

Fortinet and TelcoBridges ProSBC Security Solution

Securing Voice and Data Services at the Network Edge

Executive Summary

Fortinet and TelcoBridges offer a virtualized network edge solution using VNFs that blends SD-WAN with SBC functionality to deliver reliable voice and data services to distributed enterprises, protecting the network core from both data and voice network attacks.

Challenges

As service providers look to deliver new profitable services to enterprises and their distributed organizations, they increasingly turn to a combination of session initiation protocol (SIP) trunking and software-defined wide-area networking (SD-WAN) to enable unified communications and data services. Delivering quality SIP trunking voice services requires low latency transport and intelligent traffic management, while protecting the core of the network from excessive traffic.

A best practice for managing SIP trunking voice traffic utilizes a session border controller (SBC) to manage the traffic and prevent various denial-of-service (DoS) attacks. Until recently, this has been accomplished within the core of the service provider data center via a centralized SBC, leaving the edge of the network open to attack or congestion. Without protection at the edge of the network, service provider core systems are vulnerable to distributed attack and traffic surges that would negatively affect many customers. Positioning an SBC at the edge of the network gives service providers greater control over customer traffic and better protection against various attack methods.

Meanwhile, cost savings and improved reliability of data services can be attained using SD-WAN technologies positioned at the edge of the network. With application-specific traffic handling, SD-WAN can eliminate traditional backhaul bottlenecks, optimizing routes of both data and voice traffic.

To implement these services, providers are more frequently looking to universal customer premises equipment (uCPE) and network functions virtualization (NFV), a new opportunity to deliver both SBC and SD-WAN services at the customer premises. Delivered as virtualized network functions (VNFs), these software services and uCPE work together to create an “intelligent edge” device for voice and data services.

Joint Solution Description

TelcoBridges and Fortinet established a technology partnership to address the above challenges utilizing a combination of TelcoBridges’ FreeSBC virtualized session border controller alongside Fortinet SD-WAN VNFs on uCPE equipment. Using the ETSI-defined NFV architecture, both solutions operate as VNFs on a shared platform as shown below:

Joint Solution Benefits

- SD-WAN
 - Extends network reach
 - Improved network reliability
- Feature-rich session border controller
 - Protection from DoS and DDoS attacks
 - Voice traffic management and monitoring functions
 - Resolve SIP interoperability issues
- End-to-end voice security
 - Encryption of signaling and media
- Voice and data performance management
- Single device
 - Simplifies installation and maintenance
- Dynamic remote provisioning
 - Reduces deployment costs



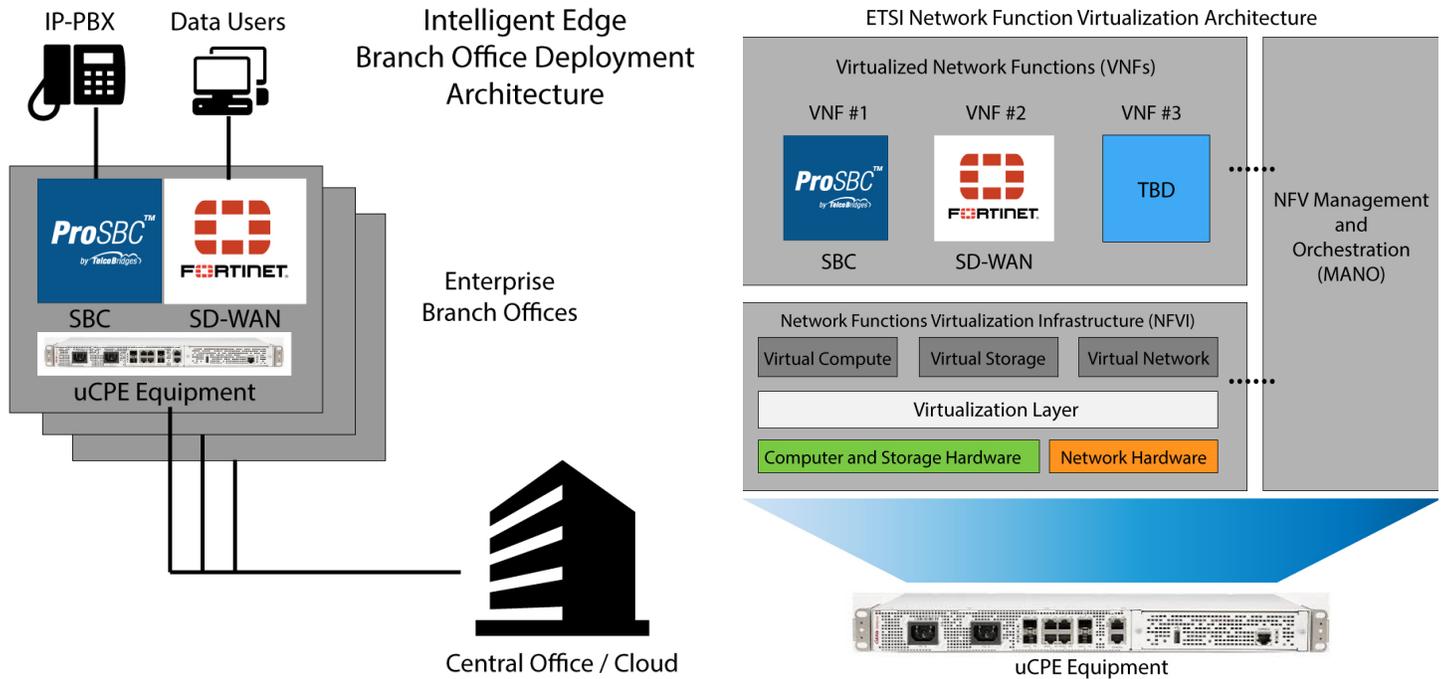


Figure 1: Intelligent edge implementation with TelcoBridges ProSBC and Fortinet SD-WAN VNFs.

Configured in a service chain arrangement, the Fortinet SD-WAN VNF provides application-aware routing and transport for data applications, while the TelcoBridges' FreeSBC manages SIP trunking traffic, resolves SIP interoperability issues, and provides DoS/distributed denial-of-service (DDoS) protection for the voice traffic.

TelcoBridges' ProSBC:

TelcoBridges' ProSBC is a virtual session border controller, protecting networks from attack while offering extensive SIP interoperability and routing features with outstanding session handling performance. It includes a B2BUA, DDoS protection, and advanced call routing features. ProSBC delivers carrier-grade features including high-availability, encryption, and media manipulation capabilities with support and maintenance for a \$1/session/year subscription. As virtualized software, it operates on any combination of VMware™, KVM/OpenStack™, Amazon/AWS™, Microsoft Azure™, and bare metal servers as well as a VNF on dedicated network devices.

Learn more at www.ProSBC.com.

Fortinet Secure SD-WAN Overview

As the use of business-critical, cloud-based applications and tools continues to increase, distributed organizations with multiple remote offices are switching from performance-inhibited WANs to SD-WAN architectures. SD-WAN offers business application steering, cost savings, and performance for Software-as-a-Service (SaaS) applications as well as unified communication services. However, traditional SD-WAN has its own shortcomings—especially when it comes to security with direct internet access.

Fortinet Secure SD-WAN offers best-of-breed SD-WAN and next-generation firewall (NGFW) capabilities to help organizations reduce costs, enhance application experience, simplify operations, and enable high security posture. Fortinet Secure SD-WAN includes best-in-class NGFW security, SD-WAN, advanced routing, and WAN optimization capabilities, delivering a security-driven networking WAN edge transformation in a unified offering. Fortinet has received a "Recommended" rating in NSS Labs SD-WAN Group Test. Fortinet Secure SD-WAN delivered the lowest total cost of ownership (TCO) per Mbps among all eight vendors. Fortinet is highly ranked for delivering excellent quality of experience for voice and video, high overlay VPN throughput, and best price/performance.



Use Cases

Delivering both voice and data services to enterprise branch offices, service providers and enterprises are challenged with protecting the core of their network from abuse. The combination of SBC services and SD-WAN delivered as VNFs on uCPE equipment at the customer premises facilitates monitoring and management of voice and data traffic with security.

About TelcoBridges

TelcoBridges is a leader in the design and manufacture of carrier grade, high performance, and high-density SBCs and VoIP gateways. Based in Montreal with offices in Poland, Turkey, and Hong Kong, TelcoBridges has deployed VoIP solutions in more than 100 countries worldwide. TelcoBridges' brands include: [FreeSBC™](#), [ProSBC™](#), Tmedia™ ([VoIP media gateways](#)), Tsig™ ([signaling gateways](#)), Tdev™ ([development platforms](#)), and Tmonitor™ ([real-time network monitoring equipment](#)).

For more information, visit www.telcobridges.com.



www.fortinet.com