squire technologies
the signalling specialists to the telecoms industry

Delivering More Effective Networking

Comsys Ghana Migrates to NGN and Delivers Enhanced Business Services

Comsys Ghana is an established provider of a range of enterprise connectivity and communication solutions in West Africa. As a result of a growing subscriber base and network complexity, the company approached Squire Technologies to provide a solution that would deliver efficient routing and enhanced operational control over their network.

The Challenge

Comsys Ghana offers data and voice services to enterprises via an MPLS-enabled network, accessible through fibre as well as microwave and V-SAT links. With a history spanning more than nine years, Comsys has also established points of presence in other West African countries, and enjoyed significant growth.

It is able to deliver services nationally and regionally and to remote regions not served by traditional infrastructure. This flexibility provides an advantage to its customers, as they can confidently access services when they support multiple sites or expand to new regions.

In addition to managed, secure connectivity for voice and data services, Comsys also offers value added features for business customers, such as voice conferencing, as well as extremely competitive International access. To achieve the requisite efficiency and cost control for international traffic, Comsys must actively maintain multiple interconnection points with international carriers.

However, with growing numbers of customers, the network had diversified to include numerous elements and layers of complexity that impacted operational costs and performance. Regional growth also needed to be taken into account, as the Comsys network spread into other countries, requiring the management of additional interconnection points. The growing network complexity also inhibited the introduction of new services. In order to maintain the levels of service for which it is known and to provide a platform for the future, Comsys needed to re-evaluate its network architecture.

The Solution

Squire Technologies was invited to review the situation. It was quickly apparent that the key was to combine the integration of VoIP and legacy connectivity solutions with an advanced routing logic to govern the distribution of calls internally and externally to the network. The previously distributed system had led to replication and inefficiencies in call delivery.

Instead, the team from Squire Technologies proposed the deployment of a Media Gateway (SVI_MG) solution that supported both VoIP and legacy SS7 signalling. This solution could then be used as the hub for all connectivity, ensuring efficient routing within the network ("on net") and to external partners.

To achieve this, the SVI_MG was combined with an integrated routing function and a Class 5 feature pack, the SVI_C5. This provided support for voicemail for

those of Comsys' customers that did not have their own on-premise solution, and managed access to other value added service platforms, such as an IVR.

In addition, the SVI_C5 was configured with Comsys' numbering plan, enabling calls to be routed to the appropriate SIP trunk; value added service platform, such as the conferencing server; or to other national and international destinations. Incoming calls would be serviced via the same logic, so that they can be delivered to the direct line of a customer or to a main office number.
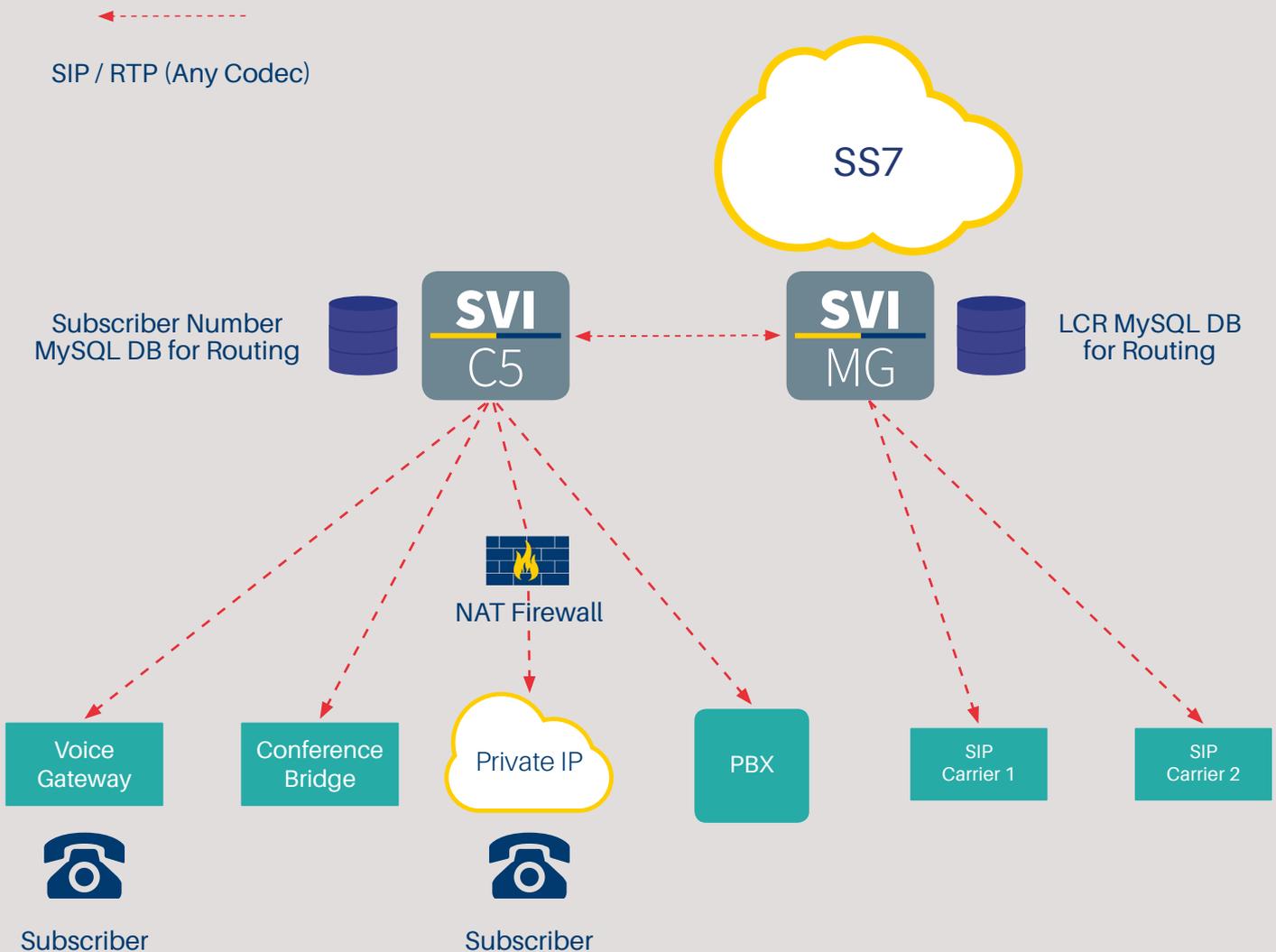
It was decided to route all off-net traffic to the SVI_MG solution, from where it can be delivered to the appropriate carrier for onward routing. The SVI_MG was equipped with full least cost routing (LCR) capabilities in order to ensure that the most appropriate route was chosen for outgoing traffic.

This was essential as, to offer the most competitive pricing, Comsys needed to be able to manage its costs and to maintain margins on long distance or international traffic. It could only achieve this by real-time selection of the best available path, based on up-to-date charging information. By implementing LCR directly on the SVI_MG, Comsys was able to assert the real-time control over long-distance traffic it needed to protect its margins while delivering optimal service for its customers.

The SVI_MG also provided the flexibility required to establish new routes with different partners, quickly and efficiently, simply by activating new signalling paths. The combination of SS7 and VoIP capabilities provided Comsys with a flexible, all-in-one solution that could support any desired interconnection type. This meant that Comsys could rapidly create new interconnection relationships and switch to new partners from the same platform.

Consolidated NGN Infrastructure for Comsys Ghana

SIP / RTP (Any Codec)

SS7

Subscriber Number MySQL DB for Routing

SVI C5

SVI MG

LCR MySQL DB for Routing

NAT Firewall

Voice Gateway

Conference Bridge

Private IP

PBX

SIP Carrier 1

SIP Carrier 2

Subscriber

Subscriber

Results

The new architecture provided Comsys with an unbeatable combination of an NGN core and legacy interconnection capabilities. This delivered more robust, centralised control of the advanced MPLS and multi-carrier network, while providing the flexibility required to forge new partnerships, whether via SIP or SS7.

Similarly, new business customers can easily be connected via secure SIP trunks to on-premises PBX systems or as individual SIP end-points. This means that Comsys can quickly extend its business and rapidly connect new customers as it grows its footprint across Ghana and beyond.

The SVI_C5 ensured that business customers obtained a reliable, secure voicemail solution and that connectivity could be made to other value added service elements. Comsys has already deployed an advanced conferencing solution and more services for business customers can be added. Because routing is controlled from the SVI_C5, services can simply be added through the NGN model of application servers, rather than as separate silos. Finally, the integrated LCR provided the full control that Comsys required to obtain the most efficient operational control of its network. In competitive markets, the ability to manage the finest margins makes a significant contribution to long-term success.

Squire Technologies worked with Comsys in order to collaboratively define a long-term solution for its network and its customers. The ability of Squire Technologies to integrate multiple functions into a single package provided a flexible and cost-effective approach to Comsys' needs. Such partnerships are crucial in the extremely competitive alternative operator market.

Operators that face strong competition need partners that can offer them more than simply advanced technology. They need consultancy, support and expertise to guide them to the right solution for their current and future needs. Squire Technologies has experience and commercial understanding, combined with the willingness to deliver a custom solution to challenges that makes all the difference for such operators, and provides the foundation to resolve today's challenges while confronting those of the future.

How Squire Technologies can help

Operators need partners that understand how to deliver solutions that meet fundamental business needs, such as migrating from legacy to NGNs and deliver the right levels of return on investment. They need partners that can solve business challenges and provide adaptable solutions. In the case of Comsys Ghana, there isn't a single one-size-fits-all approach. Despite standardisation, there will often be exceptional situations and variations in implementation.

Squire Technologies specialises in the delivery of solutions that are adapted to different requirements and situations, based on a broad portfolio of proven technology and a core culture of innovation. Our solutions can be rapidly customised to meet specialist requirements and the needs of different situations. The MG can be deployed in different configurations and architectures and Squire Technologies ensures that it is delivered effectively irrespective of differences in implementation.

We solve complex and evolving challenges and deliver high-performance solutions that deliver clear business benefits and ROI. Contact Squire Technologies to find out how we can solve your network and signalling challenges, cost-effectively and quickly.

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