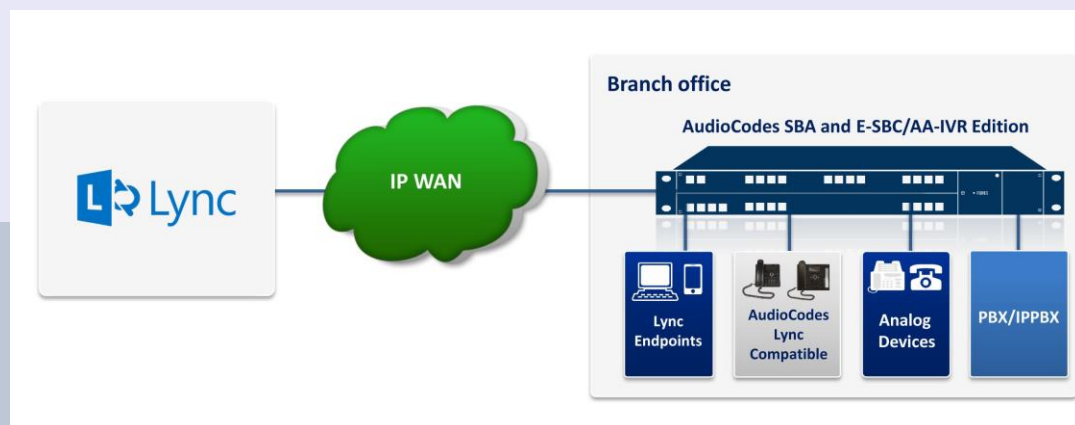AudioCodes® Auto Attendant

IVR / ACD Applications

Survivable Branch Appliance (SBA)

Auto Attendant for Microsoft® Lync™
Application Note

L⅔ Lync

Microsoft Partner
Gold Communications

AudioCodes

Version 2.0

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Table of Contents

List of Figures

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Notice

This Note describes the features, capabilities and network architecture of AudioCodes' Auto Attendant application.

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1   Introduction

AudioCodes' Auto Attendant is an Interactive Voice Response (IVR) system that provides enterprises with a powerful and flexible tool to manage inbound calls and deliver them to intended destinations, based on buttons pressed by callers, using DTMF detection or speech activated.

AudioCodes' Auto Attendant supports advanced Call Queue for Automatic Call Distribution (ACD) based on different routing modes and agents availability.

As part of AudioCodes' One Voice for Microsoft Lync offering, AudioCodes' Auto Attendant application can be deployed together with AudioCodes' Survivable Branch Appliances (SBAs) in branch offices to complement Lync's Response Group Service (RGS) when the connection with the central Lync server is lost.

AudioCodes' Auto Attendant is a pure software application which can also be deployed on standard server hardware.

1.1   About Auto Attendant

1.1.1   Features and Capabilities

- Automatically plays voice prompts to callers.
- Transfers callers to additional menus and extensions based on caller input.
- Supports different IVR behavior for working hours, non-working hours and holidays.
- Automatic Call Distribution (ACD) to Lync agents.
- Multi-Language support and localization.
- Allows direct extension reach with minimal DID.
- Graphical User Interface for managing IVR menus and call flow.
- Voice activation and Text to Speech.

1.1.2   Value Proposition

- Maximizes employee productivity by automating inbound enterprise call routing.
- Reduces Direct Inward Dialing / Direct Dial-In (DID / DDI) requirements through direct extension dialing.
- Increases customer satisfaction through reduced waiting times.
- Suitable for main offices and remote branches.
- Supports application survivability at branch offices.
- Can work in conjunction with Lync Response Group Service (RGS) or as a standalone solution.
- Multi-language support for global enterprise Lync deployments.
- Saves on operational costs by reducing the number of operator calls.

Reader's Notes

2   Installing Auto Attendant in the Network

Auto Attendant is a pure software application running on a Windows 2008 R2 Server. As such, it can be installed on the customer's dedicated server or on top of the AudioCodes SBA server.

> ⚠️ **Note:** When installed on an SBA sever, the Auto Attendant application runs on a separate operating system using Hyper-V virtual machine.
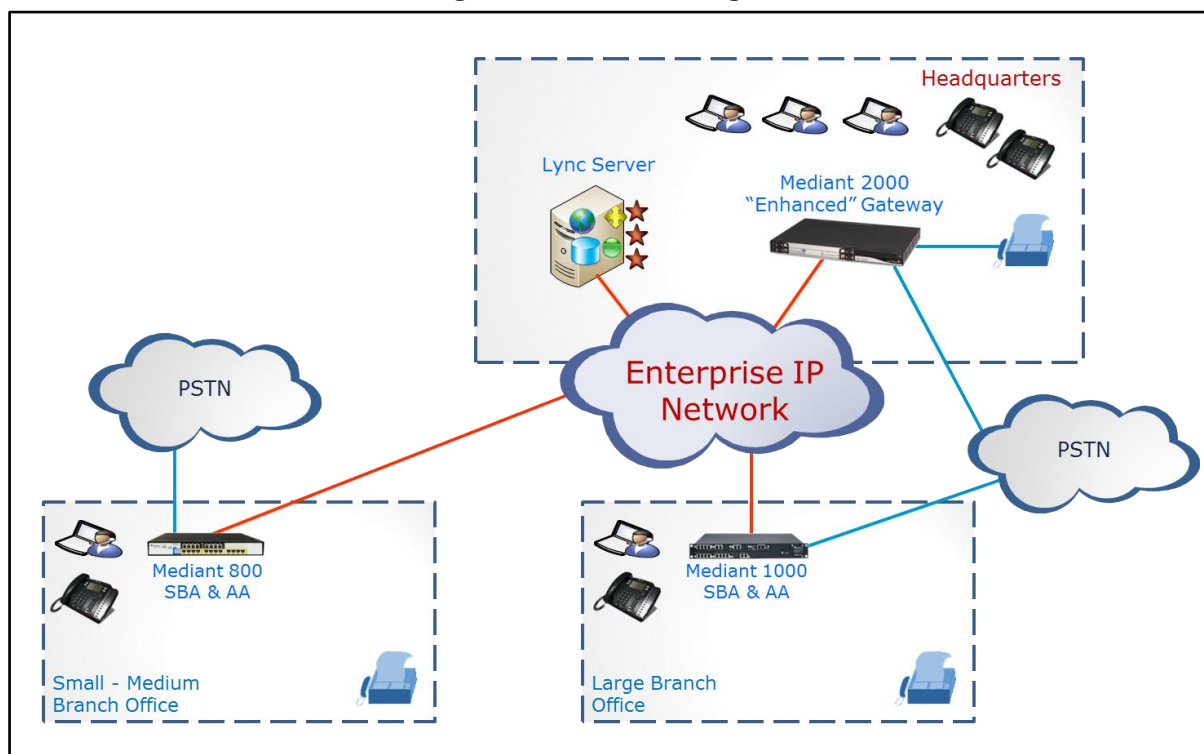
The Auto Attendant application is built on top of the Microsoft Unified Communications Managed API (UCMA) and is supported for Lync 2010 and Lync 2013.

The diagram below shows an enterprise with a Headquarters and two Branch Offices.

The enterprise's Headquarters includes the Lync data center.

Each Branch Office uses a local AudioCodes Gateway with SBA and Auto Attendant (AA) application.

Figure 2-1: Network Diagram

> ⚠️ **Note:**
>
> - AudioCodes' Gateway is used for local PSTN or SIP trunk connectivity.
> - SBAs are used for local survivability service for Lync clients.
> - The Auto Attendant application is used as the main Branch Office's Auto Attendant IVR and ACD tool.
> - The above architecture insures that the local Branch Office will fully operate, receive incoming calls, and automatically distribute calls according to branch IVR settings.

Reader's Notes

3   IVR and ACD Support

Auto Attendant supports two main applications:

- IVR
- ACD

3.1.1   IVR Features and Capabilities

Auto Attendant features IVR that allows automatic call answering and distribution to different company services such as operators, users, ACD, team call groups, etc.

IVR supports the following features and capabilities:

- Multiple-access number for multiple IVR menus.
- Multi-Level IVR menus.
- IVR Actions:
  - Automatically plays voice prompts and announcements to callers.
  - Transfers calls to SIP URI or Tel URI.
  - Menu select (DTMF choice, speech, on error settings)
  - Sends calls to ACD.
  - Changing IVR settings.
  - Transfer to the operator.
  - Transfer to an external number.
  - Transfer to Lync Team call groups.
  - Collect and Dial mode - the caller is prompted to enter the extension number.
  - Disconnect call.
- Schedules-based IVR for working hours, non-working hours, holidays and vacations.
- Plays prompts files or play announcements via Text To Speech (TTS).
- Different Music on Hold (MOH) per IVR menu.
- Web-based Admin tool for managing all AA IVR settings and menus.
- Multi-Language support - change menu language and/or different menu per language.
- IVR Configuration Hierarchy (System, IVR, Node)

3.1.2   ACD Features and Capabilities

Auto Attendant features ACD that allows automatically answering incoming calls and routing them to a specific agent according to caller interaction, ACD routing settings, and agent availability.

ACD supports the following features and capabilities:

- Agents
  - Lync user (e.g., Agent@company.com)
  - External numbers (e.g., Tel:+97231234567)
- Groups
  - Supported ring methods: Serial, Parallel, Round Robin, Longest Idle
  - Route calls based on Agents availability (Online, Inactive)
- Queues
  - Manage Queue Timeout settings and Timeout actions (e.g., disconnect, send to Voicemail, send to another Queue)

- Manage Queue overflow and overflow actions (e.g., disconnect, send to Voicemail, send to another Queue)
- Supports different prompt announcement and MOH per Queue
- Different behavior for working hours and Holidays
- A Queue may send calls to one or more groups

3.2 Call Flow

The figure below shows the typical flow of a call coming in from the PSTN to a Lync agent controlled by the Auto Attendant application.

Figure 3-1: Call Flow
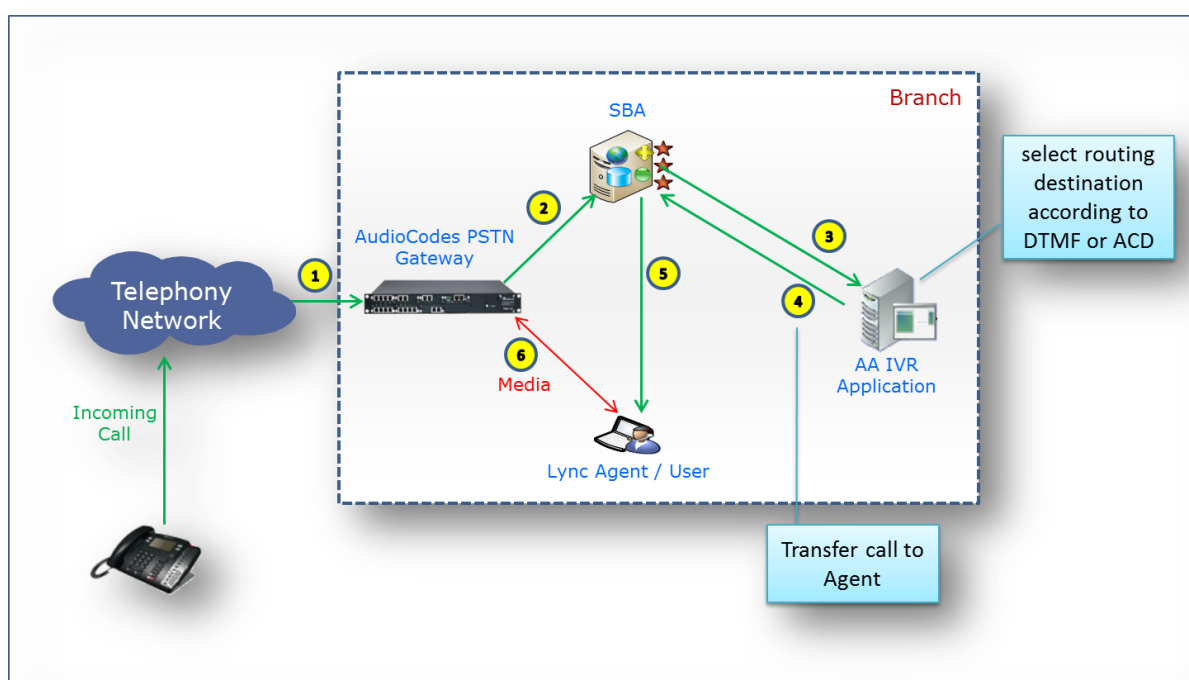
Refer to the figure above.

1	A caller dials the enterprise's leading number
2	The Gateway sends the call to the SBA.
3	The SBA identifies the number as an Auto Attendant number and sends the call to the Auto Attendant application.
4	The Auto Attendant application answers the call and - according to IVR settings and caller interactions - the call is transferred to a Lync user or agent.
5	The SBA sends the call to the Lync user/agent.
6	The call is established and a Media path is established between the Gateway and the Lync client.

3.3   Defining a Lync Application End Point

Auto Attendant is a Microsoft Unified Communications Managed API (UCMA) application supported for Lync 2010 and Lync 2013.

Auto Attendant is installed as a Trusted Application in the Lync or SBA environment.

Each Auto Attendant IVR node is registered to a Lync Application End Point.

Example:

SIP URI: +972124000@company.com -> Main menu IVR

SIP URI: +972125000@company.com -> Sales menu IVR

Defining an Application End Point is performed through the **Auto Attendant Application End Point** tool (i.e., Windows PowerShell Scripting is not required).

Figure 3-2: Defining a Lync Application End Point in the AA End Point Tool

Reader's Notes

4   Server Requirements

Auto Attendant requires a Windows 2008 R2 server. Auto Attendant can be installed:

- on a dedicated server
- on the AudioCodes Mediant 1000 SBA server -or-
- on the Mediant 800 SBA server

Minimum server specifications for running the Auto Attendant application:

- 2 Cores 2.4GHz with 2G RAM
- 120G hard disk or higher
- Must support running Hyper-V virtual machine

Reader's Notes
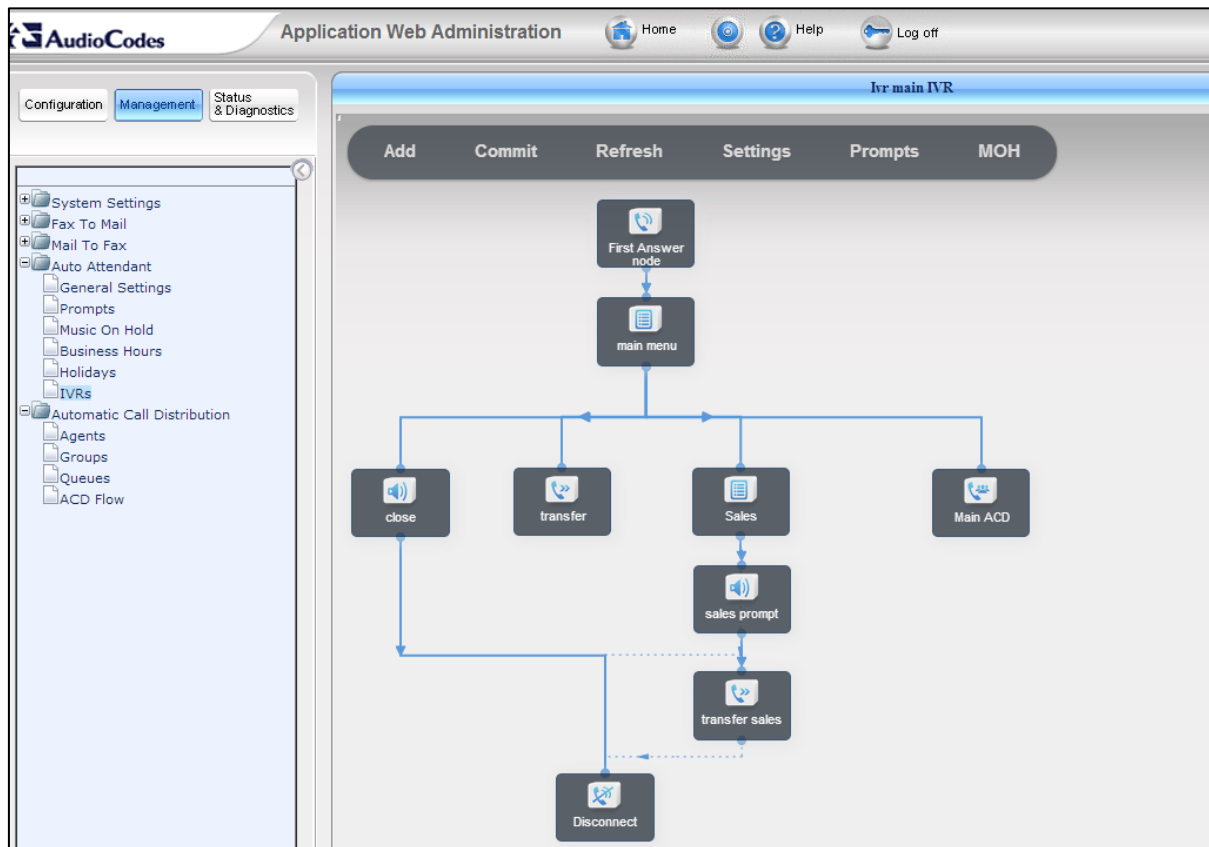
5   Managing Auto Attendant

Auto Attendant is managed using a Web interface that allows enterprise network administrators to manage General Settings such as Authentication settings, License management, Backup and Restore procedures, etc.

The Auto Attendant Web interface supports graphical view and tools that allow administrators to define and manage the enterprise's IVR menu trees and ACD definitions.

The Auto Attendant Web interface gives enterprise network administrators an easy way to manage IVR and ACD settings and to manage prompts, announcements, Music on Hold, company working hours, etc.

The figure below shows an example of an IVR menu tree defined in the Auto Attendant Web interface.

Figure 5-1: Auto Attendant Web Interface – IVR Menu Tree

Reader's Notes

6   Licensing

Auto Attendant is licensed per the number of concurrent calls the application is required to handle. At any time, customers can purchase an additional license to increase the number of concurrent calls supported.

Each call handled by the Auto Attendant IVR or ACD is counted as an Auto Attendant call. A call transferred to a user or to another destination is no longer counted as an Auto Attendant call.

Auto Attendant supports activating a trial license that allows a limited number of concurrent calls for a limited time.

AudioCodes

Auto Attendant
for Microsoft Lync