Tellabs® Global Services helps Telstra meet aggressive network transformation goals

Faster time to market means faster time to revenue.

Telstra, Australia's leading telecommunications service provider, will soon complete a multi-year network transformation project that includes the construction of a nationwide MPLS-based network, the Telstra Next IP® network, and the migration of multiple traffic types onto that network, including traffic aggregated from DSL connections, frame relay and ATM traffic and wireless backhaul traffic.

Telstra's new network is being rolled out according to an aggressive deployment schedule, with specific milestones along the way. Tellabs is one of four key manufacturers that provided the equipment on which the network was based. Telstra enlisted Tellabs Global Services to help address a wide range of challenges related to network deployment and migration and help meet their aggressive timelines.

"To get the network turned up in the timeframes that we were after was a challenge," said Mike Lawrey, Executive Director of Network and Technology for Telstra Network and Technology. "By engaging with Tellabs in the professional services context and having them work with us on-site, we got the best outcomes."

Telstra's Network Transformation Project

Telstra undertook its network transformation project with the goal of enhancing efficiency and reducing costs by migrating multiple single-purpose networks onto a common platform. Among other equipment, Telstra deployed the Tellabs® 8840 Multiservice Router (MSR). Traffic was moved on to the network in phases, beginning with backbone switch router (BSR) traffic.

Telstra

"Transformation is all about reducing your costs while improving your simplicity"

The project involved Tellabs as well as other vendors, adding a level of complexity to the effort.

The Tellabs Global Services Partnership

To bring additional critical expertise to the project, Telstra made the decision to enlist the help of Tellabs Global Services with the network transformation project. As Tellabs Director of APAC Global Services Michael Stephens recalls, "The proposal was that we would be infused into the Telstra machine and undertake the architecture and design phases so they could integrate the Tellabs 8840 MSR into the multi-vendor platform."

Focused on delivering measurable results.

As a result, several Tellabs Global Services network consultants began working full-time with Telstra on network integration architecture issues. "The systems integrator had responsibility for the end-to-end architecture solution and our piece was a big black box that needed to be interconnected," said Stephens. "We helped architect that solution."

From Telstra's point of view, the engagement with Tellabs Global Services enhanced accountability, which in turn helped keep the project on schedule. "If you have the equipment vendor provide professional services around deploying that equipment, turning it up and assisting in its integration, it really drives one point of accountability for you to be able to make the solution work in the most opportune time," said Lawrey. "Obviously the vendor who has developed the box has the actual intellectual property and knowledge about it. And by deploying their professional services, you should be able to get the best expertise possible from the source to be able to make sure the box is integrated and it's operationally efficient in how it's actually deployed."

Interoperability Testing

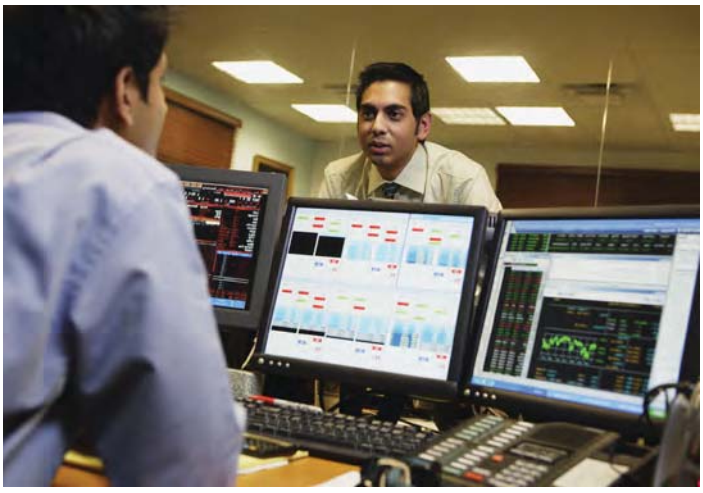
A critical element of ensuring that equipment was properly integrated was interoperability testing. Telstra has its own interoperability test laboratory capable of simulating large volumes of various traffic types. But, here, too, the carrier found that it required additional support to conduct thorough interoperability testing of the Tellabs product in the time frame required.

Shortly after enlisting Tellabs Global Services to assist with the Tellabs 8840 MSR network architecture, Telstra sought the help of Tellabs on interoperability testing. Tellabs provided specialists in interoperability testing to help with the testing process.

As Stephens explains, those specialists work with components of the production network, enabling them to construct the network configuration and go through a series of test cases to validate the design. "They take the architecture design from the network consultant, build a solution in the lab and run through test cases," says Stephens.

In situations where the equipment design did not pass certain tests, the network consultants explored the reasons why, sometimes challenging the assumptions on which the test case was based, other times determining that data needed to be configured in a different format to be accepted by another manufacturer's device. If a change was required in how the Tellabs equipment was manufactured, the test engineers became the conduit into Tellabs' product house and worked with them to resolve the issue.

"It's not just about the people on deck in Australia," said Lawrey. "It's also about leveraging back into the U.S. and getting to the core base of developers, researchers and designers. The faster you want to turn up something, the more issues you'll find. So it's really important that you trust what's happening. And by having the Tellabs people directly engaged through professional services, that certainly helps build that relationship, build that teamwork and really starts to allow us to build that trust."



Same sense of urgency you expect from your own team.

Network Management Challenges

Telstra realized it would be important to get the help of Tellabs Global Services on another aspect of the network transformation project. The carrier had purchased the Tellabs® 8890 Management System (MS) to monitor, manage and maintain the Tellabs 8840 MSRs but needed help in integrating that system with its internally-developed operations support system. In addition, the management systems for other manufacturers' equipment used in Telstra's MPLS network had to be capable of receiving feeds from the Tellabs 8890 MS.

At the time, Telstra was involved in a significant project to transform its information technology systems, putting pressure on internal IT resources. Decision-makers realized that, because Tellabs Global Services had personnel with substantial expertise with the Tellabs 8890 Management System, the NMS integration project could be completed more quickly and efficiently by using Tellabs Global Services.

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Initially Telstra enlisted a Tellabs Global Services network consultant to provide advice on NMS integration. They later enlisted another Tellabs Global Services network consultant to be responsible for working with the IT vendors working on Telstra's new operations support system to provide expert guidance in connection with the different functionalities of the NMS, such as equipment provisioning.

Telstra also realized that Tellabs Global Services could help with interoperability testing for the NMS integration project and several Tellabs network consultants were engaged to help with that process.

Key Milestones

Between multi-vendor equipment integration, interoperability testing and network management integration, Telstra had the help of about a dozen Tellabs Global Services network consultants. With the help of these personnel, Telstra was able to meet the target date to begin carrying BSR traffic on its new MPLS network. But Tellabs' involvement didn't end there.

Telstra's timeline called for a series of milestones, each with its own target date. As Stephens explains, "Telstra identified building blocks, including what each block contained and when it had to be ready. The aim was to build the network block by block, ending up with a completely integrated network onto which all traffic had been moved."

Shortly after the BSR traffic was moved onto the new network, Telstra began to move DSL traffic — a migration project that ramped up over a period of several months. The carrier then began its ATM migration project. "The first three months was just load stressing on the box but migration started to ramp up quickly," recalls Stephens.

The next step of traffic migration commenced as Telstra began to move wireless backhaul traffic onto the new network. That milestone was completed by its target date. The deadline was a particularly critical one because it marked the expiration date of Telstra's maintenance and support contract for the switches underlying its (now decommissioned) legacy ATM network.

Meanwhile, the capabilities of the Tellabs 8890 MS, for example, were expanded over time — and Tellabs Global Services team members involved with that aspect of the network transformation project continued to work full-time with Telstra to help meet specific NMS milestones.

Virtually all Tellabs Global Services personnel who began working on Telstra's network transformation project continued to work full time with Telstra during this period, along with a few additional Tellabs team members. As the deadline for complete traffic migration approached, Telstra requested additional Tellabs resources to help keep the project on schedule.

Moving Forward

Telstra, after the completion of its network transformation, will have successfully migrated all of its ATM and Frame as well as a large proportion of its broadband ADSL customers. It will also have enabled Ethernet on the regional nodes of its Next G™ mobile network.

The carrier has achieved significant operational efficiencies. Tellabs 8840 MSRs are now installed in 255 nodes across 138 physical locations and have replaced approximately 900 ATM switches. Network management has been simplified as fewer devices are involved. Fewer devices also equate to lower power consumption which has freed up real estate in the network nodes that can now be used for other equipment.

"Transformation is all about reducing your costs while improving your simplicity," said Lawrey. "By putting fewer pieces of technology in the network and transitioning away from the old legacy networks into the new environment, we should gain a whole range of efficiencies. We'll cut down on floor space, cut down on air conditioning, and cut down on the amount of vendors we have in the network, which means we'll cut back on support agreements and sparing."

Tellabs Global Services' engagement with Telstra continues. Nearly all Tellabs network consultants from the original deployment are still connected full time with the project in pursuit of Telstra's next goals, which include expanding the capabilities of the MSR to support new services and maximizing Telstra's efficiency with the product.

Expert resources provide a industry leading Engineering Design Package

"Using Tellabs professional services offers a combination of saving time, saving money and making sure we get the right level of expertise at the right points in time," said Lawrey. "Having the right professional services engaged, in this case directly from Tellabs, really puts the point of accountability in place. This approach helped make sure we got the fastest resolution of any issues that came up as we went through the process of, first, building out the network; second, integrating it and third, going through the migrations."

Tellabs Global Services

Tellabs Global Services delivers quantifiable results that help you succeed. Our deep expertise and specialized services are designed to reduce costs, optimize performance, minimize risk and speed time-to-market. We solve the complex business, technical and operational challenges you face in deploying advanced networks — anywhere in the world. Tellabs Global Services' reputation for providing a better customer experience is the result of an open and honest approach, the ability to provide an objective viewpoint, and dedication to customer satisfaction.

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