Solbox

Solbox Live Transcoder

Version 0.10 | Updated 2022/10 | Written by Solbox

Copyright

Copyright 2022 Solbox Inc. All rights reserved.

Since this document is the intellectual property of Solbox Co., Ltd., part or all of this document may not be reproduced, transmitted, distributed, or altered and used without the official permission of Solbox Co., Ltd. under any circumstances.

This document is provided for informational purposes only. Solbox Co., Ltd. has made every effort to verify the completeness and accuracy of the information contained in this document, but is not responsible for any errors or omissions that may occur. Therefore, the user is solely responsible for the use or results of the use of this document, and Solbox Co., Ltd. makes no warranty of any kind, either express or implied.

Certain software products referenced in this document, including the relevant URL information, are subject to, and not to comply with the applicable local and national laws of their respective owners. You are solely responsible for any consequences arising from this.

Solbox Co., Ltd. can change the contents of this document without notice.

1. Concept

1.1. Solbox Live Transcoder

As many different devices such as large smart TVs, OTT set-top boxes, smart phones, tablets, and PCs become popular, the playback environment of viewers is becoming more diverse. In addition, with the advancement of 4G/5G wireless networks, Internet media services have recently achieved tremendous growth.
There are various live media services for internet users, such as sports broadcasting, music live, online education, games, and live commerce using wired and wireless Internet.

As a result, Internet streaming service providers are faced with the task of ensuring reliable and efficient service quality to satisfy users' satisfaction in various playback environments.

Solbox Live Transcoder easily creates a video stream with optimal video resolution to playback the original online live video sent by a service provider on various end user devices and supports ADR (Additional Bit Rate) streaming to maintain maximum quality of video sources without buffering or disruption depending on the user's connection environment. It also supports ultra-low latency streaming (LL-HLS, CMAF-DASH) to minimize the delay of video transmission time and the video playback time on end user side.

We can help broadcasters, OTT services, online training, and live commerce to work with Solbox Media CDN service to open and provide high-quality, low-latency live streaming services directly to a large number of online users at a reasonable cost.
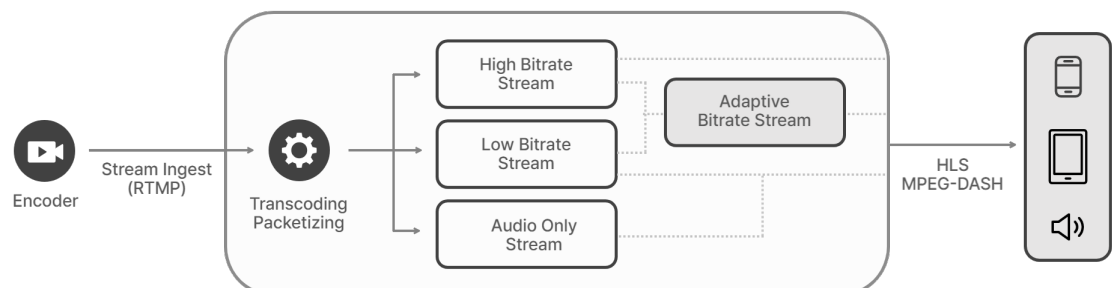

Figure 1) Solbox Live Transcoder Service Configuration Diagram

2. Benefit

- Provides services to users of different playback environments such as PC, TV, OTT set-top box, smart phone, tablet, and game terminal

- Provides high-quality live broadcasts anytime, anywhere. When interworking with Solbox Media CDN, it is possible to provide a large-scale live streaming service at a reasonable cost.

- Starts a high-quality live streaming service immediately, either directly purchasing a streaming server or at no cost without installing IDC.

- Media content providers can directly provide high-quality Internet live broadcasting services with Solbox's media conversion/transmission experts, and the content provider can focus on media content service development.

3. Key Features

- **Supports for Receiving Live Signal**

  Receives or request original live stream signals in various protocols (RTMP, RTP/UDP, MPEG-TS/RTP)

- **Live Video Packetizing**

  Converts live video source to MPEG2-TS, fMP4 format and create it as a segment file

- **Multi Output Protocol**

  Supports HTTP-based output protocols such as HLS and MPEG-DASH

- **Live Transcoding**

  Transcodes from a single source of live video into streams of different video resolutions and qualities

---

- **ABR (Adaptive Bitrate) Support**

  Supports variable bitrate (ABR) streaming to allow a video player to check the playback environment and automatically playback optimized video streams

- **Live Ultra-Low Latency Transmission**

  Supports LL-HLS (Low latency HLS) and CMAF-DASH protocols to reduce latency to seconds

- **DVR**

  Saves live stream as a VOD file

4. Applications

- Internet OTT Service
- National Broadcast Stations
- E-learning
- Sports Broadcast
- Live Commerce Broadcast
- Personal Broadcasting