AudioCodes Voice.AI
Voca - Agile Conversational IVR

Voca - AudioCodes Agile Conversational IVR enables businesses to seamlessly automate customer and internal calling with simple voice requests.

Voca's voice recognition solutions, combined with AudioCodes industry-leading telephony & voice networking expertise, offers enterprise-class Voice.AI technology that instantly upgrades call journeys eliminating the need for complex DTMF menus.

Voca is designed to understand and master custom organizational vocabularies – such as contact names, departments, job titles, product names, branches and services.

Whether an enterprise, SMB, or a System Integrator, Voca is designed to cater to all types of organizations from various business verticals: Healthcare, Entertainment, Education, Municipalities, Telecommunications, Retail, Industry manufacturers, Banking, Finance and more.

Vast Mediation Capabilities and Proven Interoperability

- Full support in German, English-US, Spanish-US, Spanish-ES and Spanish-MX (with Central and Latin America dialects coverage) - with a wide range coverage of dialects and accents representing everyday regional population and speakers

- Available as cloud or on-premise deployment (per customer's demand): Cloud deployment over AWS or private cloud; On-premise deployment over AudioCodes SBCs/Gateways or virtual machines

- Seamless integration with any organizational PBX (IP or Analog) or IVR

- Automatic contact information or department list synchronization via Active Directory or CSV

Deployment Options
Voca can be deployed on a private cloud, public cloud (over AWS), or on-premises. For any deployment type, the solutions utilize any of the various combinations of choice between AudioCodes SBCs with or without dedicated application servers, as well as Virtual SBC - for providing seamless telephony interfacing.

Integrated AudioCodes SBC/Gateway with Proven Interoperability
Voca on-premise solution deployments are based on either Virtual Machine deployment, or as HW deployment using AudioCodes dedicated SBCs/GWs, such as the AudioCodes Mediant 800, providing instant, secured connectivity to any organizational PBX (analog/legacy or IP-PBX) and extended interoperability for various industry-standards and leading IP-PBXs widely available in the market.

Multi-Tenancy
Voca solutions are developed with a multi-tenant capability, providing multiple levels of administration and control from solution-providers to tenants (where a 'tenant' stands for an end-customer).

Multi-Tenancy is available for all Voca deployment options.

High Availability
Voca provides Active-Active High-Availability for both on-premise and cloud-based deployments. Coupled with AudioCodes SBCs/GWs, customers can enjoy complete interruption-free service when experiencing hardware or network connectivity issues.

Scalability
Voca solutions are built in a multi-server and multi-client architecture, enabling easy scaling of solution deployments from single to multiple channels, effectively supporting larger call traffic volumes.

Built-in Integration with Microsoft Teams
Voca solutions can seamlessly integrate with Microsoft Teams, powering any Teams or hybrid-Teams environments with voice-driven capabilities for seamless calling.

Whether an internal user with limited calling capabilities (i.e. E3 license) or an external caller, Voca connected to Teams automates call transfer with voice recognition, making calling through Teams easy like never before!

Voca - Agile Conversational IVR

AI-based Voice Recognition Engine with Custom Vocabulary Expertise

Voca utilizes a fully self-developed, AI-based Automatic Speech Recognition (ASR) Engine that provides more than 90% accuracy in voice recognition, with a wide coverage of dialects, accents and industry-related jargons used by everyday callers. By using AudioCodes Voca ASR Engine, Voca solutions provide high flexibility, full customization and rapid optimization for any industry or customer-specific grammar needs.

Enhanced Calling Assistant Solutions

Voca includes integrated DTMF and voice recognition capabilities, allowing voice-driven inbound and outbound call flows supporting contact names, departments, branches, job titles or any other organizational service.

Voca call flows are easily managed using a simple Web Management Interface, the solution to be quickly adapted to customer's requirements and needs.

Automatic Call Hunting

As users are trying to reach contacts, departments or services under a 'moving destination state', reachable on different devices or locations, depending on the time of day - Voca allows to customize the service behavior in case the desired contact person is busy or unavailable during a call transfer.

Voca provides call hunting functionality which automatically connects to the next destination number in case the remote destination is busy or not answering. This process is repeated until the call is answered or alternatively perform a customized behavior when the destination is not reachable.

Web Management Interface

Voca Web Management Interface provides end-customers and service-providers with easy access to manage, monitor and configure their AudioCodes voice recognition solutions. The Web Management Interface enables easy customization of the Voca solutions with minimal training, and includes a flexible call flow builder for easy, real-time tailoring and manipulation of spoken terms, solution behavior and user flows.
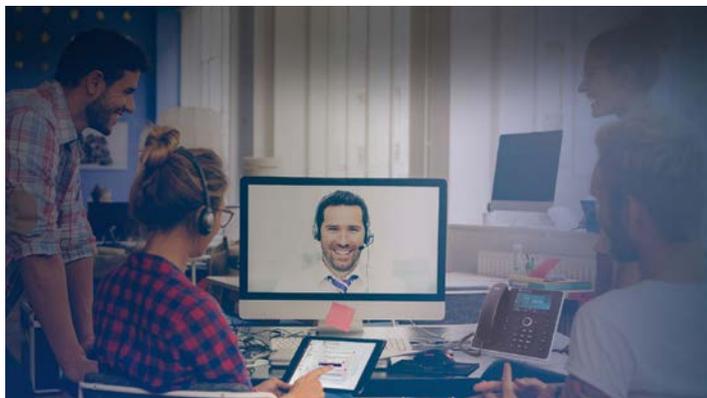
Real Time Analytics Reporting

The Voca Web Management Interface includes in-depth call traffic reports and analytics such as: overall performance, call details records (CDRs), on-demand playback of caller requests, calling peak times, call duration, transfer rates, peak concurrent channels usage and daily/hourly calling statistics.

This usage data allows linguistic and performance analysis for ongoing optimization, as well as providing business intelligence insights regarding the organization's incoming and/or internal call traffic.
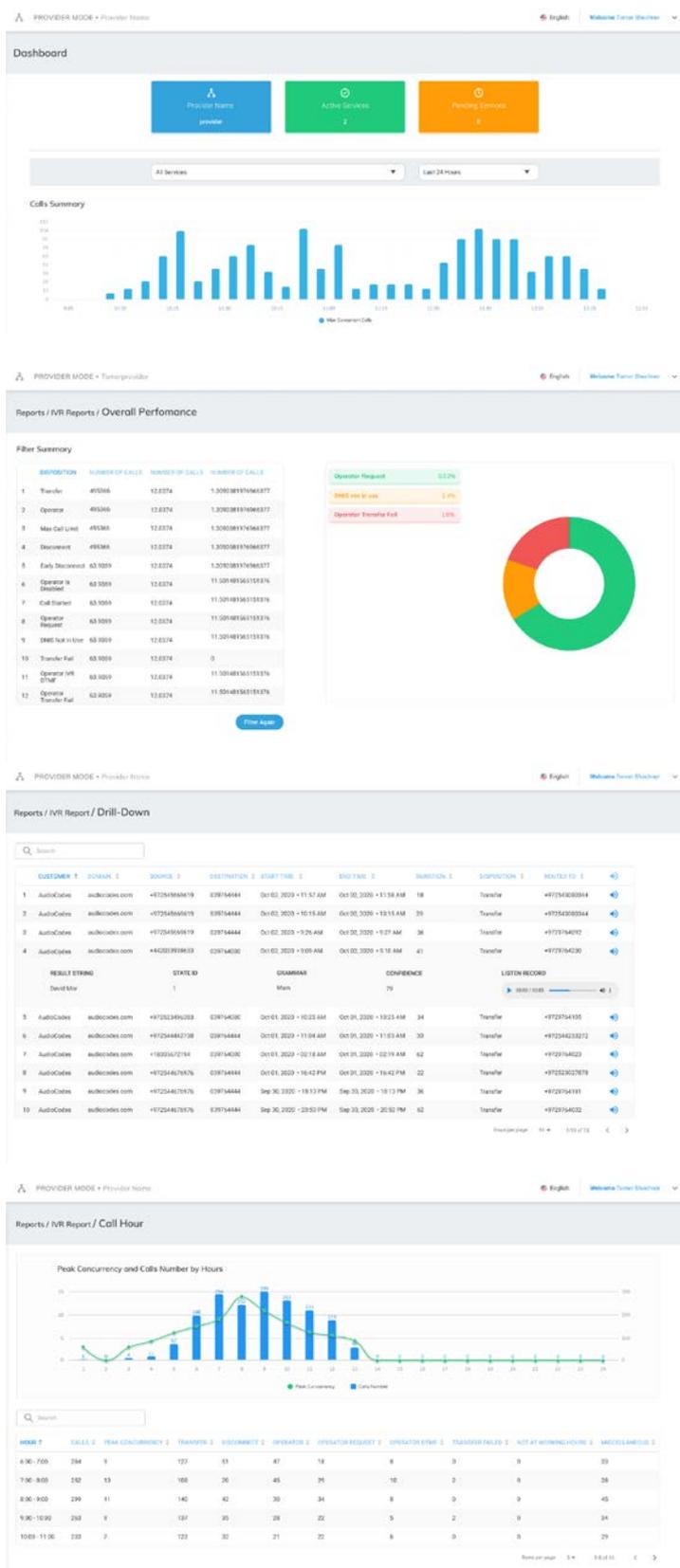
Contact Information Database Synchronization

Voca supports secured periodic synchronization of the organizational contact or department list from Active Directory, as well as importing lists from an external CSV file via the Voca Web Management Interface. In use-cases where continuous contact synchronization is needed, a scheduler fetching service is available for retrieving the most recent contact or department data.

Guided-NLU: A Powerful Customization Engine For Spoken Terms and Everyday Vocabulary

Voca Voice Recognition technology includes built-in, industry specific spoken jargon support using its powerful Guided-NLU (Guided Natural Language Understanding) engine. Solution administrators can easily create multiple speech recognition lists for different enterprise categories and use-cases, configure their desired behavior, add alternate names, synonyms & acronyms, as well as nicknames or aliases.

The Guided-NLU capability allows the Voca AI-based Voice Recognition Engine to recognize unique vocabulary terms such as product and model names, job titles, department names and any other jargon, used by service-specific everyday callers.

For specific industries, Voca provides a rich built-in glossary and grammars for various enterprise domain terms that are part of an industry-specific or use-case-specific jargon.

Analytical and Linguistic Tools

Voca incorporates analytical and linguistic tools that provide usage and activity insights, including voice recognition performance. By using these tools, AudioCodes linguistic analysts can rapidly optimize the performance of the voice recognition performance, based on everyday language trends.

VocaASR

VocaASR is an Automatic Speech Recognition (ASR), AI-based Engine built for direct integration with IVR, call-center platforms and Windows servers, providing solid Voice Recognition technology which can be integrated with 3rd-party platforms and services.

This Voice Recognition Engine offers immediate, seamless enhancement of 3rd-party applications with the Voca enterprise-class voice recognition capabilities, supporting German, English-US, Spanish-US, Spanish-ES and Spanish-MX (with Central and Latin America dialects coverage) and readily available over cloud, or on-premises for secured deployments.

Security & Data Protection

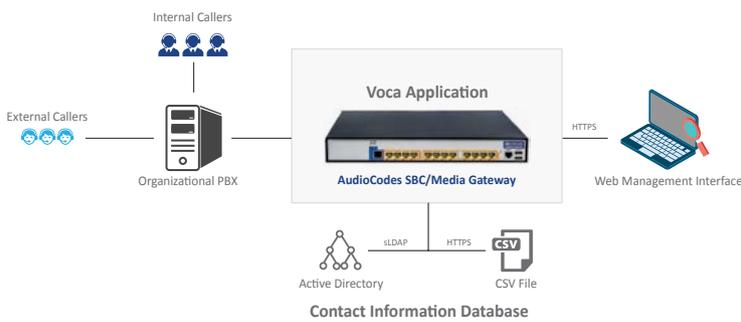ISO9001, ISO14001, ETSI, CE, OHSAS 18001 and TUVRheinland

Voca - Agile Conversational IVR

Connectivity, Management and Call Flow Specifications (On-Premise, Cloud)
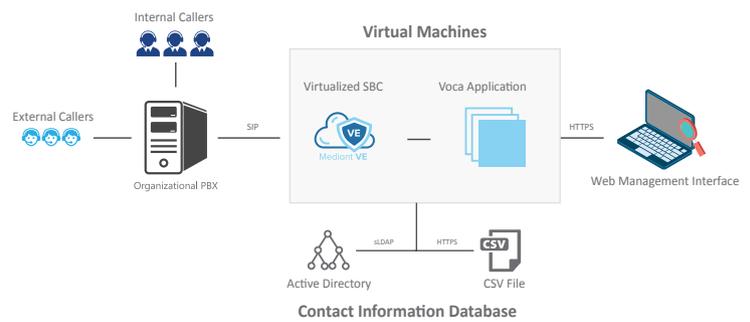
VOCA ON-PREMISE

CONNECTIVITY AND MANAGEMENT

- The customer's PBX can be seamlessly connected to the Voca server through an analog (FXO) or SIP trunk interface
- Voca can fetch any organizational contact list from Active Directory or from a CSV file

Voca On-Premise Deployment (using AudioCodes SBC/Media Gateway)   Voca On-Premise Deployment (using Virtual Machines)


SIP CALL FLOW

- The call arrives to the PBX on the Voca DID
- The PBX redirects the call to the Voca server
- Voca communicates with the caller and then sends the call back to the PBX with the required destination information (SIP REFER)
- The PBX transfers the call to the desired destination
- Voca disconnects the call with the PBX

Voca's On-Premise Call Flow
(using AudioCodes Virtual Machines or Mediant 800 SBC/Gateway)
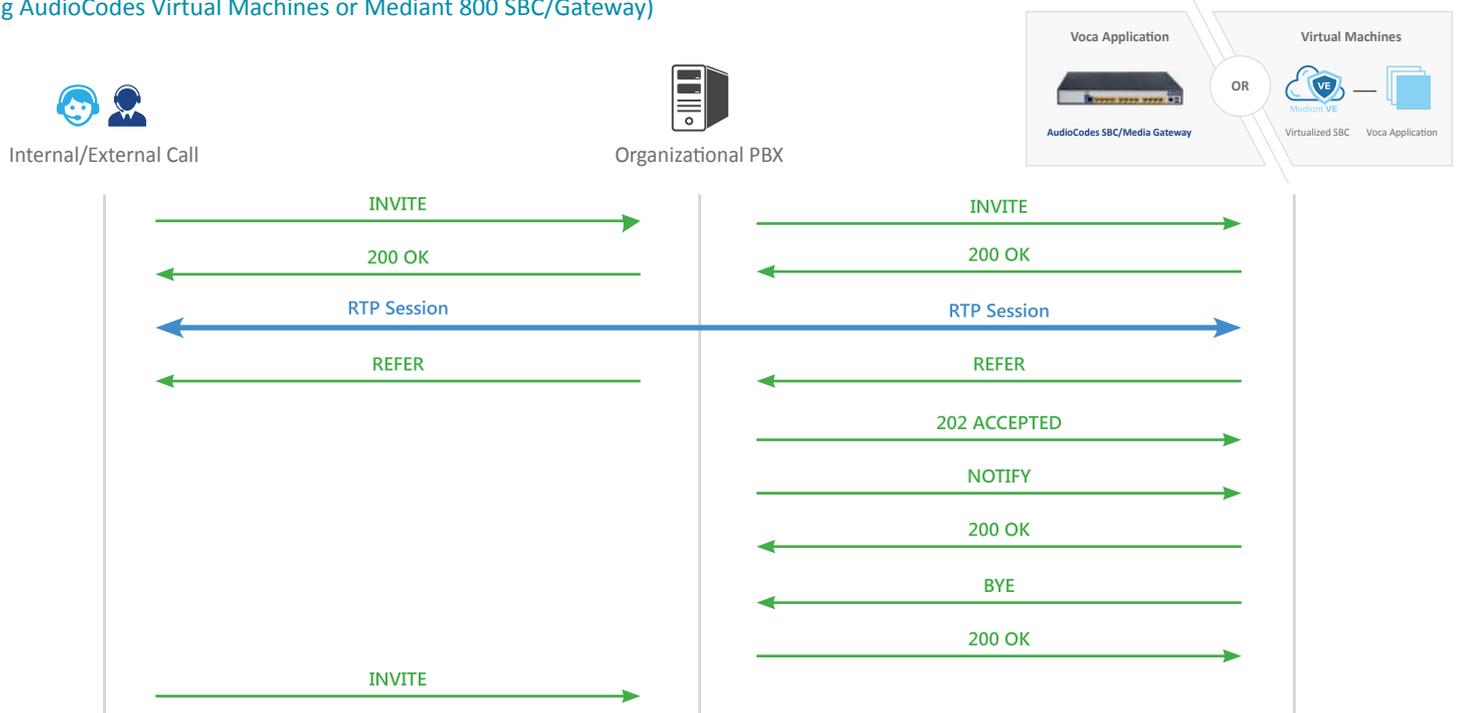
VOCA CLOUD

CONNECTIVITY AND MANAGEMENT

- The customer's PBX is connected to AudioCodes or any other SBC/Gateway through an analog (FXO) or SIP trunk interface
- The SBC/Gateway allows secured access from the customer premises to the Voca cloud
- A sync application (contact list synchronization service) is installed on the customer's site in order to retrieve the organizational contact list from Active Directory or from a CSV file, and delivers it to the Voca cloud server in a secured manner

Voca Cloud (AWS) Deployment
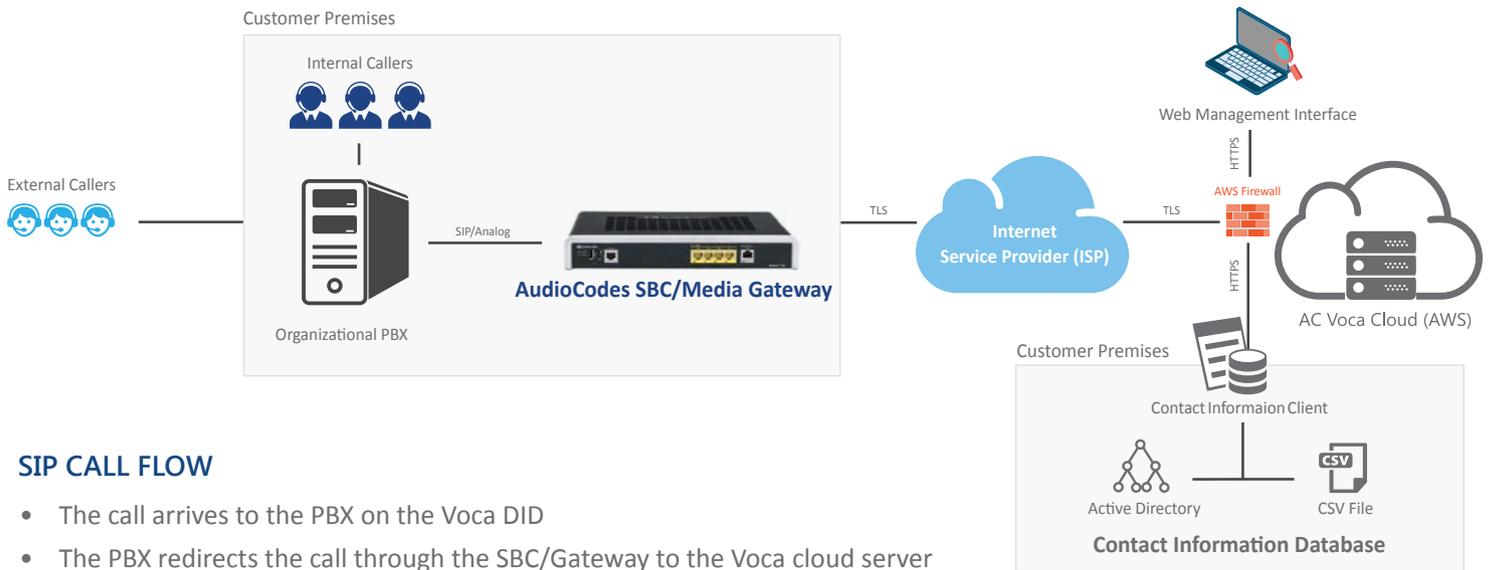
SIP CALL FLOW

- The call arrives to the PBX on the Voca DID
- The PBX redirects the call through the SBC/Gateway to the Voca cloud server
- The SBC communicates over SIP with the Voca application
- Voca communicates with the caller and then sends the call back to the PBX through the SBC/Gateway with the required destination information (SIP REFER)
- The PBX transfers the call to the desired destination
- Voca disconnects the call with the PBX

Voca Cloud (AWS) Call Flow
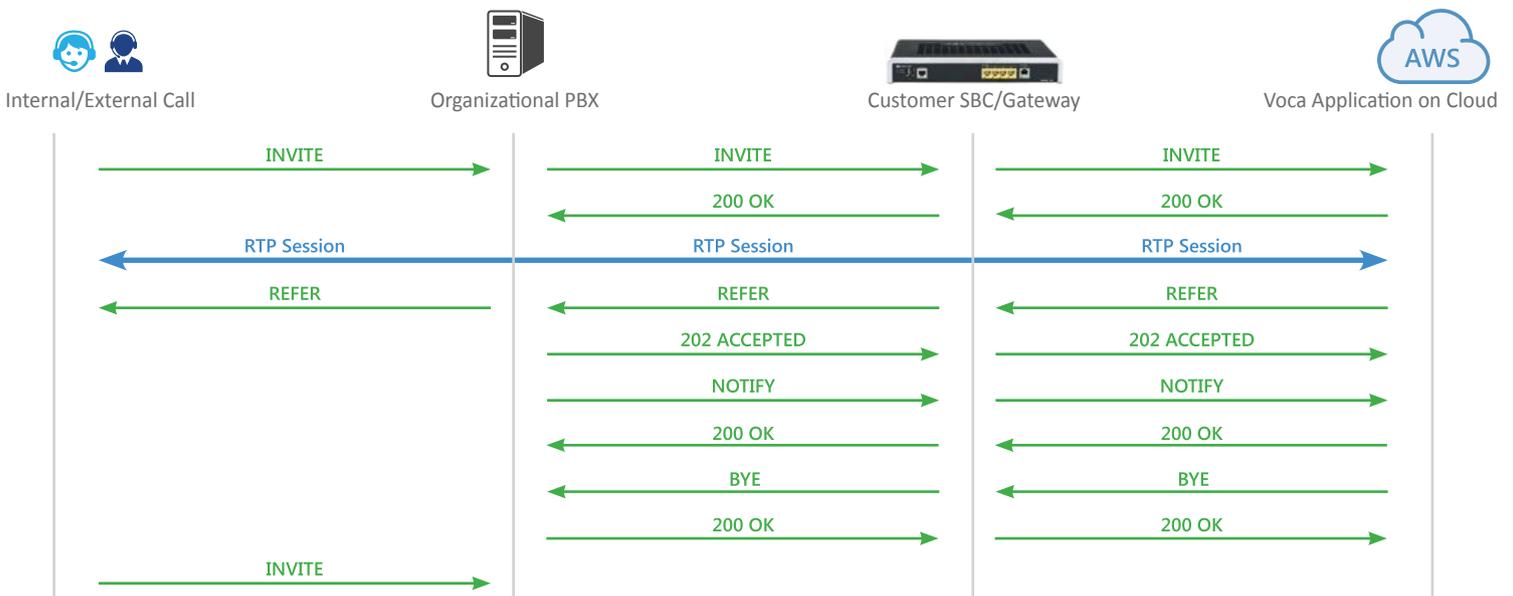
Voca Application Architecture
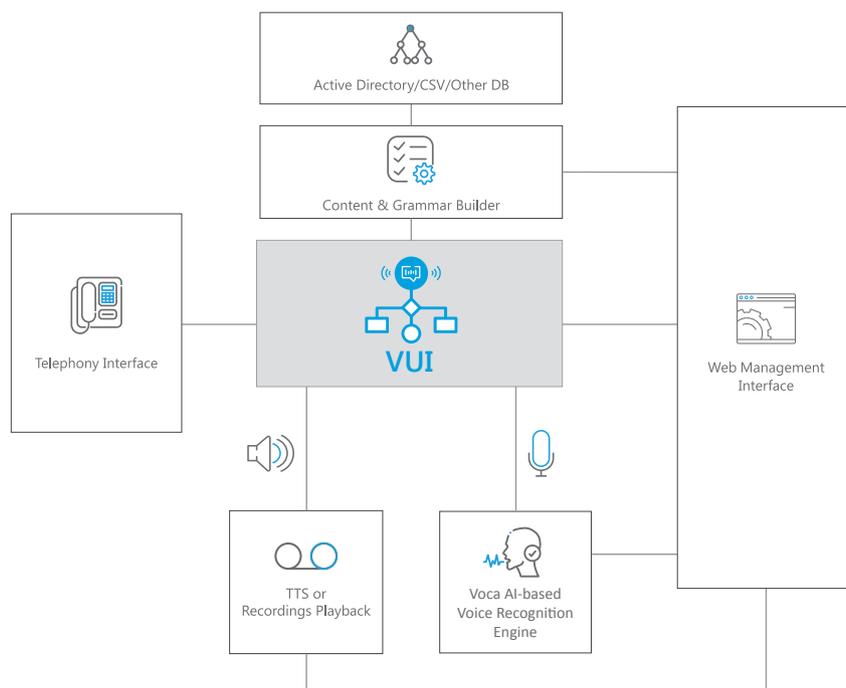
Voca Application Specifications

Organizational Contact List Size	
Cloud	Up to 17,000 entries per tenant (for larger deployments, please contact your AudioCodes sales or technical representative)
On-Premises	Up to 17,000 entries per tenant
Security	
Contact List Synchronization	Access to Active Directory via LDAP/sLDAP; Database update over HTTPS
Signaling and Media Transport	Secured & encrypted using TLS/SRTP
Web Management Interface	Secured over HTTPs
Connectivity to AWS Cloud	Secured and encrypted over HTTPS
General Features and Services	
Voice Recognition Engine Languages	Support for German, English-US, Spanish-US, Spanish-ES and Spanish-MX (with Central and Latin America dialects coverage)
Text to Speech Languages (TTS)	Support for English, German and Spanish
Voice Prompts	Available built-in system prompts with an option to upload prompts for customized and professional recordings
Dialing Plan Manipulation	Supported for when there is a need to manipulate outgoing dialed numbers
Time-based Services	Flexible service configuration options for different solution behavior(s) during non-working hours or other time-schemes
Time Zone Support	Allows different time zone settings
Privacy Rules	Different flow and menu behavior for various caller groups
Web Services and REST API Support	For easy integration with external, 3rd party enterprise systems and applications
Remote Access	
The system can be accessed remotely for configuration, monitoring and maintenance	

AudioCodes' Mediant 800 Main Specifications

Operating System
Microsoft Windows Server 2016

Networking Interface
4 ports 10/100/1000Base-T

Telephony Interface
8 analog FXO ports using RJ-11 connectors

Control Protocols
SIP-TCP, SIP-UDP, SIP-TLS

Security for the Session Border Controller (SBC)
SIP Header conversion SIP Normalization Survivability
IP-to-IP routing translations of various SIP transport types: UDP, TCP, TLS
Translation of RTP, SRTP
Support SIP trunk with multi-ITSP (Registrations to ITSPs is invoked independently) Topology hiding
Call Admission Control
Call Black/White list

OSN Server Platform	
Application	Voca software
CPU	Core i7 4 Core Hyperthreaded 2.7 Ghz
Memory	32GB RAM
Storage	512GB SSD

Hardware Specifications	
Power Supply	Single, universal 90-260 V AC
Physical Dimensions	320mm x 345mm x 1U

Regulatory Compliance	
Safety and EMC Standards	UL60950-1, EN60950-1, CB certification (TÜV Rheinland) including National deviations EN55024, EN55022 Class A, EN61000-3-2, EN61000-3-3, EN300 386, FCC 47 Part 15 Class A
Physical Dimensions	TIA/EIA-IS-968, ETSI ES 203 021 (FXO Interface)

Hardware Specifications for Voca on Virtual Machines

	On-Prem Low Density VM Specifications	On-Prem High Density VM Specifications
OS	Windows Server 2016	Windows Server 2016
CPU	Intel Core i7 @ 2.7GHz, 4 Cores (dedicate all cores, enable hyperthreading)	Intel(R) Xeon(R) Gold 6126 CPU @ 2.6GHz with 2 CPUs and 12 Cores each (24 physical Cores) (dedicate all cores, enable hyperthreading)
RAM	32GB	48GB
Storage	256GB SSD	256GB SSD
NIC	1GB Ethernet card	1GB Ethernet Card
Channel Capacity	• For German language - up to 6 concurrent channels per machine • For English language - up to 2 concurrent channels per machine • For Spanish language - up to 30 concurrent channels per machine	• For German language - up to 30 concurrent channels per machine

Mixed Languages and Additional Voca Channels

For expanded scalability of concurrent Voca channels, additional machines may be used on cloud or on-premise.
Please contact your AudioCodes Sales or Technical point of contact for more information.

Note: In cases of mixed languages under a single tenant, the service is limited by the lowest number of supported channels per language.

Hardware Specifications for AudioCodes Virtualized SBC

Detailed hardware specifications for the virtualized SBC can be found in the data sheet on the AudioCodes SBC Web page.
https://www.audiocodes.com/solutions-products/products/session-border-controllers-sbcs/mediant-vese

About AudioCodes Voice.AI

AudioCodes Voice.AI business unit focuses on voice, the most fundamental form of human communication, to help enterprises automate workspace collaboration and customer experience, by leveraging state-of-the-art Conversational Voice technologies.

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