

StreamLive

Feature Guide

Product Documentation



Copyright Notice

©2013-2024 Tencent Cloud. All rights reserved.

Copyright in this document is exclusively owned by Tencent Cloud. You must not reproduce, modify, copy or distribute in any way, in whole or in part, the contents of this document without Tencent Cloud's the prior written consent.

Trademark Notice



All trademarks associated with Tencent Cloud and its services are owned by Tencent Cloud Computing (Beijing) Company Limited and its affiliated companies. Trademarks of third parties referred to in this document are owned by their respective proprietors.

Service Statement

This document is intended to provide users with general information about Tencent Cloud's products and services only and does not form part of Tencent Cloud's terms and conditions. Tencent Cloud's products or services are subject to change. Specific products and services and the standards applicable to them are exclusively provided for in Tencent Cloud's applicable terms and conditions.

Contents

Feature Guide

Implementing Live Streaming

Preparations

Configuration

Configuring StreamPackage

Configuring CSS

Configuring StreamLive

Publishing and Playing a Live Stream

Digital Rights Management (DRM)

Input Failover

Input Switch

Playlist

Scheduled Recording

Highlights

Time shifting

Delayed Playback

Adaptive Bitrate Streaming

Caption

Smart Subtitling

Caption Pass-Through

Relay

Frame Capture

SCTE-35

PDT (HLS)

Archiving (Recording)

Ad Insertion

StreamLive Tag

Feature Guide

Implementing Live Streaming

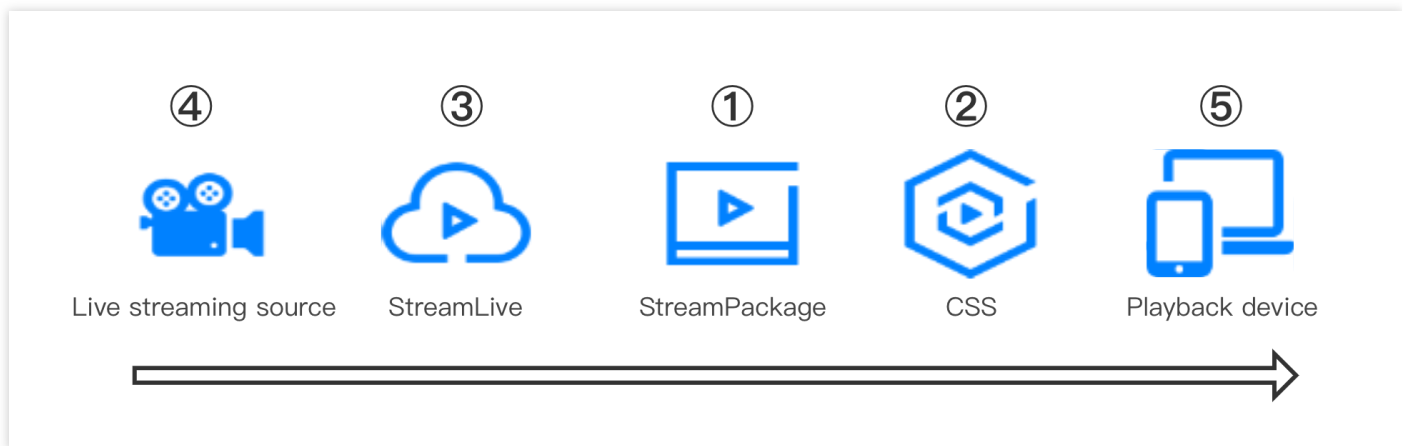
Preparations

Last updated : 2022-09-14 11:01:30

StreamLive offers live stream connection and real-time transcoding services. It supports multiple protocols, input redundancy, and other high-availability source management capabilities. With StreamLive, you can easily set up cloud origin servers for live streaming. Together with CSS and its huge distribution network across the world, StreamLive provides you with reliable and secure global streaming services with excellent user experience.

Prerequisites

- You have activated [StreamLive](#), [StreamPackage](#), and [CSS](#).
- We will show you how to set up live streaming based on the three Tencent Cloud products. The figure below shows the flow of live streaming data from left to right. However, you need to set up live streaming in the order specified by the sequence number.



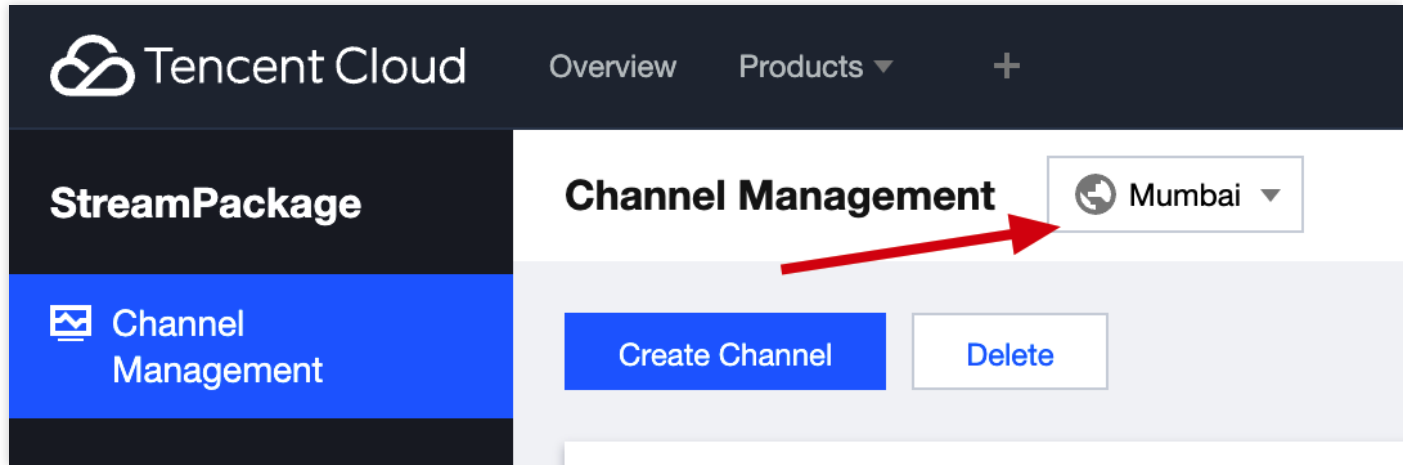
Configuration

Configuring StreamPackage

Last updated : 2022-09-14 11:01:30

This document shows you how to configure StreamPackage.

1. Log in to the [StreamPackage console](#), select a region near to your operations.



2. Click **Create Channel** and enter the required information in the pop-up window.

Create Channel ✕

Name * ✓

Input Protocol * ▼

HLS Setting

Max Segment Duration (sec) ⓘ * ✓

Max Playlist Duration (sec) ⓘ * ✓

- **Input Protocol:** HLS or DASH. HLS is selected in this example.
- **Max Segment Duration:** The maximum duration of TS segments pushed to this channel. We recommend you set this to four seconds.
- **Max Playlist Duration:** The maximum duration of M3U8 playlist files pushed to this channel. We recommend you set this to 12 seconds (i.e., three TS segments in an M3U8 playlist).

3. Click **Create**. You will enter the advanced configuration page. You can view existing configuration information under the **Information** tab, or configure push URLs, playback URLs, and CDN acceleration under the **Input**, **Endpoints**, and **CDN** tabs.

4. **Input:** The system will automatically assign two input URLs for the channel, which can be used for failover to ensure high availability.



← Test_Channel

Information

Input

Endpoints

CDN

Item	Input Protocol	Input Url	Authentication	Operation
input1	HLS	http://1301446065.ap-mumba... 	OFF	Authentication
input2	HLS	http://1301446065.ap-mumba... 	OFF	Authentication

Total items: 2

10 / page

1

/ 1 page

- You can configure independent authentication information for each input. After you enable **Input Authentication**, the system will automatically generate **a username and a password** for the input.
- You can click **Rotate credentials** to generate new authentication information. The original information cannot be recovered.
- If you want to push content to the input URL from a third-party service, make sure you note the **Input URL** and authentication information.

5. **Endpoint:** Select the **Endpoints** tab, click **Create Endpoint** to create a playback URL. Two access control methods are supported: **IP Restriction** and **AuthKey**. Because HLS is selected as the input protocol, an HLS URL will be generated. The URL is the full path of the main.m3u8 file.

Create Endpoint

×

Name

Test_Endpoint

Type

HLS

IP Restriction

☐

AuthKey

☐



Create

Cancel

6. You have now completed configuration for StreamPackage. Return to **Channel Management**, find the channel you created in the list, and note the **ID** and **Endpoint URL** for later use.

Channel Management Mumbai ▼


[Create Channel](#) [Delete](#)

<input type="checkbox"/> Name ↕	Input Protocol ▼	ID	Input URL ⓘ	Operation
<input type="checkbox"/> Test_Channel	HLS	 Copy	 Copy	Info Edit Delete

[←](#) **Test_Channel**

[Information](#) [Input](#) [Endpoints](#) [CDN](#)

[Create Endpoint](#) [Delete](#)

<input type="checkbox"/> Name ↕	Endpoint Protocol	Url	Authentication	Operation
<input type="checkbox"/> Test_Endpoint	HLS	 Copy		Edit Delete

Total items: 1

10 ▼ / page [⏪](#) [⏩](#) 1 / 1 page

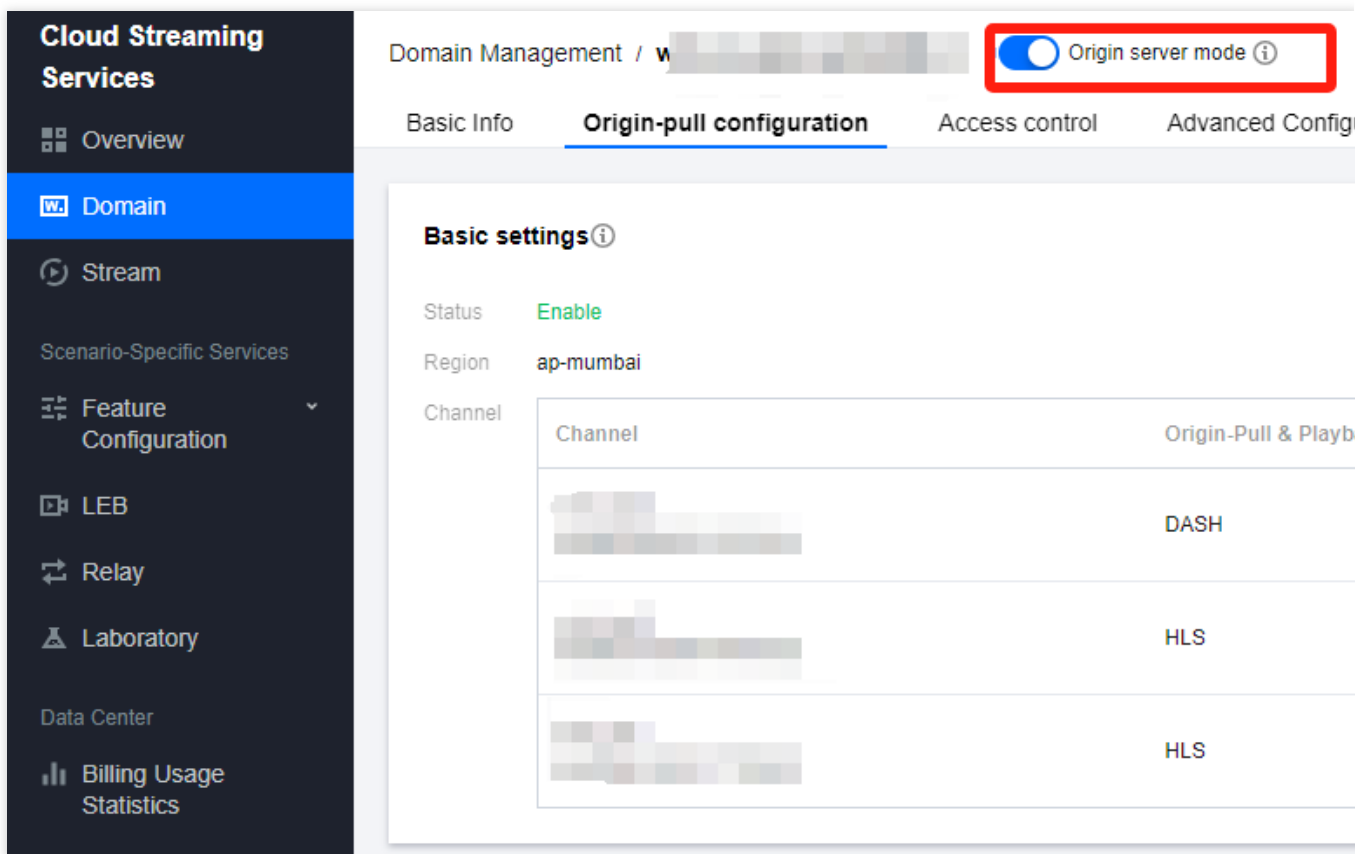
Configuring CSS

Last updated : 2024-06-26 14:11:26

CSS ensures a better viewing experience for end users. This document shows you how to configure CSS. StreamPackage, as the cloud origin server service, will be combined with CSS's globally extensive distribution network to deliver stable, secure, and high-quality global streaming services.

Method 1

1. For [CSS CSS](#) products, go to the [Domain Management](#) section in the console and refer to the [Documentation Guide](#) to set up the CSS playback domain.
2. For your playback domain, you can enable the [Origin server mode](#).



The screenshot displays the Tencent Cloud console interface for configuring CSS. On the left, the 'Cloud Streaming Services' sidebar is visible, with 'Domain' selected under 'Scenario-Specific Services'. The main panel shows the 'Domain Management' page for a specific domain. The 'Origin-pull configuration' tab is active, and the 'Origin server mode' toggle is turned on, highlighted with a red box. Below this, the 'Basic settings' section shows 'Status' as 'Enable' and 'Region' as 'ap-mumbai'. A table lists the configured channels for 'Origin-Pull & Playb'.

Channel	Origin-Pull & Playb
[Redacted]	DASH
[Redacted]	HLS
[Redacted]	HLS

3. In the origin server settings, select the type as StreamPackage, then choose the region and channel of your StreamPackage.


Origin server settings

Origin Server Type






☐ Live streaming origin server

☒ StreamPackage

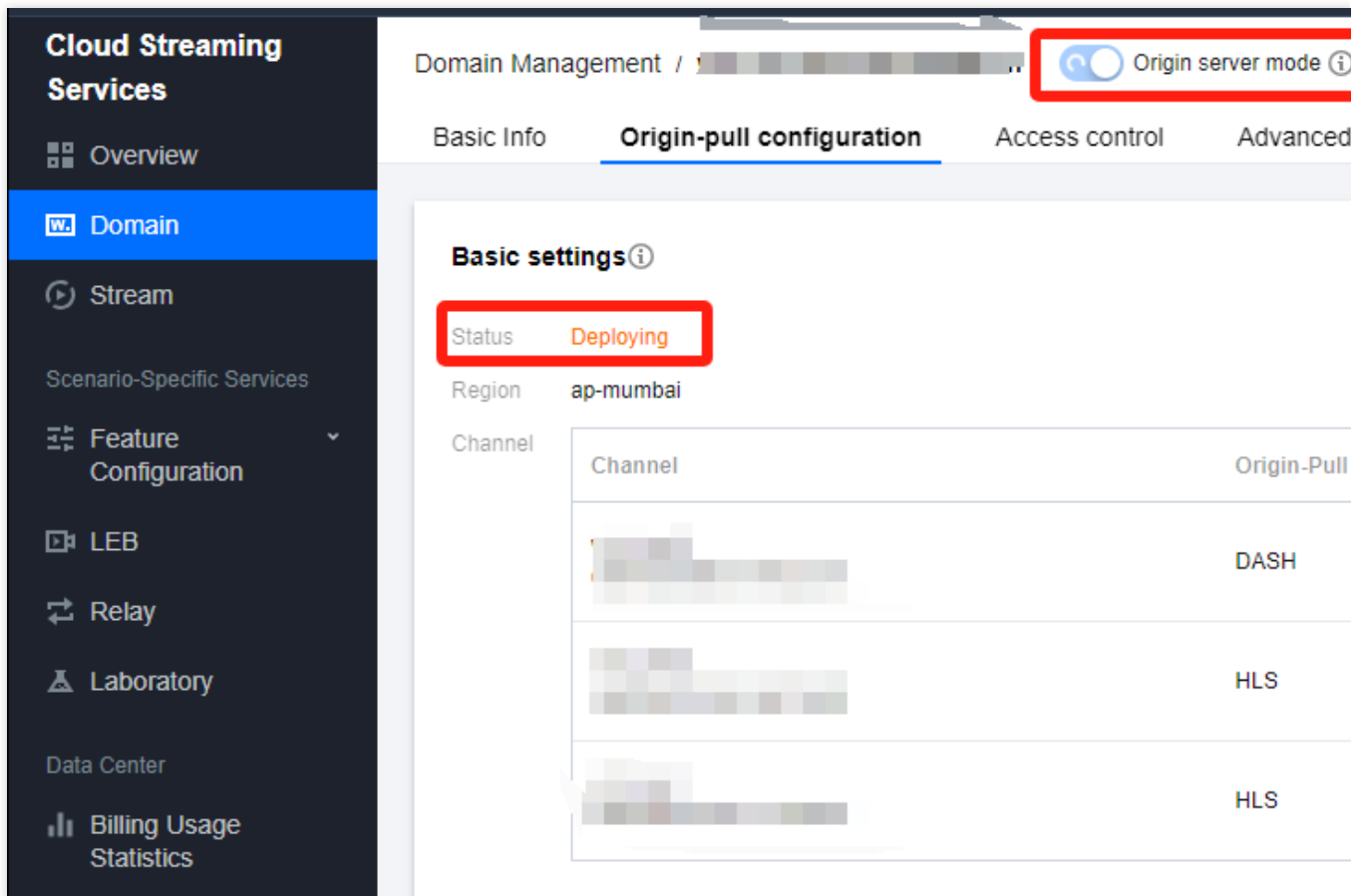
Region

ap-

Channel

<input checked="" type="checkbox"/> Channel	Origin-Pull & Playback Protocol
<input type="checkbox"/> 	HLS
<input checked="" type="checkbox"/> 	DASH
<input type="checkbox"/> 	HLS
<input type="checkbox"/> 	HLS
<input type="checkbox"/> 	HLS

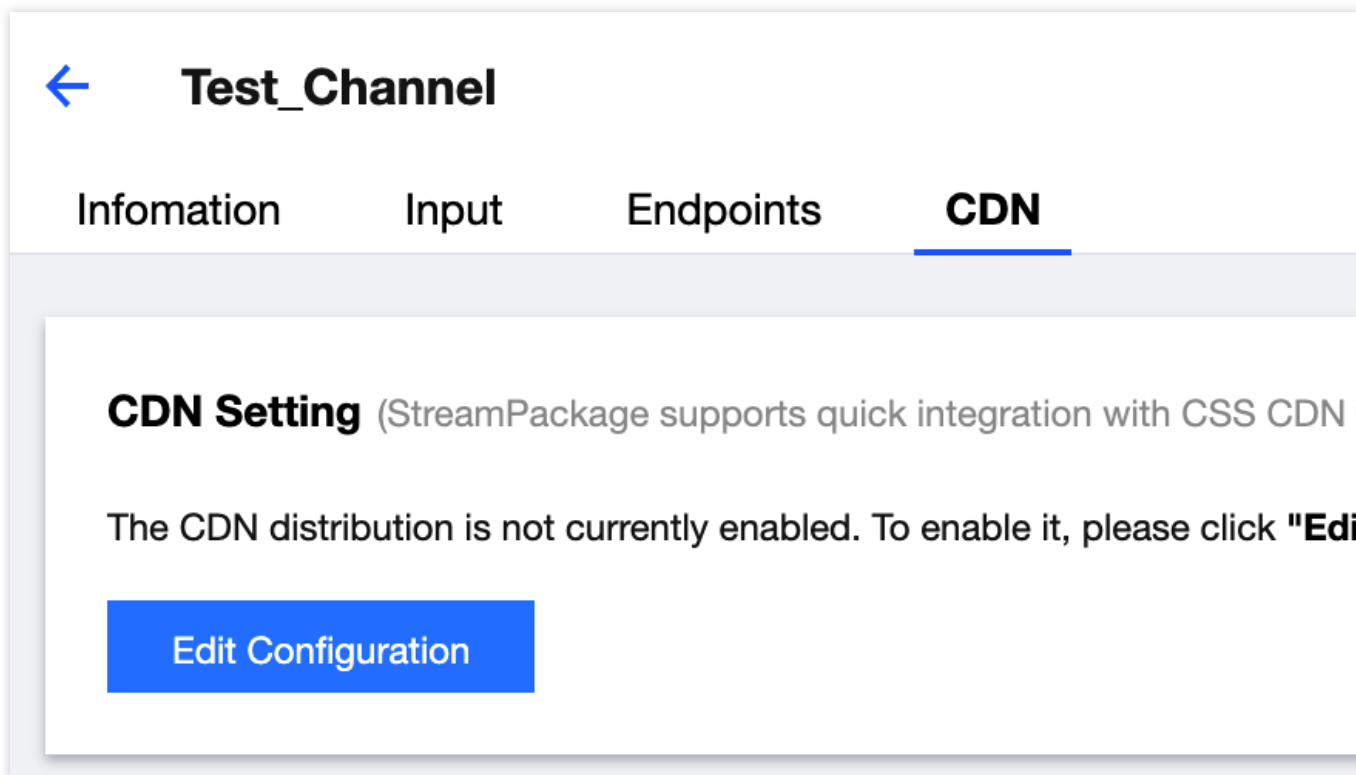
4. After the configuration is completed, the system will take some time to take effect.



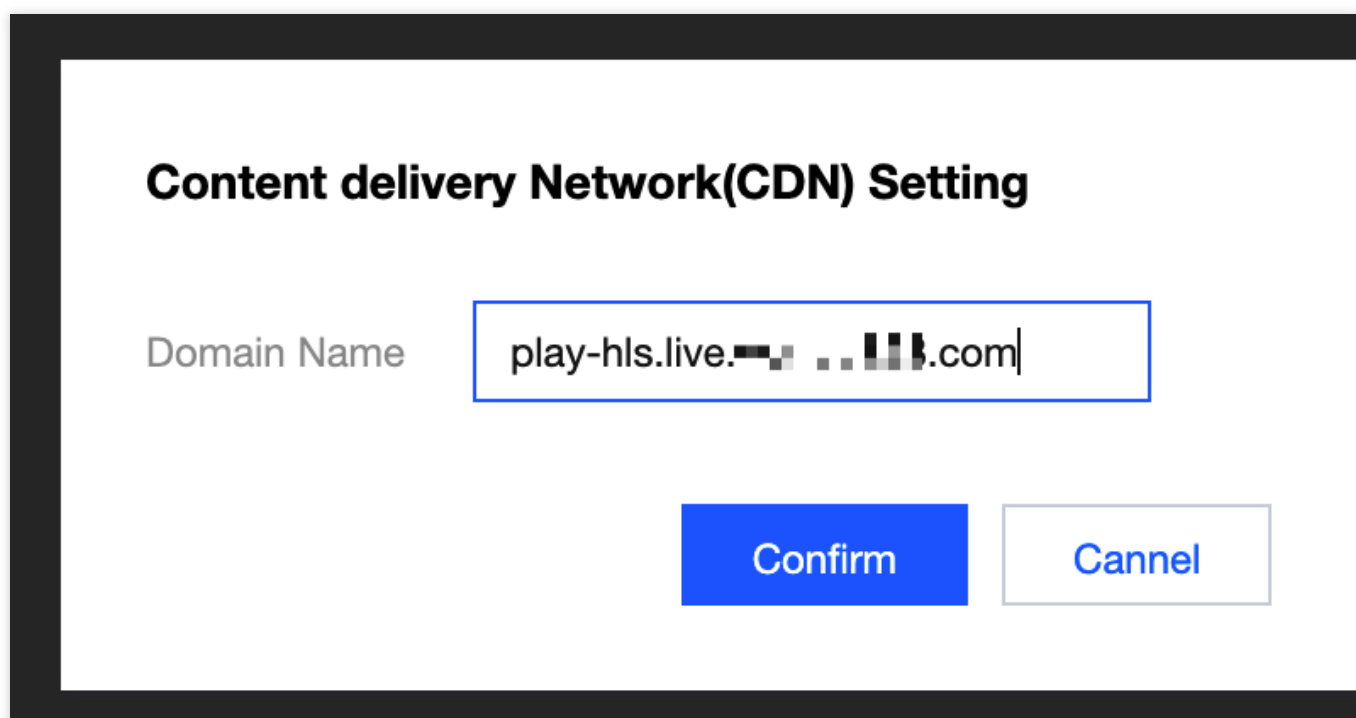
5. To get the final URL for playback, splice the CSS playback domain and the StreamPackage endpoint path.

Method 2

1. After you complete the following configuration in [StreamPackage](#), Tencent Cloud will automatically add origin server settings for the corresponding playback domain in CSS. In the StreamPackage console, click the StreamPackage channel you created, select the **CDN** tab, and click **Edit Configuration**.



2. In the pop-up window, enter the playback domain you want to use and click **Confirm**.







3. After the CSS origin server configuration is completed, the current page will display information including the **Playback Domain Name**, **CNAME**, **Acceleration Region**, and **Status**. The default acceleration region is outside the Chinese mainland.

[←](#) **Test_Channel**

[Information](#) [Input](#) [Endpoints](#) **[CDN](#)**

CDN Setting (StreamPackage supports quick integration with CSS CDN to distribute live video streams.)

Playback Domain Name	play-hls.live.  .com	CNAME 	
Acceleration Region	Outside Mainland China and Hong Kong...	Status	

Go to the CSS CDN Console to Perform More Actions

4. If you also want to configure access control, referer allowlist/blocklist, and HTTPS for the playback domain, click

Go to the CSS CDN Console to Perform More Actions.

5. If you don't need to perform further configuration, note the **CNAME** assigned by the system and add it in your DNS platform.

DNS Records

[DNS Records](#) tell the Internet what to do with your domain, like showing your website content and deliver

DeleteCopy

[CNAME records](#) are a type of subdomain, or alias, that points to another domain name.

Type

CNAME

**Name**

play-hls.live

Value

play-hls.live.v...

Add record[Clear](#)

6. To get the final URL for playback, splice the CSS playback domain and the StreamPackage endpoint path.

Configuring StreamLive

Last updated : 2024-07-22 14:11:57

Go to the [StreamLive console](#). The left sidebar displays four sections:

- Security Group Management
- Input Management
- Channel Management
- Watermark Management

We will show you how to configure security groups, inputs, and channels (required), as well as watermarks (optional).

1. Select **Security Group Management** on the left sidebar and click **Create Security Group**. In the pop-up window, enter a security group name and specify the IP allowlist. IP addresses must be in CIDR format. Separate addresses with commas or line breaks.

2. Select **Input Management** on the left sidebar, click **Create Input**, and complete the settings in the pop-up window.

Create Input [X]

Name * ✓

Type * ▼

Security Group * ▼

Delay Time ☐

Destination A (?) *

Destination B (?)

Type: The streaming protocol. RTMP_PUSH is selected in this example.

Security Group: The security group to associate. Select from the drop-down list a created security group.

Destination: The push destination. Enter at least one **AppName** and **StreamName**. You can configure two destinations to offer redundancy.

3. Click **Confirm**. Find the input you created in the input list to enter the details page. Note the push destination for later user.

4. Click **Channel Management** on the left sidebar and click **Create Channel**. In the **General Information** step, enter a channel name.

The screenshot shows the 'Create channel' wizard with the 'General Setting' step selected. The sidebar on the left shows three steps: 1. General Setting (active), 2. Input Setting, and 3. Output Group Setting. The main content area is titled 'General info' and contains the instruction: 'Create a channel that encodes your input into multiple groups and outputs.' Below this, there is a 'Channel name' field with the value 'Test_Channel' and a green checkmark icon to its right. Below the name field is a 'Regularly cleaned' toggle switch, which is currently turned off. At the bottom of the main content area, there is a 'Tags' section with a play icon. At the bottom of the wizard, there are two buttons: 'Import Configuration' and 'Next'.

5. In the **Input Setting** step, add the input you just created (you can add multiple inputs, for which you can configure different transcoding templates and outputs).

The screenshot shows the 'Create channel' wizard with the 'Input Setting' step selected. The sidebar on the left shows three steps: 1. General Setting, 2. Input Setting (active), and 3. Output Group Setting. The main content area is titled 'Notes:' and contains three bullet points: 'If you add multiple inputs, the first input is used by default. Other inputs may be used in failover or when an event in the plan is triggered. You can enable the Input Failover in Input used for failover must be of the same type as the primary input.', 'If you add multiple inputs, you can only add inputs that contain the same number of pipelines.', and 'Please note that after input data is first received, as long as the corresponding channel is in "RUNNING" status, transcoding fees will be incurred. And for the input contains two independent pipelines will incur transcoding fees. Even if no input data is received for a certain period of time, transcoding fees will still be incurred. This is because the system will insert black frames for channels whose status is "IDLE" will not incur transcoding fees.' Below the notes, there is a table with the following columns: 'Input Name', 'Input Type', 'Pipeline', 'Bind Status', and 'Operations'. The table has one row with the following values: 'Test_Input', 'RTMP_PUSH', '1', '-', and 'Details'. Above the table, there is an 'Add' button. Below the table, there are three toggle switches: 'Callback Configuration' (turned off), 'Input Pipeline Failover' (turned off), and 'Input Loss Behavior' (turned off). Each toggle switch has a note next to it. At the bottom of the wizard, there are two buttons: 'Previous' and 'Next'.

Input Name	Input Type	Pipeline	Bind Status	Operations
Test_Input	RTMP_PUSH	1	-	Details

6. In the **Output Group Setting** step, configure transcoding templates and outputs for the channel.

For **Basic Information**, enter an output group name and select an output group type (two protocols and three output types are supported). In the **Destination Information** area, enter the **StreamPackage Channel ID** you noted previously. This allows you to quickly implement transcoding and packaging for your live streams.

The screenshot shows the 'Output Group' configuration section. The 'Output Group name' is set to 'Test_Output_Grp'. Under 'Output Group type', several options are listed: HLS, DASH, HLS_ARCHIVE, DASH_ARCHIVE, **HLS_STREAMPACKAGE** (which is selected and highlighted with a red box), and DASH_STREAMPACKAGE. Below this, the 'Destination Information' section is visible, with a red box highlighting the 'StreamPackage Channel ID' field, which contains a blurred value.

You can also specify the **Segment Information** on this page, including the segment type, segment duration, and segment number. For some devices, such as Apple TV, to play H.265-encoded videos, you need to select **h265** as the **Segment Type** and **hvc1** as the **Packaging Type**.

The screenshot shows the 'Segment Information' configuration section. It includes the following fields: 'Segment Type' set to 'ts', 'Segment Duration' set to '4000' (with a note: 'Between 1000 and 30000, only be a multiple of 1000'), 'Segment Number' set to '3' (with a note: 'Between 3 and 300'), 'H.265 Packaging Type' set to 'hev1' (with an information icon), and a 'Low Latency' toggle switch that is currently turned off.

7. In the outputs setting, you can set multiple outputs as required, such as naming outputs according to different bitrates. Then click **transcoding setting** to enter the detailed parameter settings page.

Outputs *

Add one or more outputs to this group. Each output has unique stream settings that enable you to choose the video, audio, and captions tracks that you need. All need to be kept in the same transcoding type (joint transcoding/separate transcoding).

[Add](#)

Output Name	SCTE-35 Setting	ID3 Passthrough	Transcoding Setting	Actions
<input type="text" value="Test_Output_800k"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Setting	Remove
<input type="text" value="Test_Output_400k"/>	<input type="checkbox"/>	<input type="checkbox"/>	Setting	Remove

8. Set the audio and video transcoding parameters, and save them after completing the settings.

Transcoding Setting

Transcoding ⓘ ☒ Joint Transcoding ☐ Separate Transcoding

[Add Audio/Video](#) [Add Caption](#)

Audio/Video [Copy Audio/Video](#)

Name	<input type="text" value="800k"/>
Audio Transcoding	<input checked="" type="checkbox"/>
<input checked="" type="radio"/> Single track <input type="radio"/> Multi track ⓘ	
Audio Selector Name ⓘ	<input type="text" value="Please Select"/>
Acodec	<input type="text" value="AAC"/>
▶ Audio Codec Configuration	
▶ Audio Normalization Settings	

9. Return to the channel list and click **Start** in the **Operation** column to start the channel.

Channel Management

Mumbai

Create Channel

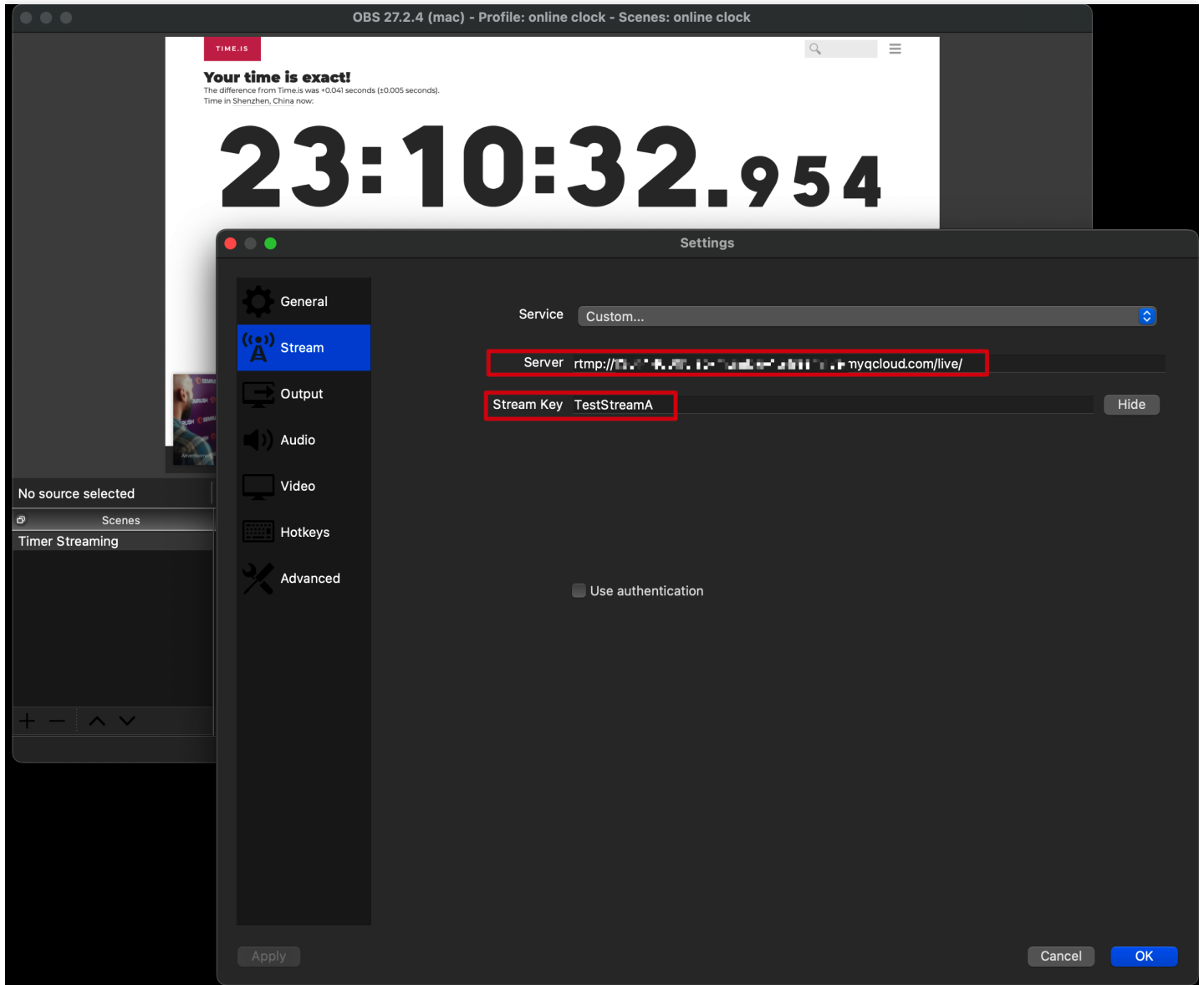
Search by channel Name or ID

Name	State	ID	Operation
Test_Channel	IDLE	62D03AD8C2AB091D3B5F	Edit Start

Publishing and Playing a Live Stream

Last updated : 2022-09-14 11:01:30

This document shows you how to use OBS to push streams and VLC to play streams. Open OBS, go to **Settings > Stream**, and enter the input URL in **Server** and the stream name in **Stream Key**.



Open VLC (VLC for macOS is used in the example), click **File > Open Network...**, select the **Network** tab, and enter the StreamPackage endpoint URL (replace the domain part with the playback domain configured in CSS).

Open Source

File

Disc

Network

Capture

URL http://play-hls.live.ves.vol.eas.aliyun.com/v1/0181fcfb9ff10b8ed5aa142ace7f/0181fd09

To Open a usual network stream (HTTP, RTSP, RTMP, MMS, FTP, etc.), just enter the URL in the field above. If you want to open a RTP or UDP stream, press the button below.

Open RTP/UDP Stream

> Media Resource Locator (MRL)

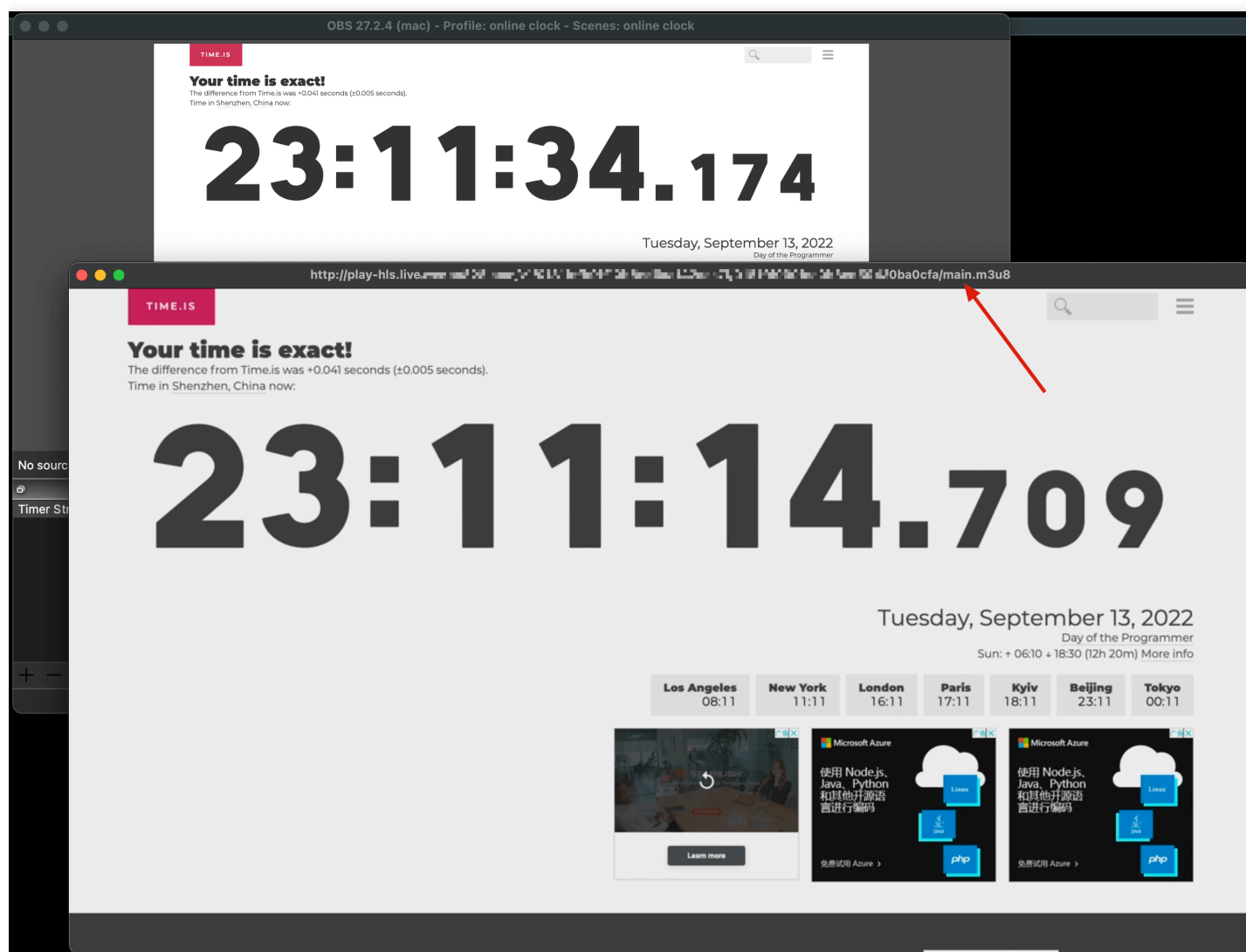
☐ Stream output:

Settings...

Cancel

Open

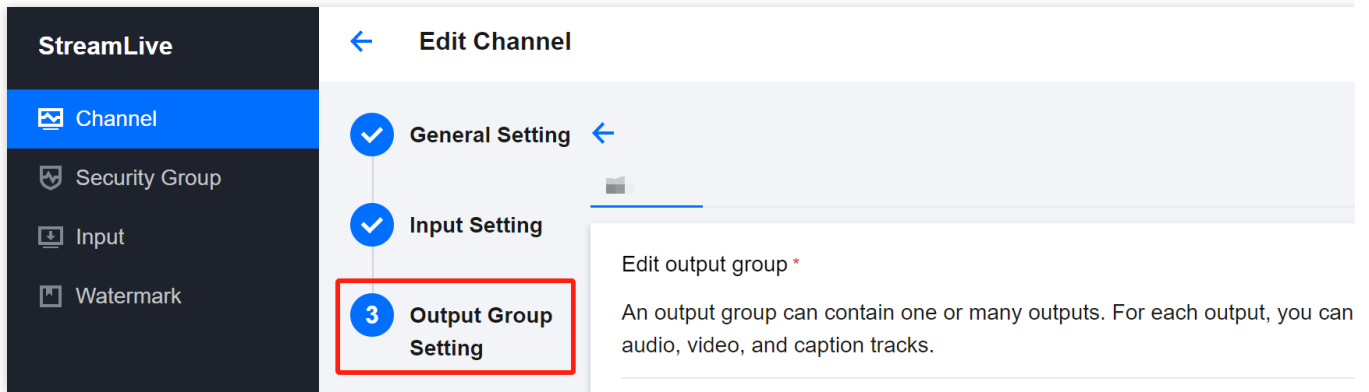
You have now implemented a high-reliability live streaming service based on StreamLive, StreamPackage, and CSS.



Digital Rights Management (DRM)

Last updated : 2023-11-03 09:45:45

StreamLive supports custom key DRM and SDMC DRM. To configure DRM, go to **Channel Management**, find the channel you want to configure DRM for, and click **Edit**. On the **Output Group Setting** page, configure DRM in the **DRM** area.



▼

DRM

DRM

☒

Scheme *

CustomDRMKeys ▼

DRM Type

☒ FAIRPLAY ☐ AES128

Cid *

Please enter the content id

Key *

Please enter a 32-bit hexadecimal

Iv *

Please enter a 32-bit hexadecimal

The supported DRM Types for each protocol type and scheme type are shown in the table below:

	Scheme : SDMCDRM	Scheme : CustomDRMKeys
--	------------------	------------------------

HLS , Segment Type : ts	FAIRPLAY	FAIRPLAY、 AES128
HLS, Segment Type : fmp4	FAIRPLAY、 WIDEVINE、 PLAYREADY	FAIRPLAY、 WIDEVINE、 PLAYREADY、 AES128
DASH, Segment Type : ts	WIDEVINE、 PLAYREADY	
DASH, Segment Type : fmp4		

SDMCDRM

When the Scheme is selected as SDMCDRM:

- 1) For the HLS protocol with ts segments: DRM Type can support FAIRPLAY.
- 2) For the HLS protocol with fmp4 segments: DRM Type can support FAIRPLAY, WIDEVINE, and PLAYREADY.
- 3) For the DASH protocol: DRM Type can support WIDEVINE and PLAYREADY.

Taking the HLS protocol with fmp4 segments as an example, you need to enter the following information.

▼

DRM

DRM

☒

Scheme *

SDMCDRM ▼

DRM Type

☒ FAIRPLAY ☐ WIDEVINE ☐ PLAYREADY

Cid

Please enter the content id

Uid *


Please enter the userid

Secret id *


Please enter the secret id

Secret key *

Please enter the secret key

Url  *

Please enter sdmc key url

Tokenname 

Supports digits, letters, and under

Cid: The content ID provided by SDMC. If you leave this empty, the channel ID will be used.

Uid: The user ID provided by SDMC.

Secret id: The secret ID provided by SDMC.

Secret key: The secret key provided by SDMC.

Uri: The URL to get the DRM key (provided by SDMC).

Tokenname: The token name for the key URL, which is provided by SDMC. If you leave this empty, token will be used.

CustomDRMKeys

When the Scheme is selected as CustomDRMKeys:

1. For the HLS protocol with ts segments: DRM Type can support FAIRPLAY and AES128.

When selecting FAIRPLAY, please provide the following information:

▼

DRM

DRM

☒

Scheme *

CustomDRMKeys ▼

DRM Type

☒ FAIRPLAY ☐ AES128

Cid *

Key *

Iv *

Cid: The FairPlay content ID. If your DRM system does not use content IDs, enter a custom ID.

Key: The FairPlay encryption key.

Iv: The FairPlay encryption IV.

When selecting AES128, please provide the following information:

▼

DRM

DRM

☒

Scheme *

CustomDRMKeys ▼

DRM Type

☐ FAIRPLAY ☒ AES128

Key *

Uri *

Iv *

Key: The encryption key.

Uri: The URL to get the key.

Iv: The encryption IV.

2. For the HLS protocol with fmp4 segments: DRM Type can support FAIRPLAY, WIDEVINE, PLAYREADY, and AES128. Multiple selections are supported, but AES128 is mutually exclusive with the other three types.

When selecting FAIRPLAY, WIDEVINE and PLAYREADY, please provide the following information:

▼ **DRM**

DRM ☒

Scheme * CustomDRMKeys ▼

DRM Type ☒ FAIRPLAY ☒ WIDEVINE ☒ PLAYREADY ☐ AES128

Cid * Please enter the content id

Iv *

Track setting **All Track** Select Track

Track Type	KeyId ?	Key ?
All Track	*	*

Cid: The content ID. If your DRM system does not use content IDs, enter a custom ID.

Key: The encryption key.

Iv: The encryption IV.

If your DRM system does not provide keys for different tracks, select All Track. If your DRM system provide keys for different tracks, you can configure a separate key ID and key for each track (five track types are supported: AUDIO, SD, HD, UHD1, and UHD2).

When selecting AES128, please provide the following information:

▼

DRM

DRM

☒

Scheme *

CustomDRMKeys

DRM Type

☐ FAIRPLAY ☐ WIDEVINE ☐ PLAYREADY ☒ AES128

Key *

Uri *

Iv *

Key: The encryption key.

Uri: The URL to get the key.

Iv: The encryption IV.

3. For the DASH protocol: DRM Type can support WIDEVINE and PLAYREADY.

▼

DRM

DRM

☒

Scheme *

CustomDRMKeys ▼

DRM Type

☒ WIDEVINE ☒ PLAYREADY

Cid *

Track setting

All Track Select Track

Track Type	KeyId ?	Key ?
All Track	* <div></div>	* <div></div>

Cid: The content ID. If your DRM system does not use content IDs, enter a custom ID.

Key: The encryption key.

If your DRM system does not provide keys for different tracks, select All Track. If your DRM system provide keys for different tracks, you can configure a separate key ID and key for each track (five track types are supported: AUDIO, SD, HD, UHD1, and UHD2).

Input Failover

Last updated : 2024-07-22 11:57:53

StreamLive provides redundancy and supports failover to help you ensure the reliability of live stream sources. Follow the steps below to configure failover:

1. On the **Channel Management** page, Click **Create Channel**. To configure input failover for an existing channel, click **Edit**.

The screenshot shows the 'General Setting' step of a channel configuration interface. On the left, a sidebar lists three steps: '1 General Setting' (active), '2 Input Setting', and '3 Output Group Setting'. The main content area is titled 'General info' and includes the instruction 'Create a channel that encodes your input into multiple groups and outputs.' Below this, there is a 'Channel name' field with the value 'failover_demo' and a green checkmark icon. A 'Regularly cleaned' toggle switch is currently turned off. At the bottom, there is a 'Tags' section with a play icon and a 'Tags' label. At the very bottom, there are three buttons: 'Import Configuration', 'Save', and 'Next'.

2. Add inputs in the **Input Setting** step. The backup input used for failover must be of the same type as the primary input.

The screenshot shows the 'Input Setting' step of the channel configuration interface. The sidebar on the left now shows '1 General Setting' as completed with a checkmark, and '2 Input Setting' as the active step. The main content area has a blue header with 'Notes:' and three bullet points: 'If you add multiple inputs, the first input is used by default. Other inputs may be used in failover or when an event in the plan is triggered. You can enable the Input Failover in Input S used for failover must be of the same type as the primary input.', 'If you add multiple inputs, you can only add inputs that contain the same number of pipelines.', and 'Please note that after input data is first received, as long as the corresponding channel is in "RUNNING" status, transcoding fees will be incurred. And for the input contains two inde pipelines will incur transcoding fees. Even if no input data is received for a certain period of time, transcoding fees will still be incurred. This is because the system will insert black fra channels whose status is "IDLE" will not incur transcoding fees.' Below the notes is an 'Add' button. Underneath is a table with the following data:

Input Name	Input Type	Pipeline	Bind Status	Oper
rtmppush	RTMP_PUSH	2	-	Detail
rtmp	RTMP_PUSH	2	-	Detail

Below the table, there are three toggle switches with labels and notes: 'Callback Configuration' (turned off, note: 'This callback configuration only takes effect for RTMP_PUSH inputs.'), 'Input Pipeline Failover' (turned off, note: 'As long as the channel is in "RUNNING" status, for the input currently in use, each pipeline within the input will incur transcoding fees.'), and 'Input Loss Behavior' (turned off).

3. Find the input for which you want to configure failover and click **Setting**.

☆ Settings

Input Settings

Input Name rtmppush

Failover Settings

Input Failover ☒

Audio Selector ⓘ

Audio Selector Name ⓘ	Type ⓘ	Value ⓘ	Operation
	PID_SELECTOR	1-8191	Delete

[Add Audio Selector](#)

Confirm Cancel

4. Toggle on **Input Failover** and complete the following settings.

Failover Settings

Input Failover ⓘ ☒

Select Backup Input ⓘ * rtmp ✓

Downtime Threshold ⓘ 3000 ms

Input Preference ⓘ CURRENT_PREFERRED

5. Select a **backup input** from the inputs bound to the current channel. Specify the downtime threshold, which indicates the time (ms) to wait when there is no data from the primary input before the system switches to the backup input. We recommend you set this to 3000. The lower the downtime threshold, the faster the failover. However, a low

downtime threshold also means there may be a frequent switch of inputs caused by temporary packet loss. At last, specify what you want the system to do after the primary input is recovered. If you select **CURRENT_PREFERRED**, the system will continue to use the current input. If you select **PRIMARY_PREFERRED**, the system will switch back to the primary input if the backup is currently used.

6. Click **Confirm** to return to the **Input Setting** page. You will see that the bind status of the two inputs is now **Primary** and **Backup** respectively.

General Setting

2 Input Setting

3 Output Group Setting

Notes:

- If you add multiple inputs, the first input is used by default. Other inputs may be used in failover or when an event in the plan is triggered. You can enable the Input Failover in Input Setting.
- If you add multiple inputs, you can only add inputs that contain the same number of pipelines.
- Please note that after input data is first received, as long as the corresponding channel is in "RUNNING" status, transcoding fees will be incurred. And for the input contains two independent pipelines will incur transcoding fees. Even if no input data is received for a certain period of time, transcoding fees will still be incurred. This is because the system will insert black frames whose status is "IDLE" will not incur transcoding fees.

Add

Input Name	Input Type	Pipeline	Bind Status	Oper
rtmppush	RTMP_PUSH	2	Primary	Detail
rtmp	RTMP_PUSH	2	Backup	Detail

Callback Configuration ☐ Note: This callback configuration only takes effect for RTMP_PUSH inputs.

Input Pipeline Failover ☐ Note: As long as the channel is in "RUNNING" status, for the input currently in use, each pipeline within the input will incur transcoding fees.

Input Loss Behavior ☐

7. You have now configured input failover and can continue to configure outputs for the channel. For detailed directions, see "Channel Management - Step 4. Configure Output Groups".

Input Switch

Last updated : 2024-07-22 11:52:36

Input switch allows you to use multiple inputs to enrich live streaming experiences. You can add two PUSH inputs and multiple inputs of other types to a channel. To configure input switch, follow the steps below:

1. On the **Input Setting** page, add the inputs you want to use.

Notes

- If you add multiple inputs, the first input is used by default. Other inputs may be used in failover or when an event in the plan is triggered.
- You can add up to 5 inputs, including 2 PUSH inputs. All the inputs must have the same number of pipelines (1 or 2).

Add Input ⓘ *

MP4_PULL

2 ▼

✓

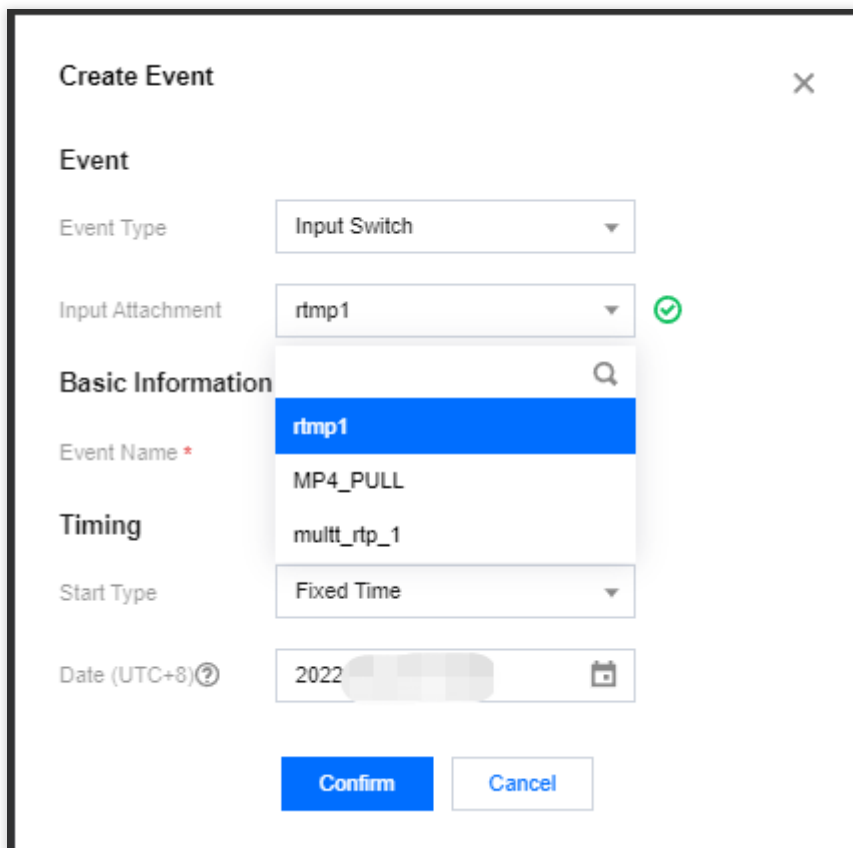
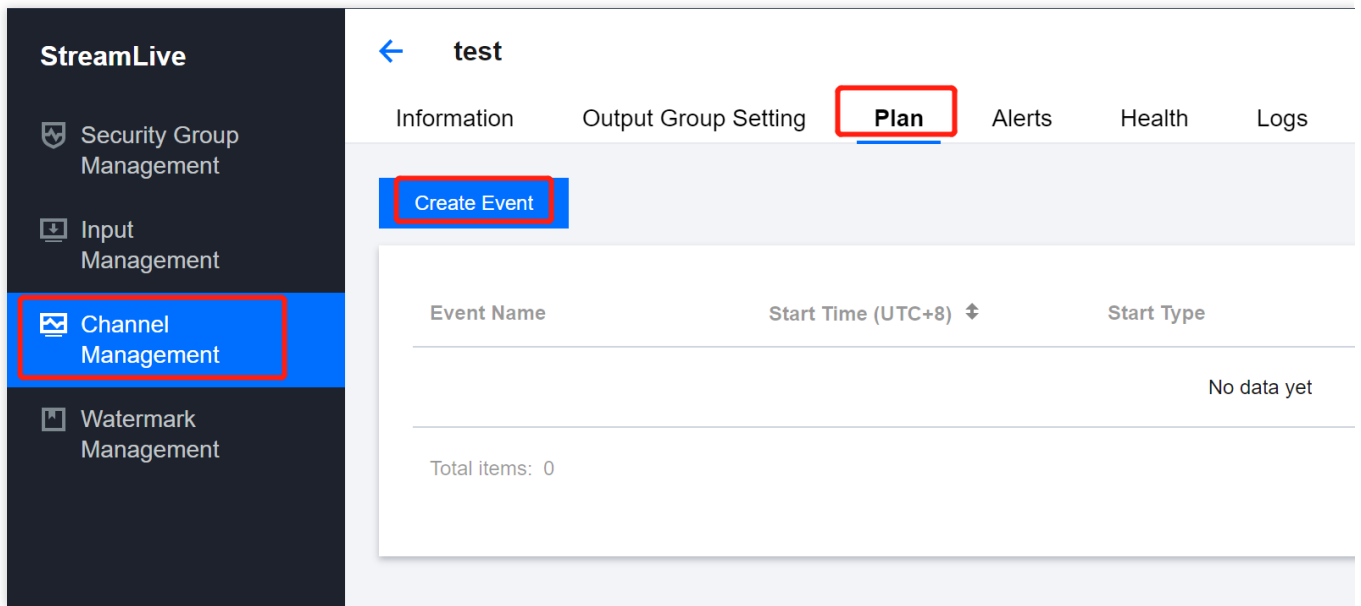
Input List

Input Name	Input Type	Pipeline	Bind Status
rtmp1	RTMP_PUSH	2	-
multirtp_1	RTP_PUSH	2	-
MP4_PULL	MP4_PULL	2	-

Previous

Next

2. After creating or editing your channel, find the channel on the **Channel Management** page, and click its name to enter the details page. Select the **Plan** tab and click **Create Event**.



Select from the drop-down list of **Input Attachment** an input you just added to the channel, and specify the **Start Type**. For details, see [Plan Management](#).

Playlist

Last updated : 2022-09-14 11:01:30

Video looping is a typical use case of input switch. For how to configure input switch, see the previous document. You can use this feature to play teasers on loop before a live stream starts or replay a live streaming session repeatedly after it ends.

The video looping feature plays existing videos, so the input type should be **MP4_PULL** or **HLS_PULL**. If your channel is not currently bound with such inputs, add one first before you configure an input switch event. The figure below shows the configuration for a typical input switch event for PULL inputs. You can specify two inputs for failover. Enter a public URL or a Tencent Cloud COS address with public read access.

Create Input

Name *

file_pull

✓

Type *

MP4_PULL

▼

InputAddress A *

Please enter the input source url

☒ From a public-read file

☐ From COS of this account ⓘ

InputAddress B

Please enter the input source url

☒ From a public-read file

☐ From COS of this account ⓘ

ⓘ

Media files cannot be pulled from COS as you have not activated COS or no bucket is created. [Click here](#) to check in the COS console.

Scheduled Recording

Last updated : 2022-09-14 11:01:30

StreamLive allows you to record live streams for a specified time period. This feature must be used together with Tencent Cloud COS.

Follow the steps below to configure scheduled recording:

1. Go to the COS console to configure the storage of recording files. You can either create a bucket or select an existing bucket. Make sure that the bucket is in the same region as your StreamLive channel. For example, if your StreamLive channel is in Mumbai, then the bucket must also be in Mumbai.

Information

Bucket Name



Region

Mumbai, India (Asia-Pacific) (ap-mumbai)

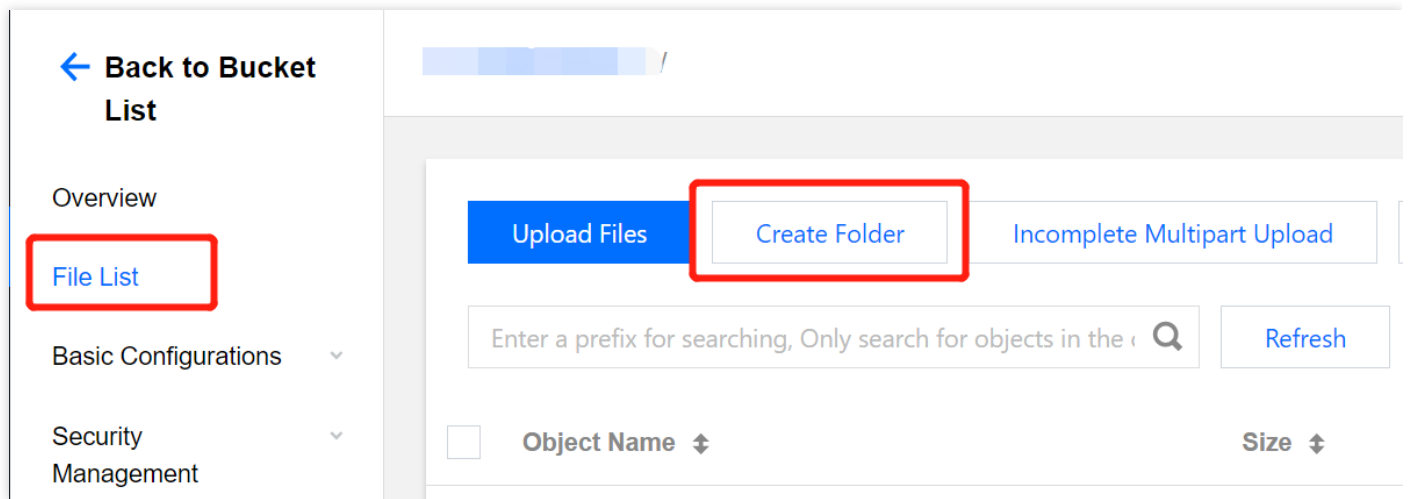
Creation Time



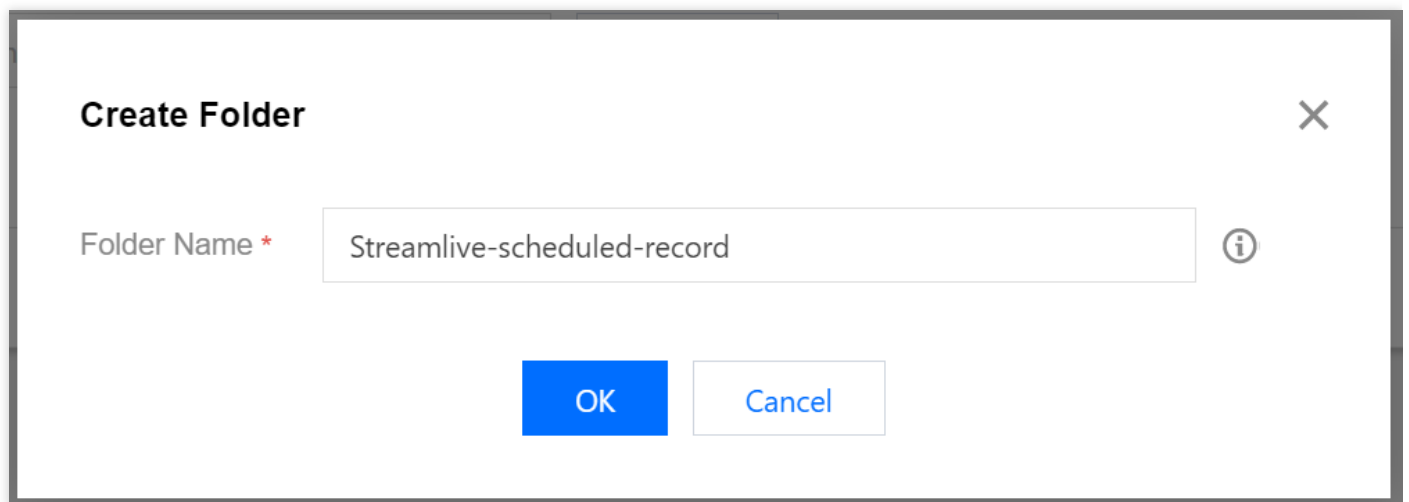
Access Permission



2. Click the bucket name to go to the configuration page and select **File List** on the left sidebar. Click **Create Folder** to create a folder for the recording files.



3. Enter a folder name and splice it to the endpoint URL of the bucket. The result is the address where StreamLive recording files will be saved.



You can view the endpoint URL of a bucket on the **Overview** page.

Domain Information

Endpoint	<code>https://[redacted].cos.ap-mumbai.myqcloud.com</code>	Use the access domain name for Intranet access
Custom CDN Acceleration Domain	--	
Custom Endpoint	[redacted]	
Global Acceleration Endpoint	[redacted]	
Static Website Endpoint	[redacted]	

Note: COS domains use smart DNS. If your other Tencent Cloud services access COS, intra-region access will be resolved to a private address. Cross-region access cannot use a private network and thus will be resolved to a public address. For details, please see [Request Creation Overview](#)More.

In the example above, the address to save StreamLive recording files is `https://${your-bucket-name}-${appid}.cos.ap-mumbai.myqcloud.com/streamlive-scheduled-record`. Note it for later use.

- Go to the StreamLive console. Click the name of the channel for which you want to configure scheduled recording and select the **Plan** tab.

[←](#) **Test_Channel**

[Information](#) [Output Group Setting](#) **[Plan](#)** [Alerts](#) [Health](#) [Logs](#)

Create Event

Event Name	Start Time (UTC+8) ⬆

5. Click **Create Event** and complete the following settings.

Create Event

Event

Event Type

Time Record

Basic Information

Event Name *

Test_StreamLive_Record

OutputGroupName *

Test_Output_Grp

ManifestName *

record

.m3u8

DestinationUrl1 ? *

https://h[REDACTED] 146065-appid.c

DestinationUrl2

Please enter the COS Url

Timing

Date (UTC+8)

2022-07-17 11:00:25 ~ 2022-07-17 11:01:25

Confirm

Cancel

- **Event Type:** Select **Time Record**.
- **Event Name:** Enter a name for the recording event.

- **OutputGroupName:** Select from the drop-down list an output group added to the channel.
 - **ManifestName:** The name of the playlist file. For HLS outputs, the file format is M3U8. For DASH outputs, the file format is MPD.
 - **DestinationUrl1:** Enter the full COS path (including the bucket name) to save the recording files.
 - **Timing:** Specify the time period to record the stream.
6. Click **Confirm**. This concludes the configuration. The channel will record the stream it receives during the specified time period and save the recording files to the specified destination.

Highlights

Last updated : 2024-08-02 14:05:16

For football and basketball event live streams, the StreamLive **Highlights** feature can identify exciting moments in the game and record and save the highlight clips.

Points of Attention

Highlights feature is provided by [Media Processing Service \(MPS\)](#), which means once users enable the Highlights feature in StreamLive channel, the StreamLive backend service will automatically call the MPS backend service. For this reason, you need to follow system guides to activate and authorize MPS; authorization refers to granting MPS the access to StreamLive data. Only after authorization can MPS read live stream data from StreamLive and perform the intelligent analysis for Highlights.

Once MPS obtains live stream data from StreamLive and generates highlights files, the files need to be saved to [Tencent Cloud Object Storage \(COS\)](#). Thus, you need to follow system guides to authorize MPS, granting it access to Tencent Cloud COS. Only after authorization can MPS read COS storage paths and perform write operations on the COS bucket.

Highlights feature will also incur fees from MPS and COS. For details, please refer to: [MPS intelligent analysis fee introduction](#), [COS billable items](#).

Prerequisites for Use

You have activated the StreamLive service.

Configure the Highlights feature

1. Log in to the [StreamLive console](#), the Highlights feature is in the [Input Setting](#) page.

✓ General Setting

2 Input Setting

3 Output Group Setting

Notes:

- If you add multiple inputs, the first input is used by default. Other inputs may be used in failover or when an event in the plan is triggered. You can enable the Setting, and the backup input used for failover must be of the same type as the primary input.
- If you add multiple inputs, you can only add inputs that contain the same number of pipelines.
- Please note that after input data is first received, as long as the corresponding channel is in "RUNNING" status, transcoding fees will be incurred. And for the independent pipelines, both pipelines will incur transcoding fees. Even if no input data is received for a certain period of time, transcoding fees will still be incurred. Only channels whose status is "IDLE" will not incur transcoding fees.

Add

Input Name	Input Type	Pipeline	Bind Status	Operations
Test_input01	RTMP_PUSH	1	-	Details Delete

▶ Callback Configuration

▶ Input Pipeline Failover

▶ Input Loss Behavior

▶ Highlights

Previous

Save

Next

2. Enable the feature and configure the parameters.

▼ Highlights

Highlights ⓘ

☒

Storage type ⓘ

Tencent Cloud Object Storage (COS)

Storage path *

Select

File name ⓘ

- {Timestamp} - {StartSecond}

Timestamp format ⓘ

☐ Unix ☐ UTC(+00:00)

Audio selector ⓘ

Please select

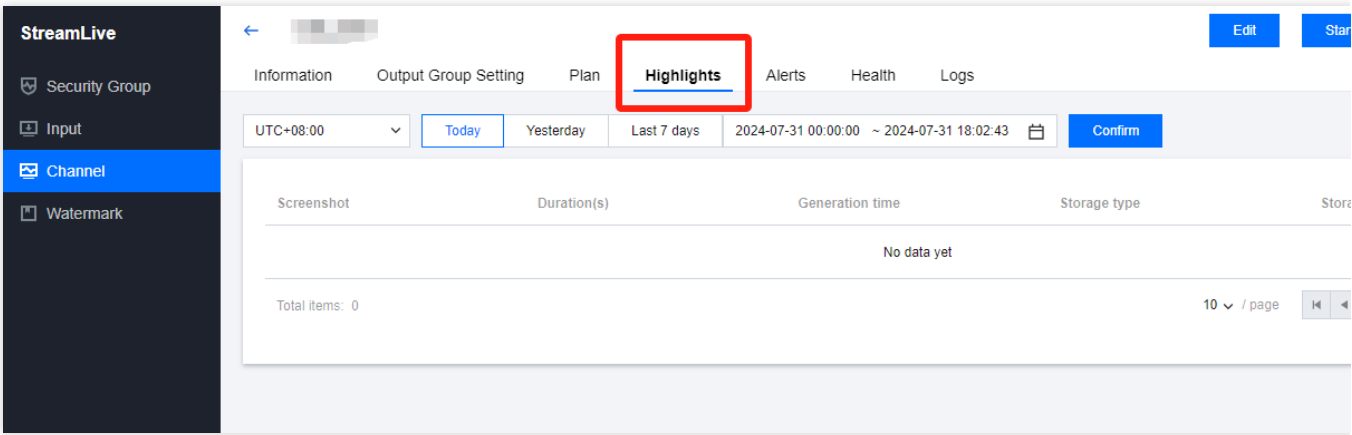
▼

Configuration Item	Description

Highlights Feature	<p>Only after enabling the feature can you configure the relevant parameters.</p> <p>When enabling the switch, the system will verify whether you have granted Media Processing Service (MPS) the permission to read StreamLive data. This is necessary, because only with authorization can MPS read the live streaming data from StreamLive and analyze the exciting moments.</p> <p>If you have already authorized, you can directly turn on the switch.</p> <p>If you have not authorized yet, please follow the system guidance to complete the authorization first before turning on the switch.</p>
Storage type	<p>For the generated highlight clips, storage is required. Currently, only Tencent Cloud Object Storage (COS) is supported.</p>
Storage path	<p>When selecting the storage path, the system will verify whether you have authorized MPS the read and write permissions on Tencent Cloud COS. Only after authorization can MPS read the storage path information and store files in COS.</p> <p>If you have already authorized, you can directly click Select to choose the storage path.</p> <p>If you have not yet authorized, click Select then, and follow the system guidance to complete authorization first, then choose the storage path.</p>
File name	<p>The file name consists of three parts: user-defined name, file generation timestamp, start second.</p> <p>User-defined name: Optional. Allows 1-32 characters consisting of numbers, letters, underscores, or hyphens. If you do not enter a name, the system will default to using the inputID.</p> <p>File generation timestamp: The timestamp can be selected in either Unix or UTC(+00:00) format.</p> <p>Start second: The start time of the highlight is expressed in seconds, relative to the source stream's starting point.</p>
Timestamp format	<p>Supports both Unix and UTC (+0:00) formats.</p>
Audio Selector	<p>If the source stream contains multiple audio tracks, you can set the Audio Selector. And then you can select the configured audio selectors as the audio for the highlight file.</p>

3. After completing the configuration, save it with the other channel information.

4. After starting the channel, you can view the generated files on the **Highlights** tab of the channel details page.



List Information	Description
Screenshot	A screenshot of the highlight segment for reference.
Duration(s)	Duration of the highlight file.
Generation time	Generation time of the highlight file.
Storage type	Currently, only Tencent Cloud Object Storage (COS) is supported.
Storage path	Storage path of the highlight file.

Time shifting

Last updated : 2024-07-22 11:44:53

The StreamLive time shifting feature has been migrated to StreamPackage. For more details, please refer to:

[StreamPackage Console Guide](#).

Delayed Playback

Last updated : 2022-09-14 11:01:31

The delayed playback feature is useful if you want StreamLive to ingest input in real time, but do not want to process the content or generate an output immediately. Delayed playback allows you to hold an input for a specified period of time before it's transcoded and packaged for output. Currently, this feature only works for RTMP_PUSH inputs.

Follow the steps below to configure delayed playback:

1. Click the input for which you want to configure delayed playback. If the input is bound to a channel that is currently running, you need to stop the channel first.

Basic Information[Edit](#)

Name	rtmp1
ID	62DE0B01E
State	Attached
Type	RTMP_PUSH
Delay	OFF

2. Click **Edit**, toggle on **Delay Time**, and specify the delay time (10-600 seconds).

Edit Input

Name *

rtmp1

Type *

RTMP_PUSH

Security Group *

new_test

Delay Time

300

seconds

Between 10 to 600

Destination A ? *

live1

streama

Destination B ?

live1

streamb

Media files cannot be pulled from COS as you have not activated COS or no bucket is created. [Click here](#) to check in the COS console.

Confirm

Cancel

Click **Confirm**. Now, instead of generating outputs immediately, the input will be processed only after the specified delay time.

Adaptive Bitrate Streaming

Last updated : 2024-07-22 11:18:47

Adaptive bitrate streaming is a method of streaming over HTTP where the source content is encoded at multiple bitrates or resolutions. Which bitrate is delivered to a player depends on network conditions. This can reduce stutter and improve streaming experiences.

To enable adaptive bitrate streaming, find the target channel on the **Channel Management** page and click **Edit**. Click **Next** until you enter the **Output Group Setting** page. You can configure outputs of different bitrates or protocols on this page. For detailed directions, see [Step 4. Configure Output Groups](#).

The following section shows you how to configure adaptive bitrate streaming for HLS outputs:

1. First, you need to configure transcoding templates. Audio templates only support the AAC codec. Specify the audio bitrate. If the input is a TS file and a PID selector is specified, you can also configure the **Language Code** displayed in the manifest.

The screenshot shows the 'Audio Templates' configuration page. On the left is a sidebar with the text 'Audio Templates'. The main area is titled 'Audio Template 1'. It contains four input fields: 'Name' with the value 'audio', 'Acodec' with a dropdown menu showing 'AAC', 'Audio Selector Name' with a dropdown menu showing 'Please select', and 'Language Code' with a text input field. A blue button labeled 'Add Audio Template' is at the bottom left of the main area.

2. The adaptive bitrate streaming feature is more relevant for videos because videos have higher bitrates and are more likely to be affected by network conditions. The H.264 and H.265 video codecs are supported, and you can choose either of two rate control modes: ABR and CBR. You can also enable **Top Speed Codec Transcoding** to deliver the same viewing experience at lower bitrates. Note that you cannot modify the rate control mode after enabling top speed codec.

Group 1

Video Templates

Video Template 1

Name	720	Vcodec	H264	Rate
Video Bitrate/bps *	2000000	Width?	720	Height
Fps?		Top Speed Codec Transcoding ?	<input checked="" type="checkbox"/>	Bitrate
Video Watermark	<input type="checkbox"/>	Video Watermark Template	Please select	Rate

Video Template 2

Name	1080	Vcodec	H264	Rate
Video Bitrate/bps *	4000000	Width?	1080	Height
Fps?		Top Speed Codec Transcoding ?	<input checked="" type="checkbox"/>	Bitrate
Video Watermark	<input type="checkbox"/>	Video Watermark Template	Please select	Rate

Add Video Template

Updates will affect the whole channel, please reset the outputs in every group

3. After configuring the transcoding templates, you can go on to configure multi-bitrate outputs in the **Outputs** area.

Outputs

Outputs *

Output 1

Name	<input type="text" value="720p"/>	Audio Template Names	<input checked="" type="checkbox"/> audio	Vid Ten Nar
Scte 35 Setting?	<input type="checkbox"/>			

Output 2

Name	<input type="text" value="1080p"/>	Audio Template Names	<input checked="" type="checkbox"/> audio	Vid Ten Nar
Scte 35 Setting?	<input type="checkbox"/>			

Add Output

4. After the configuration, click **Done**. Now, the input of the channel will generate HLS outputs with two bitrates.

Caption

Smart Subtitling

Last updated : 2024-07-22 10:38:01

The Smart Subtitling function converts voice information into subtitles by real-time Automatic Speech Recognition (ASR) during live streaming, and subsequently translates them into the target language. Currently, this feature supports four languages: Chinese, English, Japanese, and Korean. In practical applications, please select the appropriate language according to your business needs and audience.

Points of Attention

Currently, the Smart Subtitling feature can only be used in joint transcoding.

The ability to generate the intelligent captions is provided by [Media Processing Service \(MPS\)](#) to StreamLive. When using it for the first time, you need to authorize MPS to access StreamLive's data to generate captions.

When using the intelligent caption feature in StreamLive, in addition to StreamLive's [live transcoding fees](#), there will also be speech recognition fees from MPS. Translating across languages will incur speech translation fees from MPS. For specific billing information, please refer to the [MPS Billing Document](#).

Prerequisites for Use

You have activated the StreamLive service.

Configuring Smart Subtitles

1. Log in to [StreamLive Console](#), navigate to Channel Configuration and [Configure Output Groups](#). For the Output you want to configure, click **Setting** to enter [Transcoding Settings](#).

Outputs *

Add one or more outputs to this group. Each output has unique stream settings that enable you to choose the video, audio, and captions tracks that you need. All outputs need to be kept in the same transcoding type (joint transcoding/separate transcoding).

Add

Output Name	SCTE-35 Setting	Transcoding Setting	Actions
output1	<input type="checkbox"/>	Setting	Remove

2. Select **Joint Transcoding**, and click **Add Caption**.

Transcoding Setting

Transcoding ⓘ ☒ Joint Transcoding ☐ Separate Transcoding

[Add Audio/Video](#) [Add Caption](#)

3. Scroll to the bottom of the page, and in the **Caption** module, choose the caption source as **Analysis**.

Caption Copy Caption

Name

Caption Source

Analysis ▼
None

[Confirm](#) [Cancel](#) [Analysis](#)

Note :

Since the feature is provided by **MPS** to StreamLive, role authorization is required to support MPS in obtaining StreamLive data and generating captions.

When in use, the system will verify if you have authorized it before. If you have, you can directly configure captions.

If you have not authorized before, the system will guide you through role authorization. Once you agree, you can continue configuring captions.

4. Configure caption

Transcoding Setting

Format

Burn in

Source Language

☒ Chinese ☐ English ☐ Japanese ☐ Korean

Content Type

☐ Source ☒ Source + target ☐ Target

Target Language

☐ Chinese ☒ English ☐ Japanese ☐ Korean

Dynamic/Steady State Effect

☐ Real-time Dynamic Subtitles ☒ Delayed Steady State Subtitles

10 sec

Line Spacing

0%20%50%100%

Margins

0%10%20%30%40%50%

Lines

☒ 1 ☐ 2

Characters Per Line

−

40

+

Font

Source Text

Heiti

Translated Text

Heiti

Color

A

Font Color

Background Color

Confirm

Cancel

Configuration Item	Description
Format	Currently, only burn in is supported, which directly merges subtitles into the video.
Source language	It supports recognition of four source languages: Chinese, English, Japanese, and Korean.
Content type	Source: display only source language. Source + Target: display source language and translation language. Target: display only translation language.
Target	Currently, the source language can be translated into three target languages.

Language	
Dynamic/Steady State Effect	<p>Default setting: Delayed Steady State Subtitles. The system will delay the live streaming according to the set time, but the experience of watching complete sentence is better. The default delay time is 10 seconds, with other options including 20 seconds, 30 seconds, and 60 seconds.</p> <p>You can also choose: Real-time Dynamic Subtitles, which has a shorter delay, but the captions will dynamically correct the content word-by-word according to the spoken content.</p>
Line Spacing	<p>The vertical distance percentage represents the ratio of the vertical distance to the vertical width of the subtitles from the bottom of the screen. The vertical position of the subtitles is configured by adjusting the vertical distance percentage. Value range: 0 - 100%.</p>
Margins	<p>The horizontal distance percentage represents the ratio of the horizontal distance to the horizontal width of the subtitles and the side of the screen. The horizontal position of the subtitles is configured by adjusting the horizontal distance percentage. Value range: 0 - 50%.</p>
Lines	<p>Options are 1 or 2, with 1 selected by default.</p> <p>When lines exceed the displayed range, only the latest content will be displayed.</p>
Characters Per Line	<p>Value range: 1-100. Default value: 45. One Chinese character count as one word. One English character or number counts as half a word. The fewer the characters per line are, the larger the font size is.</p>
Font	<p>Options include Heiti, SimSun, Dynacw Diamond Black, and Helvetica.</p> <p>The font selection will vary depending on the Source language and Target language.</p>
Color	<p>The font color is white by default. The color can be customized.</p> <p>The background color is black by default. The customization of level of transparency is supported.</p>

5. Preview

Turn on the preview switch, enter test text, and the preview effect will be displayed according to your previous configuration. Additionally, you can readjust the resolution of the preview screen.

Preview

☒

Text Subtitle

test the caption feature

24

Preview

test the caption feature

Translation settings do not support preview

Preview Window Size

Width: 1920 PX

Height: 1280 PX

Update

Confirm

Cancel

6. Click **Confirm** to save your current Transcoding Configuration and Caption Configuration.

Caption Pass-Through

Last updated : 2024-08-16 16:48:11

StreamLive supports users in the pass-through of CC captions, meaning it can pass through captions from the input source directly to the output.

Points of Attention

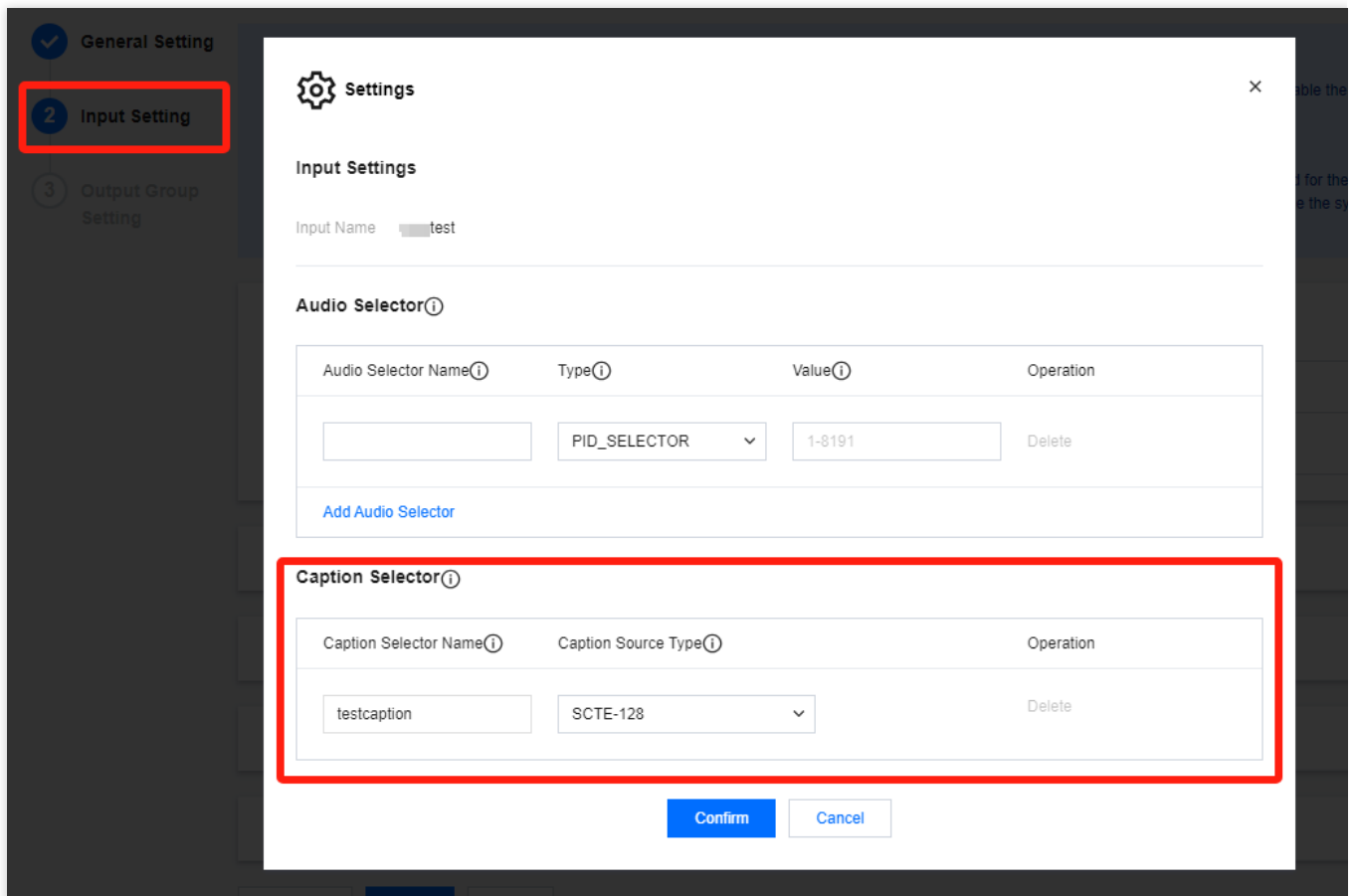
Currently, the caption pass-through feature only supports SCTE-128 type caption sources.

Prerequisites for Use

You have activated the StreamLive service.

Configuring Caption Pass-Through

1. Log in to [StreamLive Console](#) and navigate to [Configure Inputs](#) under channel configuration. For the input you want to configure, click **Setting** in the **Operation** column.
2. In **Input Settings**, you can find the **Caption Selector** section. Enter the necessary information to extract caption data from the input source.



Configuration Item	Description
Caption Selector Name	You can enter 1-32 characters including letters, numbers, and underscores. After setting the caption selector here, you can then select the output caption in the output settings.
Caption Source Type	Currently, only SCTE-128 is supported. This allows the SCTE-128 information from the input source to be used as caption.

3. For the output you want to configure, click **Setting**, then **Add Caption**.

Outputs *

Add one or more outputs to this group. Each output has unique stream settings that enable you to choose the video, audio, and captions tracks that you need. A need to be kept in the same transcoding type (joint transcoding/separate transcoding).

Add

Output Name	SCTE-35 Setting	ID3 Passthrough	Transcoding Setting	Actions
testoutput	<input type="checkbox"/>	<input type="checkbox"/>	<div>Setting</div>	<div>Remove</div>

Transcoding Setting

Transcoding ⓘ ☒ Joint Transcoding ☐ Separate Transcoding

Add Audio/Video

Add Caption

4. Configure the caption according to your needs.

Caption Copy Caption

Name

Caption1

Caption Source

Input

Format

Embedded

Caption Selector Name ⓘ *

testcaption

Confirm

Cancel

Configuration Item	Description
Name	You can enter 1-20 characters including letters and numbers.

	The detailed parameters of the caption configuration will be saved under this name. To reuse existing parameters, click Copy above.
Caption Source	To pass-through the caption from the input, please select Input as the caption source.
Format	If Input is selected as the caption source, the format currently only supports Embedded .
Caption Selector Name	Select the caption to be output from the pre-set caption selector.

5. Click **Confirm** to save your transcoding and caption configurations.

Relay

Last updated : 2024-07-22 10:56:55

StreamLive allows you to push HLS/DASH streams to an HTTP server using the HTTP PUT method.

On the **Output Group Setting** page, select HLS or DASH as the **Output Group Type** and enter the address of the HTTP server in **Destination**. After the channel is started, the live stream will be pushed to the destination URL in real time.

Input Setting

3 Output Group Setting

Edit output group *

An output group can contain one or many outputs. For each output, you can configure the encoding settings, and add or remove audio, vid

Output Group name * hlsmerger

Output Group type *

- ☒ **HLS**
Send live video and audio to smartphones, tablets, computers, and other services with HLS.
- ☐ **DASH**
Send live video and audio to smartphones, tablets, computers, and other services with DASH.
- ☐ **HLS_ARCHIVE**
Archive your live video and audio to Tencent Cloud COS with HLS.
- ☐ **DASH_ARCHIVE**
Archive your live video and audio to Tencent Cloud COS with DASH.
- ☐ **HLS_STREAMPACKAGE**
Send live video and audio to Tencent Cloud StreamPackage with HLS.
- ☐ **DASH_STREAMPACKAGE**
Send live video and audio to Tencent Cloud StreamPackage with DASH.

Destination Information *

Destination Type Standard

Destination A ⓘ * h

Authentication ☐

The difference between archiving and relay is that with archiving, the manifest file includes all audio/video files of the channel from the start to the end, but with relay, the manifest file is updated constantly and only includes the latest audio/video files.

The format of the manifest file for HLS and DASH streams is as follows:

HLS: \${Destination}/\${OutputGroupName}.m3u8

DASH: \${Destination}/\${OutputGroupName}.mpd

Relay also supports HTTP authentication. To enable it, toggle on **Authentication** in the **Destination** area and enter the authentication information.

Frame Capture

Last updated : 2024-08-06 17:58:08

StreamLive supports capturing images from live streams at fixed time intervals.

Points of Attention

The frame capture feature will incur fees with a unit price of 0.0176 USD per thousand images. For details, please refer to: [StreamLive Billing Document](#).

If you need to store the images in [Tencent Cloud Object Storage \(COS\)](#), please refer to the [billable items](#) in COS.

If you need to output the images to a third-party storage service, we will charge relaying fees based on the actual usage. For details, please refer to: [StreamLive Billing Document](#).

Prerequisites for Use

You have activated the StreamLive service.

Configuring Frame Capture

1. Log in to [StreamLive console](#), and enter the [Output Group Setting](#) page. For the output group, select the type as: **FRAME CAPTURE**.

General Setting

Input Setting

3 Output Group Setting

frame

Edit output group *

An output group can contain one or many outputs. For each output, you can configure the encoding settings, and add or remove caption tracks.

Output Group Name *

frame

Output Group Type *

HLS

Send live video and audio to smartphones, tablets, computers, and other services with HLS.

DASH

Send live video and audio to smartphones, tablets, computers, and other services with DASH.

HLS_ARCHIVE

Archive your live video and audio to Tencent Cloud COS with HLS.

DASH_ARCHIVE

Archive your live video and audio to Tencent Cloud COS with DASH.

HLS_STREAMPACKAGE

Send live video and audio to Tencent Cloud StreamPackage with HLS.

DASH_STREAMPACKAGE

Send live video and audio to Tencent Cloud StreamPackage with DASH.

FRAME CAPTURE

Send a series of frame capture files to the object storage service.

2. Fill in at least one output destination.

If you need to output the images to [Tencent Cloud Object Storage \(COS\)](#), select the destination type as: **Tencent Cloud COS**.

Destination Information *

Destination Type

Tencent Cloud COS

Storage Path *

Select

File Name ⓘ *

Enter the base file name

- {Timestamp}.jpg

Timestamp Format ⓘ

Unix

UTC(+00:00)

Configuration Item	Description

Storage path	<p>When selecting the storage path, the system will verify whether you have authorized StreamLive the read and write permissions on Tencent Cloud COS. Only after authorization can StreamLive read the storage path information and store images in COS. If you have already authorized StreamLive with read and write permissions on COS, you can directly click Select to choose the storage path.</p> <p>If you have not yet authorized StreamLive with read and write permissions on COS, after clicking Select, please follow the system prompts to complete the authorization and then choose the storage path.</p>
File Name	<p>The file name consists of two parts: base file name, file generation time.</p> <p>Base file name: Required, supports input of 1-32 characters including numbers, letters, underscores, and hyphens.</p> <p>File generation time: Supports both Unix and UTC (+0:00) formats, which can be set in the timestamp format.</p>
Timestamp format	Supports both Unix and UTC (+0:00) formats.

Note :

Please ensure the storage path + file name is unique. If two frame capture outputs have the same storage path + file name and are generated simultaneously, the generated image files may overwrite each other.

If you need to export images to AWS S3, choose the destination type as: **Amazon S3**.

Destination Information *

Destination Type
Amazon S3

Create a subaccount, and output buckets on the AWS S3 console.

Subaccount *
Enter the secret ID
Enter the secret key

Output S3 Bucket *
Enter the S3 region
Enter the name of the S3 bucket

For example ap-southeast-1

Output File Path ⓘ

File Name ⓘ *
Enter the base file name
- {Timestamp}.jpg

Timestamp Format
☒ Unix
☐ UTC(+00:00)

Configuration Item	Description

Subaccount	In AWS Identity and Access Management (IAM), create a sub-account via ' Add users ', grant the sub-account the corresponding S3 bucket permissions. Record the Access key ID and Secret access key , and enter them here as the secret ID and secret key. For details, refer to: Configure AWS Sub-account and Policy
Output S3 Bucket	S3 Region: Enter the region where the S3 bucket is located. Use the following format 'ap-southeast-1'. S3 bucket name.
Output File Path	Enter the folder directory path, starting and ending with /. For example: /output/. If not entered, the root directory of this S3 bucket will be used by default.
File Name	The file name consists of two parts: base file name, file generation time. Base file name: Required, supports input of 1-32 characters including numbers, letters, underscores, and hyphens. File generation time: Supports both Unix and UTC (+0:00) formats, which can be set in the timestamp format .
Timestamp format	Supports both Unix and UTC (+0:00) formats.

3. Set the output name, supporting 1-32 letters, numbers, and underscores. Ensure the uniqueness of the output name under the Channel. Then, you can click **Setting** to set frame capture parameters.

Outputs *

A frame capture output group can contain only one output.

[Add](#)

Output Name	Stream Setting
Output1	Setting

4. Go to the **Setting** page for detailed parameters configuration.

Stream Setting

Add Setting

Frame Capture Copy

Name ⓘ *

Width ⓘ

Height ⓘ

Capture Interval Units *

SECONDS ▼

Capture Interval *

10

▼ Scaling Settings

Scaling Behavior ⓘ

DEFAULT ▼

Sharpness ⓘ

−

0

+

Configuration Item	Description
Name	The following detailed parameters will be saved under this name. You can enter 1-20 characters consisting of letters and numbers. You can also reuse existing parameter template by clicking Copy above.
Width,Height	Enter the resolution of the output image, specifying width and height separately. If left blank or set to 0, the resolution will follow the source image. If a value is entered, it must be an even number between 0 and 3000.
Capture Interval Units	Currently, only SECONDS is supported.
Capture Interval	You can enter a positive integer between 1 and 3600, representing 1-3600 seconds.

©2013-2022 Tencent Cloud. All rights reserved.

Page 67 of 82

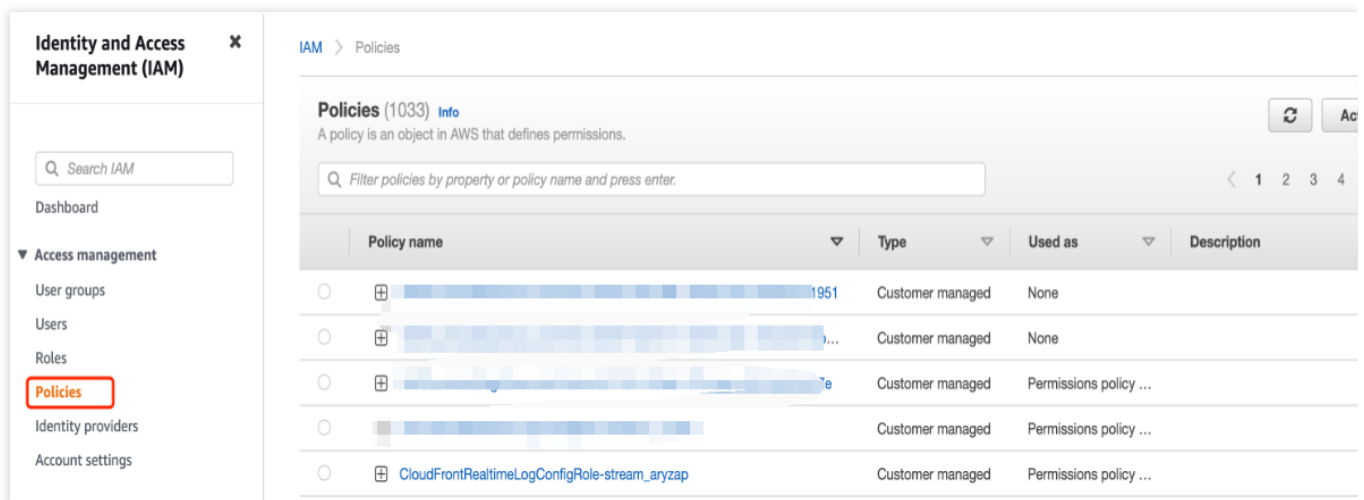
Scaling Behavior	When there is a discrepancy between the source stream resolution and the set output resolution, you can define the image scaling behavior: DEFAULT: Insert black boxes around the image to provide the specified output resolution. STRETCH_TO_OUTPUT: Stretch the image to the specified output resolution.
Sharpness	Changes the strength of the anti-alias filter used for scaling. 0 is the softest setting, 100 is the sharpest. A setting of 50 is recommended for most content.

5. Click **Confirm** to save the current configuration.

Configure AWS Sub-account and Policy

1. Create a policy

1.1 Go to the AWS Console's **Identity and Access Management (IAM)** module, click **Policies**, and then click **Create policy**.



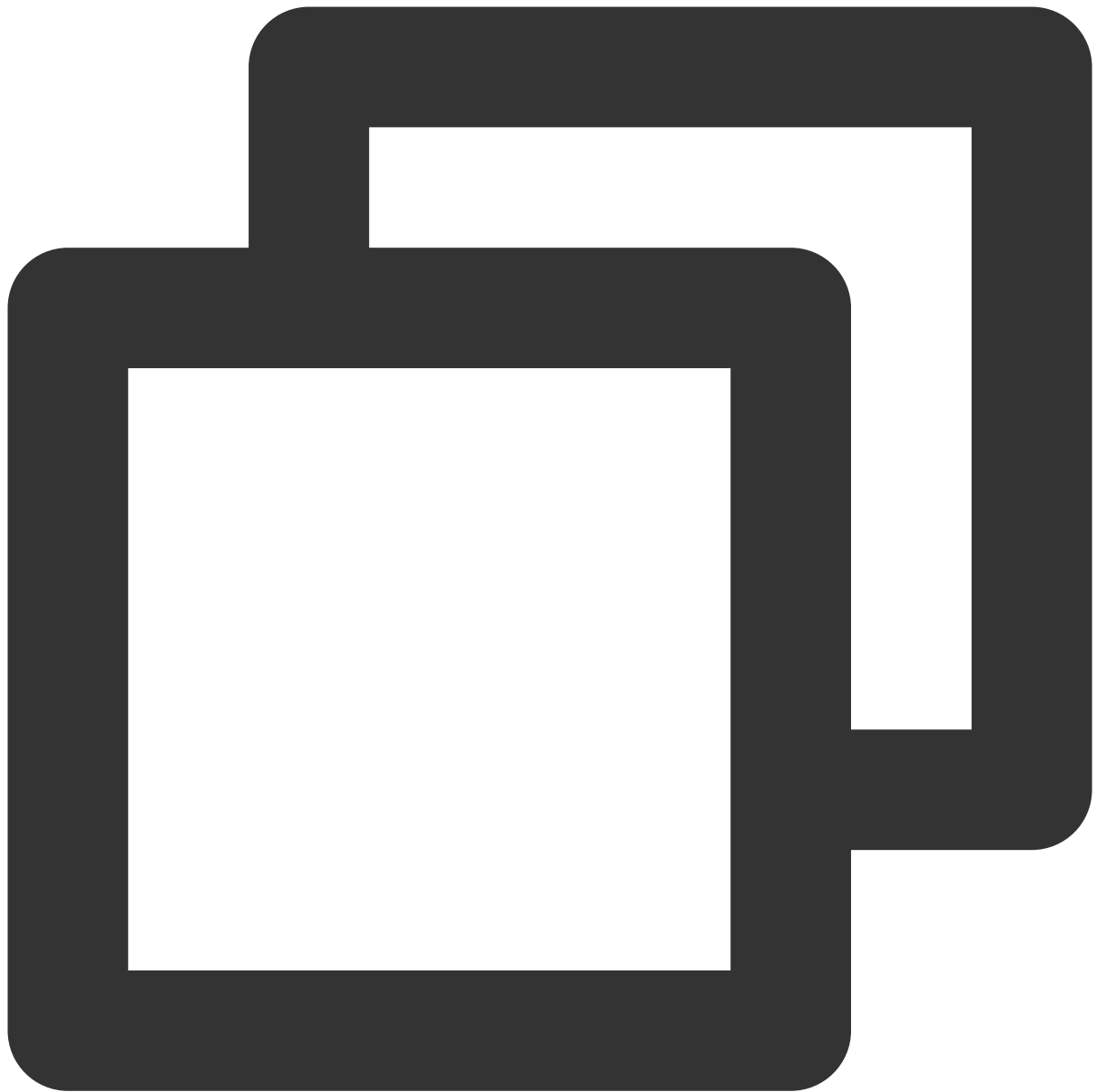
1.2 Choose the JSON tab. For StreamLive to access the S3 bucket, only the **PutObject** permission needs to be granted. Fill the ARN of the S3 bucket into the **Resource** field in the JSON.

Note:

The S3 ARN information can be found in the **Properties** section of the corresponding AWS S3 bucket.

In **Resource** of the JSON, make sure you attach **/*** to the S3 ARN. For example, if your S3 ARN is `arn:aws:s3:::thebucketname`, enter `arn:aws:s3:::thebucketname/*`.

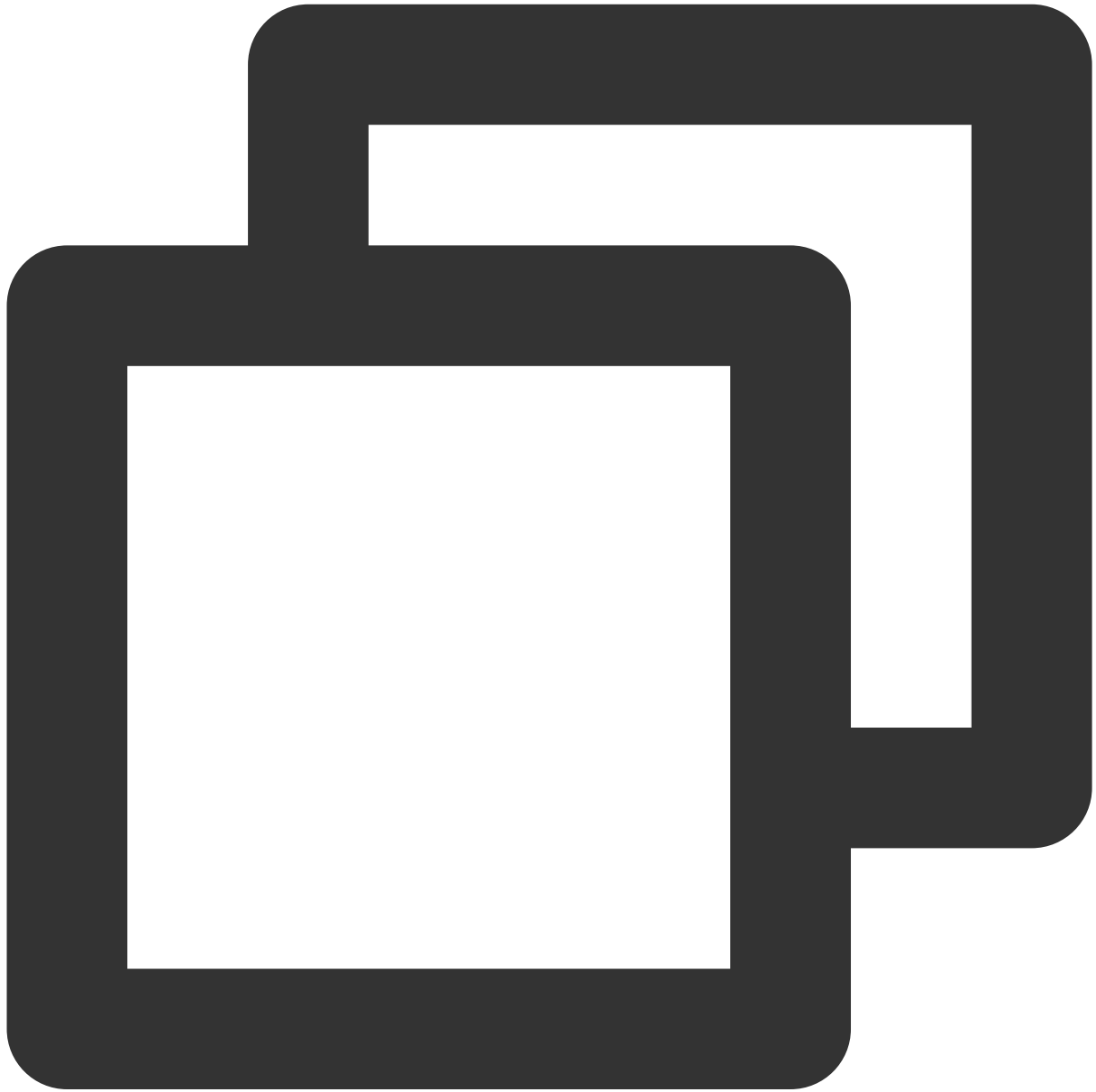
If you want to grant PutObject permission only to a specific bucket, you can refer to the following:



```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Statement1",
      "Effect": "Allow",
      "Action": [
        "s3:PutObject"
      ],
      "Resource": [
        "arn:aws:s3:::thebucketname/*"
      ]
    }
  ]
}
```

```
    ]  
  }  
]  
}
```

If you want to grant PutObject permission to all your S3 buckets, you can refer to the following:



```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Sid": "Statement1",
```

```
{
  "Effect": "Allow",
  "Action": [
    "s3:PutObject"
  ],
  "Resource": [
    "*"
  ]
}
```

1.3 Enter the **Policy name** and then click **Create policy** to complete creation.

Review policy

Name*

Use alphanumeric and '+=, @-_' characters. Maximum 128 characters.

Description

Maximum 1000 characters. Use alphanumeric and '+=, @-_' characters.

2. Create a sub-account and associate policy

2.1. Go to the AWS Console's **Identity and Access Management (IAM)** module, click **Users**, and then click **Add users** to add a user.

Identity and Access Management (IAM)

Users (2) [Info](#)

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

<input type="checkbox"/>	User name	Groups	Last activity	MFA	Password age
<input type="checkbox"/>				None	None

2.2. Enter **User name** and click **Next**.

2.3. Click **Attach existing policies directly**, type in the search box the name of the policy you just created, and select the policy. Then continue to complete the creation of the sub-account.

3. Obtain the sub-account's Access key ID and Secret access key

3.1. Go to the sub-account details page, click **Security credentials** > **Access keys** > **Create access key**.

IAM > Users > tf1-sqsnotify-test

tf1-sqsnotify-test

Summary

ARN arn:aws:iam::436808682493:user/tf1-sqsnotify-test	Console access Disabled	Access key 1 Not enabled
Created March 10, 2023, 10:46 (UTC+08:00)	Last console sign-in -	Access key 2 Not enabled

Permissions | Groups | Tags | **Security credentials** | Access Advisor

Console sign-in

Console sign-in link https://436808682493.signin.aws.amazon.com/console	Console password Not enabled
---	---------------------------------

Multi-factor authentication (MFA) (0) Ren

Use MFA to increase the security of your AWS environment. Signing in with MFA requires an authentication code from an MFA device. Each user can have a maximum of 8 MFA devices assigned. [Learn more](#)

Device type	Identifier	Created on
No MFA devices. Assign an MFA device to improve the security of your AWS environment		

[Assign MFA device](#)

Access keys (0)

Use access keys to send programmatic calls to AWS from the AWS CLI, AWS Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time. [Learn more](#)

No access keys

As a best practice, avoid using long-term credentials like access keys. Instead, use tools which provide short term credentials. [Learn more](#)

[Create access key](#)

3.2. Select **Other** and click **Next**. Note the Access key ID and Secret access key.

Access key best practices & alternatives

Avoid using long-term credentials like access keys to improve your security. Consider the following use cases and alternatives.

☐ **Command Line Interface (CLI)**

You plan to use this access key to enable the AWS CLI to access your AWS account.

☐ **Local code**

You plan to use this access key to enable application code in a local development environment to access your AWS account.

☐ **Application running on an AWS compute service**

You plan to use this access key to enable application code running on an AWS compute service like Amazon EC2, Amazon ECS, or AWS Lambda to access your AWS account.

☐ **Third-party service**

You plan to use this access key to enable access for a third-party application or service that monitors or manages your AWS resources.

☐ **Application running outside AWS**

You plan to use this access key to enable an application running on an on-premises host, or to use a local AWS client or third-party AWS plugin.

☒ **Other**

Your use case is not listed here.



It's okay to use an access key for this use case, but follow the best practices:

- Never store your access key in plain text, in a code repository, or in code.
- Disable or delete access keys when no longer needed.
- Enable least-privilege permissions.
- Rotate access keys regularly.

For more details about managing access keys, see the [Best practices for managing AWS access keys](#).

SCTE-35

Last updated : 2024-07-22 10:54:39

You can configure StreamLive to pass through SCTE-35 messages.

SCTE-35 messages are only carried by MPEG-2 TS inputs. Therefore, StreamLive can only pass through SCTE-35 messages for RTP_PUSH, UDP_PUSH, or SRT_PUSH inputs.

Find the target channel and click **Edit** to go to the **Output Group Setting** page. Find the output for which you want to configure SCTE-35 pass-through, and toggle on **Scte 35 Setting**.

Outputs *

Add one or more outputs to this group. Each output has unique stream settings that enable you to choose the video, audio, and captions tracks that you need. All need to be kept in the same transcoding type (joint transcoding/separate transcoding).

Add

Output Name	SCTE-35 Setting	ID3 Passthrough	Transcoding Setting	Actions
720p	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	720p	Remove
1080p	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1080p	Remove
4K	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4K	Remove

It's not enough to just enable SCTE-35 pass-through. For SCTE-35 messages to be visible in the output, you must also include PES payloads of the SCTE-35 messages in the input.

After enabling pass-through, you can use SCTE-35 messages to insert ads into different outputs.

PDT (HLS)

Last updated : 2022-09-14 11:01:31

You can configure EXT-X-PROGRAM-DATE-TIME tags for the output media manifest of HLS streams to associate the first media segment with an absolute date and time. The format is as follows:

```
1 #EXT-X-PROGRAM-DATE-TIME:<date-time-msec>
```

The format of `date-time-msec` is ISO/IEC 8601:2004 [ISO_8601] (YYYY-MM-DDThh:mm:ss.SSSZ). It must specify the time zone and have a millisecond precision.

Insert PDT tags in HLS streams. Find the target channel and click **Edit** to go to the **Output Group Setting** page. You can configure EXT-X-PROGRAM-DATE-TIME tags only if the **Output Group Type** is HLS, HLS_ARCHIVE, or HLS_STREAM_PACKAGE.

In the **Segment Information** area, toggle on **PdtInsertion** and specify the interval (seconds) to insert the tags.

Segment Information

Segment Type

ts

Segment Duration

4000

Between 1000 and 30000, only be a multiple of 1000

Segment Number

5

Between 1 and 300

PdtInsertion

☒

PdtDuration

600

Between 1 and 3000

H.265 Packaging Type①

Please select the segment type

After the configuration, start the channel. When input is available, you will see PDT tags in the output M3U8 streams, which are inserted every 600 seconds.

Archiving (Recording)

Last updated : 2024-07-22 10:52:24

StreamLive allows you to save HLS/DASH streams to Tencent Cloud COS.

On the **Output Group Setting** page, select HLS_ARCHIVE or DASH_ARCHIVE as the **Output Group Type** and enter the COS address to save streams in **COS Destination**. After the channel is started, the live stream will be archived to COS in real time.

The difference between archiving and relay is that with archiving, the manifest file includes all audio/video files of the channel from the start to the end, but with relay, the manifest file is updated constantly and only includes the latest audio/video files.

The formats of the main manifest file for HLS and DASH streams are as follows:

HLS: \${COS Destination}/\${region}/\${ChannelId}-\${p0 or p1}/\${OutputGroupName}/\${OutputGroupName}.m3u8

DASH: \${COS Destination}/\${region}/\${ChannelId}-\${p0 or p1}/\${OutputGroupName}/\${OutputGroupName}.mpd

Ad Insertion

Last updated : 2022-09-14 11:01:31

You can use StreamLive to insert ads into live streams. We offer the following ad insertion solutions:

1. Input switch

Bind a video file or live streaming URL as an input to your channel. On the **Plan** page, create an input switch event to insert the video or live stream at a specified time or immediately after configuration. The figure below shows you how to insert a video file into the live stream at a specified time.

Create Event [X]

Event

Event Type: Input Switch

Input Attachment: MP4_PULL ✓

Basic Information

Event Name *: ad_insert ✓

Timing

Start Type: Fixed Time

Date (UTC+8): 2022-07-08 00:00:00 [Calendar Icon]

[Confirm] [Cancel]

StreamLive will switch to the video file at the specified UTC time to play the ad. After the ad is finished, StreamLive will switch back to the original live stream. The entire process is executed automatically without the need for human intervention.

2. SCTE-35

If your input is MPEG-2 TS streams, you can also include SCTE-35 payloads in the input. StreamLive will recognize the payloads and convert them into information that can be displayed in outputs. A standard method is used for players to recognize the information and switch to the ad. You only need to enable SCTE-35 pass-through for the corresponding output. For details, see the “SCTE-35” document.

StreamLive Tag

Last updated : 2024-07-24 11:45:31

[Tencent Cloud Tag](#) is a cloud resource management tool that allows you to use different standards to categorize, search for, and aggregate cloud resources having the same attributes. A tag consists of a tag key and tag value. You can create a tag and bind it to your cloud resources. A tag key can have multiple tag values, and a key-value pair can be bound to multiple resources.

StreamLive Tag

In StreamLive, our resources are channels. You can bind tags to StreamLive channels.

Prerequisites for Use

You have activated the StreamLive service.

If you operate through the Tencent Cloud console, you can directly bind tags to StreamLive channels in the console.

If you access via the Tencent Cloud API, you need to authorize StreamLive first, granting StreamLive read and operational permissions for tag data. Only after authorization can you use tags in StreamLive API.

Method 1: Console

1. Refer to the [Tag Operation Guide](#) to create tags.
2. When creating a StreamLive channel, you can **add tags** in **General Setting**.

1 General Setting

2 Input Setting

3 Output Group Setting

General info

Create a channel that encodes your input into multiple groups and outputs.

Channel name *

Regularly cleaned ☐

Tags

Tags are used to manage resources by category in different dimensions. If the existing tags don't meet your requirements, you can add new tags.

[+ Add](#) [Paste](#)

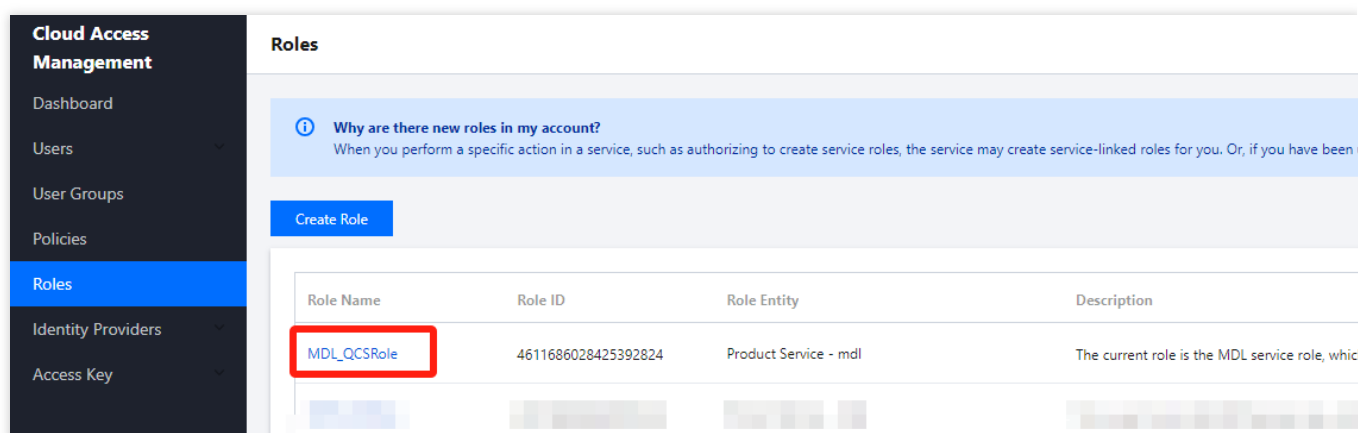
[Import Configuration](#) [Next](#)

3. After creating the channel, you can view **Tags** in the channel List. If you need to edit tags, click **Edit** to enter the **Channel Edit Page**.

Name	State	ID	Tags
	IDLE		<input type="button" value="Edit"/> 2
	IDLE		<input type="button" value="Edit"/> 1
	IDLE		<input type="button" value="Edit"/> 1
	IDLE		<input type="button" value="Edit"/> 1

Method 2: API

1. In Tencent Cloud Access Management, select [Roles](#), and find the StreamLive service role **MDL_QCSRole** in the page.



Cloud Access Management

- Dashboard
- Users
- User Groups
- Policies
- Roles**
- Identity Providers
- Access Key

Roles

Why are there new roles in my account?
When you perform a specific action in a service, such as authorizing to create service roles, the service may create service-linked roles for you. Or, if you have been

[Create Role](#)

Role Name	Role ID	Role Entity	Description
MDL_QCSRole	4611686028425392824	Product Service - mdl	The current role is the MDL service role, which

2. Enter the details page for MDL_QCSRole, and click **Associate Policy**.

← MDL_QCSRole

Role Info

Role Name	MDL_QCSRole
RoleArn	qcs::cam::uin/200019489919:roleName/MDL_QCSRole
Role ID	4611686028425392824
Description	当前角色为 媒体直播 服务角色，该角色将在已关联策略的权限范围内访问您的其他云服务资源。✎
Creation Time	2024-07-21 15:48:20
Tag	No tag ✎

Permission Role Entity (1) Revoke Session Service

▼ Permissions Policy

Associate a policy to get the action permissions that the policy contains. Disassociating a policy will result in losing the action permissions in the policy.

Associate Policy

Disassociate Policies

Search for policy

Q

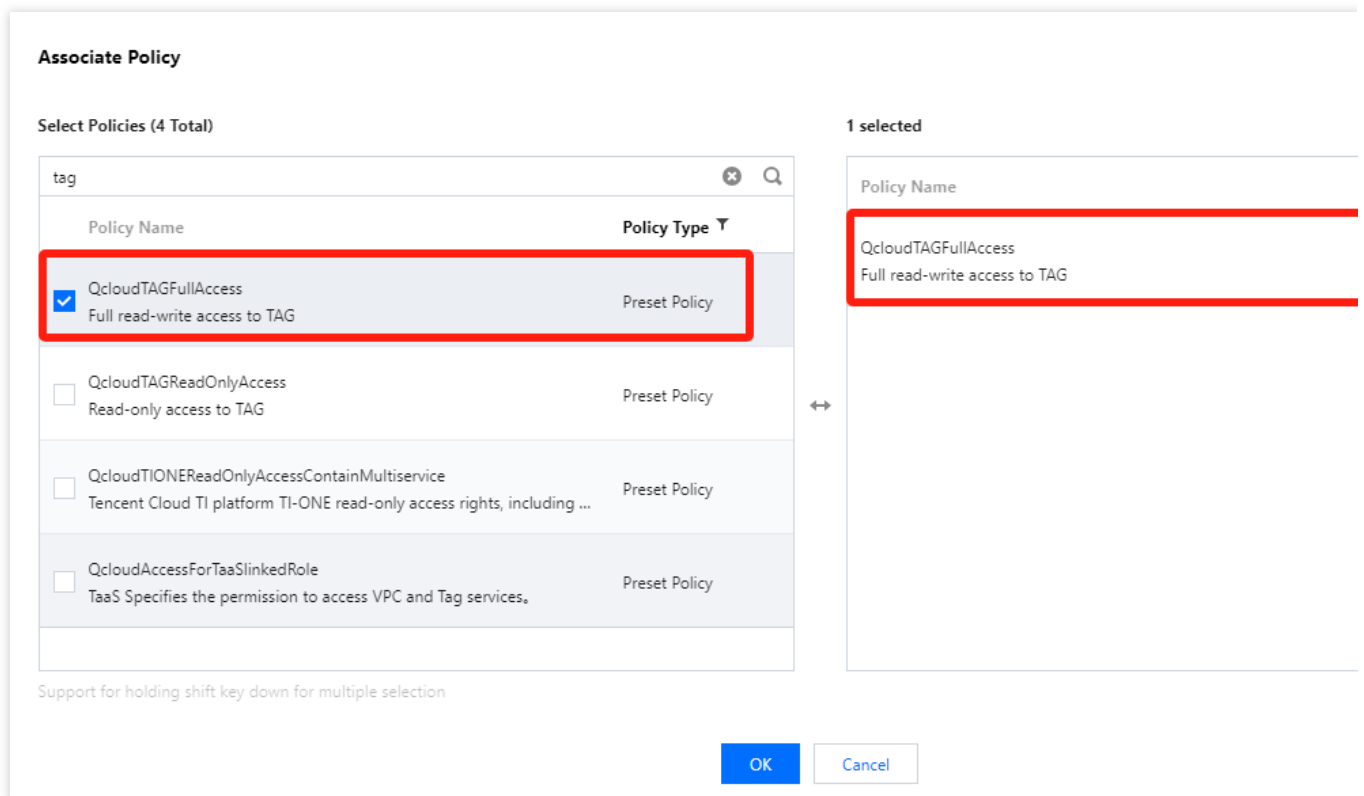
<input type="checkbox"/>	Policy Name	Description	Session Expiration Time ⓘ	Association Time	Of
<input type="checkbox"/>	QcloudAccessForMDLRoleInLive	This policy is for the MDL serv...	-	2024-07-21 22:40:57	Di
<input type="checkbox"/>	QcloudMPSFullAccess	Full read-write access to Medi...	-	2024-07-21 15:48:21	Di

0 selected, 2 in total

10 / page

1

3. Then add the policy **QcloudTAGFullAccess** to MDL_QCSRole, in order to grant StreamLive the read and operation permissions on tag data.



4. You can use the following APIs to bind tag to StreamLive channel:

[CreateStreamLiveChannel](#)

[ModifyStreamLiveChannel](#)