Case Study

Upgrading and Futureproofing

Company: IX Australia

› BACKGROUND

IX Australia is an internet exchange which provides network capacity to 20 metropolitan data centres. These locations are scattered throughout peering points in Adelaide, Melbourne, Canberra, Sydney and Brisbane. With most of the country's population concentrated throughout these metropolitan areas and surrounding regions, increasing traffic requirements put a substantial strain on IX Australia's previous network capacity infrastructure.

› CHALLENGE

A growing population coupled with an increasing technological need for data consumption had caused the previous 60GB link capacity to become inadequate. The steadily increasing demand has led IX Australia to make the decision to enhance their network's link capacity from 60GB to 200GB. Any complex infrastructure purchase needs to address strict criteria when determining the specific solution and supplier. In this instance, IX Australia needed a network which:

- was cost-effective;
- was compact and easily housed;
- consumed a relatively low quantity of power; and
- could be expanded as demand continued to increase.

› SOLUTION

In the search for a solution to upgrade network link capacity, IX Australia engaged with Independent Data Solutions, the local Australian supplier of Smartoptics. Independent Data Solutions were ultimately able to supply the upgraded network with Smartoptics' Open Line System technology.

When making a selection, IX Australia prioritised space and power. The less expense that was needed to be dedicated to physically housing the system, the better. Low power consumption was also prioritised for the exchange's co-location data centres. The solution designed by Independent Data Solutions ultimately delivered simple deployment, ultra-low latency, high availability and cost-effectiveness.

As with any technological infrastructure investment, futureproofing the system was also a top priority. IX Australia had no interest in purchasing a network infrastructure system if it would become obsolete in a short time span. The Smartoptics Open Line System supplied by Independent Data Solutions provided optimal technology for their interconnects and it facilitated unprecedented expansion capability.

Smartoptics Open Line System Technical Specifications

- Enables significant growth capacity – 40 channels of 100GB available on each DCP-M40, with 200GB and 400GB waves also supported
- Link capacity is achieved over distances between 50 and 80km
- Embedded DWDM PAM4 transceivers support the lowest cost 40 x 100GB traffic capability over a single pair of fibers
- QSFP28 pluggable technology reduces costs of network system

❯ RESULTS

The installation of the new Smartoptics Open Line System was a resounding success. The infrastructure provided the lowest cost 40 x 100GB traffic capability over a single pair of fibers. In other words, the network's capacity was substantially increased in the most cost-effective manner possible.

Independent Data Solutions' implementation of the Smartoptics Open Line System fulfilled a number of other criteria as well. In addition to its relatively low expense, the new network infrastructure is easily maintained, requiring minimal human intervention. Reducing the holistic complexity of maintenance involved will continue to save IX Australia labour and technical costs for the network's lifetime.

The new network offers some of the highest performance currently available on the market. Outstanding performance was an absolute requirement for IX Australia, given that it provides link capacity to 20 of Australia's most populated metropolitan regions. The infrastructure provides users with high bandwidth and low latency to accommodate for steadily increasing data demands.

The final criterion was scalability. The selection of the Smartoptics Open Line System means that additional 100GB can be deployed and activated in a number of minutes, with no further configuration of the line system required. Independent Data Solutions' installation of the Smartoptics Open Line System has simply and effectively upgraded the performance of IX Australia's link network infrastructure, futureproofing it for years to come.

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"As demand on our network grows, we need the flexibility to add new capacity without drama. We can now easily scale service flexibility and capacity just by adding new transceivers to our switches. The line system automation handles everything else, no complex provisioning needed."

Joe Wooller – Technical Manager, IX Australia