



VoiceGuard® Solution for VoIP Anti-Blockade

1. Overview

Yahoo messenger, Skype, Microsoft Messenger and Vonage offer a subscriber the ability to "call" someone using Softphone/ATA/Gateway/IPPhone/IAD. However, several ISPs are blocking or degrading this service in order to force a consumer to use a ISP sponsored service. States such as the UAE block this technology outright while US corporations, such as Clearwire, claim that they might degrade the quality of competing services by adding choppy and delayed services.

SpeedVoIP is a leader in circumventing VoIP blocking imposed by ISP or Telco. For vision of Net Neutrality, VoiceGuard® is created to address a growing number of ISPs who either degrade or block voice services over their networks. VoiceGuard® gives choice back to the subscribers or customers of ITSP.

2. Technology

● VGCP(Voice Guard Control Protocol)

VGCP is a proprietary layer 2 link protocol working at between IP stack and nic driver for VoIP anti-blocking. The core patent-pending VGCP is industry's most state-of-the-art voice service provider class security protocol whose scalability and flexibility results in not to compromise voice quality and overhead. VGCP controls and monitors full voice signaling and media flow intelligently, meanwhile disguises sip and rtp packets into normal allowed data packets such as DNS and TFTP, and makes two-way encryption and decryption driven by user-customized policy. VGCP is fully transparent to upper SIP proxy or UA which means VoiceGuard® can work with any 3rd-party Softphone/ATA/Gateway/IPPhone/IADs and SIP proxy or server not like some competitors which take effect on their own device and softswitch.

● SidePass

Due to unique architecture, when deploying VoiceGuard® Border Controller(VGBC) at customer CPE side, VGBC can work in the way similar to that of soho router, but it only encrypts and decrypts SIP and RTP packets on link layer, not to handup these packets to IP stack for forwarding while bypassing other data packets originating from SIP terminals. In this scenario, peak throughput and minimal CPU overhead can be easily achieved.

● TrafficDisturb

Current leading carrier-class VoIP blocking platform such as NarusInsight can detect VoIP traffic with a special algorithm "traffic classification in the dark" which filters VoIP traffic based on behavioral-signature model. Compared with previous one of payload-signature model, NarusInsight is more sophisticated and robust. After deep study into traffic behavior of SIP UA, Proxy and Registrar, VoiceGuard® can real-time incorporate light-weight traffic for puzzling and bypassing VoIP blocking system without consuming more bandwidth and compromising voice quality. Even in some circumstance, VoiceGuard® can simulate traffic behavior of universal data networking protocol such as OICQ, MSN and so on.

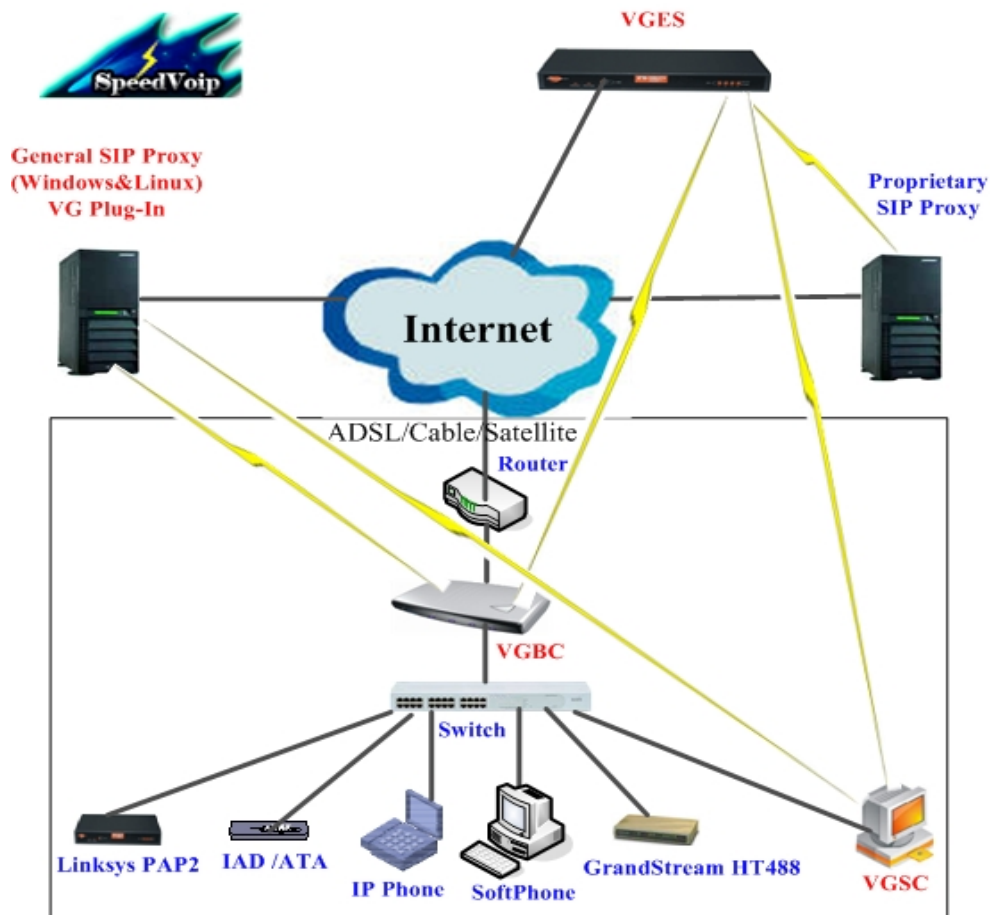
3. Key Features

- Maximum call completion rate and maximum voice service duration
- SIP core standards and a variety of drafts supported
- Proprietary link layer protocol for controlling
- Any 3rd-party Softphone/ATA/Gateway/IPPhone/IAD and SIP Proxy/Registrar/SBC supported
- The most comprehensive codec including g.711/g.723/g.729ab/iLBC/gsm/speechX supported
- Bypassing Narus and Verso platform detection
- Flexible user-customized encryption policy driven
- Strict call path protection and security up to termination
- Only simultaneous signaling/media/T.38 fax packet support across any firewall.
- No network or firewall modification is required.
- Excellent voice quality without any latency and performance compromise
- Small footprint terminal SDK .
- Available on all major platforms.

4. Technical Specification

- UDP
- TCP
- RTP/RTCP
- T.38 Fax
- SIP - RFC3261~3266
- STUN - RFC3489
- Symmetric Response - RFC3581
- Dns/Tftp/Radius wrapper

5. How it works and deployment



6. Solution Components*

- VoiceGuard® Border Controller
- VoiceGuard® SDK for Softphone/ATA/Gateway/IAD/IP Phone (available on Windows, Embedded Linux and VxWorks)
- VoiceGuard® Plug-in for Windows & Linux
- VoiceGuard® Extension Server Software for Linux and Windows
- VoiceGuard® Standalone Client(VGSC) for Windows

7. Conclusion

VoiceGuard® is versatile and powerful VoIP anti-blocking solution for ITSP and end-user which can protect call completion and lead to maximum service duration while prevent revenue leakage for ITSP.

* For detailed product information, please refer to corresponding datasheet belonging to respective product.