



Telstra Interconnect Case Study

January 2016

metaswitch

Executive Summary

After a comprehensive evaluation and a rigorous proof of concept study, Telstra Global Enterprise and Services (GES) – the Telstra business unit that provides telecommunications services and solutions to carriers and multinational enterprises globally – selected Metaswitch as the common platform for its Telstra Wholesale Interconnect Network.

Metaswitch equipment is now deployed in GES's four global Points-of-Presence (PoPs) in Hong Kong, London, Newark and Sydney, and anchored by a Metaswitch softswitch in London. The deployments were accomplished via a simultaneous worldwide flash cut driven in part by real estate lease termination concerns.

Telstra's International Operations and Services Executive Director, Darin Webb said, "Our focus was not just on replacing the nuts and bolts of our TDM and IP switches, but importantly building a future-proofed, multimedia capable distribution network that will initially route our international voice services, and soon be expanded to include exciting new communication applications".

The deployment of Metaswitch's equipment and solution under tight timelines has:

- Enabled Telstra GES to embark upon a transformation to build a multimedia capable network;
- Positioned Telstra GES to ride the TDM to IP conversion wave now and into the future;
- Empowered Telstra GES customers to increase their footprint around the world; and
- Further strengthened Telstra's world-class network demonstrating its technology vision and leadership as a major global carrier.

About Telstra

Telstra is a leading telecommunications and technology company with heritage that is proudly Australian and a longstanding, growing international business.

Today, it has around 36,000 employees offering consumer, small business and enterprise services, with more than 3,000 based in 22 countries outside of Australia. Its customers are global, its people are local and its assets are anchored in Asia.

Telstra Global Enterprise and Services (GES) is a division of Telstra that provides voice, data and IP networks together with network application services, such as managed networks, unified communications, cloud, industry solutions and integrated services. These services are underpinned by our subsea cable network, one of the largest in the Asia-Pacific region, with licences in Asia, Europe and the Americas, and access to more than 2,000 Points of Presence around the world.

“Telstra Global Enterprise and Services (GES) is a division of Telstra that provides voice, data and IP networks together with network application services”

In 2015, Telstra extended its reach by acquiring Pacnet Limited, which doubled its customer base in Asia and greatly increased our network reach and data centre capabilities. The Pacnet Business Services (PBS) joint venture in China also offers customers IP VPN connectivity services, together with state-of-the-art data centres.

In Indonesia, Telstra’s joint venture with Telkom Indonesia, telkomtelstra, offers a suite of network application services solutions to domestic enterprises and multinationals.



Telstra also has a growing video analytics business through Ooyala, a US-based subsidiary of Telstra that is a leader in video streaming and analytics, which has been complemented by the acquisition of Videoplaza, a leader in video advertising, and Nativ, a cloud based media logistics software provider. The 2015 investment in Globecast also provides Telstra’s broadcast customers with an expanded media services offering under the new name of Telstra Broadcast Services.



of Australian population has **4G mobile network**



sustainable engagement score in Employee Engagement survey



reduction in greenhouse emissions from last year

Background

Telstra GES has operated an advanced NGN network successfully for many years and required an upgrade to a multimedia capable platform to meet the needs of GES' future requirements and strategy. As the industry has evolved over these years, its platform required more advanced IP functionality, as well as the ability to maintain support for existing TDM based customers.

In November of 2013, Telstra GES issued an RFP to replace its existing softswitch and several TDM switches scattered around the globe. The RFP was designed to replace its existing NGN international wholesale switches and the international TDM gateway exchanges with best-of-breed softswitch technology to position the company to manage the accelerating migration to IP, and move its network to a multimedia capable platform. The post-RFP plans involve supporting new customer growth predominantly on IP and migrating existing customers from TDM to IP.

“Telstra GES issued an RFP to replace its existing softswitch and several TDM switches scattered around the globe.”

Conducting the Search

Metaswitch was initially brought into the RFP process as a challenger candidate. Based on the strength of Metaswitch's response, it was invited to Australia in February of 2014 to present its RFP response in a week-long workshop session.

Metaswitch brought expert personnel, either on-site or on the phone, during the workshop. Metaswitch personnel produced documents and created detailed workflows to explain its technology. On the strength of those sessions, and underscored by the caliber of its personnel, Metaswitch advanced to the final round and became a bona fide contender for winning the RFP.

Critical Factor: Project Timeline

One of Telstra GES' overriding concerns was timing. The project had to replace the current network equipment in four global PoPs. One of the four PoPs required a move from one building to another. The entire project had to be completed by mid-December 2014. This was a hard constraint driven by a real estate lease termination and building renovation. In order to meet the timeline, Telstra GES valued respondents which projected and demonstrated nimbleness, responsiveness and an ability to develop new features, attractive solutions, and quality services under pressure, budget and deadlines. As the RFP was only issued in November of 2013, Telstra GES therefore had to be certain that the successful supplier could deliver a comprehensive solution to a leading Tier 1 carrier - including the global flash cut - flawlessly within 10 months.

Telstra GES chose Metaswitch based on the company, the caliber of the people, its responsiveness, and its focus, in addition to its determination to meet Telstra's timeline.

The Decision

The RFP decision process was initially expected to conclude at the end of February 2014, leaving 10 months to complete the project and successfully flash cut. However, Metaswitch wasn't awarded the business until July of 2014, leaving less than six months to implement, test and deploy a flash cut of Media Gateways and one Softswitch simultaneously across four locations.

Telstra GES chose Metaswitch based on the company, the caliber of the people, its responsiveness, and its focus, in addition to its determination to meet Telstra's timeline.

Exceeding Expectations

When the project kicked off in July 2014, both Metaswitch and Telstra GES became concerned about the volume of work required to accomplish the flash cut. Despite the concerns, both organizations worked seamlessly together for five months to ensure success.

Over the course of the implementation, GES came to recognize and appreciate Metaswitch's devotion to the project, with a "never give up" mentality. As a team, Metaswitch and Telstra GES both understood there was no other way but forward and worked towards the common goal.

As a result of the compressed timeline, the acceptance testing plan operated two to three weeks in arrears of the implementation plan. There were only very limited periods early on where a circuit would be switched over to Metaswitch equipment to see if it would work or not. Both organizations did much of the voice design and customer development on an as-needed basis by leveraging an agile-like approach. For example, Metaswitch developed three unique Telstra GES tools:

- 1** **A tool to port LCR (Least Cost Routing)** table pricing from the Telstra commercial trading and routing system into the new softswitch
- 2** **A CLI-based tool** to handle network management controls to allow for immediate overrides of LCR route sequences
- 3** **A tool to convert CDRs** from Metaswitch equipment to legacy OSS/BSS format to avoid any backend IT requirements

All of this was in addition to the regular work required to flash cut a network: developing the design, developing the routing, testing the routing, designing the protocols, and preparing for the flash cut. At one point, Metaswitch had 12 engineers on site in Australia working on almost as many different workstreams to ensure the deployment happened on schedule. These teams worked with their equivalent GES teams as both organizations were fully committed to this project.

“Working together under a constrained timeline was an incredible challenge but the caliber of both teams shone through to deliver a best-practice outcome.”

Telstra General Manager, Voice and IPX Technology (GES), Thilak Waran, said, “This was a critically important transformation project for Telstra where we faced enormous technical and logistical challenges, in addition to the severe time pressure. Metaswitch's approach was outstanding, bringing in a top caliber team who stopped at nothing to meet Telstra's needs. It was a truly remarkable achievement by both the Metaswitch and Telstra teams who put in a phenomenal combined effort under pressure to deliver such a brilliant outcome”.

One of the proof points came over the Christmas period, a few days after the flash cut. That time of year is usually Telstra's busiest period for its network, but Metaswitch was able to withstand the Christmas traffic tsunami.

Conclusion

Darrin Webb stated, “As an operator, quality is of utmost importance to us and we are always looking at ways to grow and improve our capabilities. By working with best-of-breed suppliers like Metaswitch, we continue to transform our service for the better, empowering businesses to increase their footprint around the world”.

Metaswitch demonstrated an outstanding achievement by being a best-of-breed supplier working in very close partnership with Telstra to successfully complete a flash cut to a stable and functioning International Wholesale Interconnection platform. This was delivered while maintaining carrier-class robustness, excellent licensing value, and support.

Metaswitch’s success in this endeavor has opened up many additional possibilities within Telstra, as Metaswitch has proven, in the most concrete of ways, how nimble, responsive and agile the organisation is under pressure, budget and deadlines.