutely mission critical, so we needed confidence that all fiber and copper connections would deliver high performance - and be simple and economical to manage.

"Efficient management, including fast, error free moves adds and changes, is the key to maintaining high service levels for the many hospitals, clinics and other facilities that depend on the data center."

Design, planning and project management of the POD project was handled by the ICT Services Department at SA Health. The system they developed will handle data applications at 10 Mb/s, 100 Mb/s, 1 Gb/s and 10 Gb/s, supporting fibre channel and VoIP. This makes it backwards compatible with legacy applications and ensures the migration to 10G will be a simple process.

The crossconnect using VisiPatch 360 technology makes all fiber and copper connections easy to work on, and reduces the risk of mismatched services. Its flexible design approach also ensures that future expansion will be a simple process.

Installation work was completed by SYSTIMAX Prestige BusinessPartner, TAF and Associates, based in Kidman Park, South Australia. A team including four SYSTIMAX certified technicians installed eight full VisiPatch 360 frames with 2256 terminations to support equipment fields and switched IP fields. VisiPatch 360 four-pair leads are used to connect GigaSPEED X10D copper infrastructure and InstaPATCH connections support all the fiber applications.

Within the new POD, the 25 SYSTIMAX cabinets are linked via cables routed through overhead basket trays. Switches and severs connected via the cross connect have redundant links to each cabinet.

10G connections from the data center to the SA Health wide area network are made using SYSTIMAX TeraSPEED singlemode fiber cabling. The same solution is used to connect with the South Australian Broadband Research and Education network (SABRnet).

“The completed SA Health POD could serve as the pattern for data center facilities serving other Government departments,” said Lincoln West. “We could extend use of the technology to the whole Adelaide datacenter, giving the benefits of reliable 10G links and lower management costs to other sectors of government.

“The same technology has already been deployed in standby data center facilities. This is also backed by the SYSTIMAX 20-year extended product and application warranty, which was another key factor in our choice of CommScope infrastructure solutions”

The SA Health application is the first large scale installation of VisiPatch 360 in South Australia. Used with CommScope’s other performance leading copper and fiber solutions, it is a model for other high performance data center infrastructures.

Commenting, Reg Evans of CommScope in Australia said: “As complexity of network infrastructures, services & applications rise, the connectivity from and within a data center is critical to the service quality center delivered to users. However good the servers and switches, without the right connectivity they cannot realize their full potential. The wrong connectivity can also be a maintenance and management nightmare.

“SA Health has shown what can be done with the best available data center infrastructure. It has 10G connections over copper as well as singlemode and multimode fiber with the convenience of pre-terminated fiber cables. Its crossconnect design, using advanced VisiPatch 360 technology, takes ease of management to a new level. The quality and ergonomic advantages of the solution are obvious to anyone who sees the installation.”

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