Solution Description

Meeting Insights On-Prem

MIA OP Solution Description and Use Cases

Version 2.0

audiocodes

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Document Revision Record

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1 Introduction

1.1 Advantages of the AudioCodes MIA OP Transcription and Summary Solution

MIA OP is an advanced meeting transcription and summary solution designed to transform the way your organization records and manages essential information. Installed on a local server, MIA OP is tailor-made to meet the stringent security needs of organizations in sectors like healthcare, finance, and government, ensuring top-tier information security without compromise.

In today's fast-paced business world, meetings play a central role in driving progress. However, accurately documenting these meetings can be time-consuming and require significant resources. MIA OP elegantly addresses this challenge by offering a powerful solution that saves time, enhances accuracy, and boosts productivity.

While there are various software solutions on the market for recording and transcribing meetings, most rely on cloud services from large providers such as Microsoft and Google, limiting accessibility for organizations that are prohibited from using cloud services or require strict on-premises solutions. Additionally, automatic meeting summaries generated using advanced NLP technologies like LLM often fall short of human-level accuracy and still require manual editing. As a result, many organizations continue to manually dictate key points and tasks at the end of meetings.

Key Benefits of MIA OP:

1. **Security without Compromise:** Unlike cloud-based solutions, MIA OP operates entirely on-premises, catering to organizations with the strictest security requirements.
2. **Maximum Precision:** By combining advanced AI technologies with human dictation, MIA OP delivers more accurate results than fully automated solutions.
3. **Complete Flexibility:** Suitable for all meeting types—whether face-to-face, virtual, or hybrid.

   AudioCodes' MIA OP solution offers a range of services tailored to organizational needs:

   - **Accurate Online Summaries:** MIA OP captures and transcribes only the critical meeting segments, such as summaries of key topics, decision-making, and task assignments.
   - **Online Dictation and Proofing:** MIA OP records and transcribes all dictated content in real-time, allowing users to view and make corrections immediately during dictation.
   - **Offline Transcription and Proofing:** Users can load multiple audio files into the system for transcription, assign files to different transcribers, and track progress through intuitive tools.

Breakthrough Technology:

Powered by AudioCodes' Speech-to-Text (STT) engine, MIA OP ensures high transcription accuracy, particularly with Hebrew, and is customizable to the organization’s unique glossary and world of content. Speaker recognition further enhances accuracy by identifying different speakers via voice signatures.

Flexible Connectivity:

MIA OP supports various recording and transcription connection options, from microphones in conference rooms to apps like Teams and Zoom. Full accessibility is ensured, whether via phone or IP, offering users a seamless experience.

Task Management and Optimization Application (MIA OP Application):

The MIA OP Application offers full control over transcription and task management. Users can define tasks, load files, assign transcribers, track progress, and optimize transcribed files using an easy-to-use optimization tool.

Centralized Management of Solution Servers (OVOC Application):

The OVOC Application allows centralized command and control of all solution servers, whether MIA OP is deployed on a single server or multiple servers. It also manages additional components, such as SBC, VAIC, and SmartTap, providing a convenient and advanced interface for full system management.

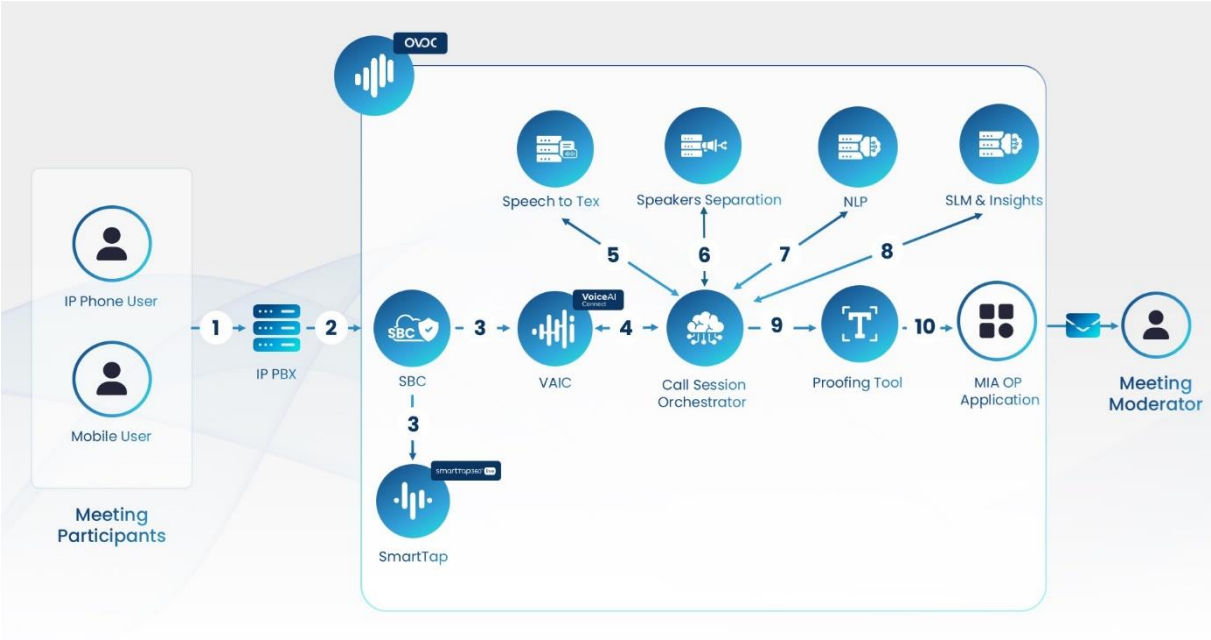
The MIA OP solution operates entirely on local servers, requiring no cloud or Internet connectivity, making it ideal for organizations with strict data security policies.

Elevate your organization's meeting and information management today with MIA OP—the next step in organizational efficiency!

2 Common Architecture Description and Use Cases

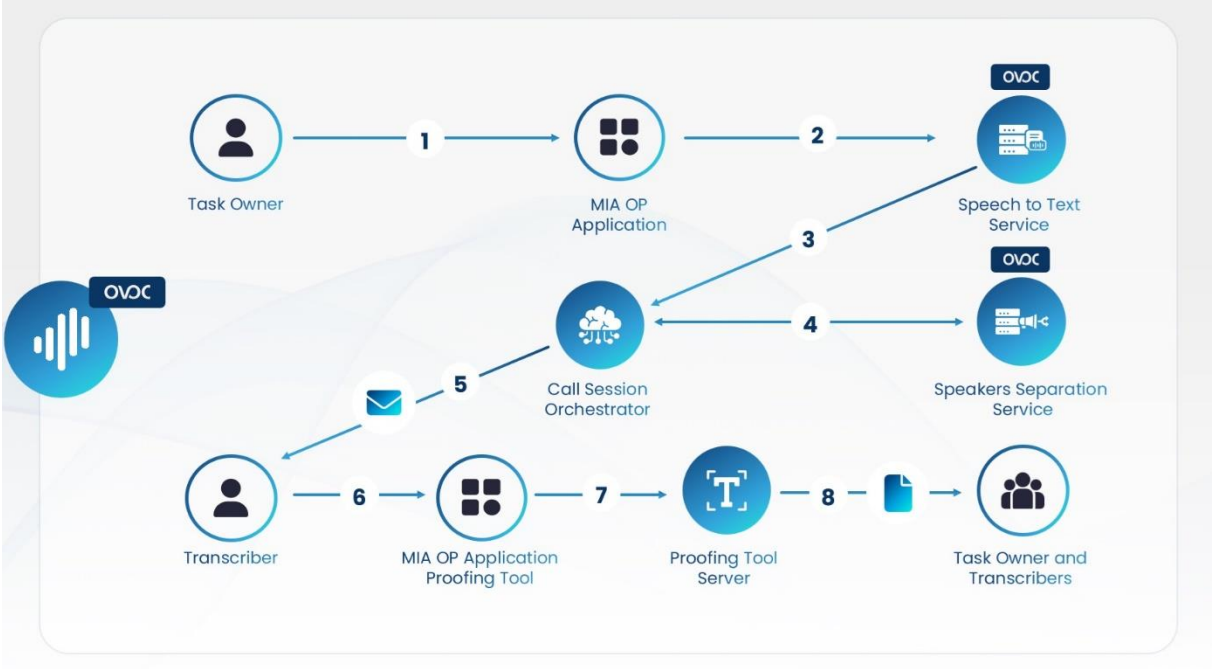
There are numerous ways to design a recording and transcription solution that can be tailored to the specific needs of each client. In building these solutions, we consider a range of factors, such as required services and applications, customer login methods, notification preferences for when transcription work is complete, and the number of supported channels. Below are some common use cases utilized by our clients:

2.1 Transcription Solution with Phone User Connectivity



1. The meeting leader dials into a designated number for the online meeting.
2. The call is processed through the customer's telephony system and routed to AudioCodes' SBC (Session Border Controller).
3. The call is forwarded to SmartTap for recording and storage.
4. The call is then sent to VAIC for transcription and further processing.
5. The Orchestrator system manages the process, ensuring that transcription is performed.
6. The system separates the speakers within the audio file.
7. It also adds punctuation to the transcribed text.
8. Additionally, the system will eventually support atomic summaries using the SLM model (planned for 2025).
9. Once the transcription and speaker separation are completed, Orchestrator sends the transcribed file to the meeting leader or a human transcriber for further correction and editing using advanced cloud-based tools.
10. The moderator or professional transcriber uses the MIA OP Proofing tool to make corrections and edits to the transcription. Each correction made helps improve the system's accuracy over time.
11. After the corrections, the final file, formatted in Word and the organization's predefined format (Template), is sent to the meeting participants via email.

2.2 Solution for Recording, Transcription, and Proofing of Meetings in Conference Rooms

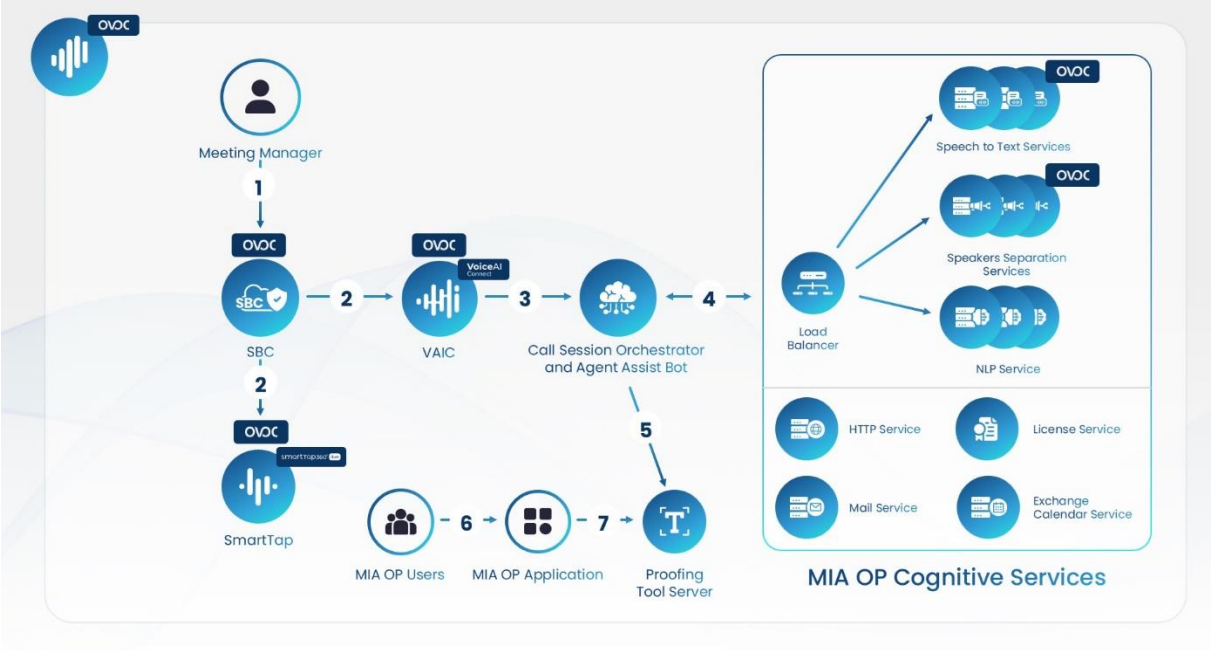


This use case applies when all meeting participants are in the same room, eliminating the need for telephone connectivity.

1. The meeting leader initiates a new task using the MIA OP transcription task management app.
2. The leader records important parts of the discussion, such as decisions, using recording threads.
3. Once the discussion concludes, the recorded audio file is generated.
4. The audio file is then transferred to a transcription server.
5. After the transcription, Orchestrator processes the file for speaker separation.
6. Following transcription and speaker separation, Orchestrator sends the transcribed file to the meeting leader or a human transcriber for final editing.
7. The meeting leader or transcriber uses the MIA OP Proofing tool to correct and edit the transcription.
8. Every correction made improves the system's transcription accuracy over time.
9. The finalized file, in Word and organizational summary format (Template), is emailed to the discussion participants.

2.3 Transcription Solution with Bulk Channel Support

Figure 1: Figure Caption



In this scenario, special attention is paid to the MIA OP Cognitive Services. The main difference here is the use of a Load Balancer, which manages multiple channels and optimizes the distribution of tasks across several services, including:

- Speech-to-Text Service
- Speaker Separation Service
- NLP Service

Each of these services works together to efficiently handle high-volume transcription tasks, ensuring scalability and reliability. Detailed descriptions of each service's role are provided in the following sections.

3 Description of the Services of Transcription Servers

This document serves as a collection of smaller sub-manuals, each dedicated to explaining the components and services that make up the Meeting Insights On-Prem system. The following sections provide detailed descriptions of the core services involved in managing voice-to-text conversion, speaker separation, authentication, and more.

- **Call Session Orchestrator**

  The orchestrator manages the process and links all components and services.

  Responsible for communicating with the STT/SRD/PTT server and the Database server.

- **Speech to Text Service**

  This service handles real-time or offline voice-to-text conversion and includes several features:

  - **Ad hoc glossary**: Supports a dynamic dictionary of organizational concepts, including phonetic representations.
  - **Spotting Phrases**: Discovers key phrases from a predefined list.
  - **Hot Phrase Detection**: Detects key phrases in real-time or offline.
  - **ASR (Automatic Speaker Recognition)**: Syntax-based speech recognition for voice-activated services.

  Multiple instances can be run to support the required amount of voice channel transcription.

- **Speakers Separation Service**

  Speaker Separation: Audio segmentation by speaker without sound signatures.

  Speaker Segmentation: Segments audio by speaker with voice signatures, incorporating an enrollment process.

  Multiple instances can be run to support the required amount of voice channel transcription.

- **NLP Service**

  This service adds punctuation to texts created from speech-to-text conversion.

  Multiple instances can be run to support the required amount of voice channel transcription.

- **Load Balancer**

  Manages and balances the load between different components for optimal system performance.

- **License Service**

  Manages the licensing for the MIA OP system.

- **Authentication Service**

  Verifies user identity before granting system access.

  Can manage local users or integrate with external user management systems like Active Directory.

- **HTTP Service**

  Provides web access services for system management.

  Used to manage recordings, transcriptions, and offer recording, editing, and dictation services.

- **Mail Service**

  Enables sending transcribed, edited, and corrected discussion summaries via email.

  Interfaces with the client-provided SMTP server.

- **Calendar Exchange Service**

Retrieves user meetings from the corporate Exchange to identify participants when recording from the browser.

Uses the LDAP protocol for corporate server authentication.

- **Voice Recorder Service**

  Allows sound recording via a microphone on a computer using a Chrome browser.

  Enables simultaneous recording and transcription.

  This manual contains individual sections for each service, guiding you through installation, configuration, and operation to ensure a seamless integration of the AudioCodes Speech System.

3.1 Connectivity and Management Product Description

MIA OP Application & Proofing Tool

The MIA OP Application is a powerful tool for managing transcription tasks and optimizing transcribed content. It provides full control over the transcription process, allowing users to define various task types, upload files, assign optimizers to specific files, and track the progress of transcription tasks. The application also includes an intuitive optimization tool to refine and enhance the accuracy of transcribed files.

OVOC (One Voice Operations Center)

OVOC offers centralized management for all solution servers, providing advanced command, control, and real-time monitoring of system status and malfunctions. It enables version upgrades and tracks KPIs for devices such as the MIA OP, SBC, VAIC, and SmartTap. OVOC simplifies the management of AudioCodes solutions by ensuring seamless operations across multiple components.

SBC (Session Border Controller)

The SBC provides seamless connectivity, enhanced security, and sound quality assurance for voice communication environments at scale. It typically connects UC, Contact Centers, and SIP trunk services, supporting an organization's migration strategies while protecting it from fraud and malicious attacks.

VAIC (Voice.AI Connect)

VoiceAI Connect serves as a communication hub between bot frameworks, telephony systems, and cognitive speech services, based on AudioCodes' expertise in voice technology. It supports a wide range of use cases for voice bots, such as Virtual Agents, IVR Call Handling, Agent Assistance, and Outgoing Calls, making it an essential component for organizations leveraging AI-driven voice interactions.

SmartTap

SmartTap is a comprehensive call recording and logging solution that enables organizations to capture, maintain, and index customer and internal communications across all channels. It ensures quality and compliance for both customer interactions and internal communications.

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