Application Note

Stand Alone VoIP Survivability (SAS) Powered by AudioCodes CPE Media Gateways

Enterprises are constantly deploying IP Telephony and increasing their adoption of centralized IP-PBX and carrier IP Centrex services worldwide. Once an enterprise makes the decision to incorporate a VoIP network deployment within its premises, a critical issue to consider is the survivability and high availability of external and internal company telephony communication services.

This issue becomes more crucial due to the single point of failure architecture, commonly located in most enterprise's centralized IP-PBX or IP Centrex telephony network offered by carriers globally. A major challenge which any enterprise IT manager faces during the deployment of the enterprise VoIP network, is maintaining legacy PSTN capabilities as well as providing all the basic telephony and supplementary services in case of a power failure or network (e.g. WAN) disconnection.





AudioCodes Stand Alone Survivability (SAS) Solution

AudioCodes Stand Alone Survivability (SAS) feature answers these challenges. AudioCodes Media Gateways have been specifically designed and developed to eliminate the single point of failure difficulty which exists in any standard enterprise's centralized IP-PBX or IP Centrex network. The Gateways provide continuous and stable telephony services even if a failure occurs in a central network element.

Unlike traditional solutions, based on proprietary Hardware and Software solutions offered by Network Equipment Providers, AudioCodes provides a pure standard solution which is integrated into the customer's existing network without requiring modifications in its operating network architecture.

How it Works

In regular network situations, AudioCodes' Gateways act as an outbound Proxy and Registrar which registers all IP-Phones in the network and simultaneously transfers the registration transactions to the main IP Centrex/Centralized IP-PBX server. This process ensures automatic double and redundant registration for all phones in the network.

In case of a network element failure, the AudioCodes Gateway, with previously registered endpoints, assumes the lead to handle all call controls within the enterprise. Utilizing its inherent fallback mechanism along with its physical PSTN/FXO connectivity to the external PSTN network, the Gateway maintains complete call control and media connectivity to and from the external telephony network.

The Gateway will continuously monitor network connectivity and once the connection with the IP Centrex has been resumed, it will switch back to its normal mode in which control is provided by the IP Centrex/Centralized IP-PBX server.

AudioCodes Stand Alone Survivability Advantages

- Based on AudioCodes best-of-breed VoIP technology experience
- Simple installation and configuration; integrate seamlessly into the existing network architecture with a single configuration procedure
- Complete stand alone standard solution; passed interoperability tests with VoIP leading marketplace vendors
- Reducing CAPEX and OPEX: Media Gateway, Registrar and SIP proxy server on a single platform
- Fully manageable remotely from web based Graphical User Interface (GUI)
- Providing a comprehensive security umbrella by supporting SRTP and SIPS*

Figure 1 - IP-Centrex Architecture



Figure 2 - Centralized IP-PBX Architecture



In case of failure in one of the network elements, e.g. IP Centrex (figure 1), centralized IP-PBX (figure 2) or the Router, AudioCodes SAS Media Gateway will take the lead and handle all the intra-call control management as well as the inter-call control and media connectivity via a built-in fallback mechanism.

Available Platform and Performance

Product Name	Available Voice Channels	Available SAS Resources
MP114/FXS/FXO	2 FXS & 2 FXO Analog ports	30
MP114/ FXO	4 FXO Analog ports	30
MP118/FXS/FXO	4 FXS & 4 FXO Analog ports	30
MP118/FXO	8 FXO Analog ports	30
Mediant 1000	Hybrid digital/analog GW	100
	- Up to 4 E1/T1 Spans	
	- Up to 24 FXO Analog ports	
	- UP to 24 FXS Analog ports	
Mediant 2000	Up to 16 E1/T1 Spans	100

About AudioCodes Mediant™ 1000 Access Gateway

The Mediant 1000 is a modular compact and cost effective Media Gateway solution which was designed to interface between TDM and IP networks in enterprises or SMB premises. The Mediant 1000 supports up to 4 E1/T1 spans and/or up to 24 FXS/FXO ports and/or up 20 BRI interfaces. In addition it supports integrated OSN (Open Solution Network) server for installing and running third party applications.

About AudioCodes Mediant™ 2000 Digital Gateway

The Mediant 2000 offers a cost-effective, cutting edge solution based on field-proven, market leading AudioCodes technology. This digital Media Gateway supports 1 to 16 E1 / T1 trunks (scalable solution) for connecting PSTN or Enterprise PBX's to the IP packet networks.

About AudioCodes Media Pack™ (MP) Analog Gateways

AudioCodes' MediaPack Analog VoIP Gateways provide superior voice technology to connecting legacy analog phones, modems, fax machines as well as PBX systems to the IP packet network. AudioCodes MediaPack Analog Gateways are available with 2, 4, 8 and 24 FXS or/and FXO ports.







About AudioCodes

AudioCodes Ltd. (NASDAQ: AUDC) provides innovative, reliable and cost-effective Voice over IP (VoIP) technology, Voice Network Products, and Value Added Applications to Service Providers, Enterprises, OEMs, Network Equipment Providers and System Integrators worldwide. AudioCodes provides a diverse range of flexible, comprehensive media gateway, and media processing enabling technologies based on VoIPerfect[™] – AudioCodes' underlying, best-of-breed, core media architecture. The company is a market leader in VoIP equipment, focused on VoIP Media Gateway, Media Server, Session Border Controllers (SBC), Security Gateways and Value Added Application network products. AudioCodes has deployed tens of millions of media gateway and media server channels globally over the past ten years and is a key player in the emerging best-of-breed, IMS based, VoIP market. The Company is a VoIP technology leader focused on quality and interoperability, with a proven track record in product and network interoperability with industry leaders in the Service Provider and Enterprise space. AudioCodes Voice Network Products feature media gateway and media server platforms for packet-based applications in the converged, wireline, wireless, broadband access, cable, enhanced voice services, video, and Enterprise IP Telephony markets. AudioCodes' headquarters are located in Israel with R&D in the U.S. Other AudioCodes' offices are located in Europe, India, the Far East, and Latin America.

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