

# **Cloud Streaming Services**

# **Live Video Broadcasting (LVB)**

## **Product Documentation**



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# Live Video Broadcasting (LVB)

## Overview

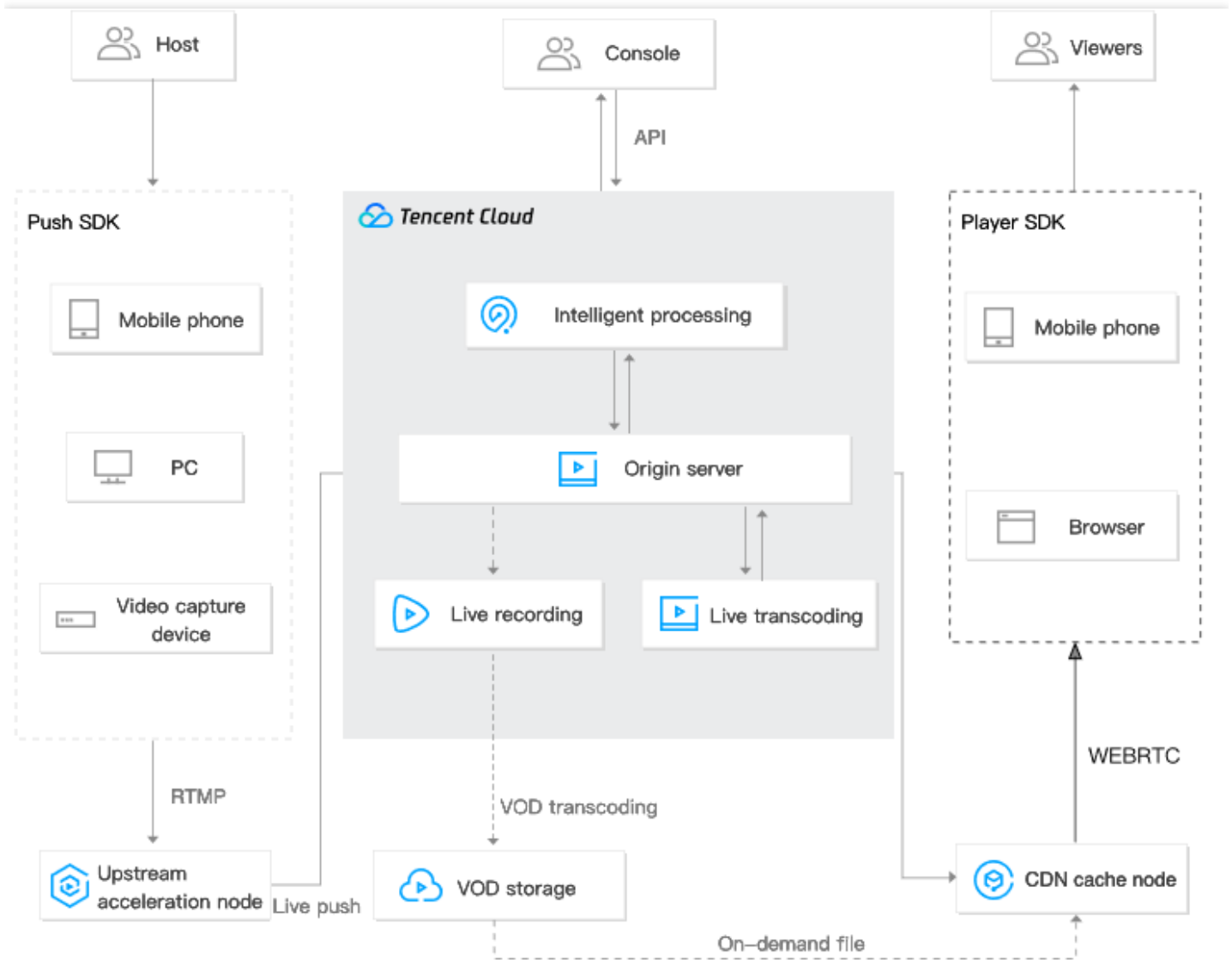
Last updated : 2021-09-02 10:50:50

Leveraging Tencent's well-established audiovisual media platforms, globally-deployed cache nodes, and leading audiovisual AI technologies, Live Video Broadcasting (LVB) provides Tencent's core live streaming capabilities to users. With professional, stable, and agile features such as live push, transcoding, distribution, and playback, LVB well meets users' requirements for ultra-low latency, ultra-high image quality, and ultra-high performance to sustain massive volumes of concurrent requests.

Note :

You can use LVB after you activate the CSS service. For more information, see [Getting Started with Live Video Broadcasting \(LVB\)](#).

## Product Architecture



## Features

### Various features

LVB supports RTMP push and HLS origin server among other ways to integrate live streaming sources. LVB provides RTMP push SDK which supports various types of devices and adaptive upstream bitrate. Moreover, LVB offers instant streaming of the first frame, low stutter rate, screen recording, and seamless resolution switching among other capabilities to meet requirements in various scenarios. It also supports playback on all clients and custom development.

### Global acceleration

Tencent Cloud boasts 1,100+ CDN cache nodes deployed with China Telecom, China Unicom and China Mobile and over a dozen small and medium ISPs such as Great Wall Broadband Network across

China. It has 1,000+ global cache nodes in more than 50 countries across North America, Europe and Southeast Asia, supporting global acceleration of live streaming business.

### **Professional video processing**

LVB provides cloud-based transcoding and processing services that can handle vast amounts of multimedia data. It can transcode audio and video files to different formats suitable for OTT services or playback on PC and mobile devices. It also offers features such as thumbnail generation, editing, porn detection, and encryption.

### **Security safeguarding and hotlink protection**

LVB uses IP blocklist/allowlist, referer blocklist/allowlist, secure HTTPS acceleration, URL encryption, as well as other live streaming encryption technologies, realizing all-round detection and protection to prevent unauthorized playback. Plus, it offers a professional digital rights management (DRM) solution to safeguard your video assets.

### **Intelligent learning**

Empowered by AI-based recognition technology, LVB can intelligently learn and analyze the contents, colors and scenes of images or videos, thus automating image recognition, speech recognition, intelligent porn detection, intelligent subtitling, and other features.




### **Statistics analysis**

Based on big data analysis covering different scenarios of various industries, LVB enables real-time control of push quality and identification of playback issues. It monitors metrics such as bandwidth, traffic, requests, and concurrent connections in real time and provides detailed statistical results to help with business expansion.

## Free Demo

You can use the demo to try out LVB features.

WeChat	iOS	Android
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WeChat	iOS	Android
 A circular QR code with a blue Tencent Cloud logo in the center and a green WeChat logo in the bottom right corner.	 A square QR code with a teal play button icon in the center.	 A square QR code with a teal play button icon in the center.

## Pricing

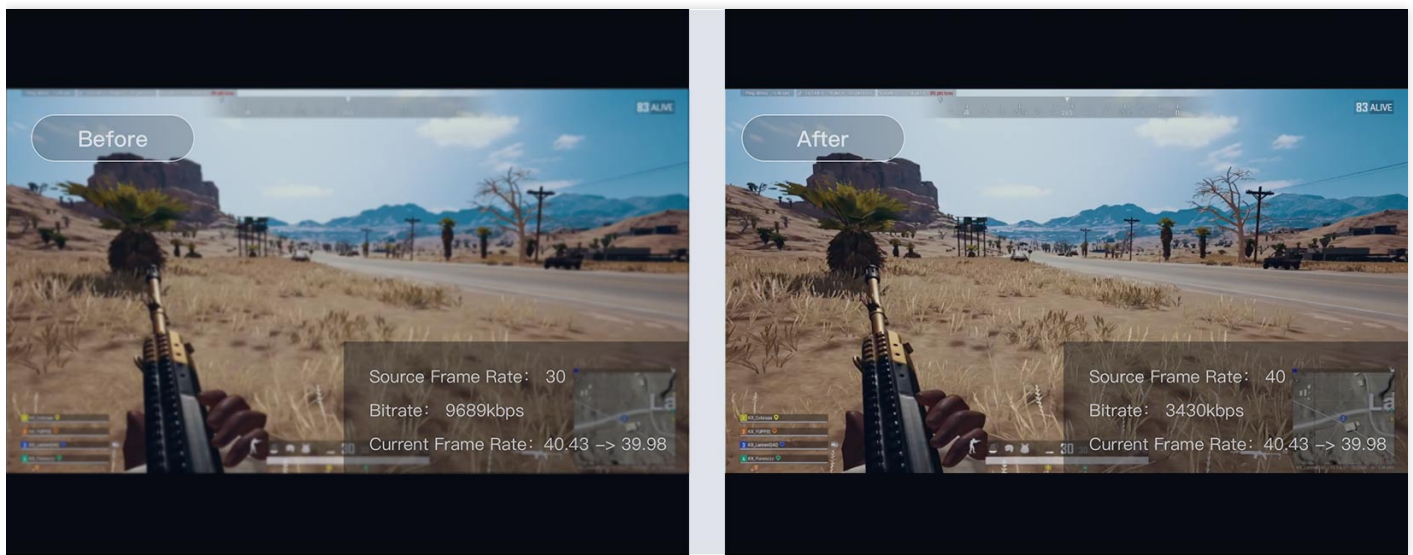
Using LVB services will incur traffic/bandwidth costs. LVB supports pay-as-you-go pricing by traffic/bandwidth. Only downstream traffic/bandwidth will be billed, while usage of upstream push will not. For details, please see [Pricing Overview](#).

# Use Cases

Last updated : 2021-09-02 10:50:50

## Live Game Streaming

LVB provides upstream acceleration, high-quality transcoding, and accelerated delivery services for live game streaming platforms. You can integrate LVB with MLVB SDK to quickly realize smooth live game streaming with low lag and low stutter.



## Live Show

LVB features instant streaming, color filters, and manual exposure, which are ideal for live shows. Its out-of-the-box ease of use readily helps boost the buzz around live shows.





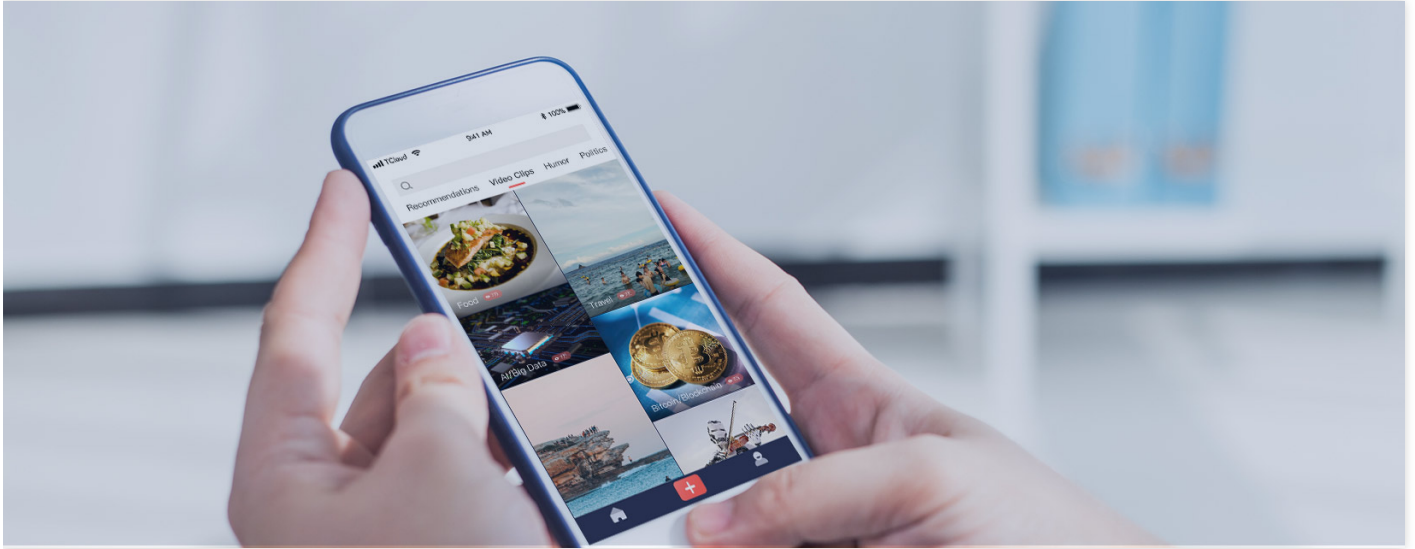
## Online Education

LVB provides a one-stop service for online education. Your well-crafted teaching materials can be uploaded and downloaded through the agile console and APIs, and are protected with player passwords and dynamic URL-based hotlink protection. In addition, the open player APIs make it easy to implement various teaching features such as setting playback time limits and disallowing progress bar dragging.



## Radio, TV, and New Media

LVB provides a complete set of live video streaming services for the radio, TV, and new media industries. It can be quickly accessed by professional live streaming platforms of news, entertainment and variety shows, etc., helping them easily transform from traditional media to internet-based new media.



## Live Shopping

LVB helps with the growth of ecommerce platforms by enabling merchants to display items with more details and assisting consumers in making informed decisions, thus reducing marketing costs and boosting sales.



# Live Video Broadcasting (LVB)

Last updated : 2021-07-09 12:16:49

This document describes how to get started with LVB. Before trying out LVB, you're advised to read the [Pricing Overview](#) of CSS to get familiar with its **billable items** and **prices**.

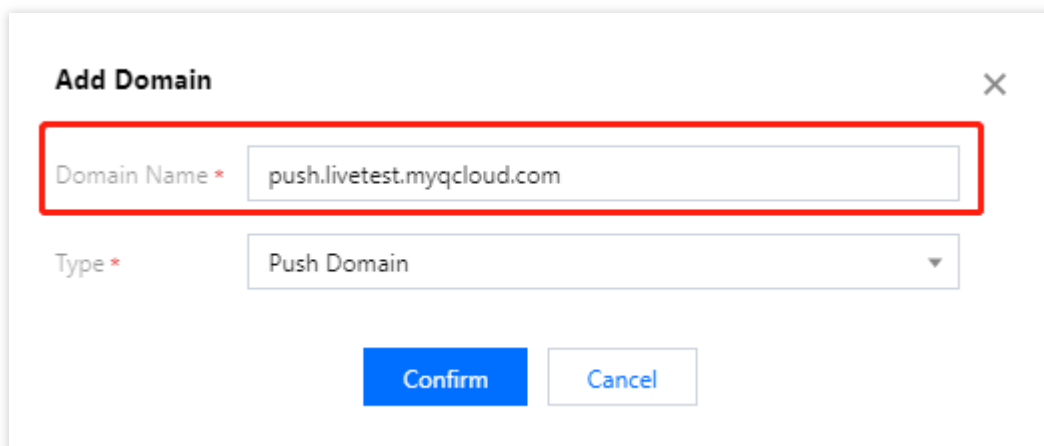
## Preparations

1. Sign up for a [Tencent Cloud account](#) and complete [identity verification](#). Unverified users cannot purchase CSS instances in the Chinese mainland.
2. Go to the [CSS service activation page](#), indicate your consent to the "Tencent Cloud Service Terms", and click **Apply for Activation** to activate the CSS service.

## Step 1. Add domain names

To use CSS, you should have at least one **push domain name**, and one **playback domain name**. You cannot use one domain name for both push and playback.

1. Prepare your own domain names. For domain names in Chinese mainland regions, ICP filing is required.
2. Log in to the CSS console, enter [Domain Management](#), and click **Add Domain**.
3. On the domain name adding page, enter your domain name, select the domain name type, and click **Confirm**.



**Add Domain** ✕

Domain Name \*

Type \*

**Confirm**

Note :

- CSS provides a test domain name `xxxx.livepush.myqcloud.com` . You can use it to test live push, but you're not advised to use it as the push domain name for business purposes.
- After the domain name is added successfully, you can view its information in the domain name list in **Domain Management**. For how to manage it, please see [Domain Management](#).
- For more information on live streaming domain names, please see [Basic CSS Features](#).

4. Once your domain name is added, the system will assign it a CNAME domain name (suffixed with `.tlivecdn.com` or `.tlivepush.com` ), which cannot be accessed before you complete the CNAME configuration at your DNS service provider. After the CNAME configuration takes effect, you can use CSS. The following example shows you how to add a CNAME record by assuming Tencent Cloud is your DNS service provider:
  - i. Log in to the [Tencent Cloud Domain Name Service console](#).
  - ii. Find the target domain name, and click **Resolve**.
  - iii. On the domain name resolution page, click **Add Record**.
  - iv. In the new line, enter the domain name prefix as the host record, select CNAME as the record type, and enter the CNAME domain name as the record value.
  - v. Click **Save**.

Note :

- After a CNAME record is successfully added, it takes some time for the CNAME configuration to take effect. If the configuration fails, you cannot use CSS.
- After the CNAME configuration succeeds, you can see that the CNAME status has changed to



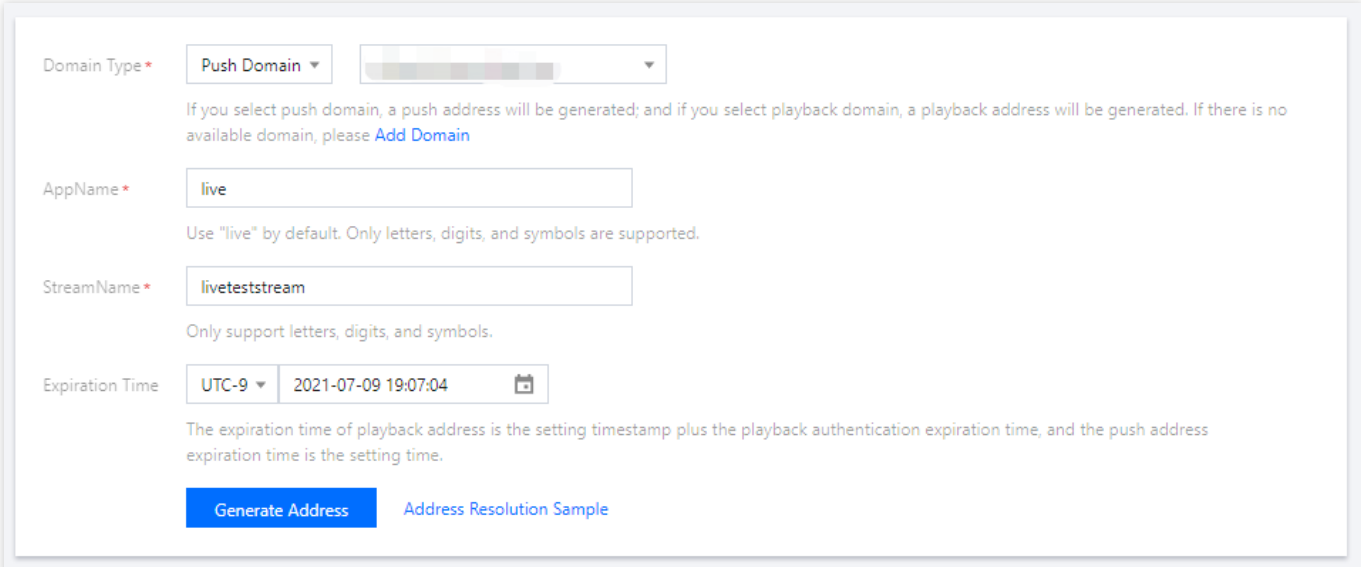
in **Domain Management** of the CSS console.

- If the CNAME configuration failure persists, consult your DNS service provider.
- For more information on how to configure with other DNS service providers, please see [Configuring CNAME for Domain Name](#).

## Step 2. Get push URL

1. Select **CSS Toolkit** > [Address Generator](#).

2. On the **Address Generator** page, configure as follows:
  - i. Select **Push Domain** for **Domain Type**.
  - ii. Select the push domain name you added in **Domain Management**.
  - iii. Enter an **AppName**. It is `live` by default.
  - iv. Enter a custom `StreamName` , such as `liveteststream` .
  - v. Select the URL expiration time, such as `2021-07-09 19:07:04` .
  - vi. Click **Generate Address** to generate a push URL.



Domain Type \* Push Domain [Domain Selection]

If you select push domain, a push address will be generated; and if you select playback domain, a playback address will be generated. If there is no available domain, please [Add Domain](#)

AppName \*

Use "live" by default. Only letters, digits, and symbols are supported.

StreamName \*

Only support letters, digits, and symbols.

Expiration Time UTC-9 2021-07-09 19:07:04 [Calendar Icon]

The expiration time of playback address is the setting timestamp plus the playback authentication expiration time, and the push address expiration time is the setting time.

[Generate Address](#) [Address Resolution Sample](#)

#### Note :

- In the push URL, `live` is the default `AppName` , `txSecret` is the signature for playing back the stream, and `txTime` is the URL expiration time.
- In addition to the above method, you can also find the push domain name in **Domain Management** of the CSS console, click **Manage**, and select **Push Configuration**. In the **Push Address Generator** section, enter a push URL expiration time and a custom `StreamName` , and then click **Generate Push Address** to generate a push URL.
- You can create and configure a desired [feature template](#) before generating the push URL based on your business needs and bind it to the push domain name. For prices of CSS value-added features, please see [Pricing Overview](#).

## Step 3. Push live stream

You can enter the generated push URL into the push software as appropriate for your use cases.

- For push on PCs, you're advised to use OBS. For detailed directions, please see [Push via OBS](#).
- For push on web, you're advised to use **Web Push**: select a push domain name, enter a custom `StreamName` , select a URL expiration time, turn the camera on, and click **Start Push**.
- For push on mobile devices, download and install Tencent Video Cloud Demo, open it, select **Mobile Live Video Broadcasting > Push (Camera)**, enter the push URL into the address box manually or by scanning the QR code, and then tap the start icon in the bottom-left corner.

Note :

You can integrate Tencent Cloud [MLVB SDK](#) into customized apps for live push.

## Step 4. Get playback URL

1. After the push succeeds, select **Stream Management > Live Streams**, view the status of the target stream, and click **Test** to play back it.
2. Select **CSS Toolkit > Address Generator**, and perform the following:
  - i. Select **Playback Domain** for **Domain Type**.
  - ii. Select a playback domain name you added in **Domain Management**.
  - iii. Enter an **AppName**. It is `Live` by default.
  - iv. Enter the `StreamName` in the push URL to play back the corresponding stream.
  - v. Select a URL expiration time, such as `2021-07-09 19:07:04` .
  - vi. To generate a playback URL for a transcoded stream, please select a transcoding template which must be bound to the domain name in the playback URL. For directions on how to bind a transcoding template, please see [Live Transcoding > Binding Domain Name](#).



vii. Click **Generate Address** to generate a playback URL.

Domain Type \*

If you select push domain, a push address will be generated; and if you select playback domain, a playback address will be generated. If there is no available domain, please [Add Domain](#)

AppName \*

Use "live" by default. Only letters, digits, and symbols are supported.

StreamName \*

Only support letters, digits, and symbols.

Expiration Time

The expiration time of playback address is the setting timestamp plus the playback authentication expiration time, and the push address expiration time is the setting time.

Transcoding Template  [Cancel Transcoding](#)

If you select a transcoding template, the generated playback address will be the live streaming address after transcoding. If you want to play the original live stream, you don't need to select a transcoding template to generate the address.

[Generate Address](#) [Address Resolution Sample](#)

3. You can use the following methods to test whether a live stream can be played back normally in different use cases:
- For playback test on PCs, you are advised to use tools such as [VLC](#). For more information, please see [Live Playback](#).
  - For playback test on web, you are advised to use the TCPlayerLite player in the Player SDK. For more information, please see [Live Playback](#).
  - For playback test on mobile devices, you are advised to download and install Tencent Video Cloud Toolkit App, select **Mobile Live Video Broadcasting > LVB Playback**, enter the playback URL into the address box manually or by scanning the QR code, and tap the play icon in the bottom-left corner.

Note :

To push/play back a stream on an app, you can integrate the [MLVB SDK](#) into the app to supplement the CSS service. If you encounter any problem during the trial period, please see [FAQs](#).

## Operations

- To enable **live recording**, please create a recording template and bind it to a domain name first. For more information, please see [Creating Recording Template](#).
- To enable **live transcoding**, please create a transcoding template and bind it to a domain name first. For more information, please see [Creating Transcoding Template](#).
- To enable **live watermarking**, please create a watermark template and bind it to a domain name first. For more information, please see [Creating Recording Template](#).
- To enable **live screencapture and porn detection**, please create a screencapture and porn detection template and bind it to a domain name first. For more information, please see [Creating Screencapture and Porn Detection Template](#).
- To enable **live stream mixing**, please call the stream mixing API [CreateCommonMixStream](#).

## FAQs

- [What are the differences between push, live streaming, and video on demand?](#)
- [What push protocols are supported?](#)
- [What playback protocols are supported?](#)
- [What does a playback address consist of?](#)
- [How do I splice multiple live stream URLs?](#)



# SDK Integration

Last updated : 2021-09-03 14:28:44

CSS provides LVB as a professional, stable, and fast cloud streaming service for common use cases. You can integrate the [MLVB SDK](#) to apps, web, and other platforms to quickly enable live streaming.

## Apps

You can integrate the MLVB SDK with apps on iOS or Android clients for live push and playback.

- **Live push on apps:** support capturing camera or mobile phone screens and then pushing the content to the CSS platform using the RTMP protocol. For details, please see [Publishing \(Camera\)](#) and [Publishing \(Screen Recording\)](#).
- **Live playback on apps:** support playback protocols including RTMP, HTTP-FLV, and HLS. You can integrate the MLVB SDK with LVB to quickly build live streaming apps. For details, please see [Playback](#).

Note :

The MLVB SDK uses CSS, IM, TRTC and other services for low-latency audiovisual communication for multiple parties. It offers co-anchoring for interaction between viewers, and other viewers who don't join co-anchoring can also watch the live streaming. For details, please see [Co-anchoring](#).

## Web

You can use the following ways to achieve live push and playback on your websites:

- **Live push on web:** you can use the standard WebRTC protocol to design and mux streams, and insert code snippets to websites to enable live push.

Note :

WebRTC push uses the Opus audio codec. If you use a standard live streaming protocol (RTMP, HTTP-FLV, or HLS) for playback, the CSS backend will automatically convert the audio streams to AAC format to ensure normal playback, which will incur audio transcoding fees. For details, please see [Live Transcoding > Audio Transcoding](#).

- **Live playback on web:** we recommend you use the player SDK [TCPlayerLite](#). You can insert the player code to browsers to play back live streams on such browsers.

Note :

As most mobile browsers on the market do not support HTTP-FLV for playback, we recommend you use HLS for playback on mobile browsers.