



## **An Enterprise Aggregation & PSTN Trunking Case Study: Global Crossing LATAM**

**Powered by AudioCodes Mediant™ 3000 Low/Mid-Density Gateways, Mediant™ 1000 & MediaPack™ CPE Gateways**

*Global Crossing LATAM, a provider of telecommunication solutions over the world's first integrated global IP-based network, has deployed AudioCodes Mediant™ & MediaPack™ gateways into their VoIP network serving as trunking gateways, enterprise aggregation gateways, and customer premises equipment.*

*Utilizing AudioCodes Mediant™ 3000 low/mid-density redundant media gateway for trunking applications enables Global Crossing LATAM to interconnect its growing VoIP service network to the various PTTs as well as its own TDM network in Latin America.*

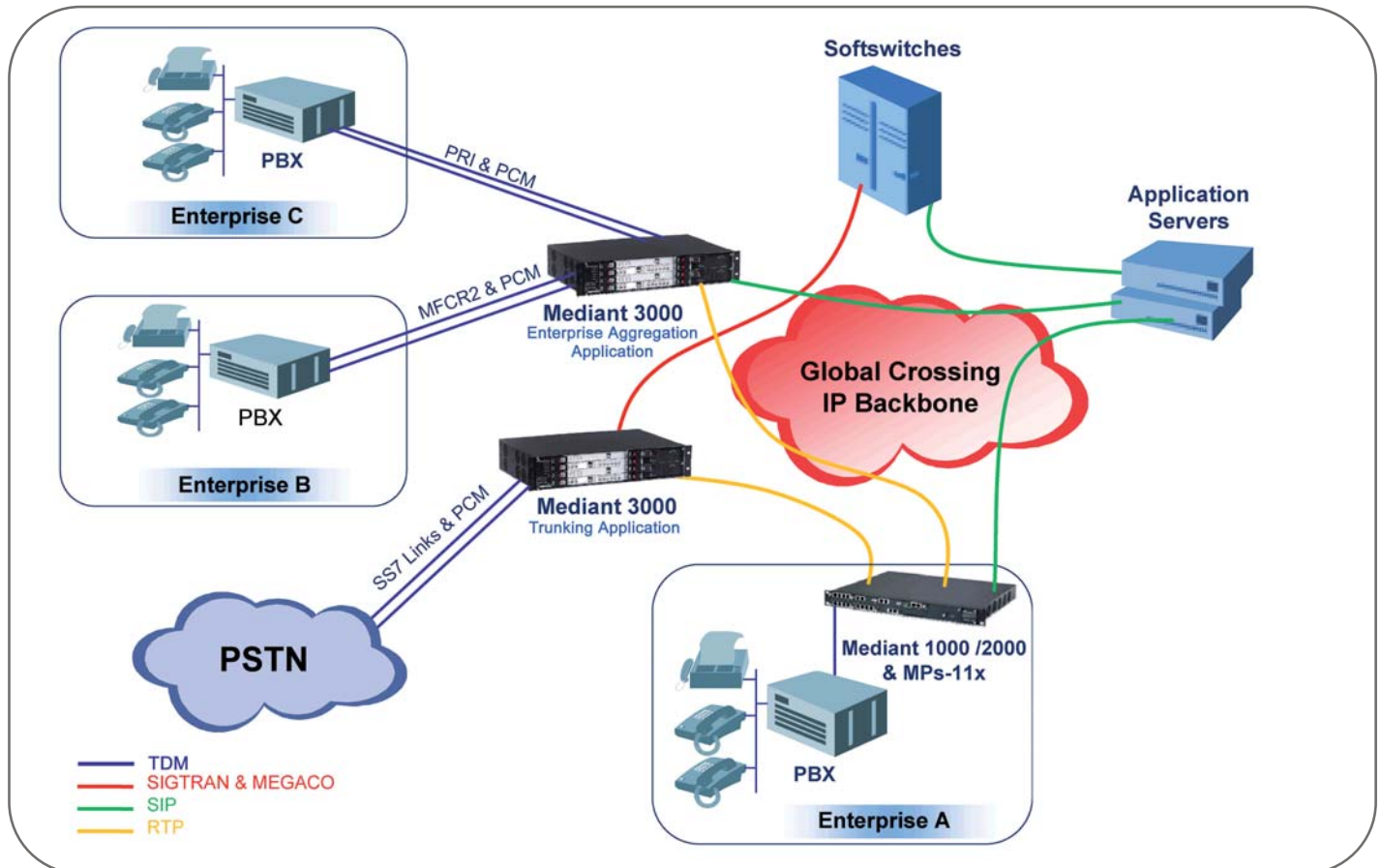
*Global Crossing LATAM is also utilizing the Mediant 3000 for providing telephony services to enterprises in Latin America. This media gateway connects to multiple enterprise PBXs, allowing these enterprises to benefit from Global Crossing's worldwide VoIP network.*

*In addition, Global Crossing LATAM is using the Mediant™ 1000 and MP-11x gateways in the enterprise to connect the enterprise legacy PBX to their VoIP network.*

*"We have selected AudioCodes for their ability to provide us with state-of-the-art VoIP gateways to address our broad network requirements," cited Guillermo Mármora, Vice President of Technology & Operations – Voice Services at Global Crossing LATAM. "The compact-sized, carrier-grade Mediant 3000 was an ideal choice for our trunking and enterprise aggregation needs and we were impressed by the rich capabilities of the CPE gateways, along with the high level of responsiveness and support we received from AudioCodes."*



## Global Crossing LATAM, Best-of-Breed Strategy



### Trunking Application

The Mediant 3000, an intelligent, low-mid density carrier-grade media gateway which matches service providers distributed architecture needs, is serving Global Crossing's VoIP network in Latin America.

Global Crossing LATAM is using the Mediant 3000 for its trunking application in order to connect to various PTTs using STM-1 connections. Both redundant and non-redundant configurations of the Mediant 3000 are being utilized.

The Mediant 3000 performs the dual role of a media gateway as well as a signaling gateway. The signaling gateway functionality interworks between the SS7 TDM signaling network and the IP network using SIGTRAN M2UA. A Softswitch control the Mediant 3000 boxes using the Megaco call control protocol.

The Mediant 3000 is interworking with various AudioCodes' gateways as well as with additional media gateways from other vendors which are deployed by Global Crossing LATAM.

Additionally, Global Crossing LATAM is using the Mediant™ 1000 and MP-11x gateways in the enterprise to connect the enterprise legacy PBXs in their VoIP network.

### Enterprise Aggregation Application

In this application Global Crossing LATAM uses the Mediant 3000 as an access gateway for the aggregation of multiple enterprise legacy PBXs over and TDM-based last mile. Incoming calls on the TDM network are interworked into VoIP and routed to the chosen destination.

The average enterprise uses only a few E1 links, while the complete configuration of the Mediant 3000 supports 63 E1s, requiring the gateway to support multiple trunking groups or routing rules in order to be able to route the calls coming in from the IP side into the different enterprises. Furthermore the number of Trunks per trunk group is adjustable according to the needs of the customer.

The Mediant 3000 supports a wide variety of PSTN protocol variants, including the CAS MFCR2 which is typical to some countries in Latin America and is used in this application. In relation to SIP, the Mediant 3000 interworks with the Softswitch when basic call processing is required or with an application server, in order to deliver more advanced features.

## Selecting the Right Vendor for the Enterprise Aggregation & Trunking Gateway

Global Crossing LATAM is offering a wide range of IP services to carriers and enterprises. The telephony service is a key service which requires the use of media gateways for trunking, enterprise aggregation and enterprise SIP trunking. AudioCodes' wide range of media gateways provides a one stop shop for all these media gateway types. Global Crossing LATAM searched for a partner with high quality products, a clear roadmap and proven interoperability with 3<sup>rd</sup> party Softswitches.

The Mediant 3000 media gateways were selected for a number of reasons:

- **Interoperability** - AudioCodes' commitment to interoperability allows trunking gateway customers the freedom to select Softswitch vendors, and class 5 switches with whom they want to interconnect. On the access media gateway front, the main requirement is to connect with numerous different PBXs and Key Systems using different types of signaling protocols. AudioCodes' proven track record of interoperability has enabled the Mediant 3000 to be a natural choice for a standard access media gateway.
- **PSTN Protocol Support** - The ability to provision ISDN and R2 trunks on the same chassis was a key feature required by Global Crossing LATAM. In addition, a number of local SS7 and R2 variants are available in the LATAM region.
- **Media Control Protocols** - AudioCodes' Mediant family of media gateways is one of the most flexible of the media gateway families in terms of media gateway control protocols. It supports SIP, MGCP, TGCP and Megaco.
- **Flexible Clocking** - The Mediant 3000 is configured to derive the clock from Global Crossing's SDH access network, assuring network synchronization.
- **High Availability** - The Mediant 3000 is a NEBS-compliant, carrier-class equipment, designed with no single point of failure, in order to provide maximum availability for carrier telephony networks.
- **Ideal Density** - The Mediant 3000 media gateway offers densities of 480 up to 2,016 low-bit-rate channels using E1/T1/T3/OC3/STM-1 connections. The capacity is conveniently upgradable via software keying.
- **Price per Channel** - AudioCodes' superior channel density allows maximum utilization of the media gateway capacity and a good price-performance within the market.
- **VoIP Quality** - AudioCodes' use of its own DSP technology supplies the best VoIP quality in today's marketplace. This was proven by the ETSI 3<sup>rd</sup> Speech Quality Event.

- **Inhouse Development** - AudioCodes products are developed inhouse which includes DSP and embedded software and more, enabling quick turn around for problem resolution and the introduction of new features.
- **Flexibility** - AudioCodes' gateways allow the flexibility of synchronization to the PSTN network by setting the gateway to derive its clock from the SDH network or by utilizing an internal clock.
- **Reliability** - The Mediant 3000 gateway is proven to be one of the most reliable products in the current marketplace.

## Selecting the Correct Vendor for Enterprise Access Gateways

Enterprise Access Media Gateways serve as CPE (Customer Premises Equipment), connecting enterprise PBX systems to the Global Crossing LATAM VoIP network.

Selecting the MediaPack for analog and the Mediant 1000 for digital connections proved suitable for Global Crossing LATAM for the following reasons:

- **Reliability** - After implementing the Mediant products as a trunking application, it was proven to be one of the most current and reliable product lines. The Mediant 1000 and MediaPack share the same software and hardware infrastructure, providing the same level of reliability.
- **Interoperability** - The primary role of an access media gateway is to connect with various PBXs and key systems using different types of signaling protocols. AudioCodes' proven track record of interoperability has ensured that the MediaPack and Mediant are a natural choice for a standard access media gateway.
- **Manageability** - The installation of a CPE media gateway in hundreds of units worldwide must include extensive management capabilities. The Mediant and MediaPack™ families of media gateways support many unique management features relevant for service provider networks.
- **VoIP Quality** - Enterprise customers are sensitive to voice quality. Any degradation in voice quality compared to the TDM telephony network is not accepted by the enterprise. AudioCodes uses its own DSP technology to supply the best VoIP quality in the marketplace today, as proven by the ETSI 3<sup>rd</sup> Speech Quality Event.
- **Support** - Support provided by AudioCodes for the trunking gateway solution, has proven that AudioCodes is also the most ideal choice for CPE gateways.

## Summary

“We are proud that Global Crossing LATAM has selected AudioCodes’ carrier and CPE media gateways,” stated Yehuda Hershkovits, Vice President, Systems Group at AudioCodes. “With the growing popularity of VoIP, Service Providers are in need of cost-effective, scalable, enterprise and carrier media gateways. AudioCodes is committed to assisting its customers to build cutting-edge VoIP networks and services with feature-rich, highly interoperable VoIP gateways.”

## About AudioCodes Mediant™ 3000 Media Gateway

The Mediant 3000 is a feature rich, highly available VoIP Media and transcoding gateway supporting low to medium channel densities. The Mediant 3000 compact footprint meets the needs of Service Providers that deploy a geographically dispersed network. The Mediant 3000 offers robust high availability architecture, meeting the most stringent availability requirements of current Service Providers worldwide. Supporting Megaco, MGCP, TGCP and SIP, the Mediant 3000 can be deployed with different Softswitches. The capacity of the 3000 can scale from 480 channels up to 2016 Low-Bit-Rate channels, with a simple software upgrade and with a very small footprint of 2 Rack Units. The Mediant 3000 is a truly converged platform that suits wireline, wireless (GSM, UMTS, CDMA), Cable, IMS and Fixed-Mobile-Convergence applications.



**MEDIANT™ 3000 MEDIA GATEWAY**

## About Global Crossing

Global Crossing (NASDAQ: GLBC) provides telecommunications solutions over the world's first integrated global IP-based network. Its core network connects approximately 390 cities in more than 30 countries worldwide, and delivers services to approximately 690 cities in more than 60 countries and 6 continents around the globe. The company's global sales and support model matches the network footprint and, like the network, delivers a consistent customer experience worldwide. Global Crossing IP services are global in scale, linking the world's enterprises, governments and carriers with customers, employees and partners worldwide in a secure environment that is ideally suited for IP-based business applications, allowing e-commerce to thrive. The company offers a full range of data, voice and security products to approximately 40 percent of the Fortune 500, as well as 700 carriers, mobile operators and ISPs. Its Professional Services and Managed Solutions provide VoIP, security and network consulting and management services to support its Global Crossing IP VPN service and Global Crossing VoIP services. Global Crossing was the first global communications provider with IPv6 natively deployed in both its private and public backbone networks.

## 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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