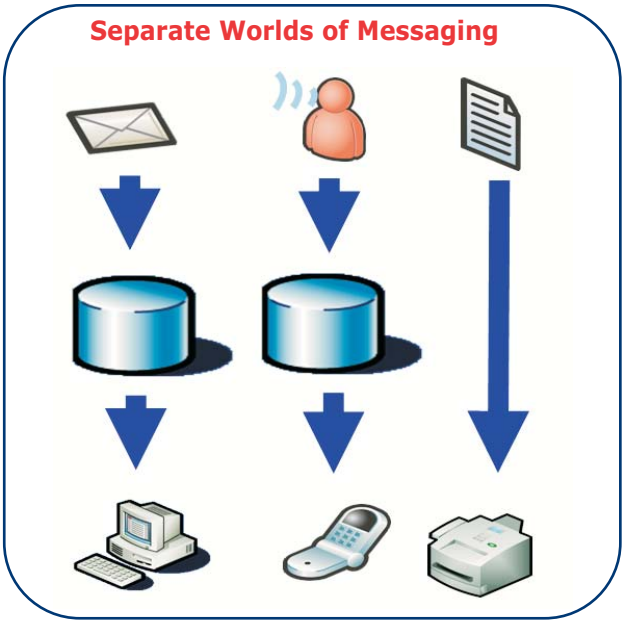
Application Note

Unified Messaging for Enterprise Customers

Powered by Microsoft Exchange Server 2007 Unified Messaging and AudioCodes Media Gateways

The Challenge

Most enterprises today use separate voice, fax and email messaging systems. Emails are received by a server such as Microsoft Exchange Server 2007 and are accessed through email clients similar to Microsoft Outlook. Voicemail systems are independent systems accessed via a telephone connected to a PBX. Faxes are often received by stand alone machines and typically have to be manually sorted in order to be delivered to the correct end user. Both, users and the administrators have to use multiple sets of tools - one or more for each of these systems in order to manage their communication.



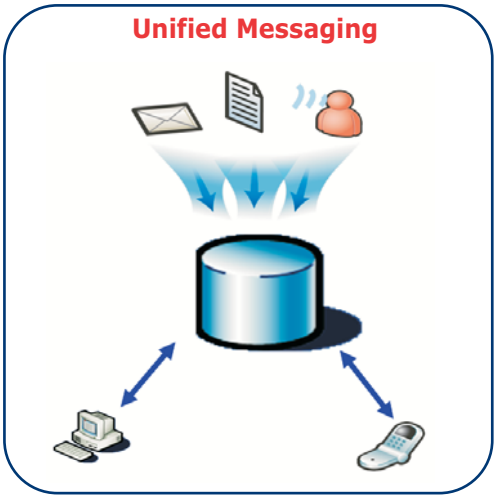
AudioCodes

Traditional Solutions

Traditional voicemail systems are dedicated systems connected directly to enterprise PBXs via proprietary protocols and accessed only by means of legacy phones and DTMF signaling.

Currently, most unified messaging systems offer partial integration of voicemail and fax into a mailbox, but still require dedicated servers and applications to handle voicemail and fax messages, while connecting to the existing email server using software plug-ins.

The result is a cumbersome integration between voicemail and the email, duplicated efforts for software integration and different administration systems with a relatively low penetration of unified messaging systems in the market today.



Microsoft & AudioCodes' Solution

Based on various parameters, Microsoft has crafted a vision for bringing Unified Messaging to Exchange. Microsoft offers value to the end user by bringing new and valuable content including voicemail and fax messages to the Exchange inbox, making it easier for administrators by giving them one infrastructure to manage.

Part of this vision is to adopt an alternative direction. Unified messaging brings new content to the inbox, accessed by familiar user friendly tools, along with offering a new method that allows access to the Exchange data, via a standard telephone. Today, Exchange Server 2007 can be accessed by utilizing a number of methods including: Outlook PC Client, browser access through Outlook web access and mobile phone access through Exchange ActiveSync. The new Exchange Server 2007 Unified Messaging support enables a new access method, Outlook Voice Access, allowing access through a plain telephone using either speech recognition or touchtone.

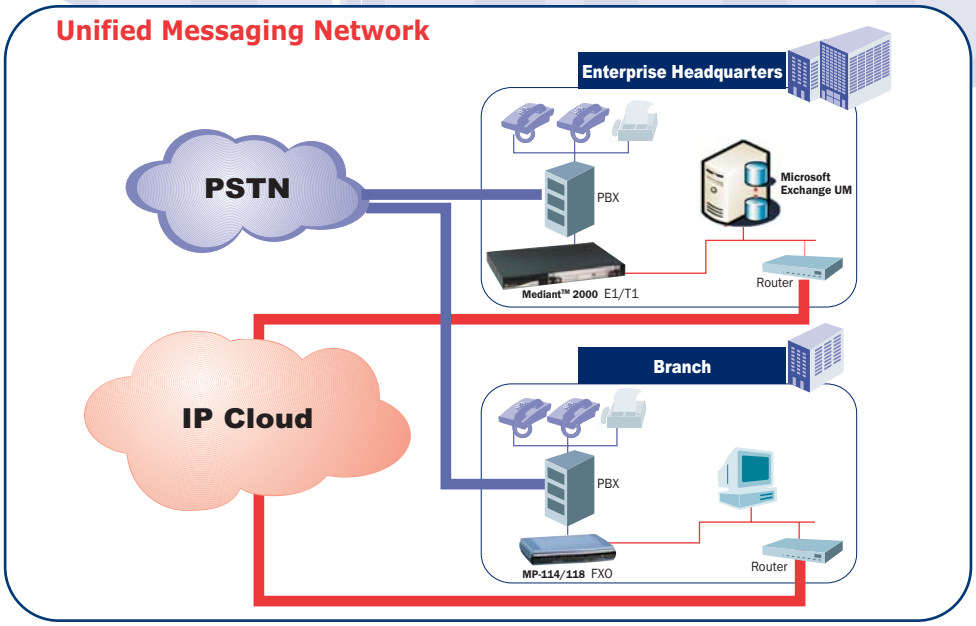
AudioCodes allows easy connectivity between the Exchange Server 2007 unified messaging system and the existing enterprise PBX. By using AudioCodes' Mediant™ 2000 digital media gateways and/or AudioCodes' MediaPack™ analog media gateways, the existing enterprise PBX can be connected to the Exchange Server 2007 unified messaging system, and allow transparent services over the IP, SIP-based network.

The Microsoft/AudioCodes solution for unified messaging offers the benefits of the move to standard, SIP-based, unified messaging, whilst protecting the investment in existing TDM enterprise PBXs and telephony infrastructure.

AudioCodes MediaPack™ analog media gateway supports the connection of PBX systems using up to 8 standard FXO connections into the VoIP network and to the Microsoft Exchange Server 2007 unified messaging system. AudioCodes Mediant™ digital media gateway supports the connection of PBX systems using up to 16 standard E1/T1 connections into the VoIP network and to the Microsoft Exchange Server 2007 unified messaging

system. Supporting high voice quality, a wide range of PBX to voicemail signaling schemes, and a cost-effective price-point per-port, the MediaPack™ is a perfect fit for small enterprises while the Mediant™ is ideal for medium-to-large enterprises, that are moving from old voicemail systems to a Microsoft Exchange Server 2007 unified messaging system without replacing the PBX itself

Distributed voicemail connectivity is another important feature of this solution. The connecting of an AudioCodes media gateway to each PBX distributed across an enterprise, allows one Microsoft Exchange Server 2007 unified messaging system to service the enterprise, while connected to different PBXs across the IP network, via AudioCodes gateways.



User Features

Exchange Server 2007 UM receives and delivers voicemail messages and faxes to the Exchange inbox.

Microsoft offers rich "voice access" to the Exchange Server 2007 system by means of contacting the Unified Messaging server and accessing Exchange voicemail, email, calendar and contacts telephonically.

In addition, the system includes a speech-enabled auto attendant. This allows calling into a main switchboard number, requesting to speak to a person and being transferred to his number. It offers customizable menus which allow you to design a personalized IVR system.

Cost Effectiveness

The combined Microsoft/AudioCodes solution demonstrates savings in capital expenses and operational expenses for the enterprise. The flexibility and interoperability of the solution allows the enterprise to easily integrate with existing PBX systems. The cost of ownership of this solution is lower than existing voicemail systems, since the email, voicemail and fax are all managed from the same platform and user interface.

Openness

The combined Microsoft/AudioCodes unified messaging solution is an open solution. It is based on SIP as an industry standard for VoIP signaling, standard VoIP codecs for voice compression and the industry-standard Exchange system for message storage and management.

Interoperability

AudioCodes has invested a substantial amount of effort in integrating its media gateways with many PBXs. PBXs from numerous vendors have been intensively tested to interoperate with AudioCodes media gateways in order to be able to operate in the enterprise environment, and specifically with the Microsoft Exchange Server 2007 Server 2007 unified messaging solution.

Signaling

Connecting the unified messaging system to the existing enterprise PBX requires the media gateway to support the specific PBX signaling protocols.

AudioCodes media gateways support a diverse range of signaling protocols for this purpose, including serial SMDI connection, CAS in-band DTMF signaling, Q-SIG and more.

VoIP Network

Moving from a TDM architecture and PSTN connectivity towards VoIP allows the enterprise to use its existing data network to direct phone calls between sites at no cost. This is in addition to the connectivity to the unified messaging system while using the same gateway.

AudioCodes' media gateways introduce a "plug & play" approach to the installation of the VoIP network. Internal routing features and redundancy mechanisms allow the creation of a toll-bypass VoIP network without configuration changes in the PBX.

Administrator Benefits

The consolidation of all messages into one inbox has a number of benefits to the administrator. With the Exchange Server 2007 UM solution we are issued with a single point of administration. Training is only required on one system and there is a single place for troubleshooting. There is only one directory infrastructure, an Active Directory, which is used for both voice and email. There is a single security infrastructure with one unified security model rather than having to secure two separate discrete systems.

Site Consolidation

Exchange Server 2007 Unified Messaging allows organizations to amalgamate a worldwide messaging infrastructure into one or more sites. Even in a case where there is a PBX at each office, you can consolidate the voicemail systems at a few sites. As per previous deployments, Exchange servers are not required to be installed in each office.

Centralized Provisioning & Management

Moving from the TDM voicemail architecture to an IP-based unified messaging architecture allows the flexibility of managing the unified messaging network from anywhere in the world.

Future Proof

In addition to the Exchange Server 2007 Unified Messaging system, Microsoft has announced its Unified Communications strategy. As part of this strategy, Microsoft is going to provide a full suite of unified communication services using a combination of the Exchange Server 2007 server unified messaging support and the new Microsoft Office Communications Server 2007.

By utilizing this system, Microsoft is going to provide all that is required for IP-based enterprise communications, including email, web, voice and video call management, conferencing and messaging. AudioCodes is supporting both Microsoft unified messaging and unified communications configurations. AudioCodes media gateways can migrate from connecting to PBXs in the unified messaging solution, to PSTN trunk gateways in the unified communications solution, making it future proof for the enterprise.

About AudioCodes MediaPack™ Analog Media Gateways Family

The MediaPack™ family of analog gateways are designed and optimized to address the needs of service providers and enterprises for feature-rich, high quality analog media gateways. The MediaPacks enable a wide range of applications including converged access, IP Centrex, fixed-mobile convergence, and next generation PBXs. Ranging from 2 to 24 ports of FXS/FXO connectivity, the MediaPack family enables the connection of analog devices such as phones, faxes and modems into the IP world.

About AudioCodes Mediant™ 1000 Media Gateway

AudioCodes compact and cost-effective media gateway solution is designed to interface between TDM & IP networks in enterprises or small-scale carrier locations. Incorporating AudioCodes' innovative Voice over Packet technology, the Mediant 1000 enables rapid time-to-market and reliable, cost-effective deployment of next-generation networks. The Mediant 1000 is based on VoIPerfect™, the comprehensive and field-proven architecture used in all AudioCodes' product lines ranging from chips to high-density media gateway platforms. It can host up to six hot swappable, modular modules that support a mixture of FXS, FXO, and E1/T1 media gateway ports. It also supports the integration of an OSN (Open Solution Network) server, for running third party applications.

About AudioCodes Mediant™ 2000 Media Gateway

A cost-effective, entry-level member to the AudioCodes family of market-ready, standards-compliant, media gateway voice network products. Intelligently packaged in a stackable 1U chassis especially designed as CPE and for smaller locations in the carrier network market, the Mediant 2000 is the right-sized solution for small-scale (1

to 16 E1/T1s) needs. The Mediant™ 2000 VoIP media gateway supports G.711 (PCM), G.723.1, G.729A vocoders. The Mediant 2000 optionally supports a DC power supply (complies with NEBS Level 3) or dual AC power supply.

About AudioCodes

AudioCodes Ltd. (NASDAQ: AUDC), Your Gateway to VoIP, provides innovative, reliable and cost-effective Voice over Packet (VOP) technology, Voice Network products, and applications to OEMs, Network Equipment Providers, Service Providers and System Integrators worldwide. AudioCodes provides a diverse range of flexible, comprehensive media gateway and media processing technologies (based on VoIPerfect™ - AudioCodes' underlying, best-of-breed, core media gateway architecture) and Session Border Controllers (SBCs). The company is a market leader in product development, focused on VoIP Media Gateway, Media Server and SBC technologies and network products. AudioCodes has deployed tens of millions of media gateway and media server channels globally over the past few years and is a key originator of the ITU G.723.1 standard for the emerging Voice over IP market. The Company is a VoIP technology leader focused on quality, having recently received a number one ranking from ETSI for outstanding voice quality in its media gateways and media servers. AudioCodes voice network products feature media gateway and media server platforms for packet-based applications in the converged, wireline, wireless, broadband access, enhanced voice services and video markets. AudioCodes enabling technology products include VoIP and CTI communication blades, VoIP media gateway processors and modules, and CPE devices. AudioCodes' headquarters and R&D facilities are located in Israel with an R&D extension in the U.S. Other AudioCodes' offices are located in Europe, the Far East, and Latin America.

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