



A **SIPREC**(IETF Standard) based Real-time Media Streaming Solution.

In today's data driven business environments, real-time access to voice data is no longer optional - it's a competitive advantage. This enables VoiceAI vendors to deliver real time agent assist solutions that boost process efficiency, improve decision-making, and elevate the overall customer experience.

Leveraging the industry-standard **SIPREC** protocol, **IraTap** provides the critical link to stream live media to GenAI platforms. The architecture enables businesses and **VoiceAI** vendors to securely listen to and analyze every conversation in real-time, delivering **actionable insights** the moment they occur.

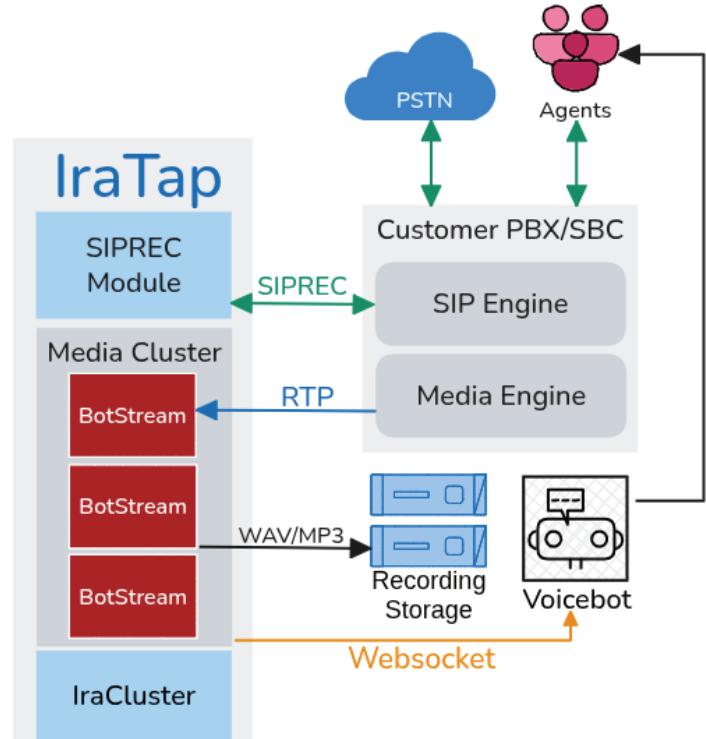
In a traditional agent-based contact center setup, accessing live media without being part of the call path is a two-step process. First, the system integrates with the Session Border Controller (SBC) using the SIPREC protocol, originally designed for call recording. The captured media is then forwarded to a **BotStream gateway**, which converts SIP traffic into **WebSocket** streams for seamless consumption by AI-driven applications.

By streaming audio over secure **WebSocket** connections, **IraTap** enables seamless integration with AI-powered platforms for **live transcription**, **sentiment analysis**, **agent assist**, **intelligent automation**, and **real-time fraud and risk detection**. This eliminates post-call delays, empowering enterprises to make faster, smarter decisions while improving both **agent productivity** and **customer experience**.

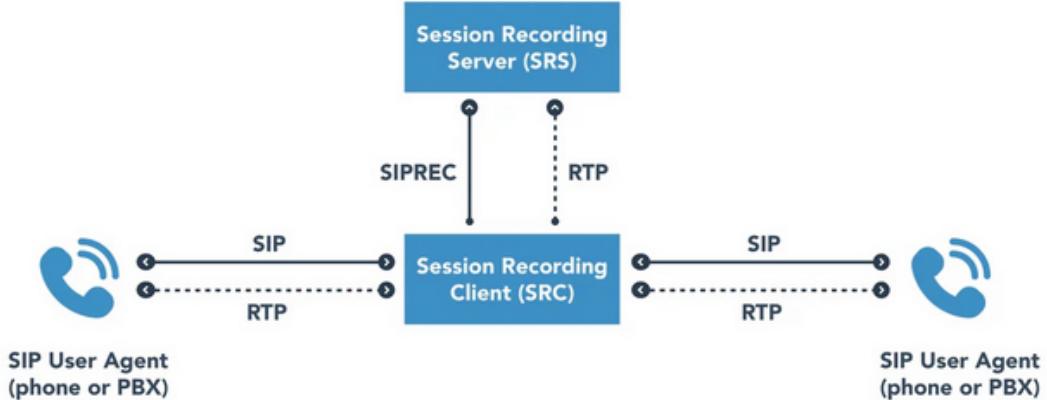
All essential call metadata, including caller and callee information exchanged during SIP negotiation, is seamlessly delivered to applications over **WebSocket**, empowering next generation **VoiceAI** and **analytics** use cases.

## HIGHLIGHTS

- SIPREC(IETF Standard) based solution.
- Integrate with any PBX.
- Deploy anywhere.
- Scalable and secure system.
- simultaneous real-time streaming and recording.
- Stream sessions in real time to VoiceAI applications
- Real-time agent assist.

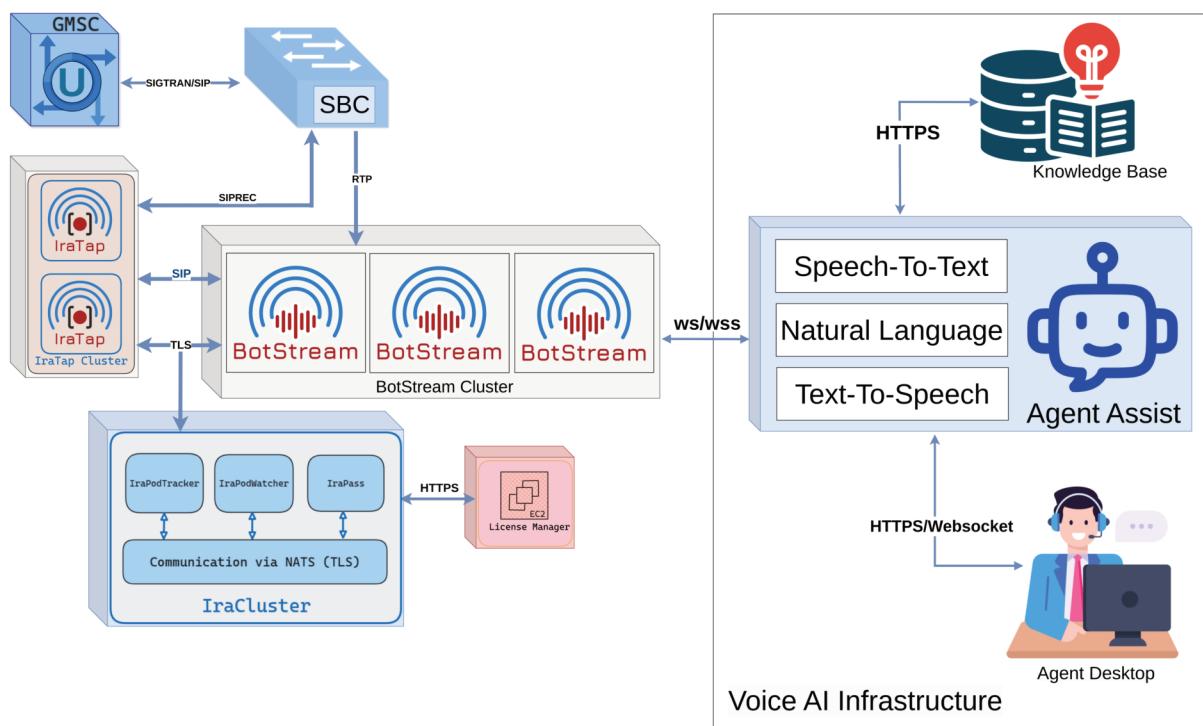


## SIPREC



SBCs act as **Session Recording clients(SRCs)** and IraTap is one of the **Session Recording Server(SRS)**. The SRC and SRS act as SIP User Agents (UAs). As the call is initiated, SRC invites SRS to record the targeted extension via SIP signalling. Once the invite is accepted by SRS, SRC forks the call audio to SRS. There can be multiple SRSs in a deployment. Media streams from SBC (SRCs) to IraTap(SRS) are unidirectional because only SBC sends recorded data to the recording server; the recording server does not send any media to SBC.

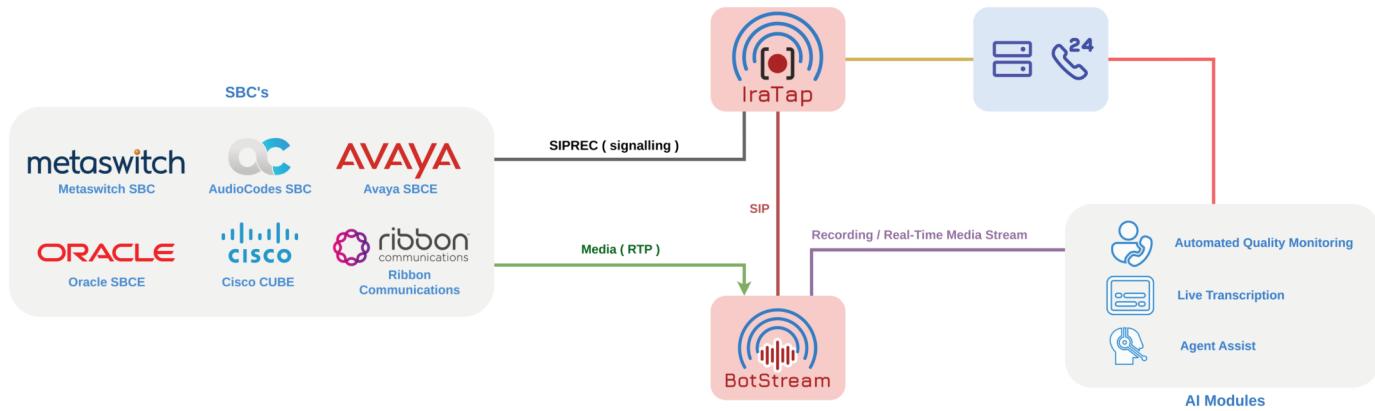
## IraTap Agent Assist



Upon new call reception, the SBC automatically engages IraTap using SIPREC. IraTap handles the standard negotiation and immediately initiates SIP signaling with **BotStream**. The result is a secure, direct stream: BotStream efficiently grabs the **RTP media** from the SBC and delivers it to your VoiceAI agent solutions over a secure WebSocket connection, ensuring real-time accuracy and the lowest possible latency for your VoiceAI applications.

At the same time, its **simultaneous recording** module ensures every interaction is securely captured for regulatory compliance and post-call analytics, giving businesses the best of both worlds – **instant intelligence and reliable recording**.

## ■ Integration with any PBX

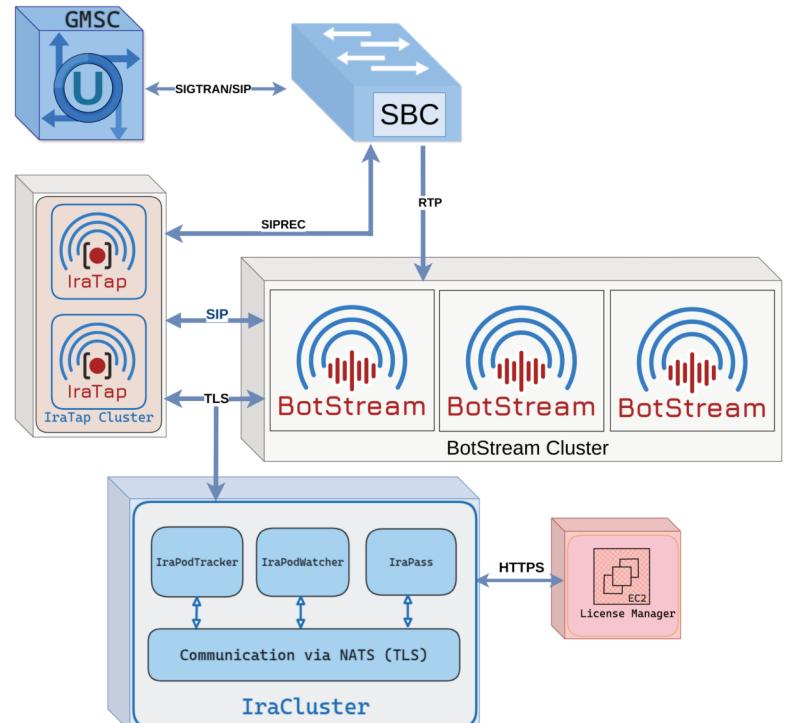


**SIPREC** is an IETF standard that is an open-SIP based protocol for call recording. IraTap supports both Inbound and outbound voice traffic and can integrate with any SBC that supports SIPREC with the popular ones being AudioCodes Mediant, Cisco CUBE, Avaya SBCE, Oracle OCSBC, Ribbon Communications, Sonus. The metadata for each call(caller, callee) that are available during SIP negotiation can be passed on to the applications over websocket.

## ■ CISCO(CUBE) & Avaya Integration

IraTap seamlessly integrates with **Cisco CUBE** for SIPREC-based call recording and real-time streaming.

- Incoming calls from the SIP trunk are handled by Cisco CUBE.
- Media between endpoints flows through CUBE.
- CUBE establishes a new SIP session with IraTap (SRS).
- CUBE then forks the **RTP media stream** to **BotStream** for real-time streaming and recording.



A SIPREC-based media recording and streaming solution with **Avaya** is enabled through the following components:

- Avaya SBC as the SIP Recording Client (SRC)
- Application Enablement Services for CTI integration
- Contact Center Application Servers such as Avaya Aura® Contact Center and Call Center Elite
- Media anchor points such as Avaya Aura® Media Server or Communication Manager Media Gateway

## ■ Deploy a Secure Flexible System.

IraTap is engineered for modern infrastructure, offering flexible deployment on both **physical and virtual servers**. With **on-demand scaling**, it instantly adapts to any growth in your call volume. Crucially, IraTap supports **High Availability (HA)**, guaranteeing near-zero downtime for your critical VoiceAI operations. For internal communications, IraTap utilizes NATS as its messaging platform, ensuring that data is propagated **securely over TLS** connections, which enhances both security and flexibility.

## Typical Use Cases

### ■ Real-time Streaming Solution for Agent Desktops

IraTap ensures the call's RTP audio stream is instantly forked from the SBC and delivered to the VoiceAI Infra with minimal latency via the secure WebSocket. This is critical because the SLM/LLMs must process the customer's last sentence and display an appropriate suggestion **before** the agent replies.

It provides the secure, encrypted, real-time audio stream necessary for AI/Human agents to perform instant **voice biometrics analysis** and **sentiment analysis**. If a fraudulent pattern is detected, the AI can trigger an immediate alert or an automated intervention/escalation to a specialized human agent.

### ■ Continuous AI Model Training & Data Lake Generation

Reliably captures 100% of the live call media, paired with essential call metadata, and routes it directly to a secure data lake. This provides the startup with a clean, standards-based (SIPREC-compliant) dataset for continuous training loops (MLOps), accelerating model accuracy and time-to-market.

### ■ Conclusion

IraTap redefines real-time media streaming without being in the call path, offering a PBX-agnostic, SIPREC-based architecture that delivers unmatched flexibility, scalability, and security across diverse communication environments. Designed for seamless integration with leading SBCs, it enables organizations to stream, record, analyze, and optimize every interaction – driving compliance, training, and real-time intelligence.

## About Us

EPCODE is a telephony middleware products company established in the year 2020. We work with ISV's to develop real-time voice applications in the AI driven customer experience domain. Our business model is tailored to the below mentioned attributes.

- Develop API based backend software products with a primary focus on system engineering.
- Expertise in developing real time voice applications with distributed architecture.
- The "Go to Market Strategy" would be "OEM partnerships" with a B2B approach, selling only to systems integrators, technology partners, and business application developers.
- Adopt proven and field-tested best-of-breed open source platforms as part of our product stack.

As a consciously chosen design strategy, our OEM products are designed based on the partner's business requirements or use cases. The EPCODE solution architects make sure that the products are optimised for specific deployment environments as prescribed by our business application partners, be it on-premise or pure cloud environments like AWS, Google or Azure cloud.



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