



Belgacom Case Study

SIP Trunking connectivity with emergency call handling for Lync 2010 and 2013 customers

Belgacom selected AudioCodes Enterprise Session Border Controller (E-SBC) to enable customers who had deployed Microsoft Lync to interconnect with its Explore Business Trunking service. A critical factor in Belgacom's decision was AudioCodes E-SBC's ability to meet the local regulator's requirements for handling emergency calls from the Lync environment.

Background

The Belgacom Group (www.belgacom.com), Belgium's national telecom operator, is the main provider of integrated telecommunication and ICT services in Belgium. Thanks to its continuous investments in cutting-edge technology, Belgacom offers its private and professional customers a complete range of telephony, Internet and television services.

Challenges

Among the advanced enterprise services offered by Belgacom is Belgacom Explore Business Trunking solution, which enables the integration of voice and data traffic on one single data network, thus removing the need for ISDN lines.

The Explore Business Trunking service's infrastructure is based on an Alcatel IMS platform. Companies connect to the network via their PBX (with a VoIP gateway) or IP-PBX equipment. One prerequisite for signing up to the service is that any equipment interfacing with the Business Trunking network has to be officially certified by Belgacom to ensure compatibility and to integrate regulatory requirements.



Recently, many companies have begun adopting Microsoft Lync as their enterprise unified communications platform, realizing the wide-ranging benefits that Lync can offer their organizations. Companies wishing to do so need to deploy third party media gateways or enterprise session border controllers (E-SBCs) that are qualified to work with Lync to ensure full compatibility. In order for a company using Lync to connect with Belgacom's VoIP infrastructure, the whole solution, including any media gateways or E-SBCs, needs to pass Belgacom's qualification testing which covers technical considerations and regulatory requirements. Belgacom, therefore, was looking for a solution that would integrate the regulator's requirements and allow customers that had migrated to Lync to benefit from its converged Business Trunking service.

Solution

The platform chosen by Belgacom to act as the interface between its customers' Lync 2010 and Lync 2013 installations and the Business Trunking network was the AudioCodes Mediant 1000 Enterprise Session Border Controller (E-SBC) platform.

The AudioCodes Mediant 1000 E-SBC acts as the demarcation point between enterprise VoIP networks and the SIP trunking service provider domain, providing protocol mediation between different SIP implementations. Furthermore, the Mediant 1000 E-SBC is fully qualified for use with Lync Server 2010 and Lync Server 2013. In Belgacom's case, this meant that customers could be sure of smooth interoperability between their Lync-based UC environments network and Belgacom's IMS core network.

Two of the Mediant 1000 E-SBC's features were of critical importance for Belgacom's selection.

The first of these was the ability to convert between the TCP transport protocol used in the Lync environment and the UDP protocol used in Belgacom's Business Trunking network.

The second was the Mediant 1000's ability to meet the Belgian regulator's requirements for the support of emergency calls. Handling emergency calls in an IP-based communications environment such as Lync can pose a particular challenge for service providers such as Belgacom. In traditional telephony networks where there is a physical connection to users' phones or PBXs, callers and their locations can be relatively easily identified, enabling emergency services to be dispatched to the correct location as quickly as possible.

In VoIP based systems, however, there is no longer an automatic correlation between the caller's number and their physical location. A company's communications system may be based on a centralized Lync platform which is only connected to the service provider at the company's head office. Individual workers, however, may be located at any of the company's branch offices.

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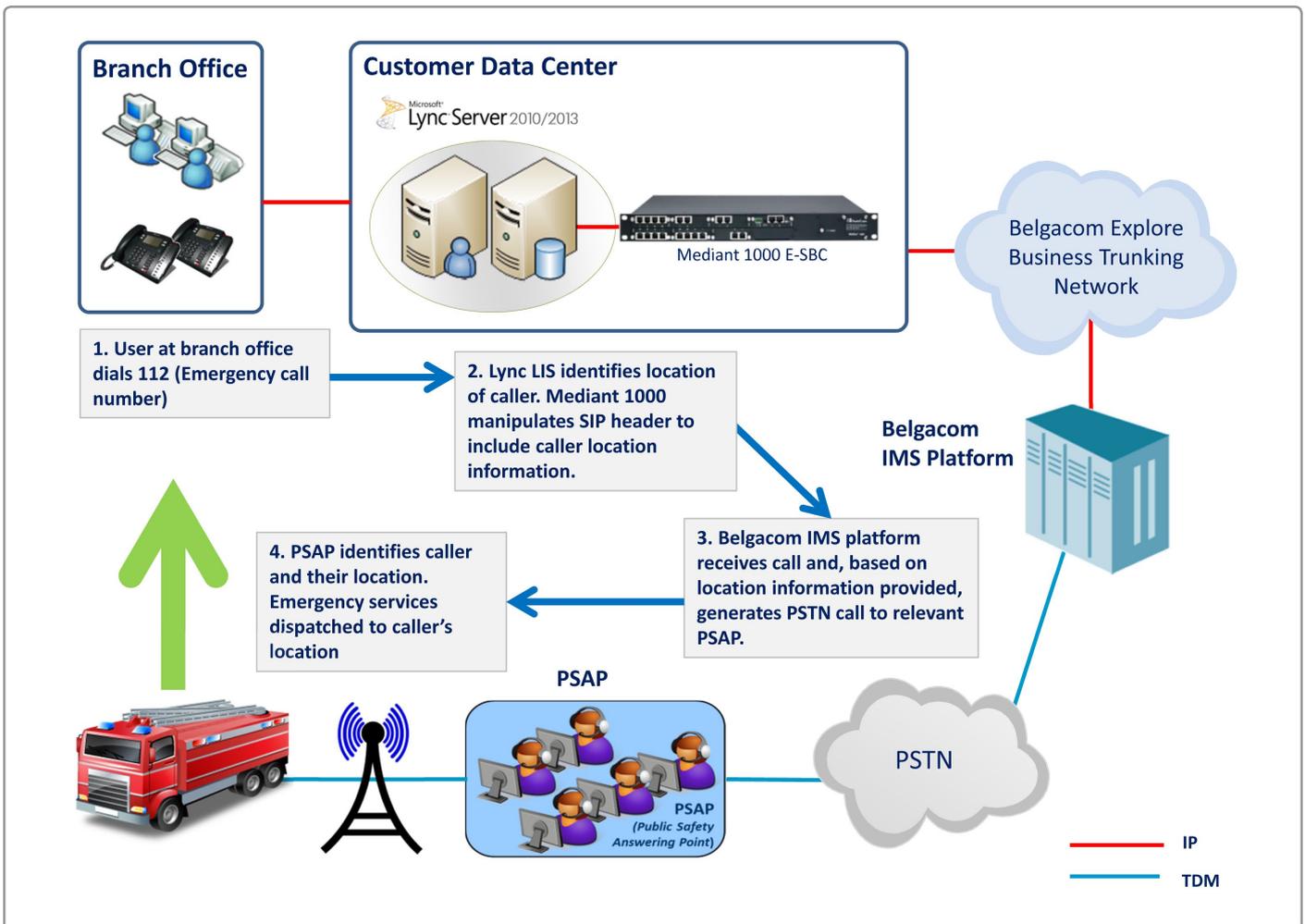
Yashfeen Saiyid

Product Manager, Microsoft Unified Communications at Belgacom

Belgacom was able to overcome this challenge thanks to a combination of Lync's Location Information Server (LIS) feature and AudioCodes E-SBC's ability to perform complex SIP packet header manipulation. AudioCodes was the first vendor to achieve Lync qualification for its solution for supporting E-911 calls in North America (using the ELIN feature) and its products possessed the flexibility to adapt this functionality to enable support for emergency calling in Belgium.

The process by which emergency calls from Lync are handled in Belgacom's network is as follows (illustrated also in the diagram below):

1. When a user dials 112 (the local emergency phone number) to place an emergency call, Lync identifies his or her location from information stored in the Location Information Server (LIS)
2. Based on the information provided by the LIS, AudioCodes' E-SBC applies manipulation to the SIP header and dialed number before the call setup request is passed to the IMS platform
3. The IMS platform receives the call setup request, analyzes the data included in the header and routes the call to the relevant emergency call center or Public Safety Answering Point (PSAP)
4. The PSAP handles the call and dispatches the necessary emergency teams to the caller's location



Results

Having passed the necessary testing, AudioCodes E-SBCs can be deployed in Belgacom's Business Trunking network to connect Lync customers to the service. Customers will benefit on the one hand from Lync's extensive range of unified communications features and from Belgacom's cost-effective converged data and voice trunking infrastructure on the other.

"AudioCodes' great experience of developing and deploying field-proven VoIP solutions was critical in providing us with a solution that would meet our technical requirements a, offering a better answer to Belgian regulation and contributing to the safety of staff working in VoIP environments," stated Yashfeen Saiyid, Product Manager, Microsoft Unified Communications at Belgacom. "The AudioCodes solution enables us to tap into the growing Microsoft Lync community and offer our converged data and voice services to a wider range of customers."

About AudioCodes

AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology market leader focused on converged VoIP & data communications and its products are deployed globally in Broadband, Mobile, Enterprise networks and Cable. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Routers, Session Border Controllers (SBC), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes' underlying technology, VolPerfectHD™, relies on AudioCodes' leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility and a better end user communication experience in Voice communications.

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About Belgacom

Belgacom (Euronxt: BELG), is the leading operator in Belgium, active on the Belgian and international market. It has vast experience with a variety of customer groups: residential, professional, corporate and institutional. Thanks to its constant innovation, Belgacom has developed a comprehensive range of products and solutions for fixed and mobile networks, going from telephony, internet, digital television, ICT and networking.

The Enterprise Business Unit of the Belgacom Group has built up vast experience with a varied group of professional customers. As a customer, you can benefit from our many investments in development, our high-level expertise in ICT and connectivity, and numerous solutions set up to meet your needs: Enterprise Network Solutions like LAN, WLAN, WAN, Enterprise Datacenter and Cloud Solutions, Enterprise Security Solutions, Enterprise IP-Telephony and Unified Collaboration Solutions, Enterprise Applications Solutions, and Enterprise Mobility Solutions.

Belgacom helps you by offering strategic and technical consultancy services, integrating all ICT aspects into these. In addition, we ensure the continuous improvement of your ICT tools and maintain or manage your whole infrastructure. With these managed services we also ensure an efficient and effective improvement of your operations. Belgacom takes care of all aspects to set up a secure and integrated ICT environment for her customers: consultancy, implementation, validation, support during installation, and project management. Belgacom is also a leader among ICT training providers in the Benelux offering a full range of ICT courses. Belgacom's goal is to create ICT solution that will help customers reach their company objectives and to make them more sustainable today, and in the future. For more info on the Belgacom Group, visit: www.belgacom.com.