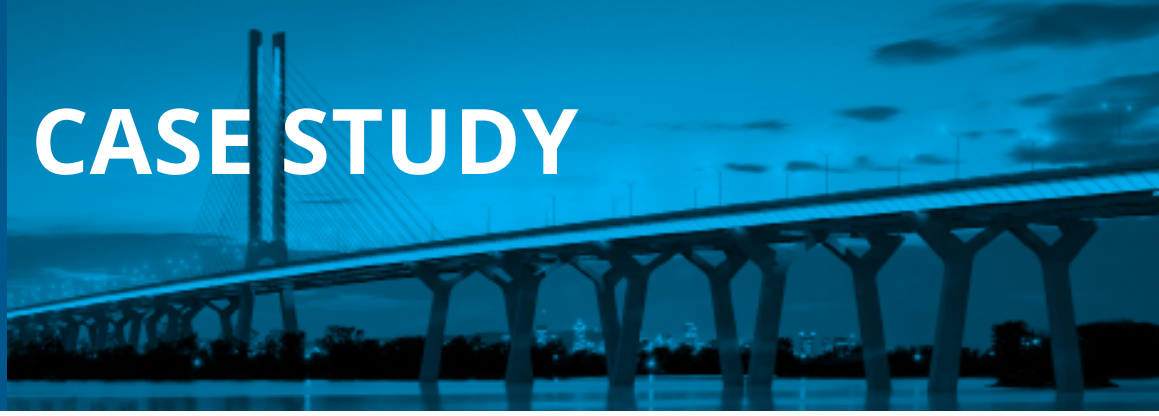
TelcoBridges

CASE STUDY



NETWORK TRANSFORMATION TO IP WITH TELCOBRIDGES

One of the Largest Telecommunications Service Provider in Hong Kong Migrates 90 Central Offices to IP with Media Gateways from TelcoBridges

BACKGROUND

This one of the largest telecommunications service providers in Hong Kong serves both consumers and commercial customers across the region with roughly 2.5 million phone lines. This telecom provider employs more than 17,000 personnel and operates numerous central offices and switching facilities across Hong Kong.

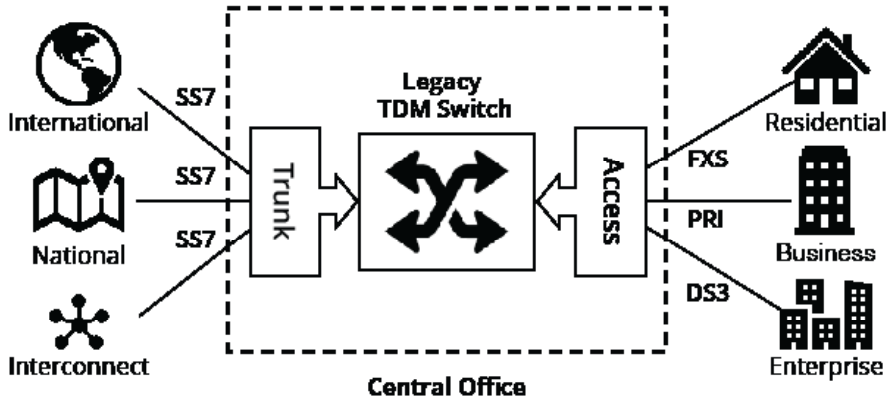
As the incumbent service provider in Hong Kong, servicing many large enterprise customers, they put considerable emphasis on delivering reliable services with five 9's reliability.

CHALLENGES

In early 2018, the client decided to develop a 5-year strategic plan to address the maintenance needs of the aging network of legacy PSTN switches in its' switching facilities. As they noted, the legacy switches were becoming increasingly difficult to maintain, with spare parts becoming scarce. Beyond the maintenance and spare parts issues, the TDM equipment was expensive to operate and required cooling, resulting in significant operating costs.

During this period, the telecom provider also observed a gradual decline in TDM circuit traffic and an increasing adoption of IP services. Consolidating facilities was viewed as an opportunity to further reduce operating costs.

TYPICAL HKT CENTRAL OFFICE BEFORE NETWORK TRANSFORMATION



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The challenge was to design and deploy a new replacement solution that could serve existing TDM customers and offer new services to IP-based customers by the end of 2022. A key goal of the project included ensuring the direct replacement of TDM services without impacting the end customer.

Because of the tight timeline, it was important to choose vendor partners that could deliver the needed network elements and software, in addition to working closely with the company on integration and enhancements that might arise.

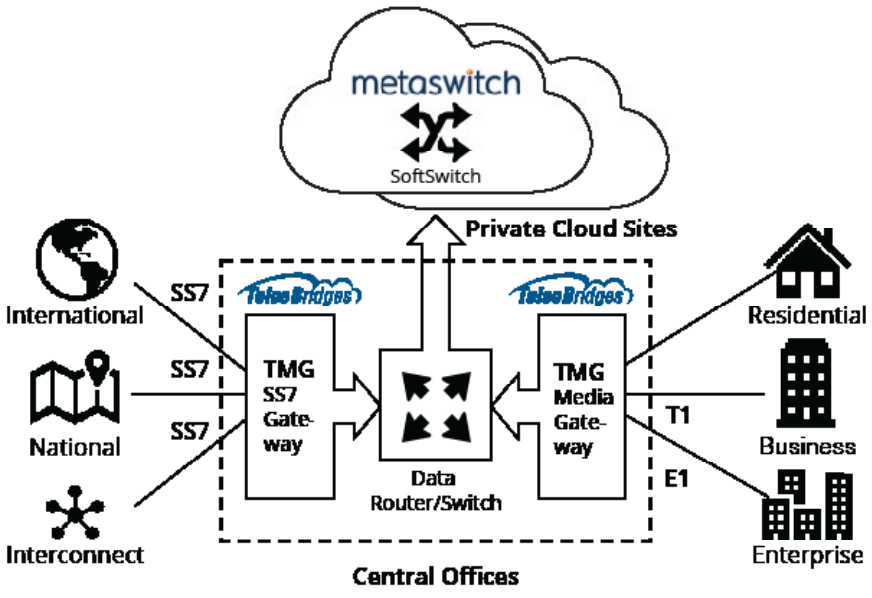
While evaluating the project ROI, it was recognized that there was an opportunity to significantly reduce energy usage, potentially reducing operational costs, which further justified much of the capital investment. The energy reductions could also help the company achieve some of their corporate environmental and Green objectives.

SOLUTION

To meet the stringent objectives, the company devised a “Network Transformation” strategy that replaced the aging TDM switches with a combination of cloud-based softswitch software and media gateways, interconnecting trunking lines and customer’s existing TDM circuits with media gateways from TelcoBridges.

This strategy puts the call switching and application logic in redundant cloud-based datacenters while replacing the trunk and access side connectivity with TelcoBridges TMG Media Gateways at the central office sites. Terminating SS7 trunk circuits is accomplished with TelcoBridges SS7 media gateways, converting trunk line signaling and media to SIP.

CENTRAL OFFICE AFTER NETWORK TRANSFORMATION



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On the access side, connections to consumers and businesses' existing last-mile TDM lines are accomplished with high-density TMG7800 media gateway clusters with 100% redundancy.

The key benefits of the Network Transformation strategy include:
• No customer disruption – switch-over is transparent to the customer, requires no action on their part, and occurs late at night without a site visit or CPE
• Centralizes call control and application logic to cloud datacenter, adding new services opportunities
• Maintains high reliability with quick switch-over in case of equipment failure
• Significantly reduces power and cooling requirements at central office facilities

During the design phase of the project, the engineers at the telecom service provider collaborated with TelcoBridges' developers on several custom enhancements to the TMG7800 architecture, integrating additional high availability features to meet the company's specifications. The enhancements reduced parts-counts and improved failure detection and recovery.

RESULTS

A pilot implementation was successfully completed, including the custom enhancement to the TelcoBridges' TMG7800 software and hardware, helping the client meet their strict timeline goals.

Roll-out of the remaining central office sites is set to occur over the next two years with work to be completed by the end of 2022.

With new state-of-the-art equipment in place, the company's engineers now have access to ongoing support and replacement parts are readily available.

It was estimated that the completed project will result in energy savings of US$ 2 Million per year – making this service provider eligible for Green awards.

MORE INFORMATION

To view all of our recorded webinars visit: https://www.youtube.com//telcobridges
For more information on TelcoBridges TMG Media Gateways, visit:
https://telcobridges.com/products/voip-media-gateways-tmedia/

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