Empowering Networks

EXTERNAL

SOLUTION BRIEF

SIP Trunking - Ekinops Secure Gateway and UC Service Platform

Since their introduction in 2005, Session Initiation Protocol (SIP) trunking services have become the industry standard protocol for the next generation of unified business communications, with a steady growth in the number of businesses that are transaminating their existing TDM and ISDN telephony services. As high-speed broadband access has become more widely available and more reliable, the demand rate for SIP trunks has accelerated and demand is expected to grow exponentially as national telecommunications operators continue to operate for the gradual elimination of ISDN and analogue connections by 2020.

This growth is being fuelled by the multiple benefits SIP has to offer over traditional PBX-based telephony solutions, including the increased use of multi-media streaming and conferencing applications that generate significant cost savings and flexibility for many small businesses and enterprises. This situation opens the door to UC and UCaaS businesses. With the emergence of social business and the increasing use of social media platforms by companies for business functions such as advertising, promotions, consumer research lead to the adoption of UCC, which is based on the SIP Trunking solution.

Nevertheless, SIP has also brought with it new security concerns that can present a serious threat to the network integrity and service availability. In particular SIP trunking is susceptible to both the same threat of toll-fraud common to TDM networks, as well as a wide range of IP level threats that can be targeted at Internet and WAN data services including sophisticated denial of service attacks designed to seriously disrupt external corporate communications.

Communication service providers have realized the need of providing high levels of end-to-end security for SIP trunking in order to reduce the risk of customer core networks and ensure reliable business communications. Transport Layer (TLS) and Secure Real-Time Transport Protocol (SRTP) are resulting of this operation; thus they become the standard protocol for SIP service providers to protect the voice and multimedia communications of their business customers.

Although TLS and SRTP provide the necessary protection for secure transmission of voice and data packets across multiple access technologies and data interfaces, there is an encryption overhead that can impact QoS and call capacity. In addition, for smaller businesses that do not have a dedicated WAN data connection, and use the same connection for SIP trunking and Internet access there is still a high risk of exposure to Internet attacks. In these cases the recommended security best practice is to deploy a firewall as well as an enterprise session border controller (eSBC) to secure this type of connection.

How Ekinops Can Help

Flexible and Extensible

OneAccess advanced branch office router solutions offer CSPs a highly flexible and extensible SIP trunking service platform as well as carrier-grade Internet access devices providing support for a broad range of business use cases.

Granular and Scalable

By including SIP support over TCP, TLS and SRTP, OneAccess routers provide cost–effective Entreprise SBC (called OneSBC) services for the delivery of managed voice services in parallel with high-speed, xDSL and Fiber Internet access for maximum resilience and reliable performance for SME and distributed, multi-location businesses.

Cost Effective

This combination of support for enterprise-class unified communications together with LAN, WAN and Cloud service access capability enables CSPs to offer secure, value-for-money bundled services to leverage maximum ROI from both the customer and the CSP perspective.

OneAccess SIP-based CPE devices offer CSPs an unrivalled value proposition that enables their customers to plan a controlled and budgeted transition of their legacy PBX technology to the latest IP-based communications systems and services in line with ISDN phase-out.

Teams

OneAccess SBC integrates natively the support for Microsoft Direct Routing with a secure connectivity to Microsoft Phone System platform. OneAccess SBCs are ready for Teams deployment.

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Glossary

SIP

Session Initiation Protocol: an open standard protocol designed to support the initiating and tear-down of person(s) to person(s) voice and video communications over IP-based links.

SIP Trunking

A SIP trunk is a dedicated connection for the delivery of voice and real-time data streaming via an IP-based data service using the SIP protocol to control the process. It is designed to replace the traditional phone lines that link an organisation's private branch network and the telephone operator's public switched telephone network (PSTN) using either a dedicated or a shared data connection or the public Internet.

Benefits of a SIP Trunk:

- *Unlimited connections/voice sessions (subject to bandwidth)*
- *Supports voice, video, presence, conference and chat functions*
- *Needs only a low-cost eSBC connected to an Internal IP-PBX system*
- *More efficient use of bandwidth*
- *Lower costs, >50% achievable*
- *Improved employee productivity*

TLS

Transport Layer Security: TLS is a successor to the Secure Sockets Layer protocol providing secure Internet communications on the Internet. TLS allows the server and client to authenticate each other and to negotiate an encryption algorithm and cryptographic keys before data is exchanged. When a SIP-based voice call is initiated, the TLS protocol ensures that no third party can listen in or disrupt the call.

SRTP

Secure Real-time Transport Protocol: SRTP is an extension to RTP (Real-Time Transport Protocol) that incorporates enhanced security features. Like RTP, it is intended particularly for VoIP (Voice over IP) communications and media protection.

About Ekinops

Ekinops is a leading provider of open and fully interoperable Layer 1, 2 and 3 solutions to service providers around the world. Our programmable and highly scalable solutions enable the fast, flexible and cost-effective deployment of new services for both high-speed, high-capacity optical transport networks and virtualization-enabled managed enterprise services

Our product portfolio consists of three highly complementary product and service sets: Ekinops360, OneAccess and Compose.

- Ekinops360 provides optical transport solutions for metro, regional and long-distance networks with WDM for high-capacity point-to-point, ring and optical mesh architectures, and OTN for improved bandwidth utilization and efficient multi-service aggregation.
- OneAccess offers a wide choice of physical and virtualized deployment options for Layer 2 and Layer 3 access network functions.
- Compose supports service providers in making their networks software-defined with a variety of software management tools and services, including the scalable SD-WAN Xpress.

As service providers embrace SDN and NFV deployment models, Ekinops enables future-proofed deployment today, enabling operators to seamlessly migrate to an open, virtualized delivery model at a time of their choosing.

A global organization, with operations in 4 continents; Ekinops (EKI) - a public company traded on the Euronext Paris exchange - is headquartered in Lannion, France, and Ekinops Corp., a wholly-owned subsidiary, is incorporated in the USA.

EKINOPS360 Dynamic Optical Transport

COMPOSE

ONEACCESS Fast Network Virtualization