Synway Carrier-Grade VoIP Gateway Helped China Telecom Build up Highly Versatile and Redundant Host VoIP Communications system

Synway
Case Study

Executive Summary:

As one of 3 top operators in China, China Telecom is a leading player in China domestic telecommunications market and also recognized as one of China's major basic telecommunications operators. To satisfy the ever-growing customers and improve the system efficiency, China Telecom selected Synway High Capacity carrier grade VoIP Gateway to connect its SMB, Enterprises, and Subscribers with its existing Huawei-based unified communications. The solution offered by Synway allowed China Telecom to remain the existing UC system and its IP PBX to maximize value at the lowest cost.

中国电信
CHINA TELECOM

Background:

China Telecommunications Corporation (China Telecom) was established on May 17, 2000, with a total registered capital of RMB 220.4 billion. At present, the size of the Company's total assets exceed RMB 600 billion, with an annual revenue level of more than RMB 380 billion. As one of the three leading telecom operators in China, China Telecom ranked 182nd in the 2013 Fortune 500 Companies, and was selected as one of the Most Admired Asian Companies as well as the one of the Best Asia Companies in terms of Corporate Governance by many international esteemed institutes for consecutive years. As an integrated information service provider, China Telecom provides integrated information service solutions including mobile services, broadband Internet access, information service applications and fixed-line telephone services.

China Telecom has many subsidiary branches in 31 provinces (municipalities and autonomous regions) and in America, Europe and the Asia-Pacific region.

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Challenges:

One of the advanced enterprise services is China Telecom SIP Trunk and Unified communications, which enables the integration of voice and data traffic on one single data network, and continue to maximize the value of its existing ISDN/ SS7 lines.

China Telecom SIP Trunk and Unified communications is a based on an Avaya 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 China Telecom SIP trunk has to be officially certified by China Telecom to ensure compatibility and to integrate regulatory requirements.

Recently, many companies have begun used Huawai's platform as their enterprise unified communications platform, realizing the wide-ranging benefits. Companies wishing to do so need to deploy third party media gateways or protocol transcoding equipment that are qualified to ensure full compatibility. In order for a company using Huawei to connect with China Telecom VoIP infrastructure, the whole solution, including any media gateways or E-SBCs, needs to pass China Telecom's qualification testing which covers technical considerations and regulatory requirements. China Telecom, therefore, was looking for a solution that would integrate the regulator's requirements and allow SMB and enterprises that had migrated to China Telecom's integrated platform to benefit from its converged Business Trunking and UC service.

Solution:

China Telecom began to test Synway VoIP Gateway under the lab and on the site. The test experiment was carried out in Synway-located Hangzhou City, a high density calling zone for China Telecom. Through three months' experiment and a thorough comparison with other competitive products such as Synway, China Telecom finally decided to cooperate with Synway to establish a large capacity VoIP calling system.

The platform chosen by China Telecom to act as the interface between its customers' unified communication and the Business Trunking network was Synway's SMG 3000(from ISDN to IP) and SBO500(for protocols mediation).

Synway's SMG 3000 and SBO500 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 Synway's SMG 3000 and SBO500 is fully qualified for use with Huawei Platform. In China Telecom's case, this meant that customers could be sure of smooth interoperability between their Huawei UC environments network and China Telecom's IMS core network.

Two of the Synway's solution were of critical importance for China Telecom's selection.

The first of these was SBO500's ability to convert between the TCP transport protocol used in the Lync environment and the UDP protocol used in China Telecom's Business Trunking network.

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The second was the SMG3000's ability to meet the China regulator's requirements for the support of emergency calls. Handling emergency calls in an IP-based communications environment. 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 UC 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.

China Telecom was able to overcome this challenge thanks to a combination of Huawei's Location Information Server (LIS) feature and SMG3000 ability to perform complex SIP packet header manipulation. Some of other reasons why China Telecom chose Synway's solutions were:

1. Robust enough to run 365*24 non-stop operation based on Synway's telco-grade software/hardware infrastructure: Synway VoIP Gateway is elaborately designed in a compact 1 U chassis with multiple user-friendly features such as redundant SS7/PRI/CAS/SS1 signaling, dual-power hot-swap, 2*1000M Ethernet ports, automatic diagnosis and reset as well as multiple intelligent cooling system, assuring stability and reliability of the entire system.

2. Perfect full load ability and voice quality under high density situations: Synway VoIP Gateway is capable of presenting crystal clear voice quality without delay even when concurrent calls are up to 5000chs per minutes. With exclusive software/hardware technology(EC, QoS, CNG, ToS, Jitter Buffer) for voice optimization and dedicated SIP-based chipset, it features automatic IP resources balance, overload protection, reasonable IP allocation and minimum bandwidth cost.

Result and Value:

Result and values:

- High Interoperability:

Distributed architecture allows for various SIP application platform, operator network and other IP devices to converge.

- Lower Bandwidth Utilization

SMG3000's advanced call processing capabilities and SBO500's DSP-enabled Transcoding maintain low bandwidth consumption while ensuring high voice quality

- Carrier-grade Reliability

Built-in redundancy (Dual backup for ISDN/SS7 TDM signaling, dual power supply, double Ethernet ports) at various levels ensures business continuity and customer satisfaction.

www.synway.net

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As a major manufacturer and supplier of communication products and solutions, Synway specializes in providing superior Multimedia Gateway, Integrated Multimedia Switch, Telephony Hardware in use for Telecom communications. Since 1995, over 3,000 service providers, software developers and system integrators have deployed Synway's offerings to deliver a broad range of TDM and VoIP-based applications worldwide, including Unified Communications, SIP Trunking, Call Center, Mobile VAS, Faxing, Conferencing, Call Recording as well as Asterisk-based Open Source Applications. With dedicated teammates and well-known premium services, Synway makes consistent efforts to deliver partners with a variety of customizable, high-performance and cost effective voice communications products.

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