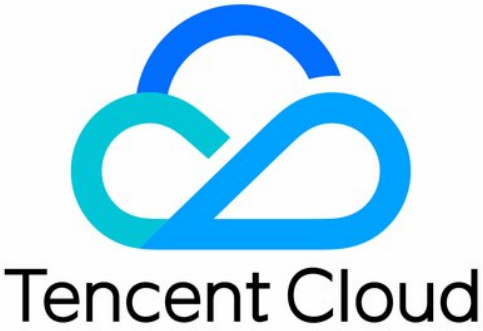
StreamLive

Feature Guide

Product Documentation



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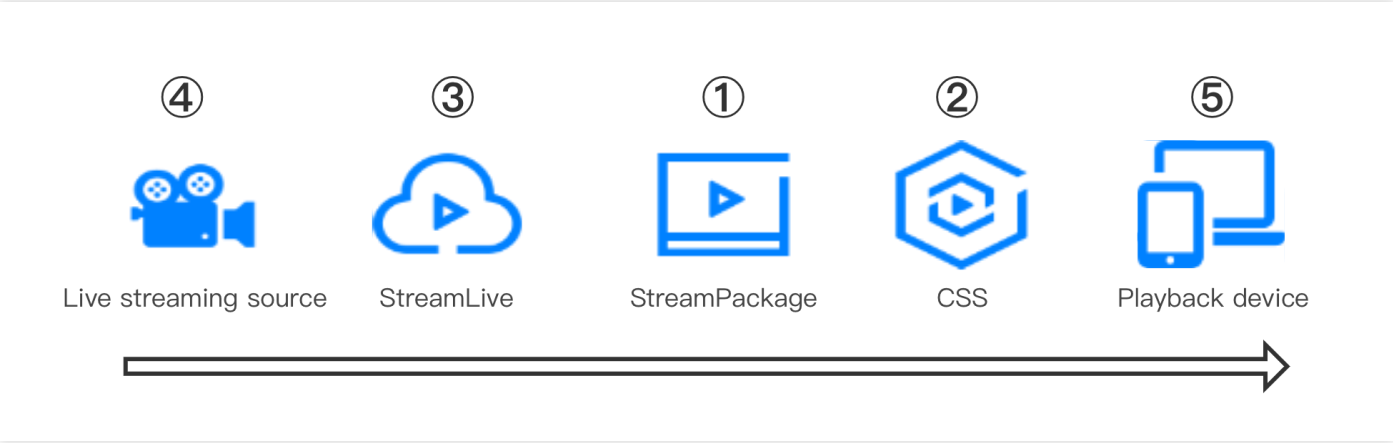
Feature Guide
Implementing Live Streaming
Preparations

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.



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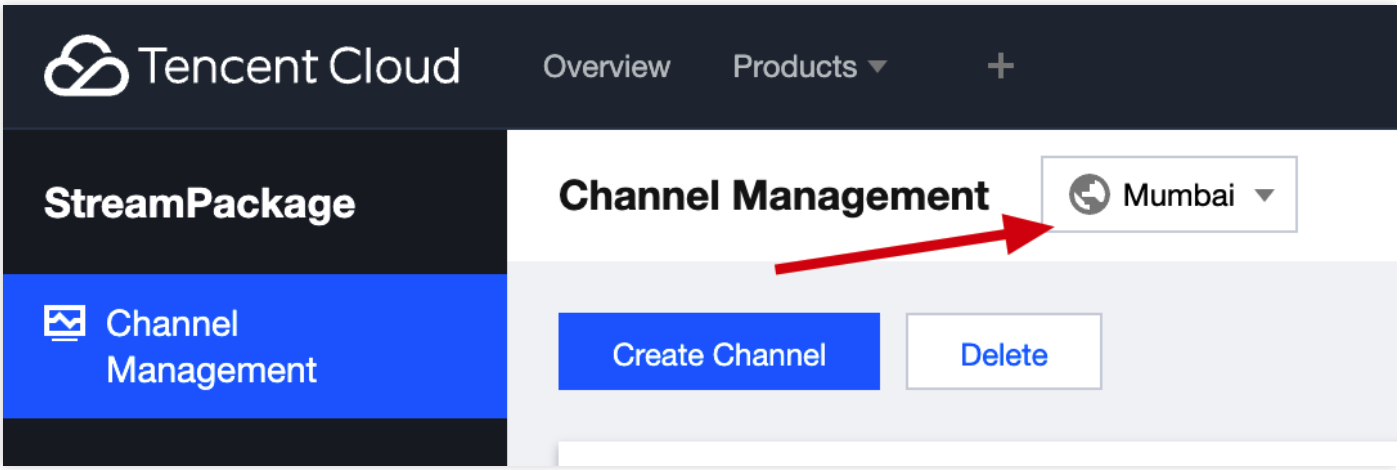
Configuration

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.



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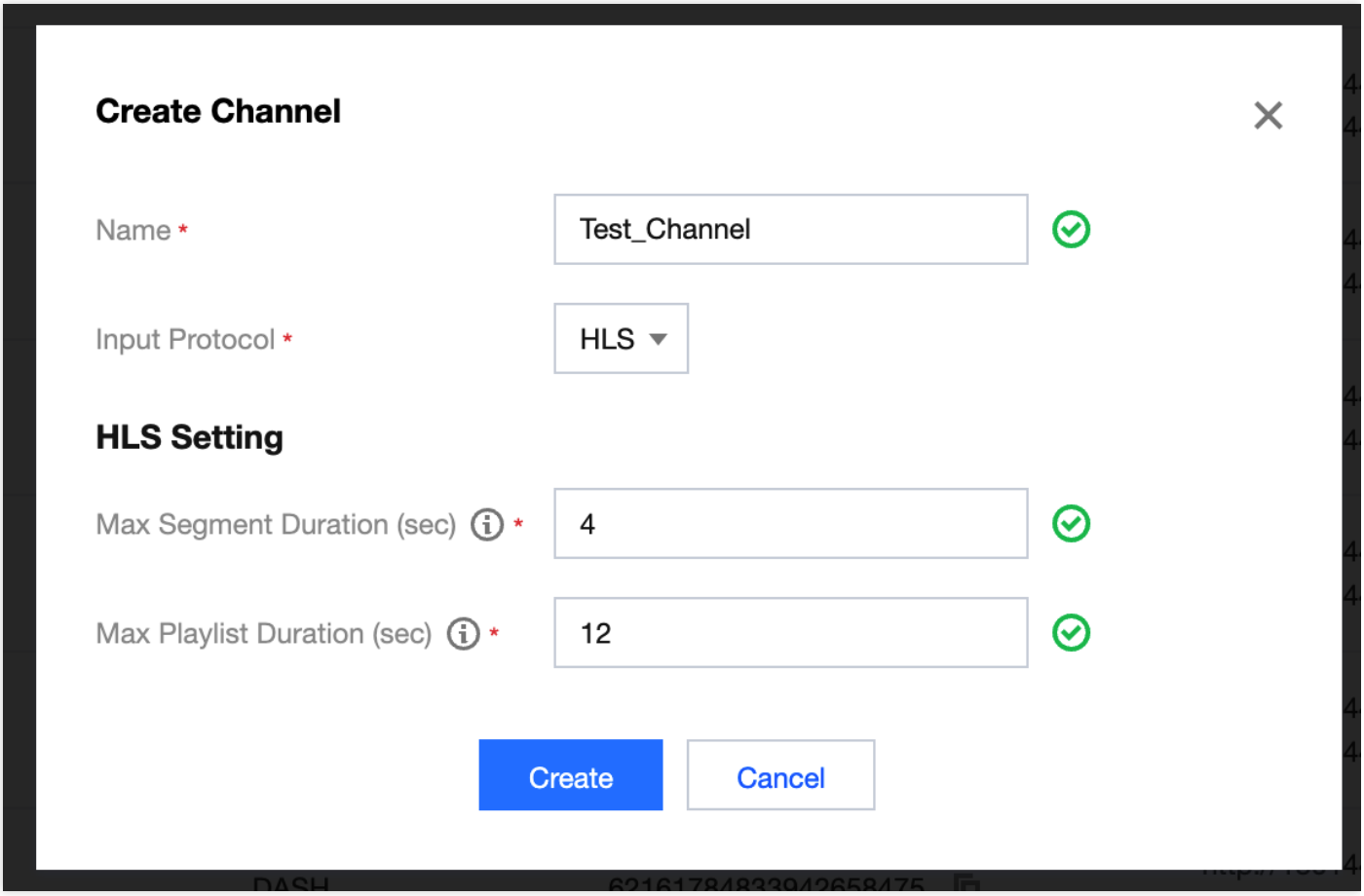
2. Click **Create Channel** and enter the required information in the pop-up window.



- **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.

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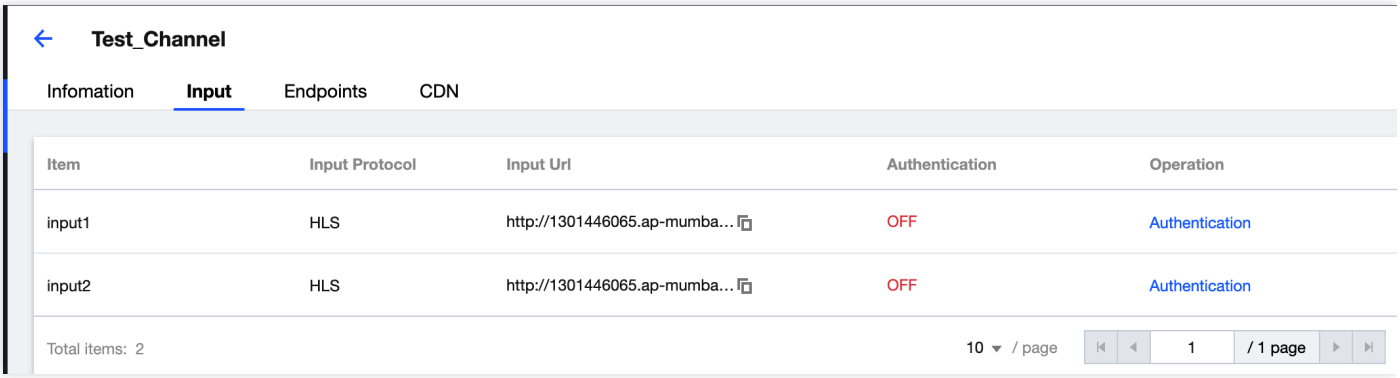
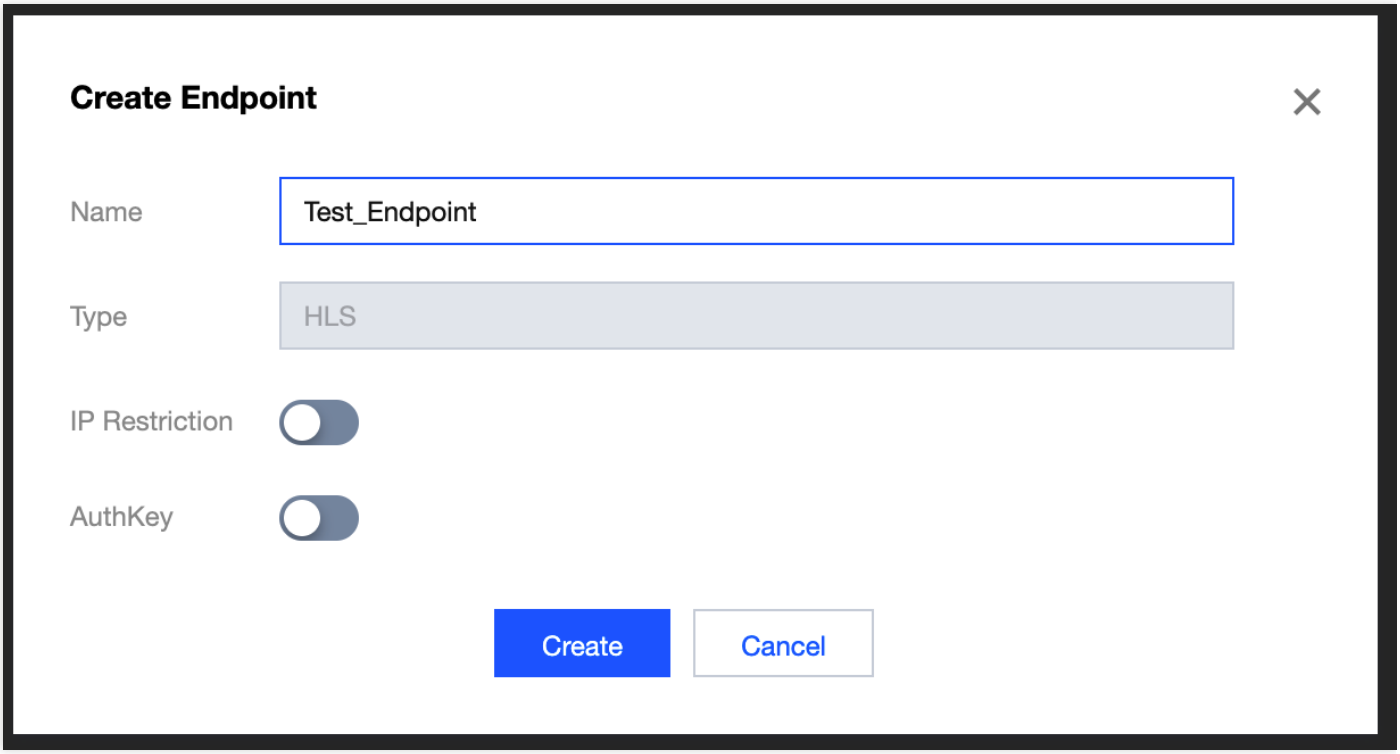


- You can configure independent authentication information for each input. After you enable **Input Authentication**, the system will automatically generate **a username and a password** for the input.
- You can click **Rotate credentials** to generate new authentication information. The original information 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.



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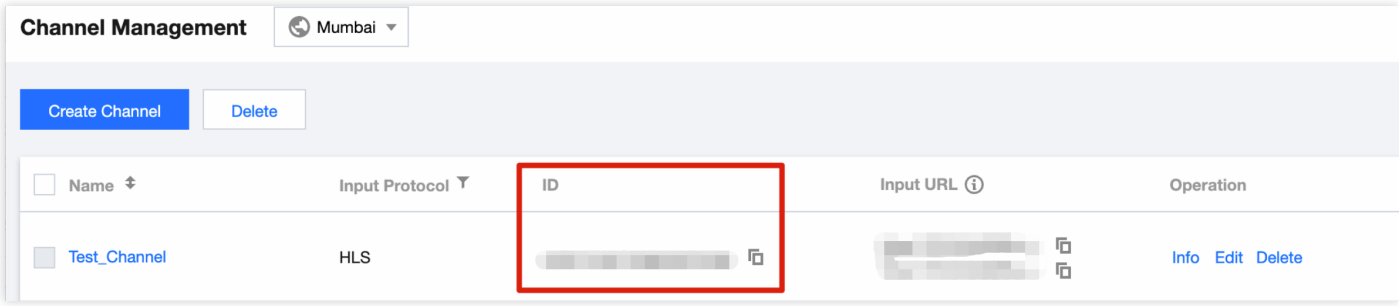
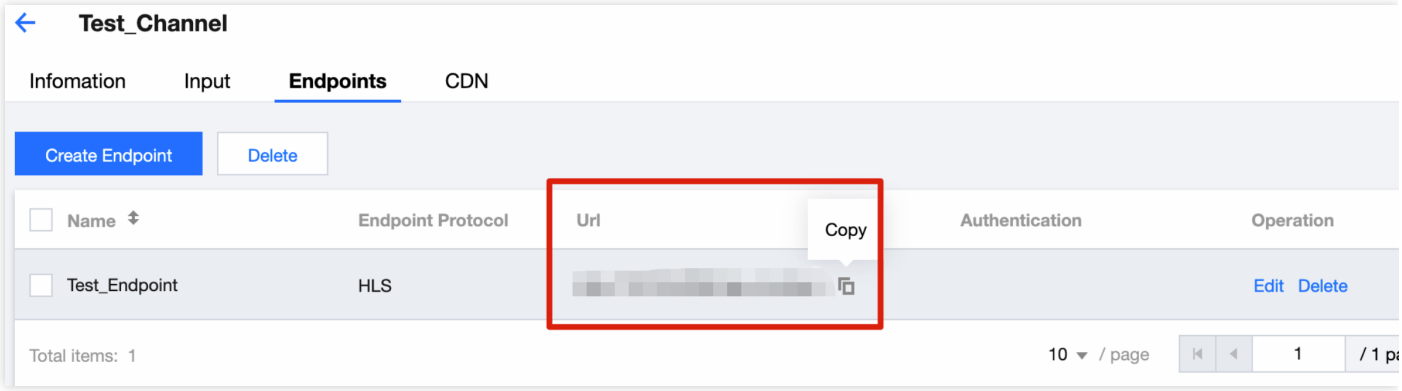
6. You have now completed configuration for StreamPackage. Return to **Channel Management**, find the channel you created in the list, and note the **ID** and **Endpoint URL** for later use.





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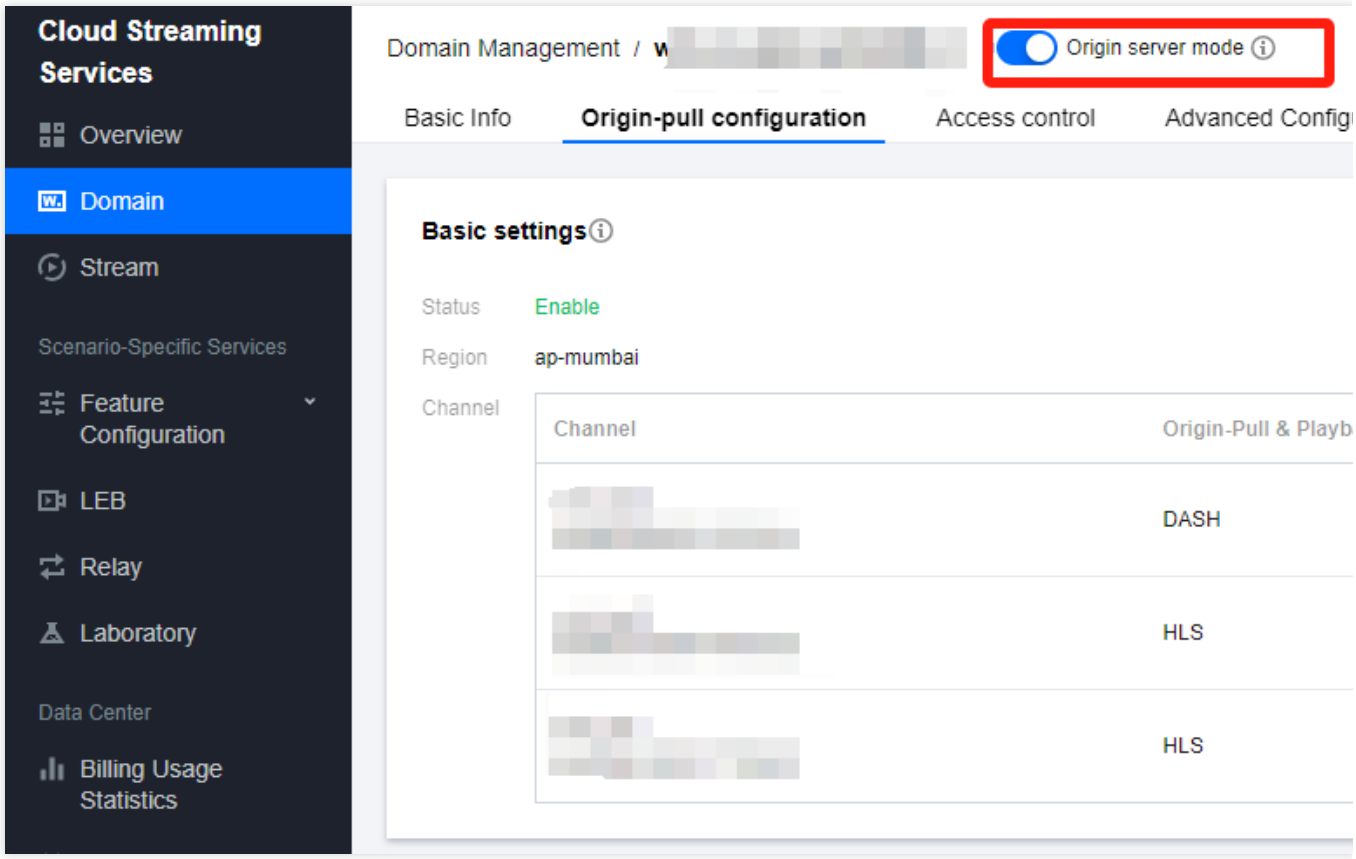
Configuring CSS

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.



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

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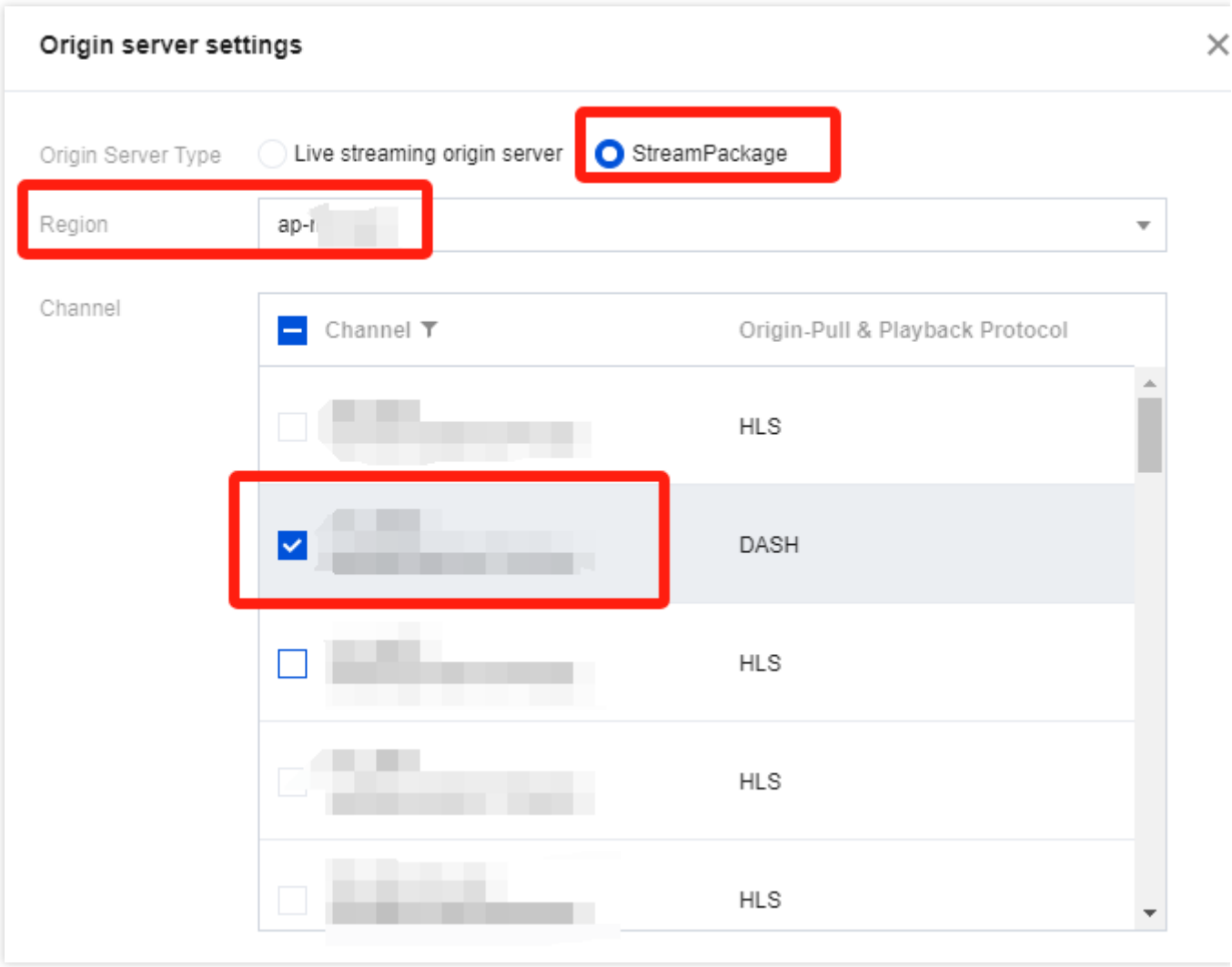

4. After the configuration is completed, the system will take some time to take effect.

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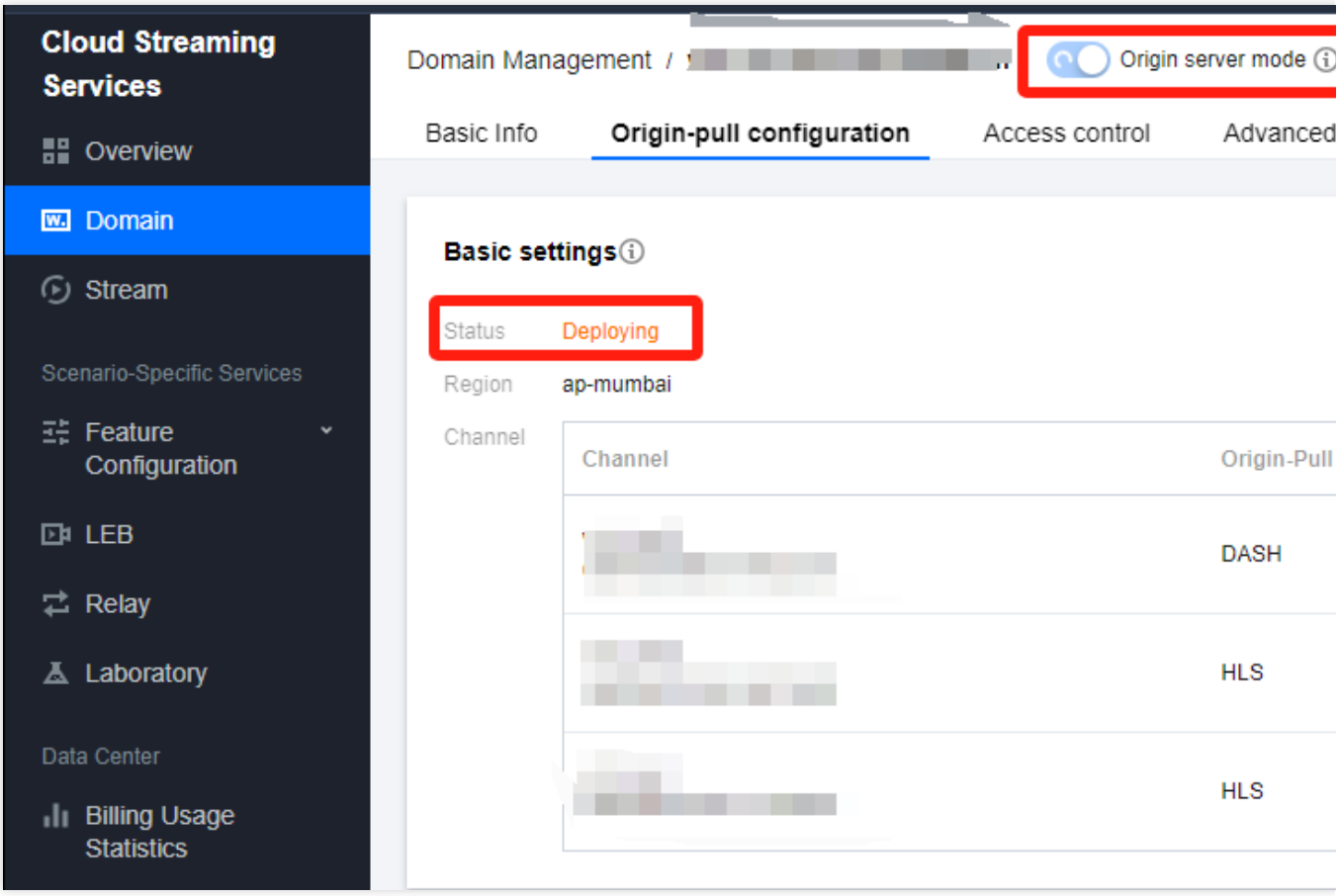

5. To get the final URL for playback, splice the CSS playback domain and the StreamPackage endpoint path.

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**.

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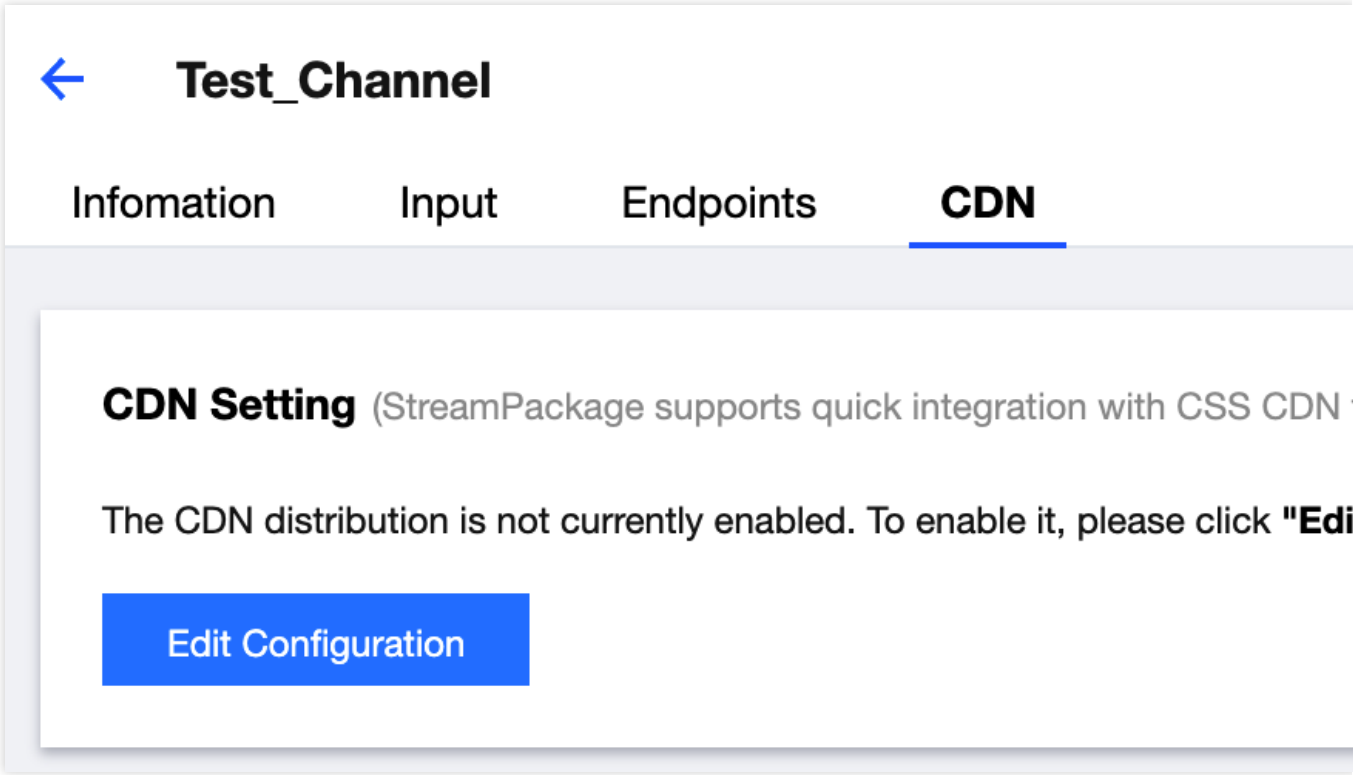
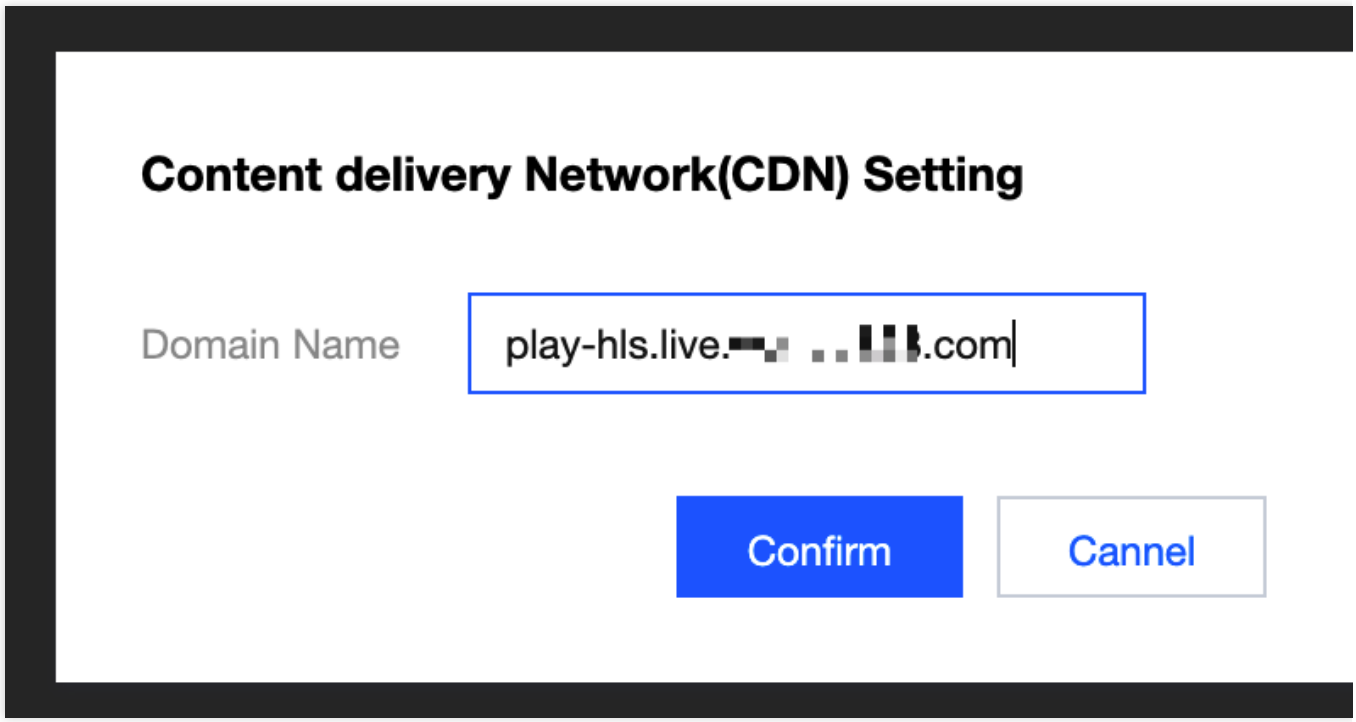


2. In the pop-up window, enter the playback domain you want to use and click **Confirm**.



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.

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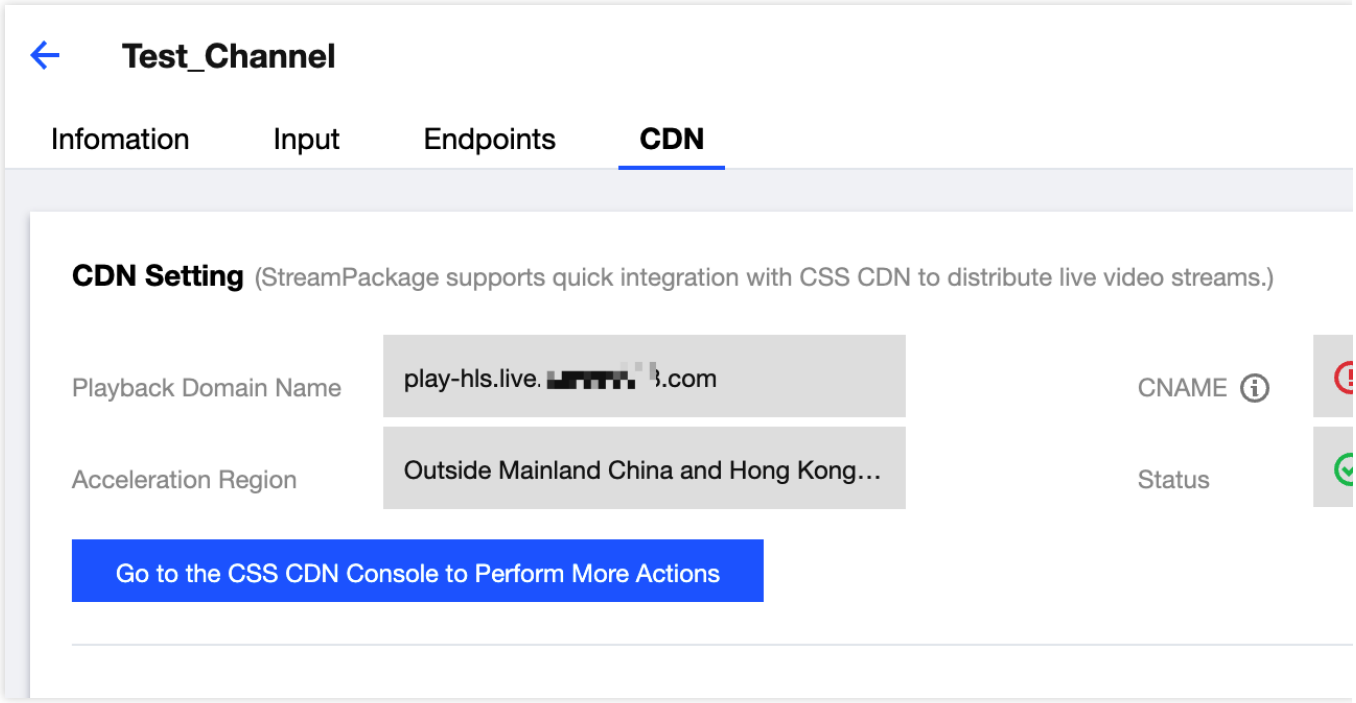

4. If you also want to configure access control, referer allowlist/blocklist, and HTTPS for the playback domain, click **Go to the CSS CDN Console to Perform More Actions**.

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

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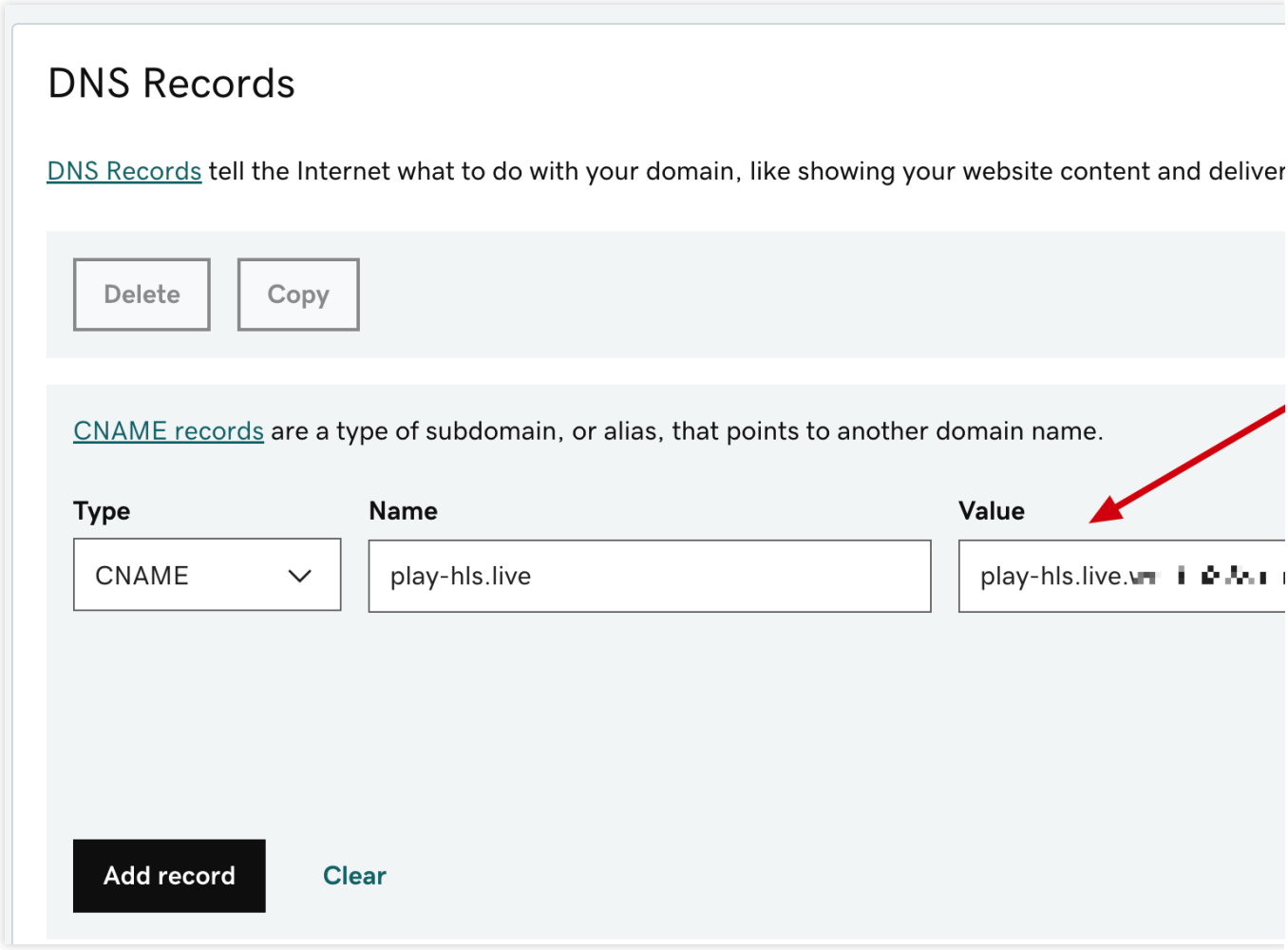

6. To get the final URL for playback, splice the CSS playback domain and the StreamPackage endpoint path.

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Configuring StreamLive

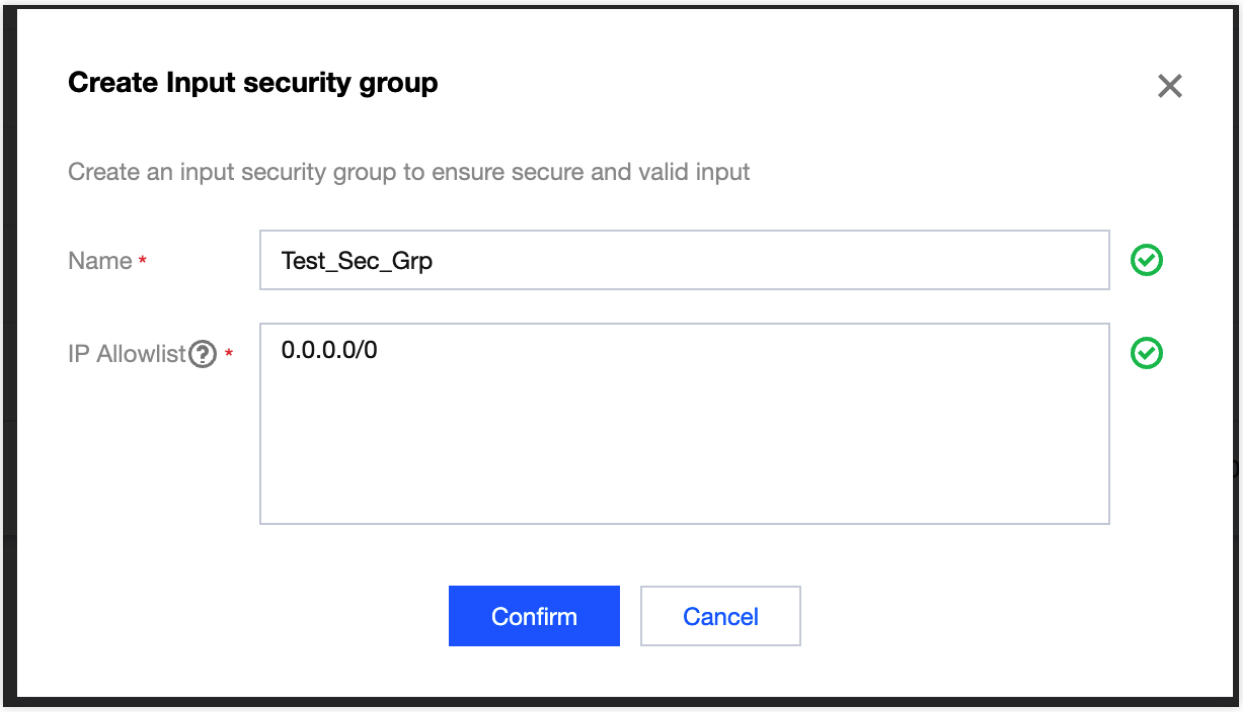
Last updated：2024-07-22 14:11:57

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.

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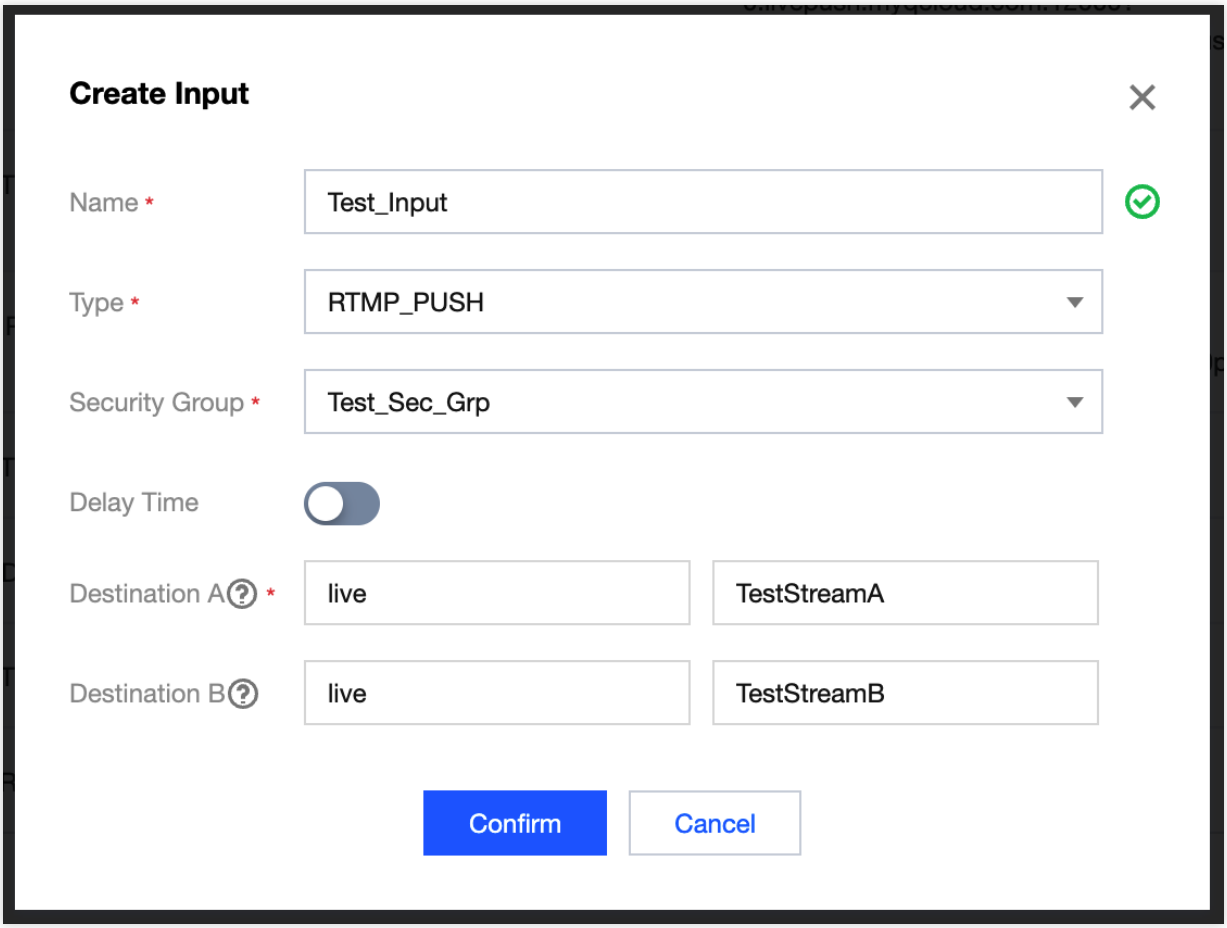

Type: The streaming protocol. RTMP_PUSH is selected in this example.

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.

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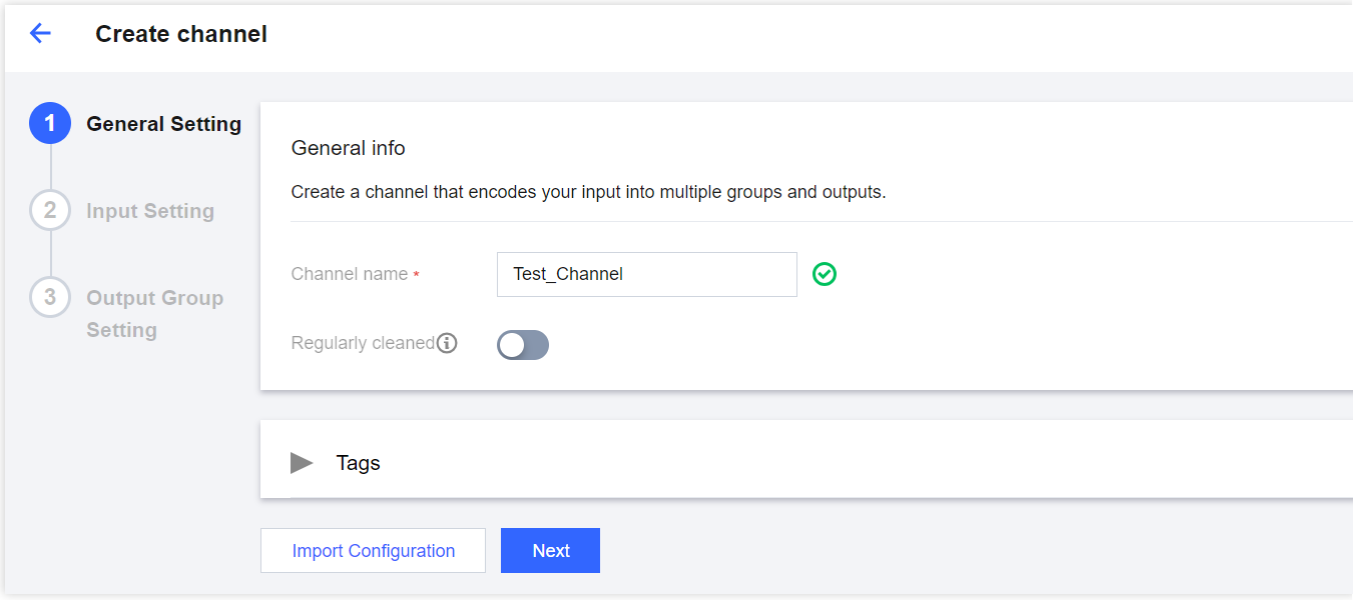
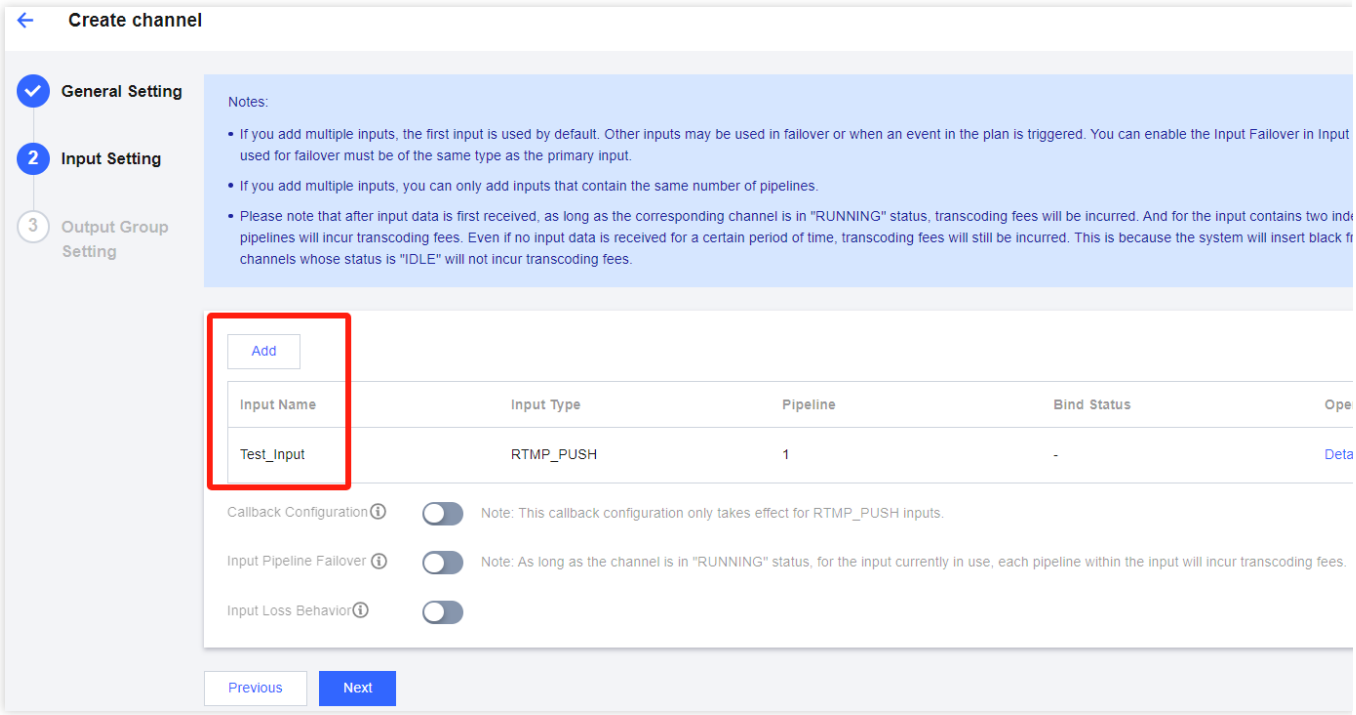


5. In the **Input Setting** step, add the input you just created (you can add multiple inputs, for which you can configure different transcoding templates and outputs).



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.

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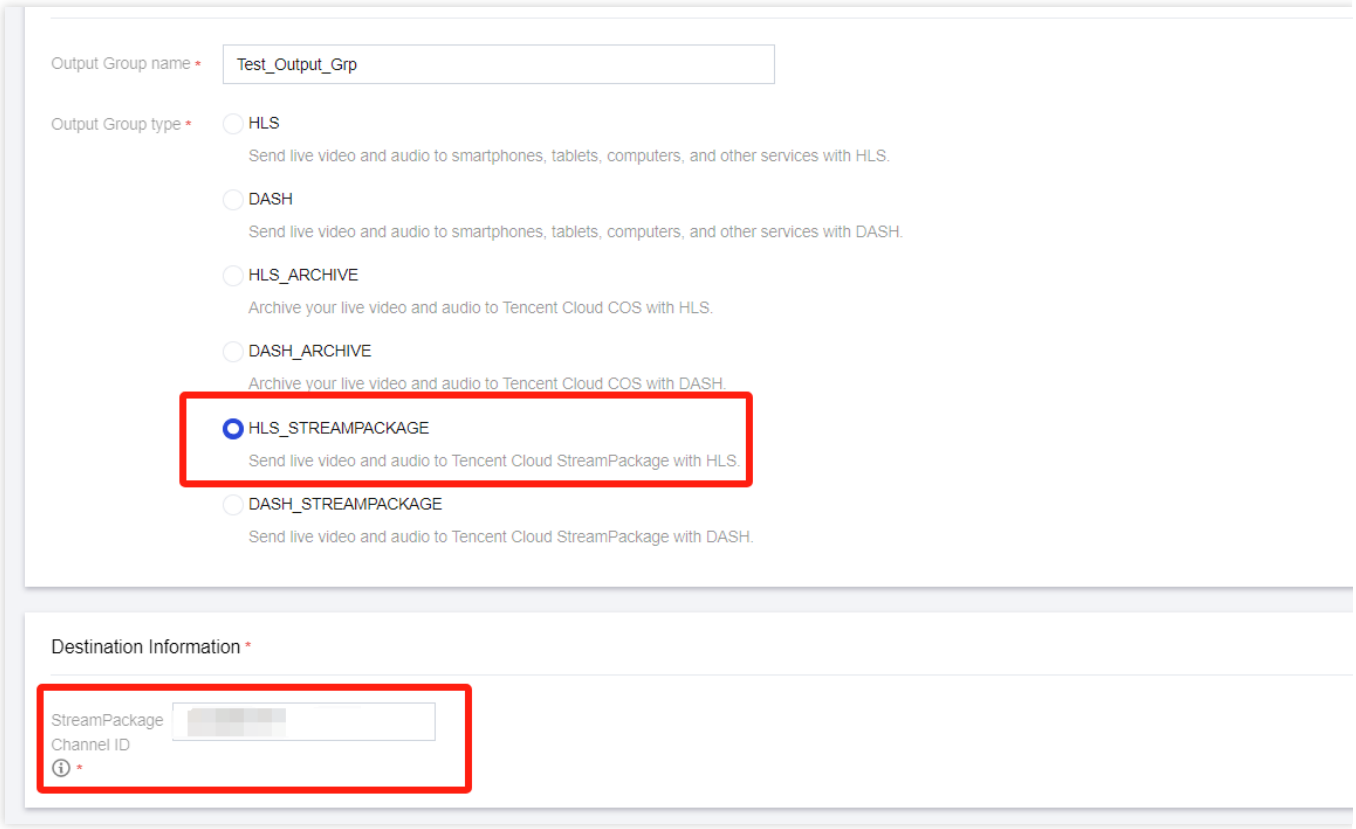
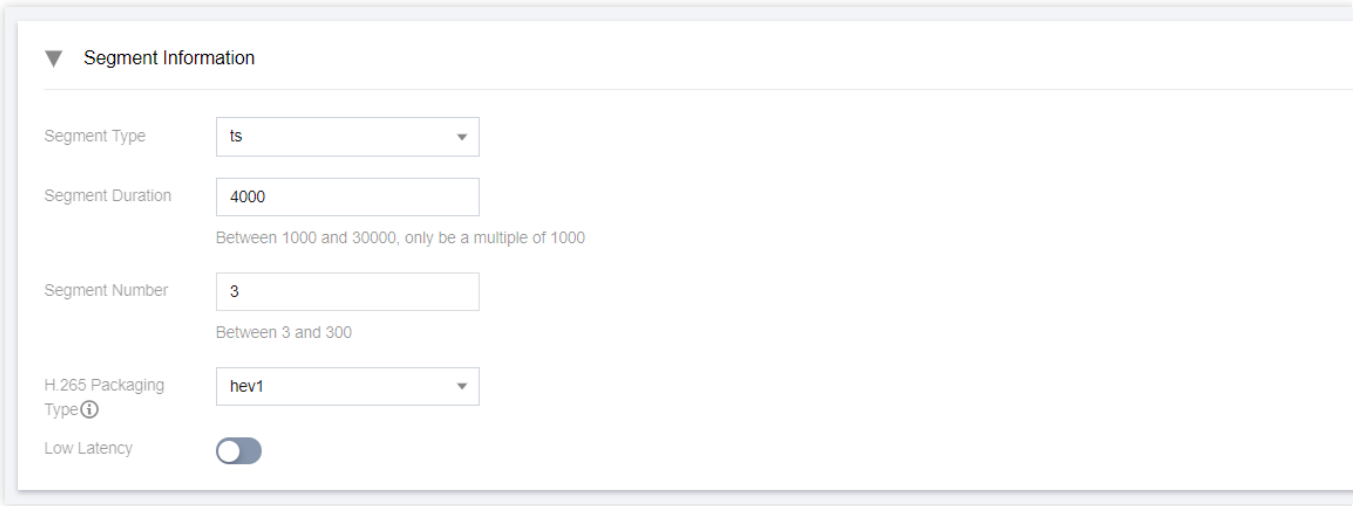


You can also specify the **Segment Information** on this page, including the segment type, segment duration, and segment number. For some devices, such as Apple TV, to play H.265-encoded videos, you need to select **fmp4** as the **Segment Type** and **hvc1** as the **Packaging Type**.



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.

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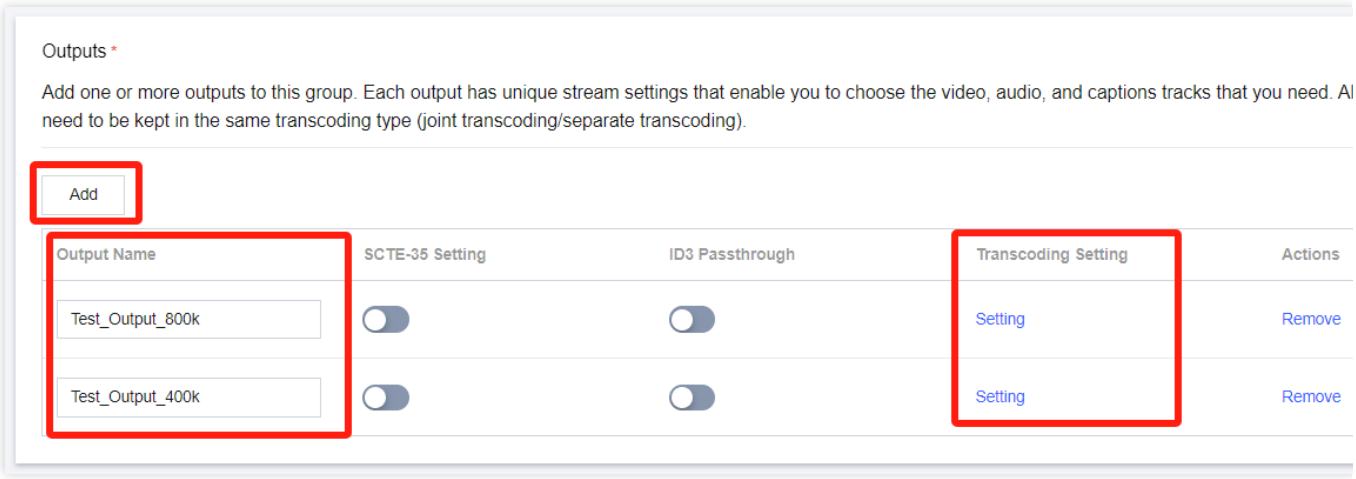
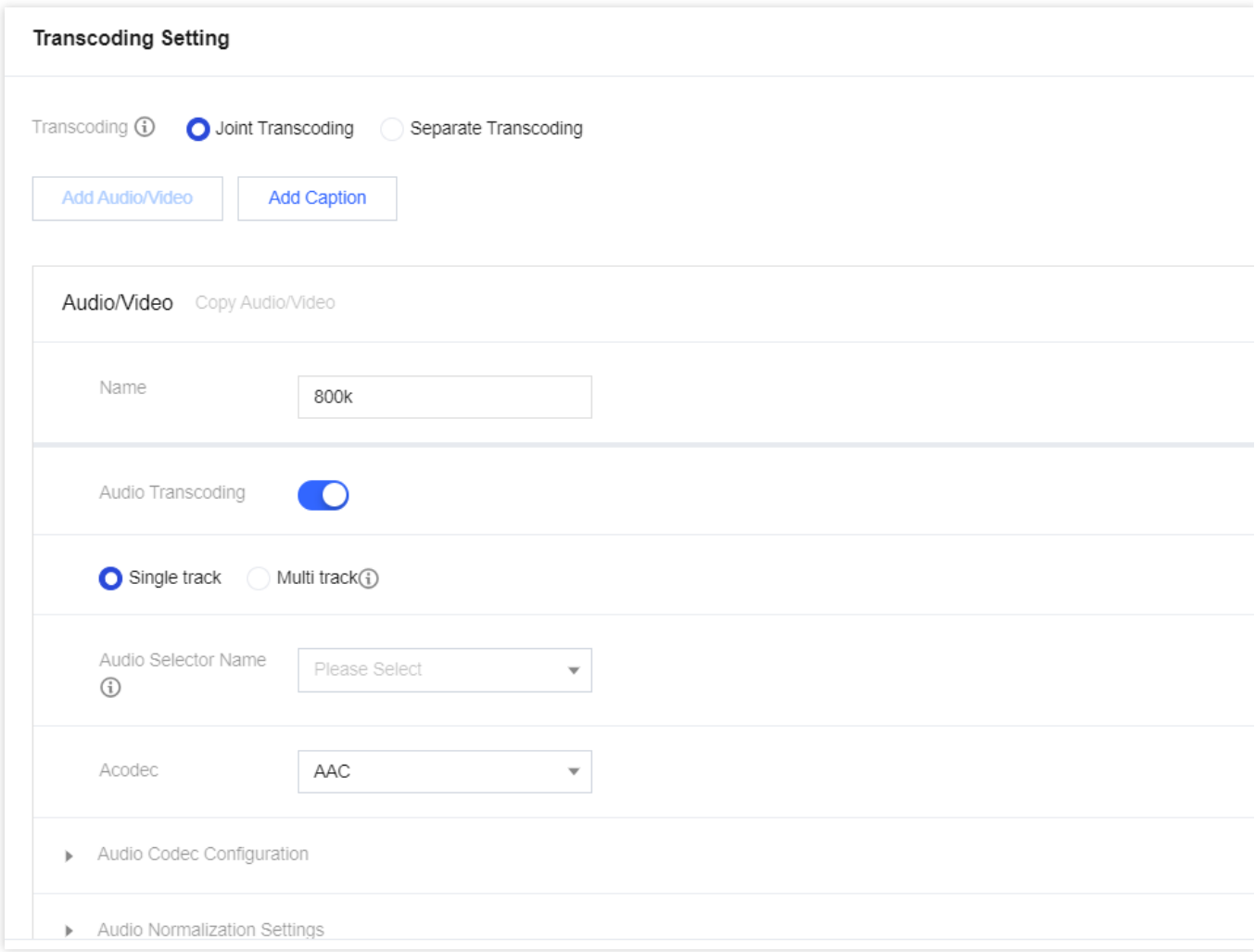


8. Set the audio and video transcoding parameters, and save them after completing the settings.



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

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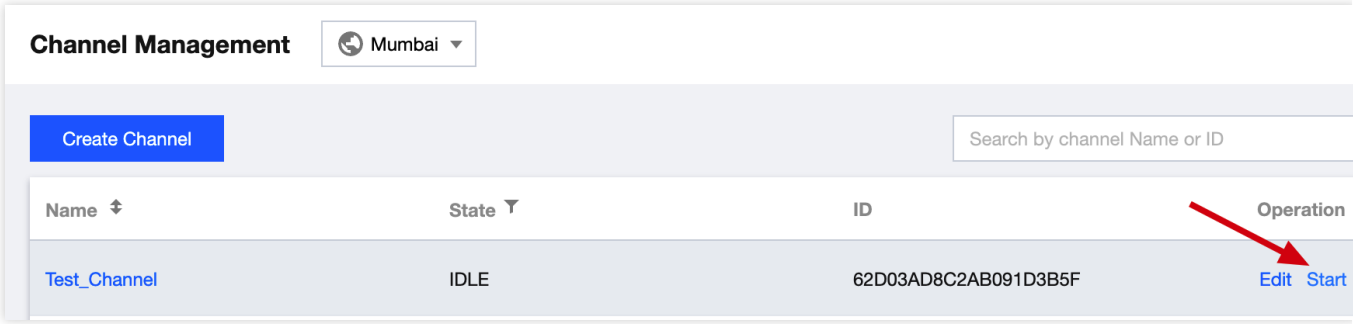

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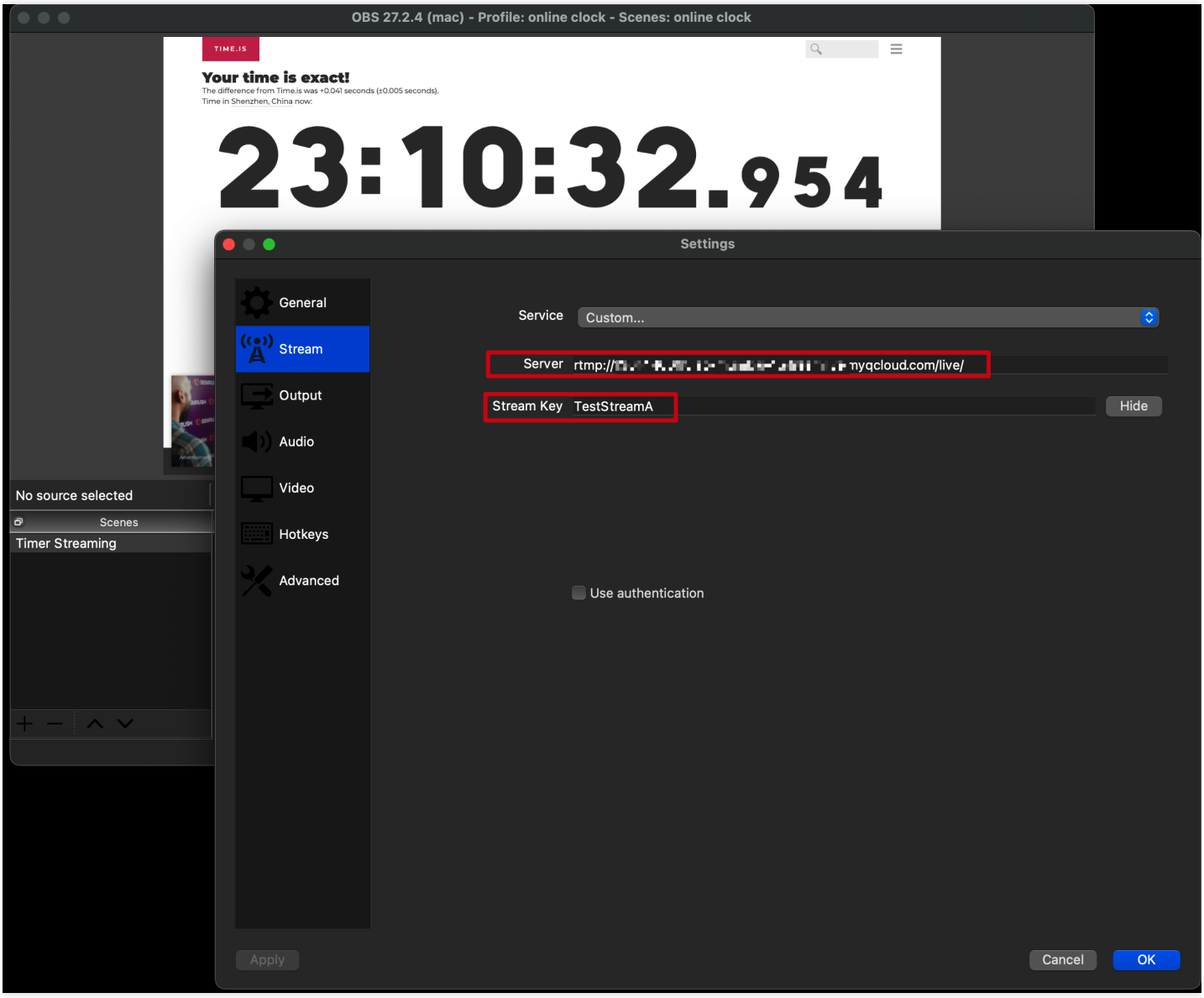
Publishing and Playing a Live Stream

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).

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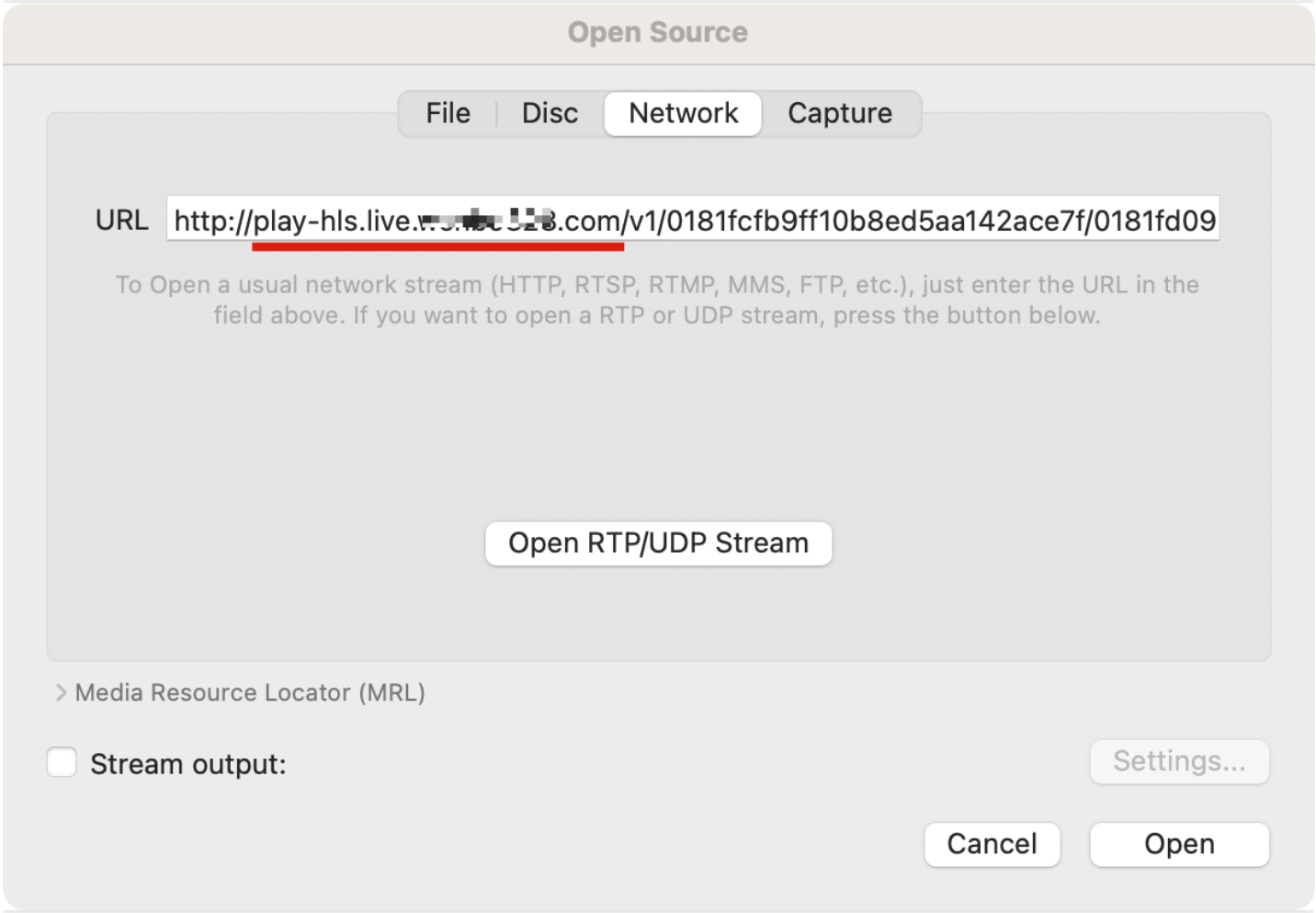

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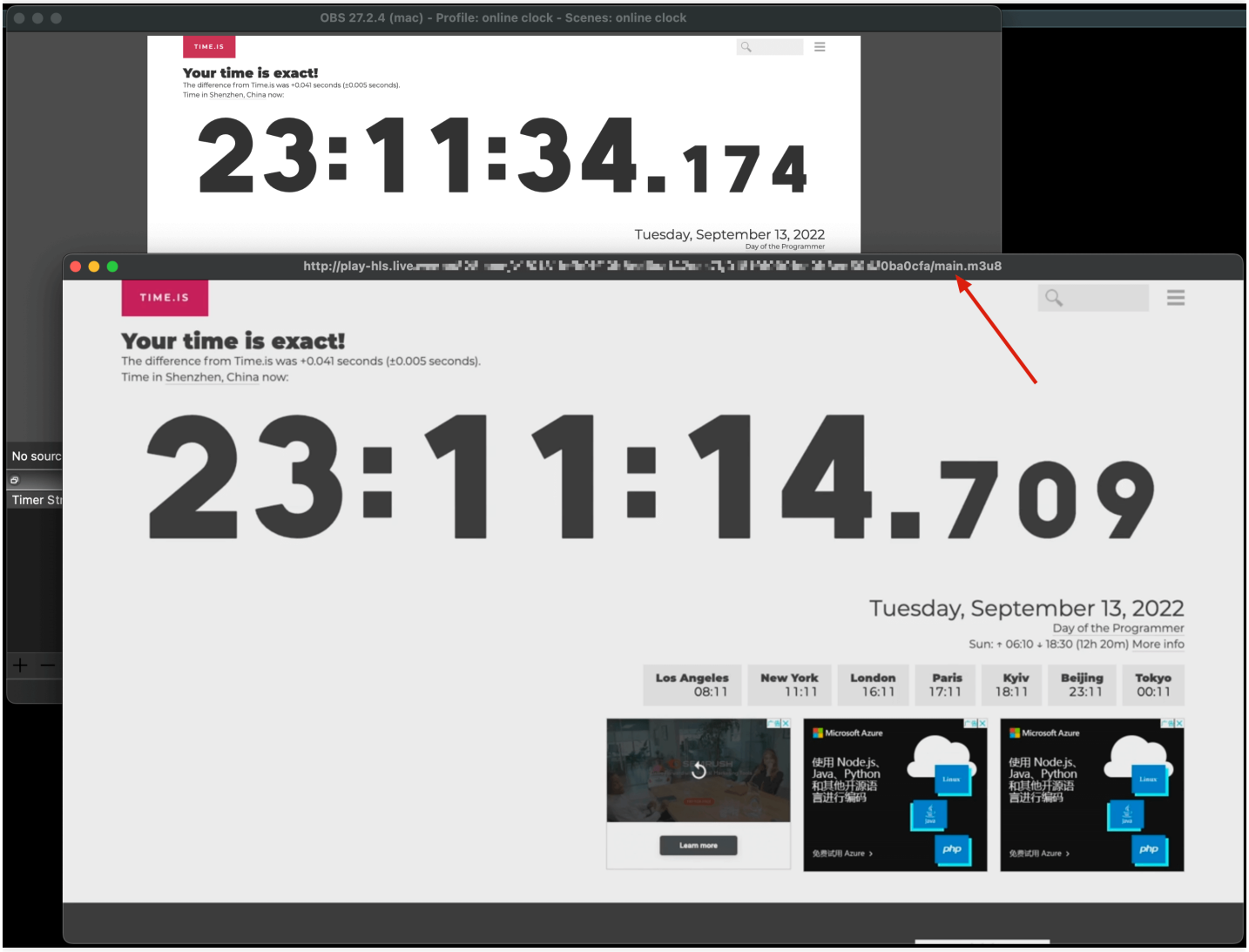
You have now implemented a high-reliability live streaming service based on StreamLive, StreamPackage, and CSS.



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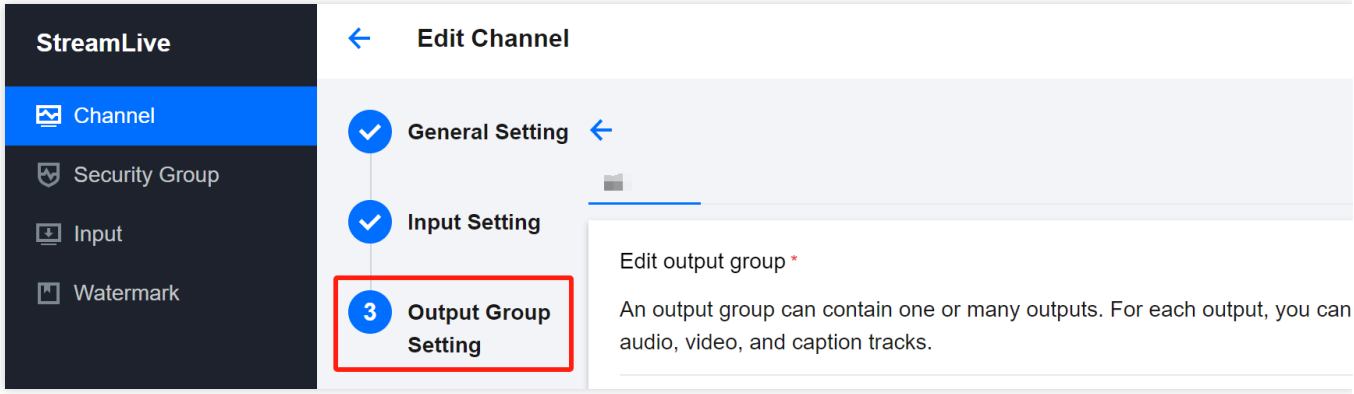
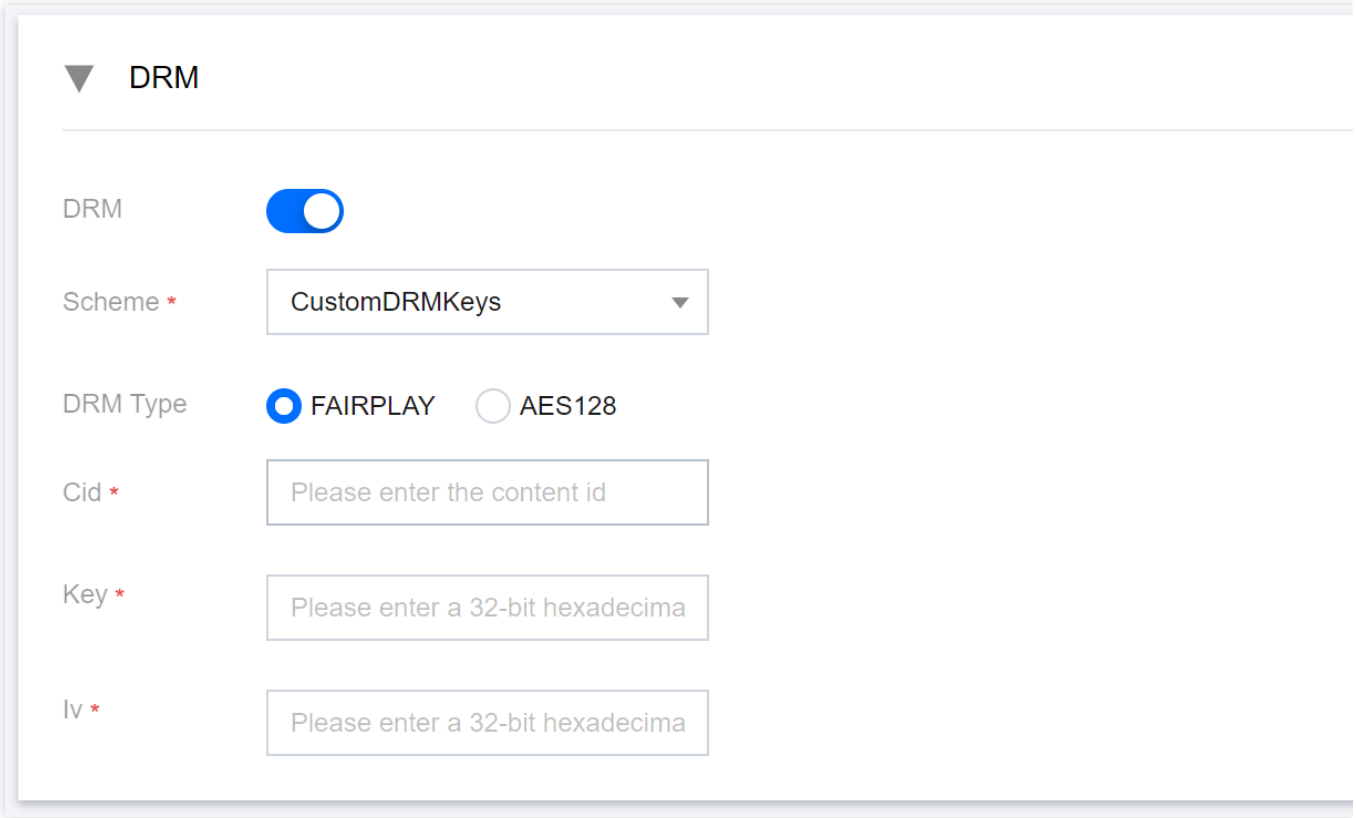
Digital Rights Management (DRM)

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.





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

	Scheme：SDMCDRM	Scheme：CustomDRMKeys

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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.

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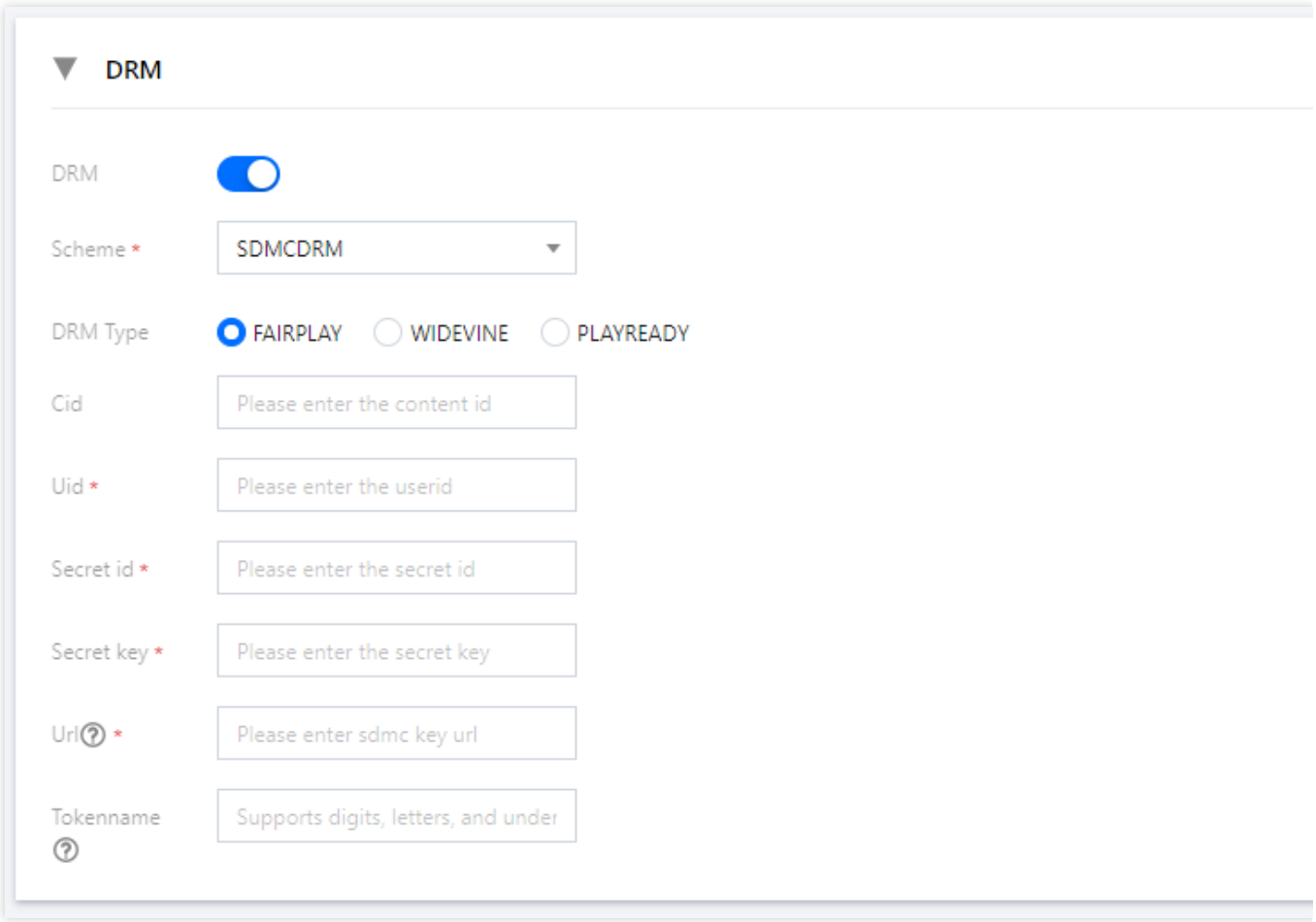

Cid: The content ID provided by SDMC. If you leave this empty, the channel ID will be used.

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:

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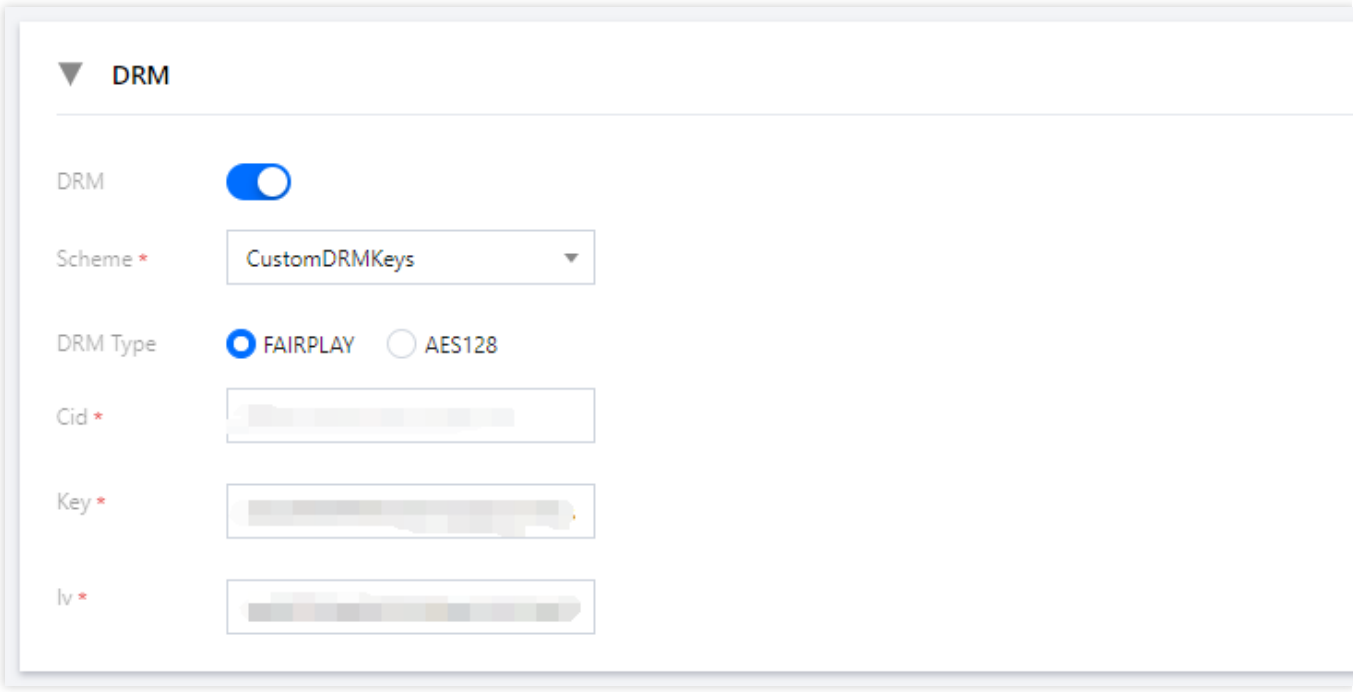
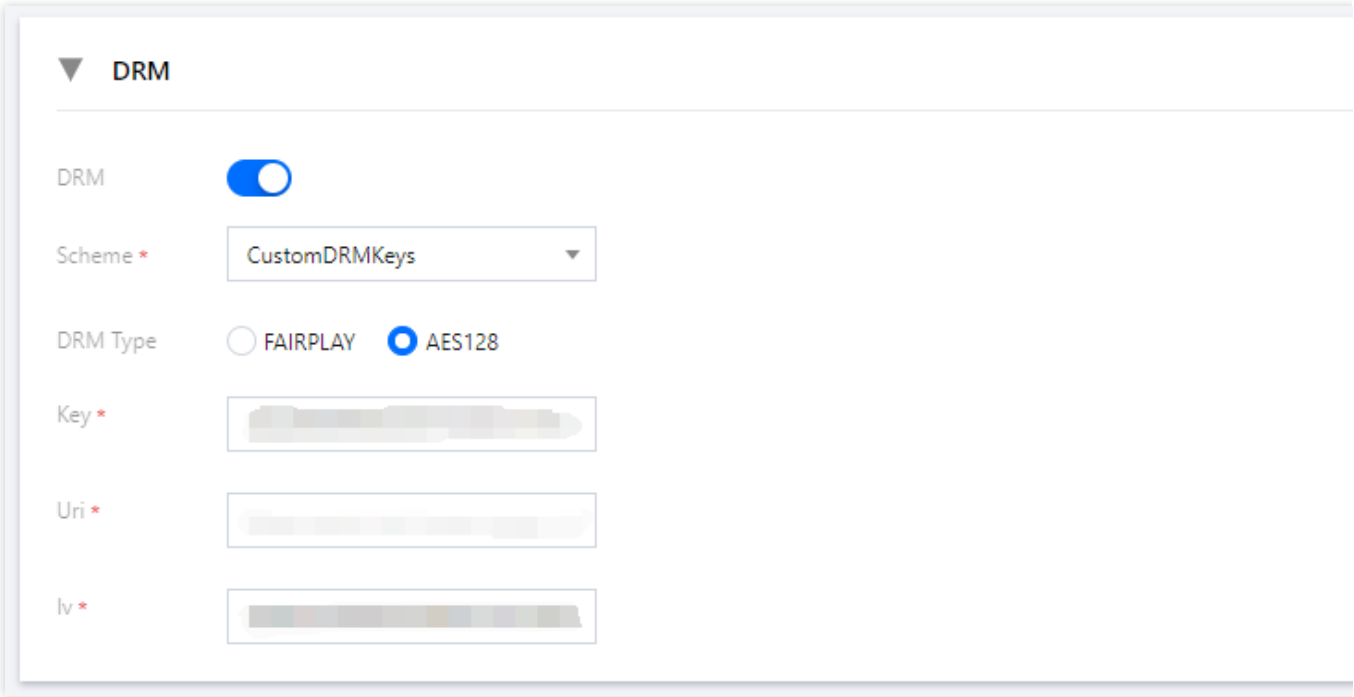


Cid: The FairPlay content ID. If your DRM system does not use content IDs, enter a custom ID.

Key: The FairPlay encryption key.

Iv: The FairPlay encryption IV.

When selecting AES128, please provide the following information:



Key: The encryption key.

Uri: The URL to get the key.

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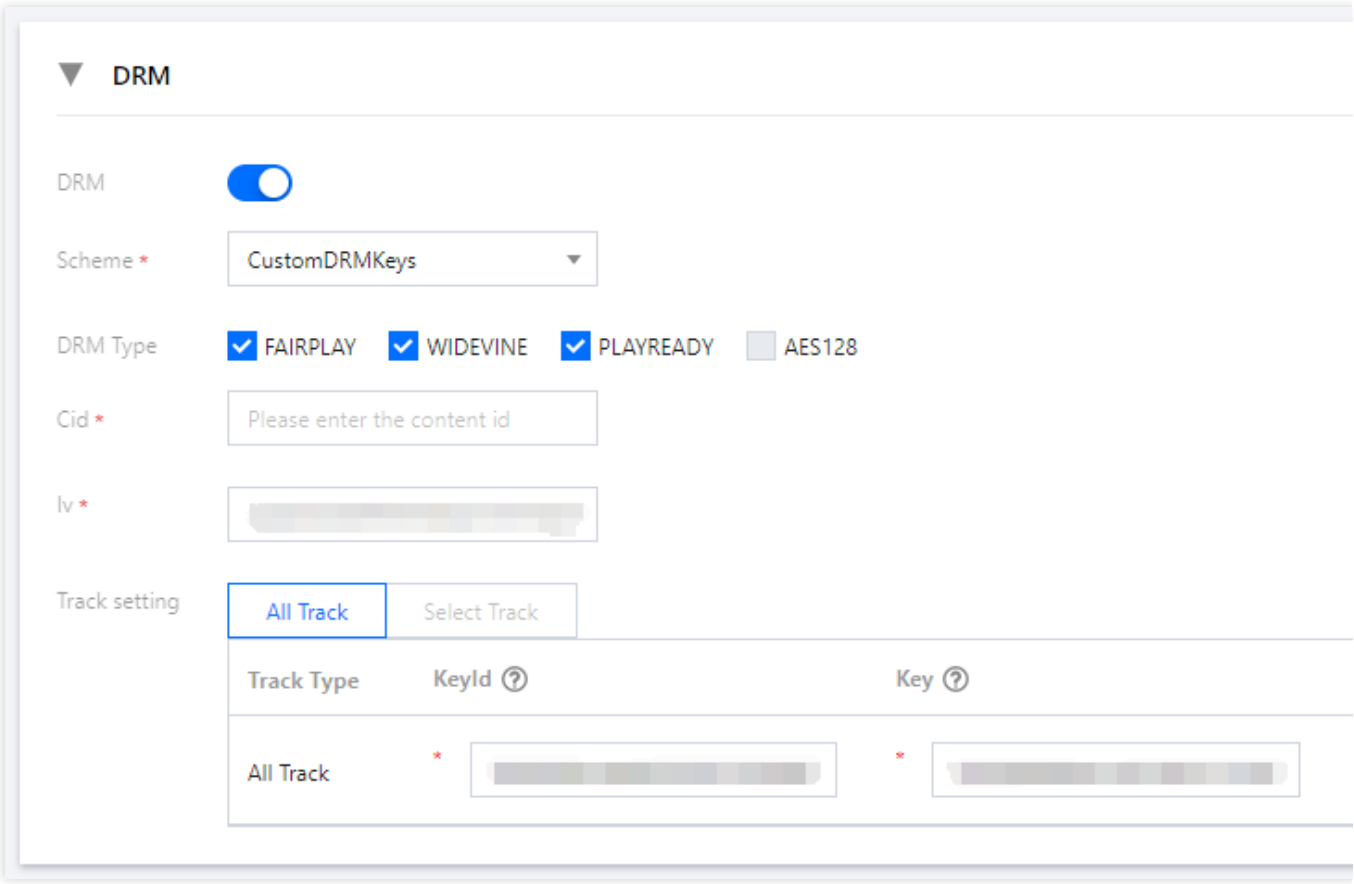
Iv: The encryption IV.

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:



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:

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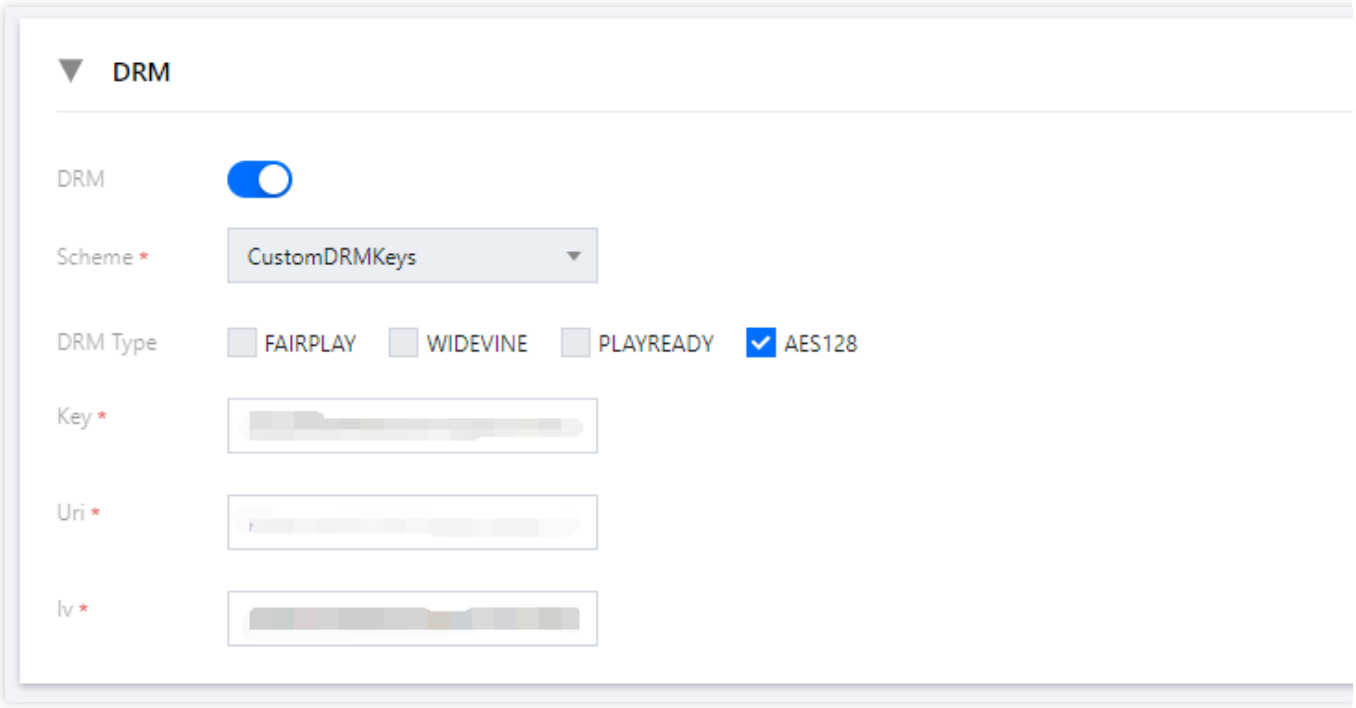

Key: The encryption key.

Uri: The URL to get the key.

Iv: The encryption IV.

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

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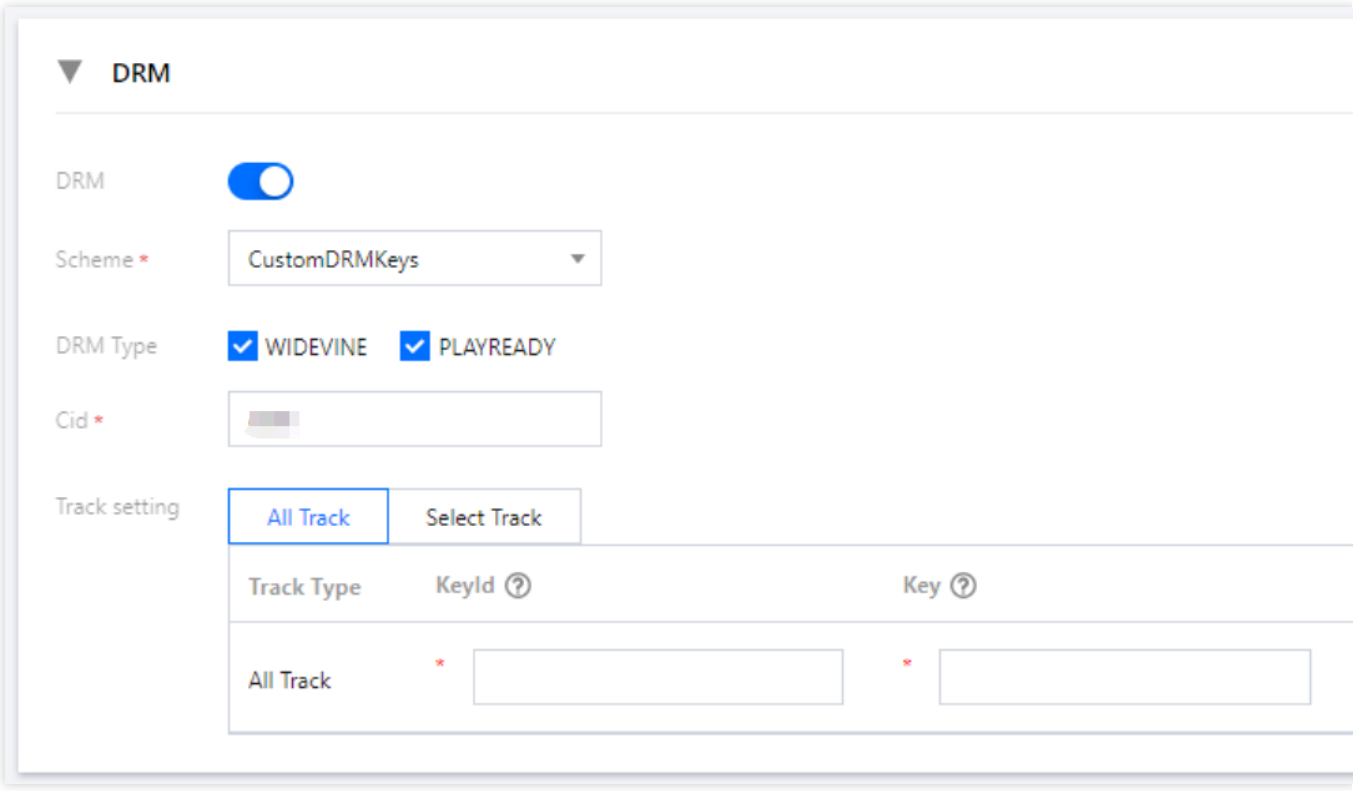

Cid: The content ID. If your DRM system does not use content IDs, enter a custom ID.

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).

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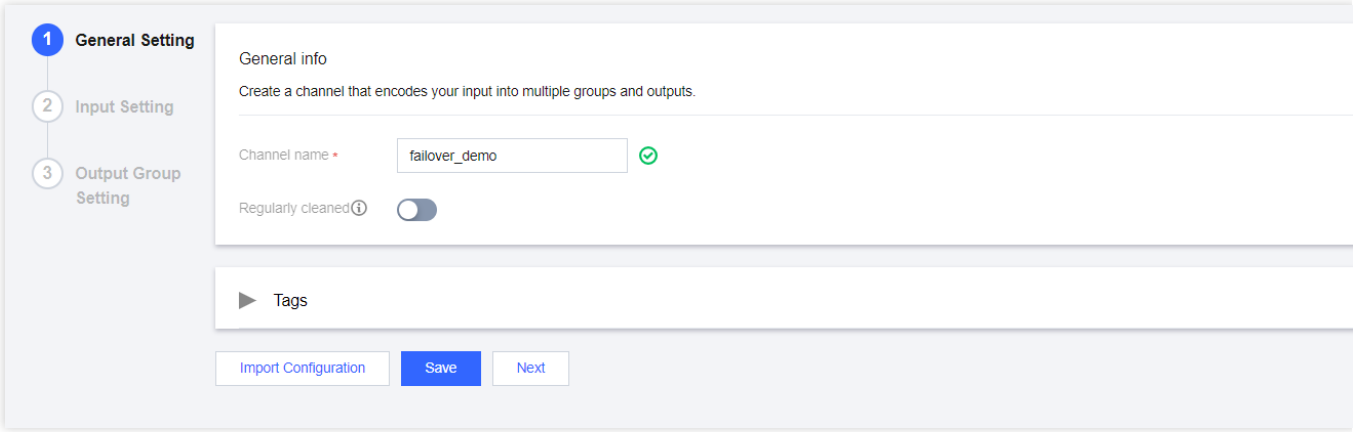
Input Failover

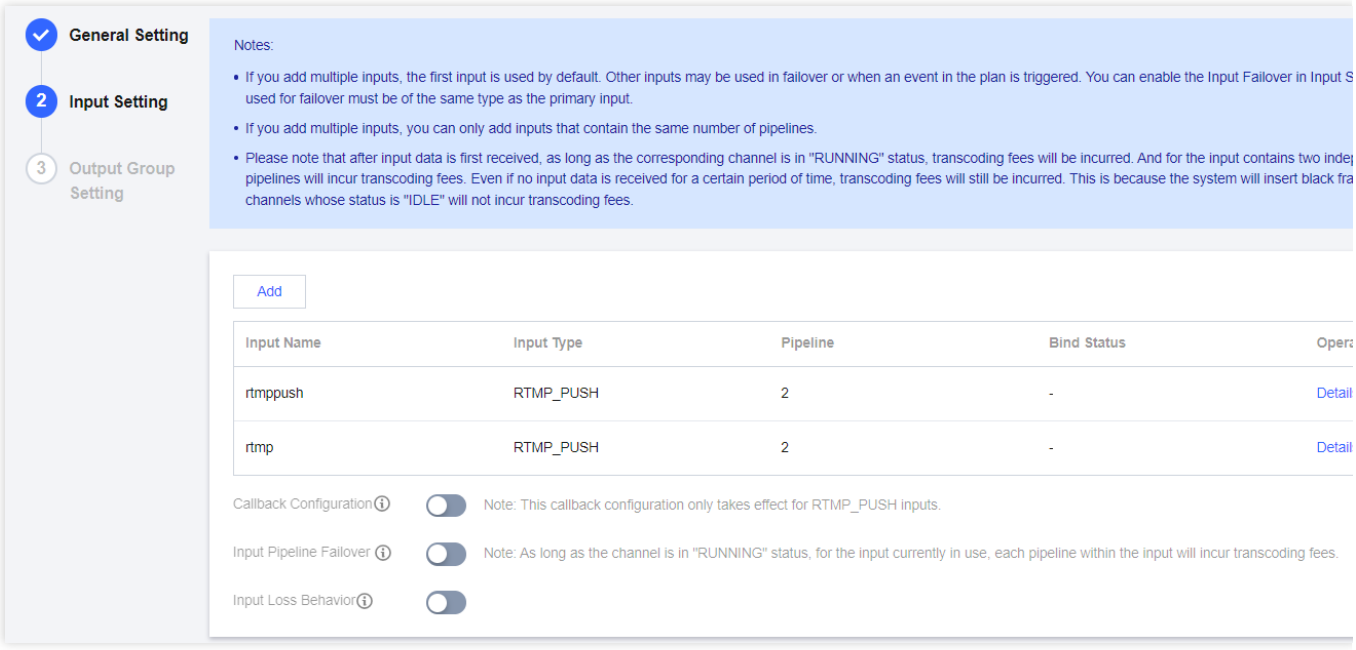
Last updated：2024-07-22 11:57:53

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**.



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



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

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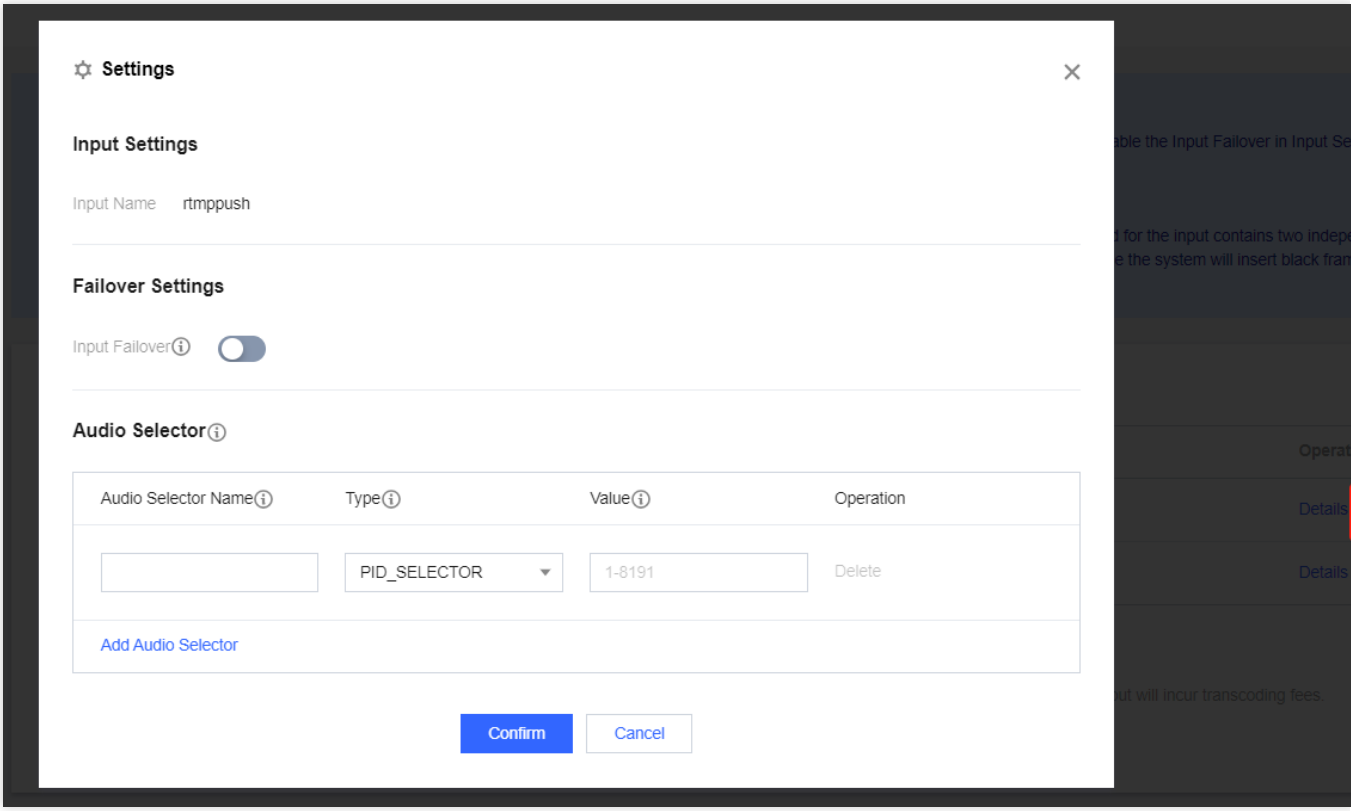
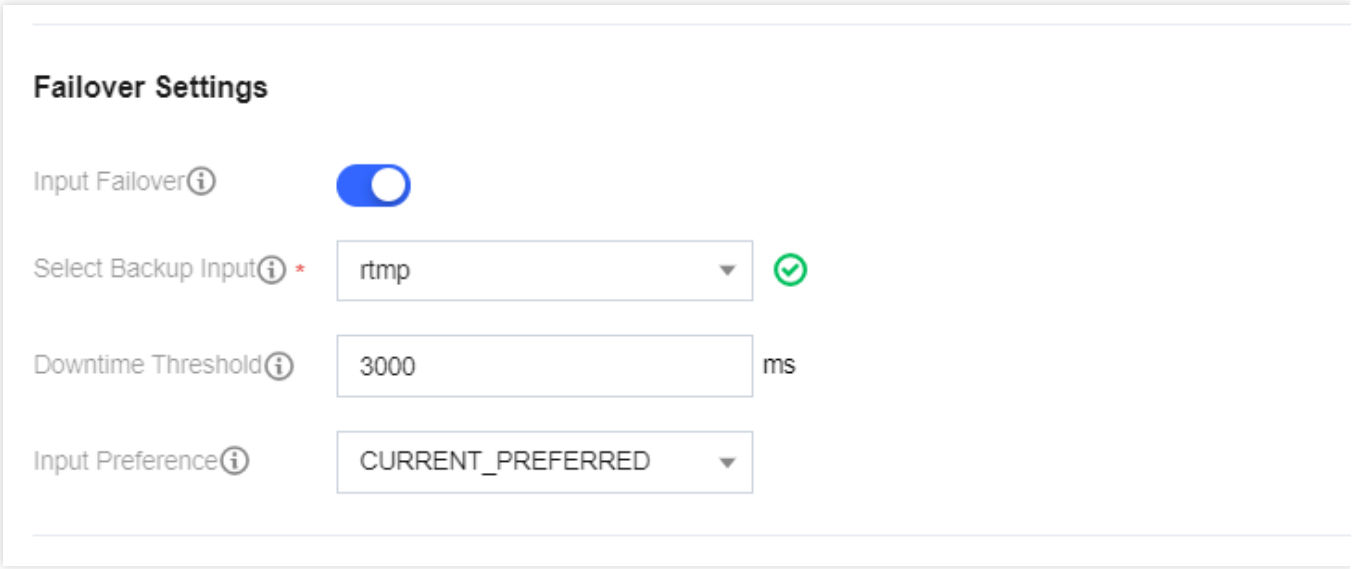


4. Toggle on **Input Failover** and complete the following settings.



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

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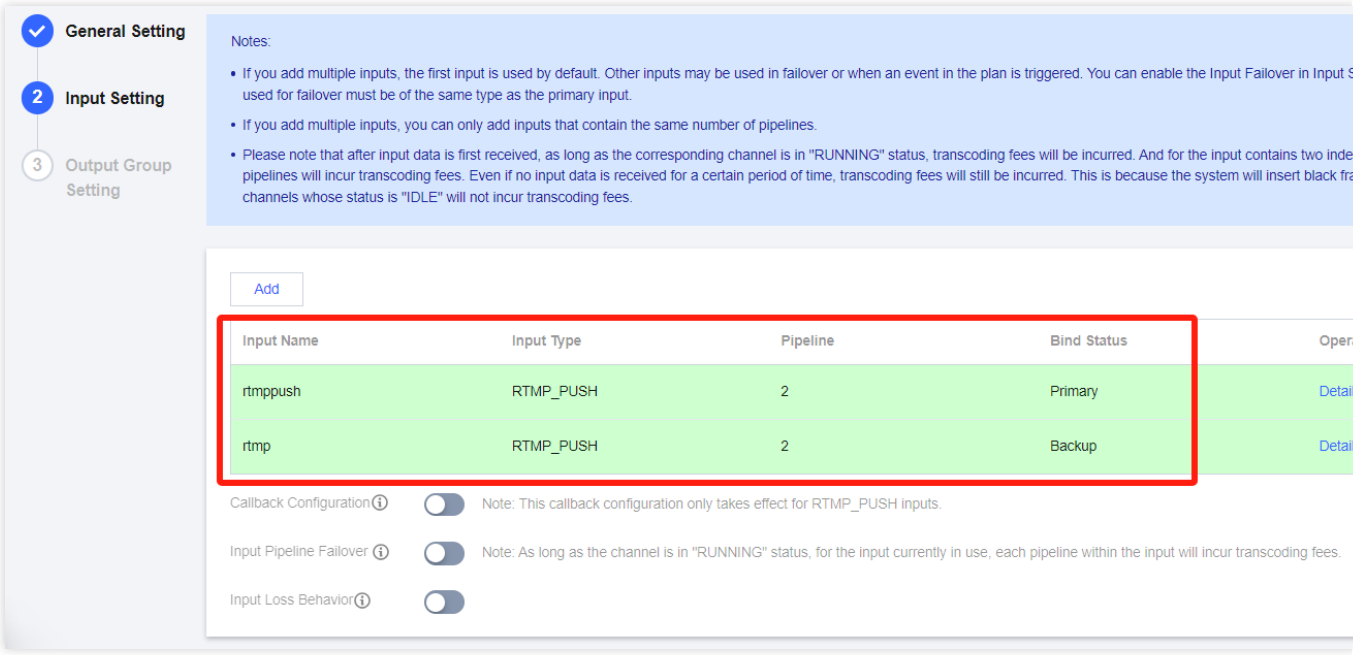
downtime threshold also means there may be a frequent switch of inputs caused by temporary packet loss. At last, specify what you want the system to do after the primary input is recovered. If you select **CURRENT_PREFERRED**, the system will continue to use the current input. If you select **PRIMARY_PREFERRED**,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



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”.

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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.

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**.

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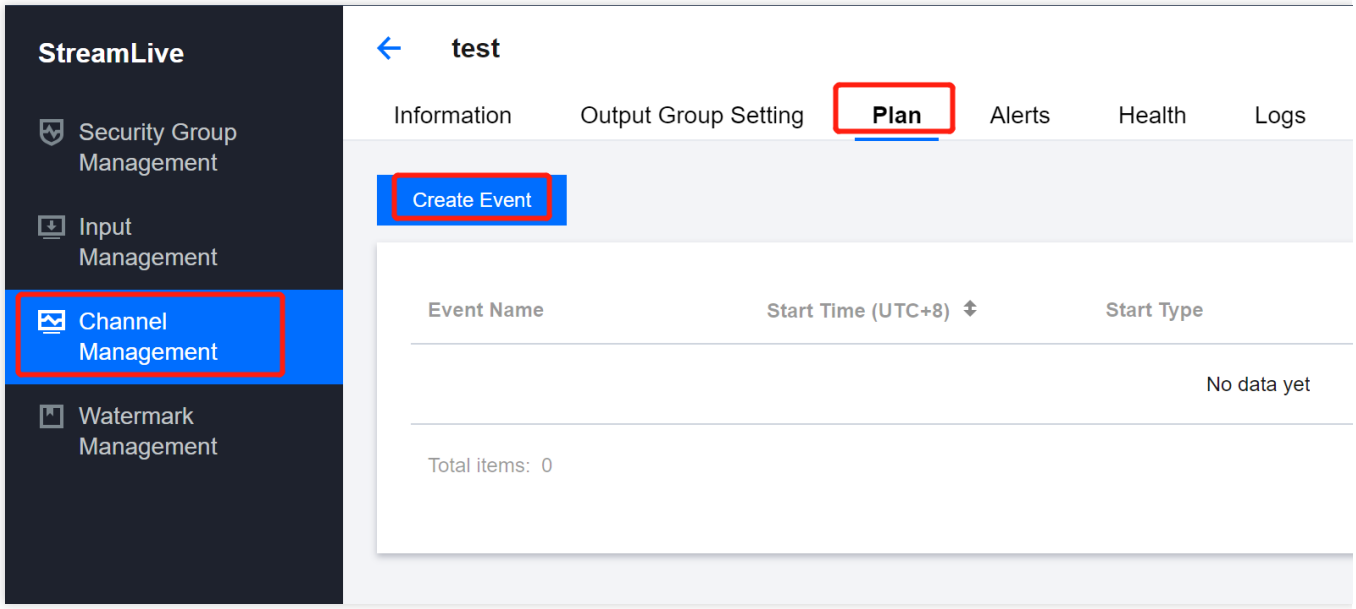

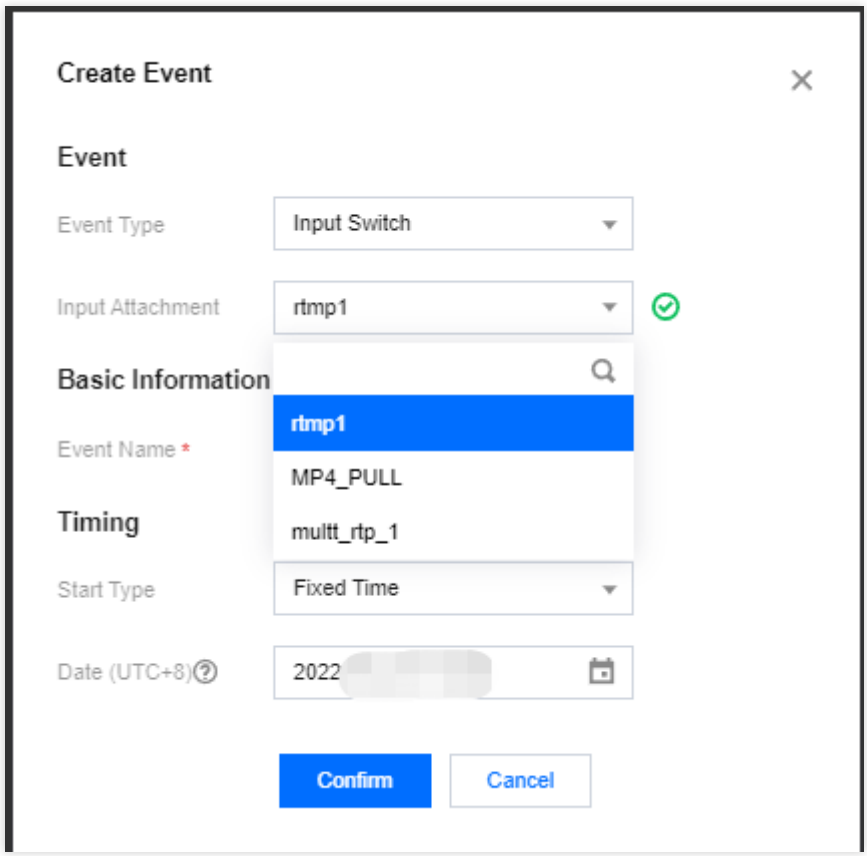

Select from the drop-down list of **Input Attachment** an input you just added to the channel, and specify the **Start Type**. For details, see Plan Management.

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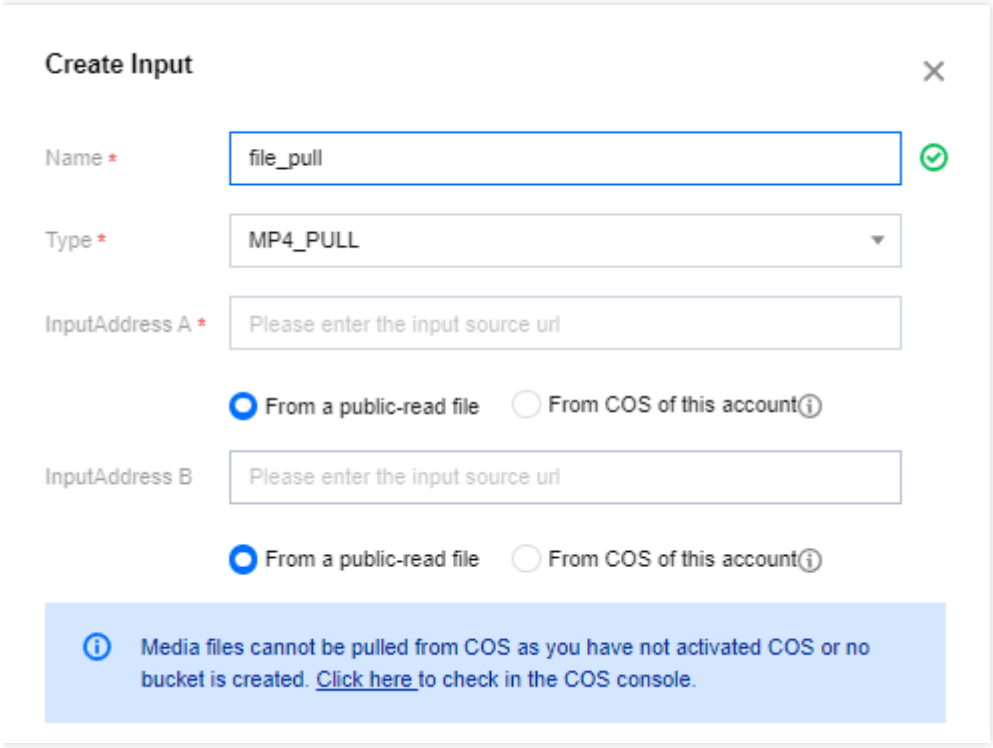
Playlist

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.



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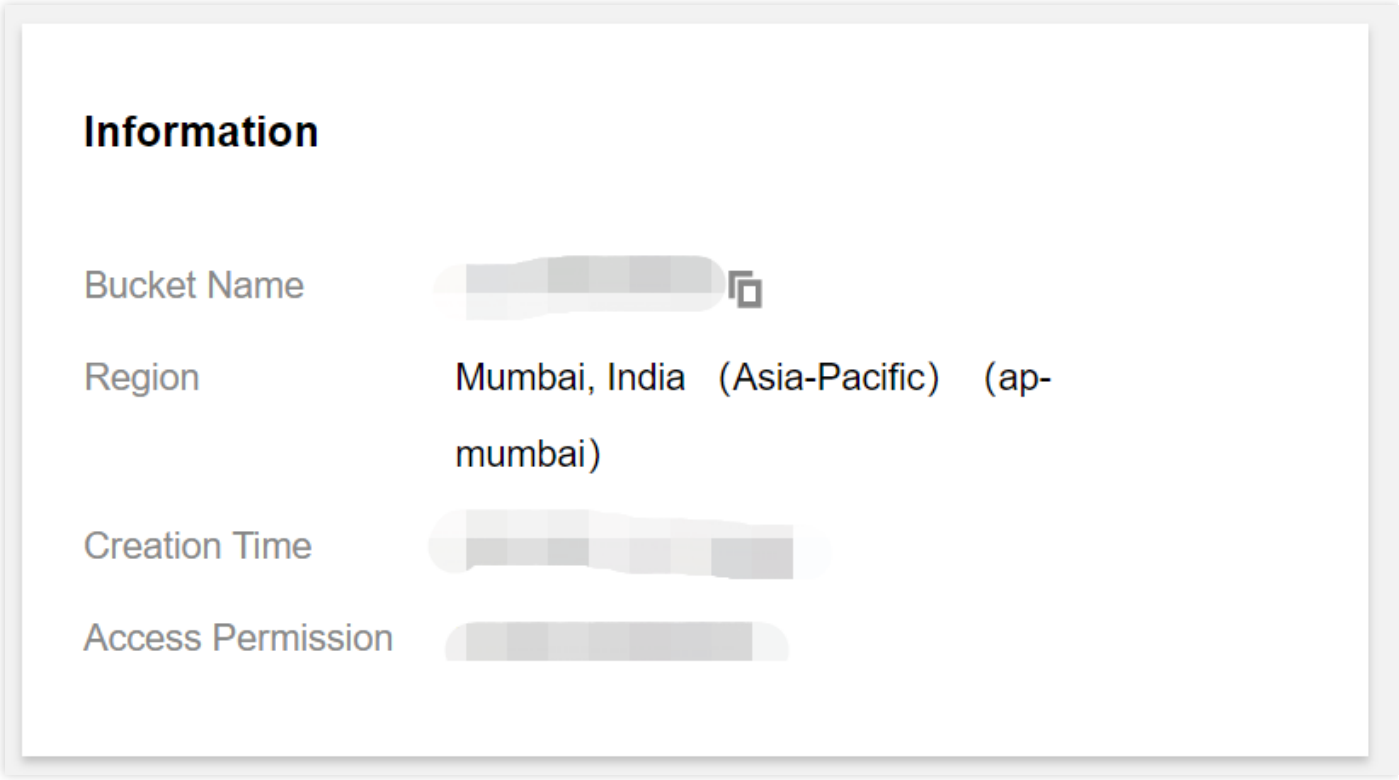
Scheduled Recording

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.



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.

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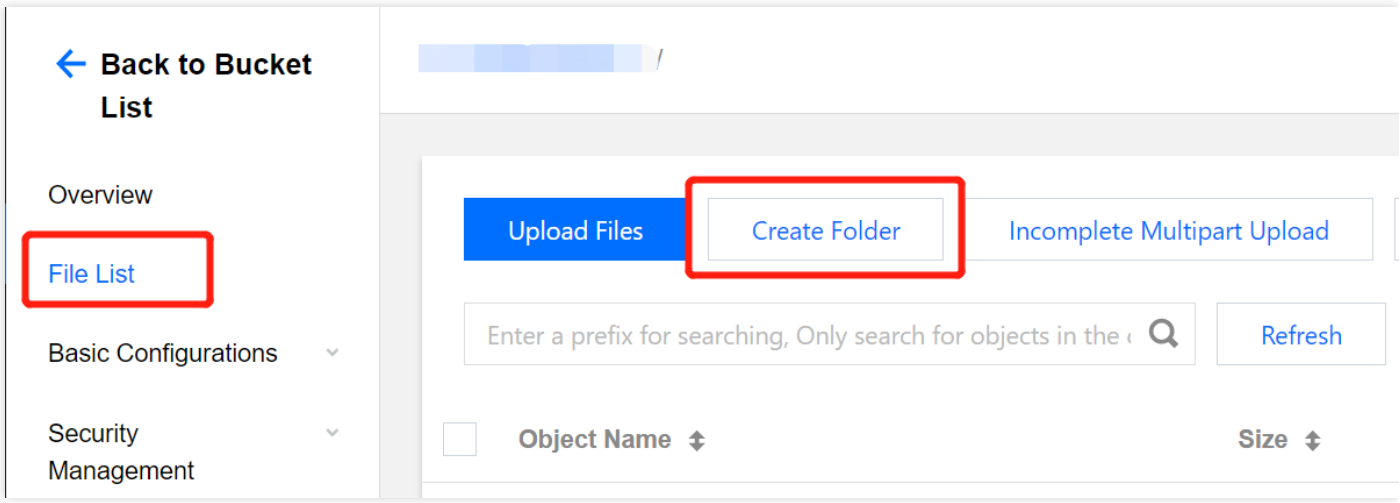
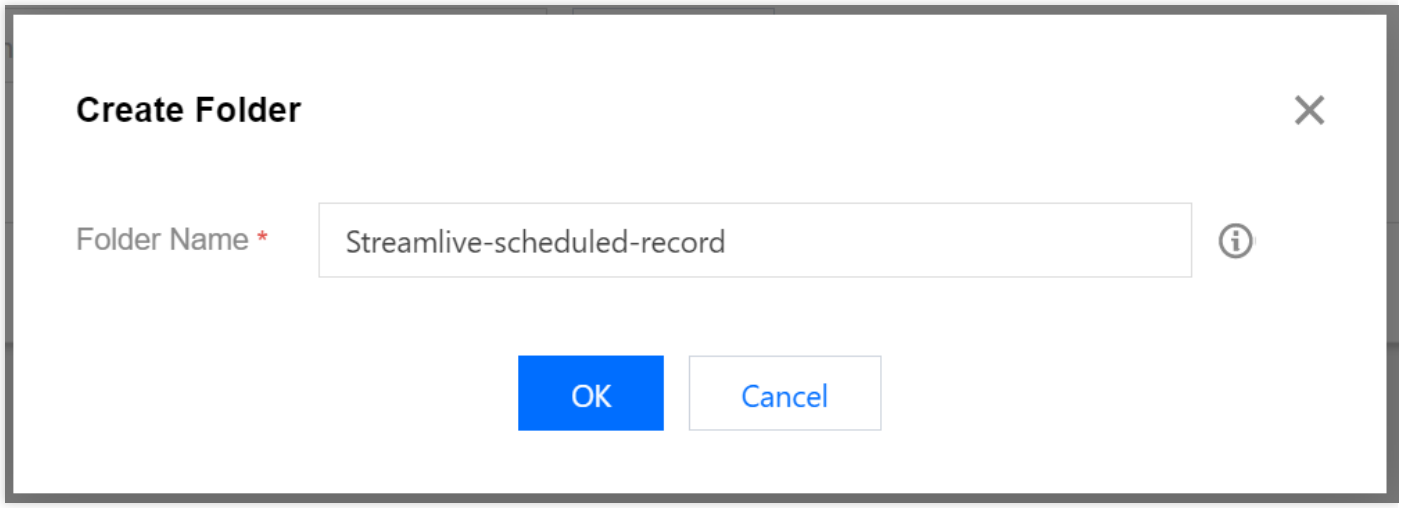


3. Enter a folder name and splice it to the endpoint URL of the bucket. The result is the address where StreamLive recording files will be saved.



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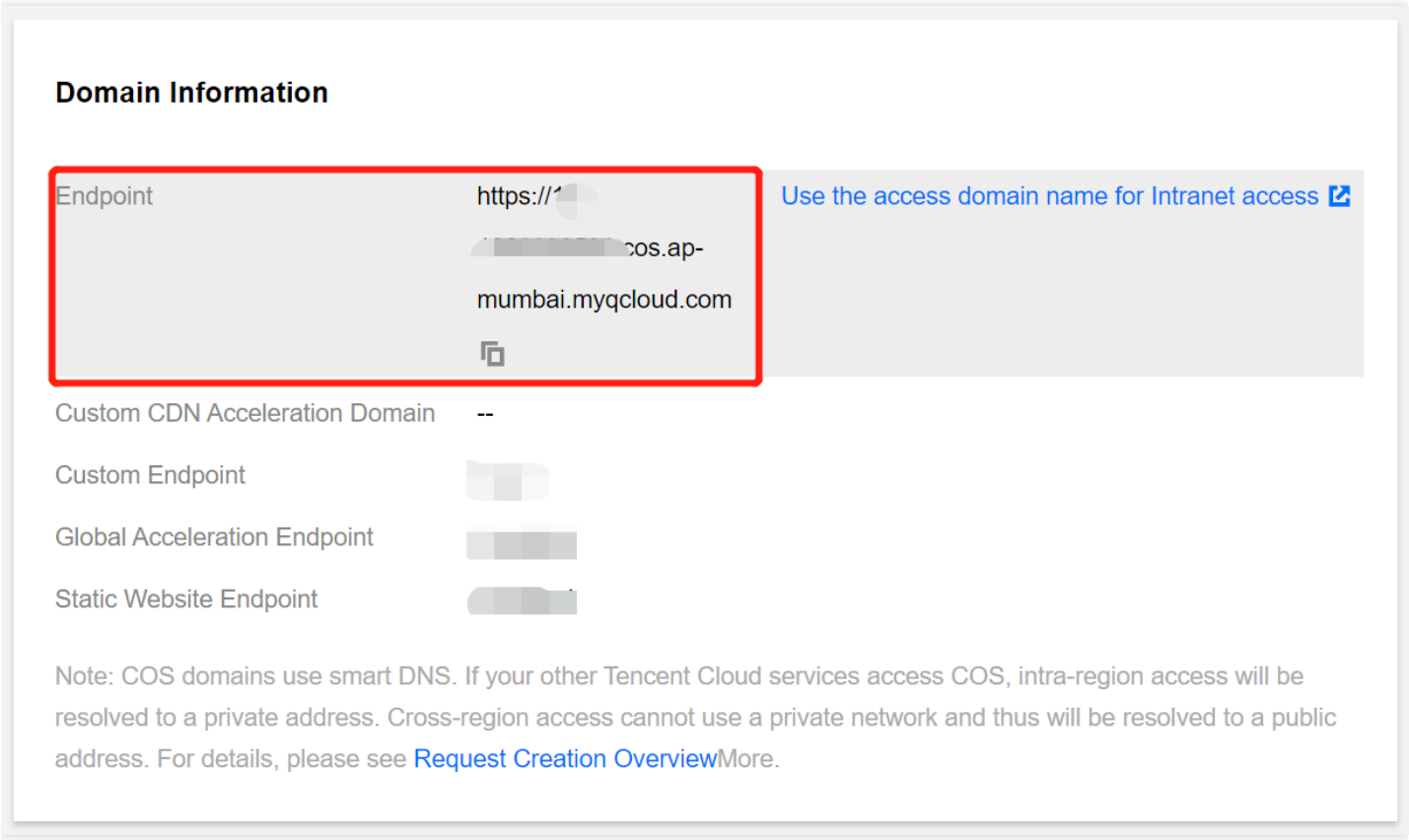
You can view the endpoint URL of a bucket on the **Overview** page.



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.

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

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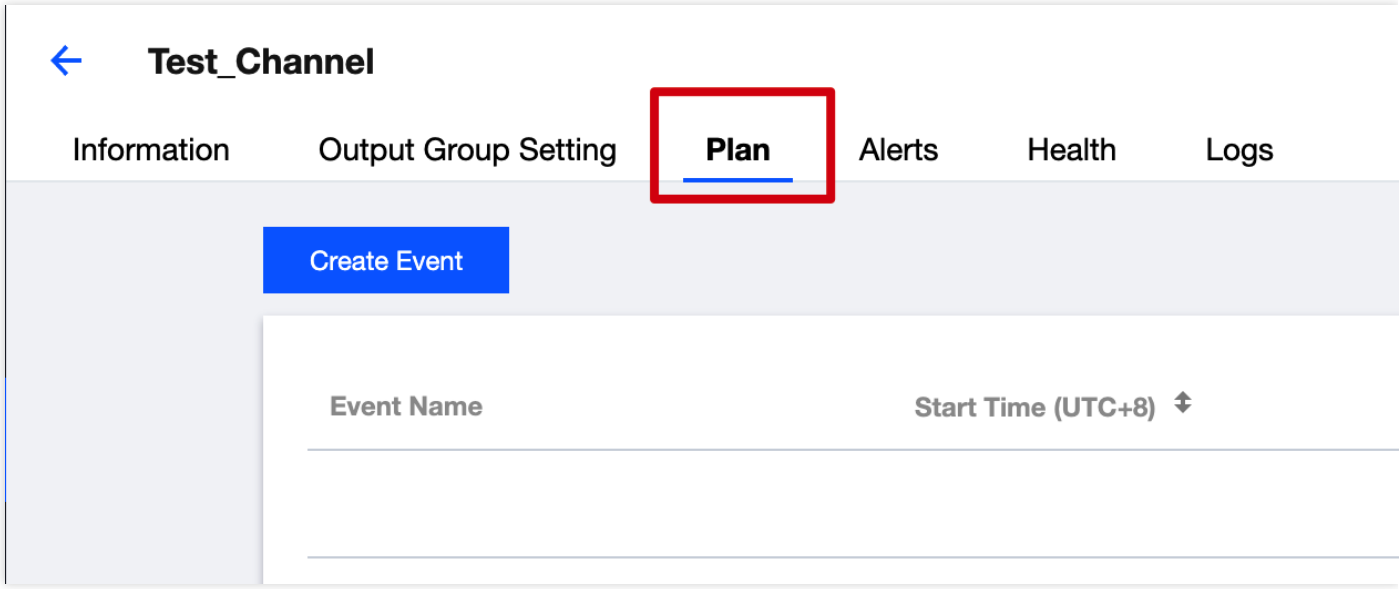

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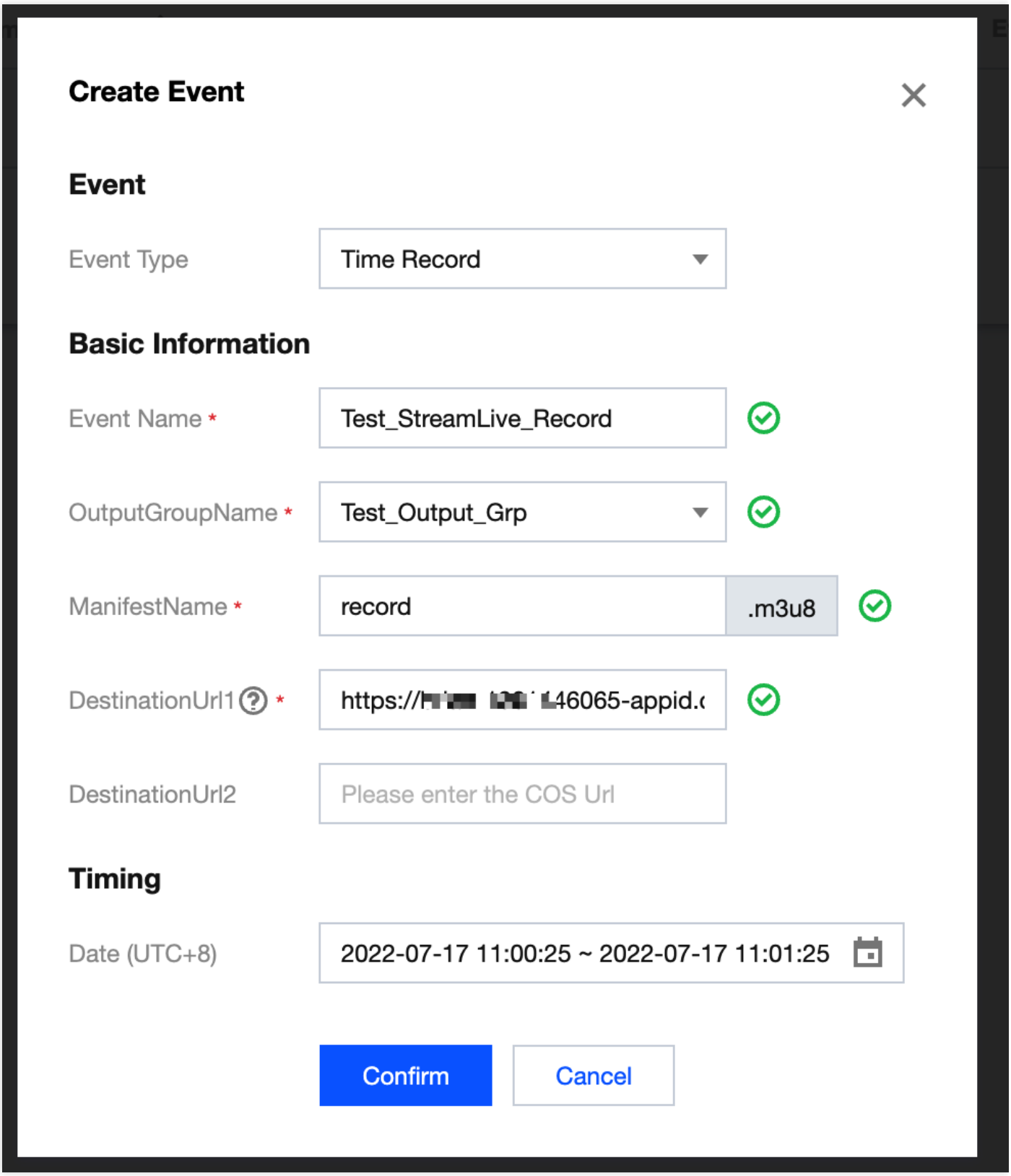
5. Click **Create Event** and complete the following settings.



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

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- **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.

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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.

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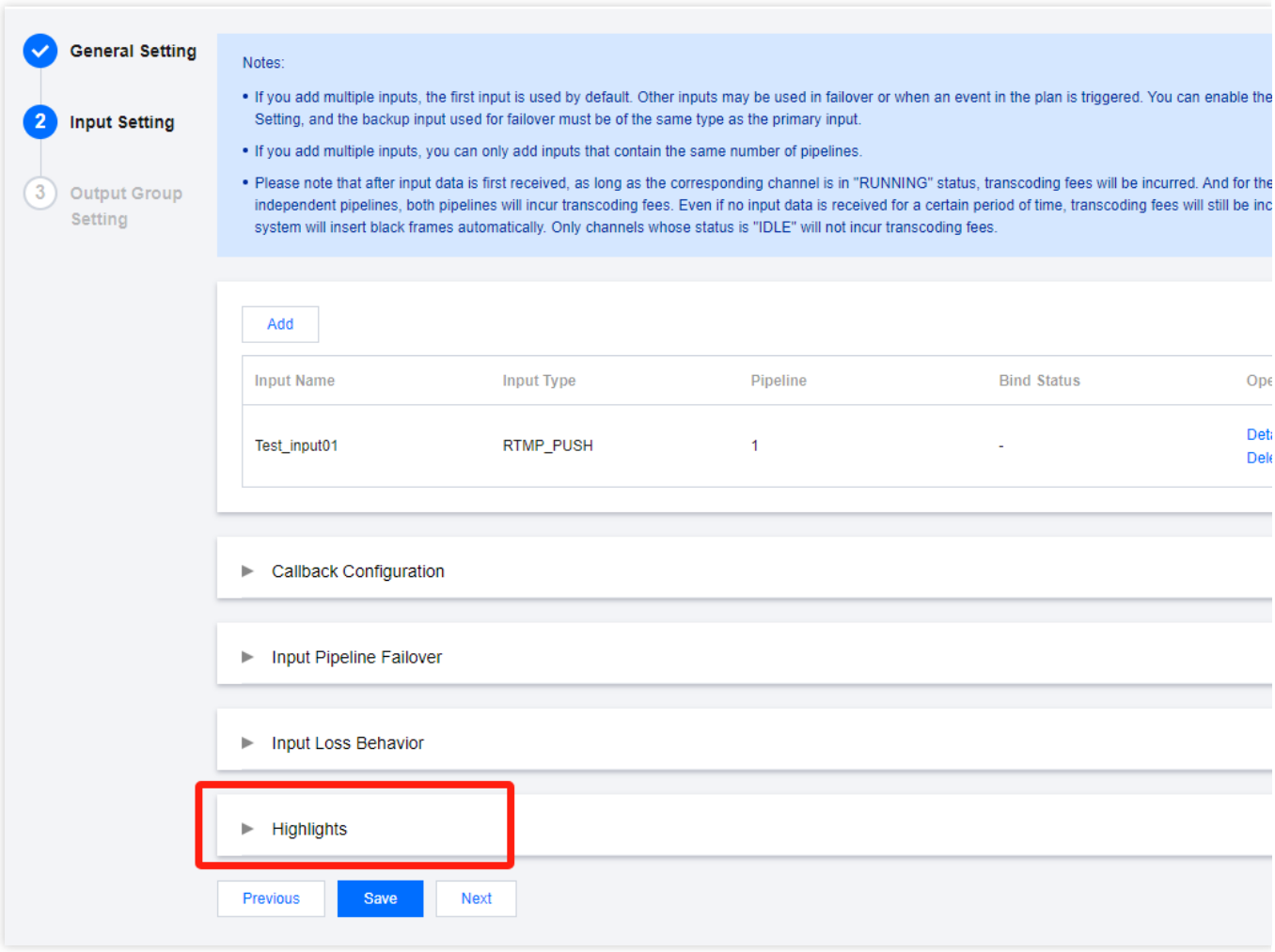
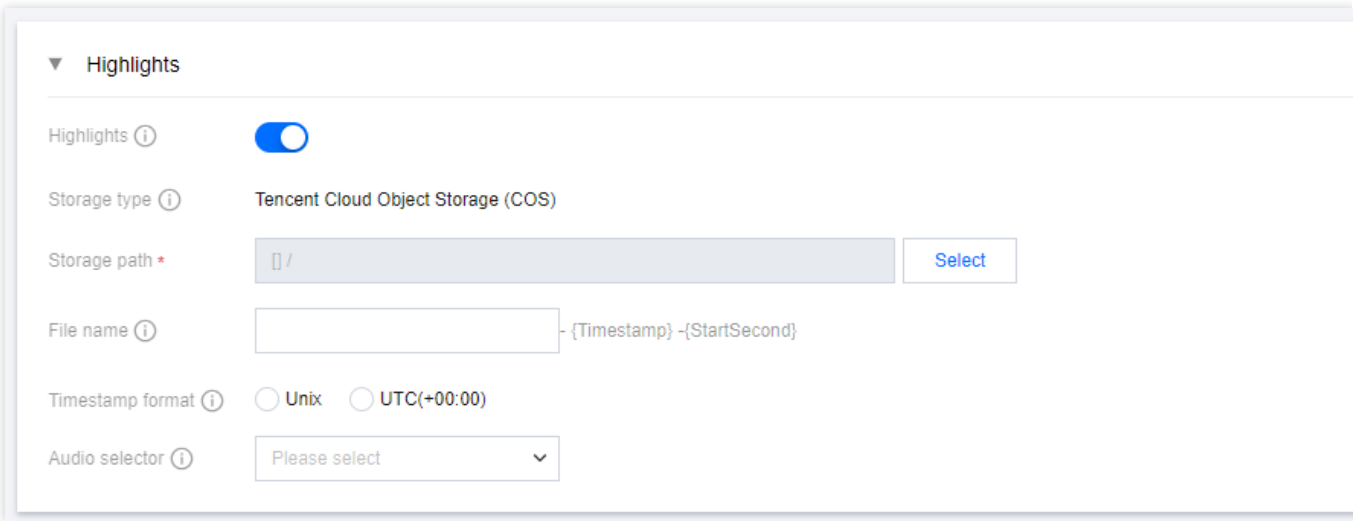


2. Enable the feature and configure the parameters.



Configuration Item	Description

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Highlights Feature	Only after enabling the feature can you configure the relevant parameters. 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. If you have already authorized, you can directly turn on the switch. If you have not authorized yet, please follow the system guidance to complete the authorization first before turning on the switch.
Storage type	For the generated highlight clips, storage is required. Currently, only Tencent Cloud Object Storage (COS) is supported.
Storage path	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. If you have already authorized, you can directly click **Select** to choose the storage path. If you have not yet authorized, click **Select** then, and follow the system guidance to complete authorization first, then choose the storage path.
File name	The file name consists of three parts: user-defined name, file generation timestamp, start second. 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. File generation timestamp: The timestamp can be selected in either Unix or UTC(+00:00) format. Start second: The start time of the highlight is expressed in seconds, relative to the source stream's starting point.
Timestamp format	Supports both Unix and UTC (+0:00) formats.
Audio Selector	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.

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.

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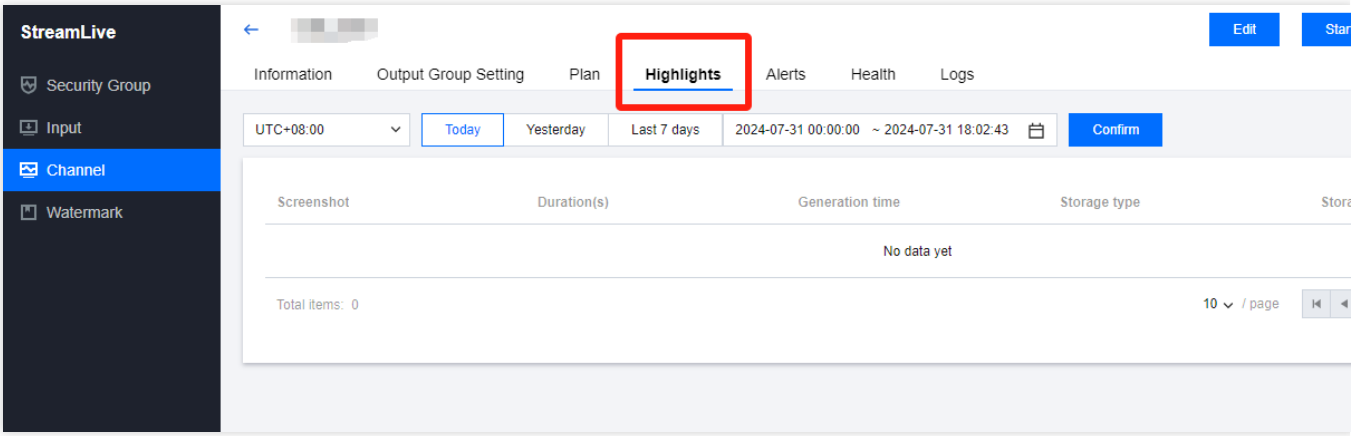

List Information	Description
Screenshot	A screenshot of the highlight segment for reference.
Duration(s)	Duration of the highlight file.
Generation time	Generation time of the highlight file.
Storage type	Currently, only Tencent Cloud Object Storage (COS) is supported.
Storage path	Storage path of the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

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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.

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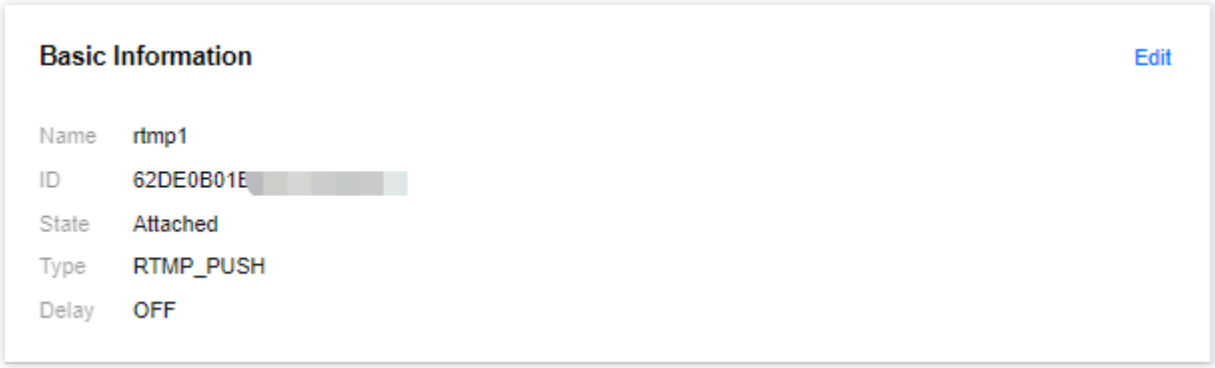
Delayed Playback

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.



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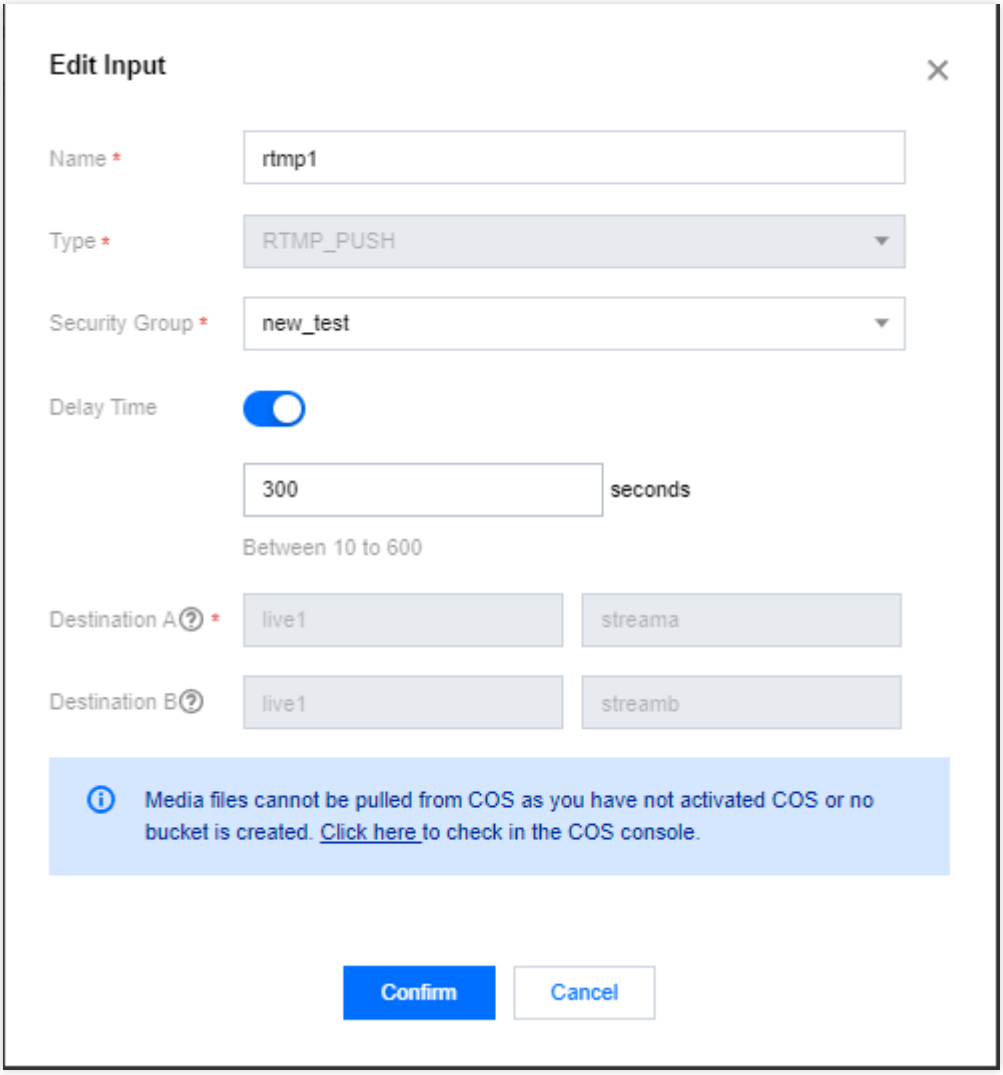
2. Click **Edit**, toggle on **Delay Time**, and specify the delay time (10-600 seconds).



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

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Adaptive Bitrate Streaming

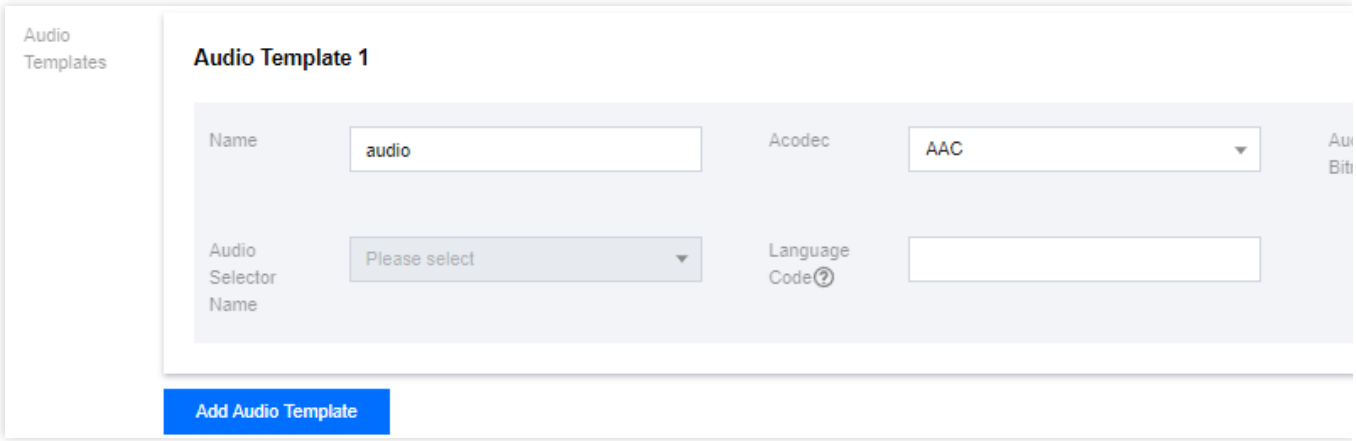
Last updated：2024-07-22 11:18:47

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.



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.

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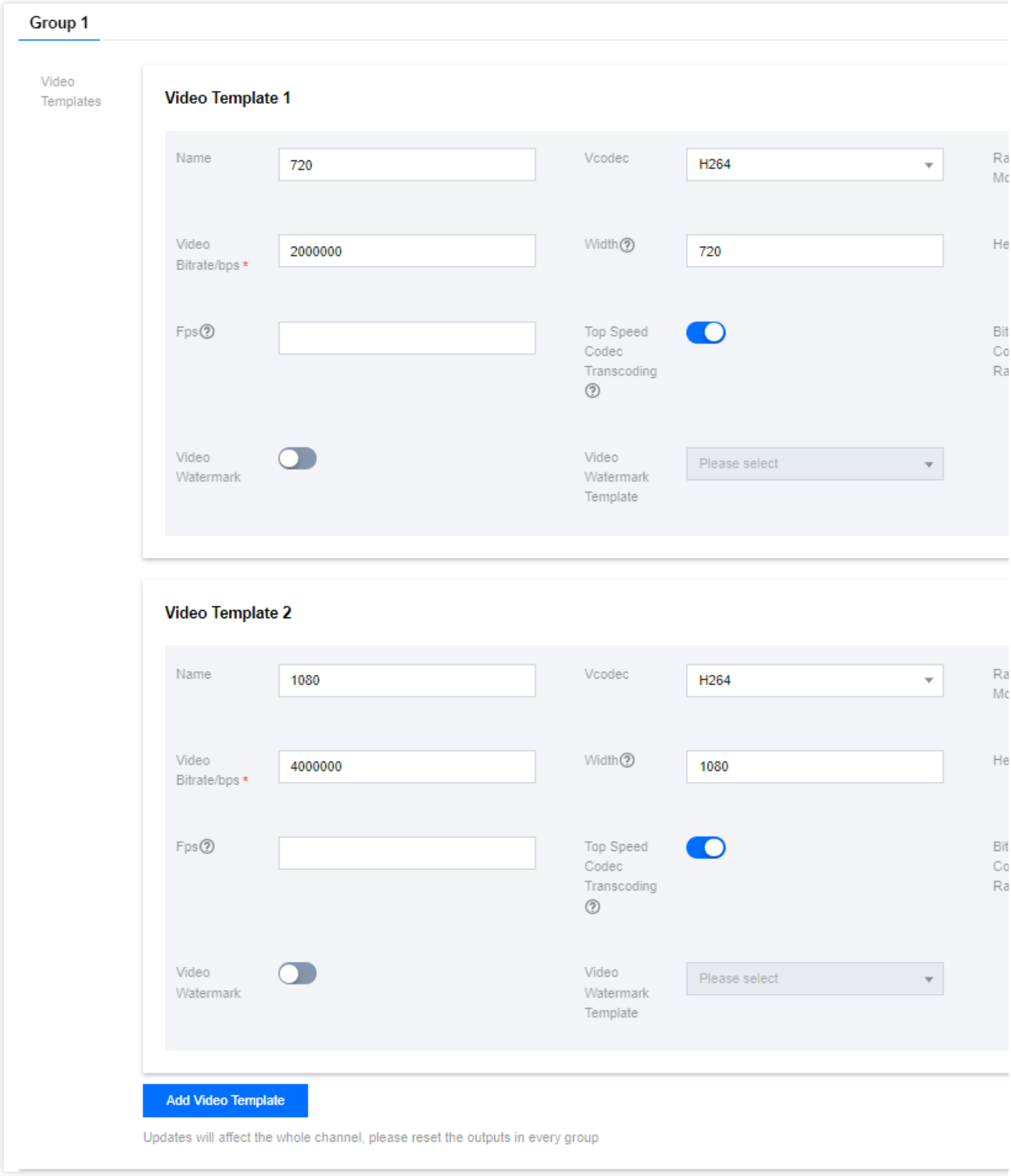

3. After configuring the transcoding templates, you can go on to configure multi-bitrate outputs in the **Outputs** area.

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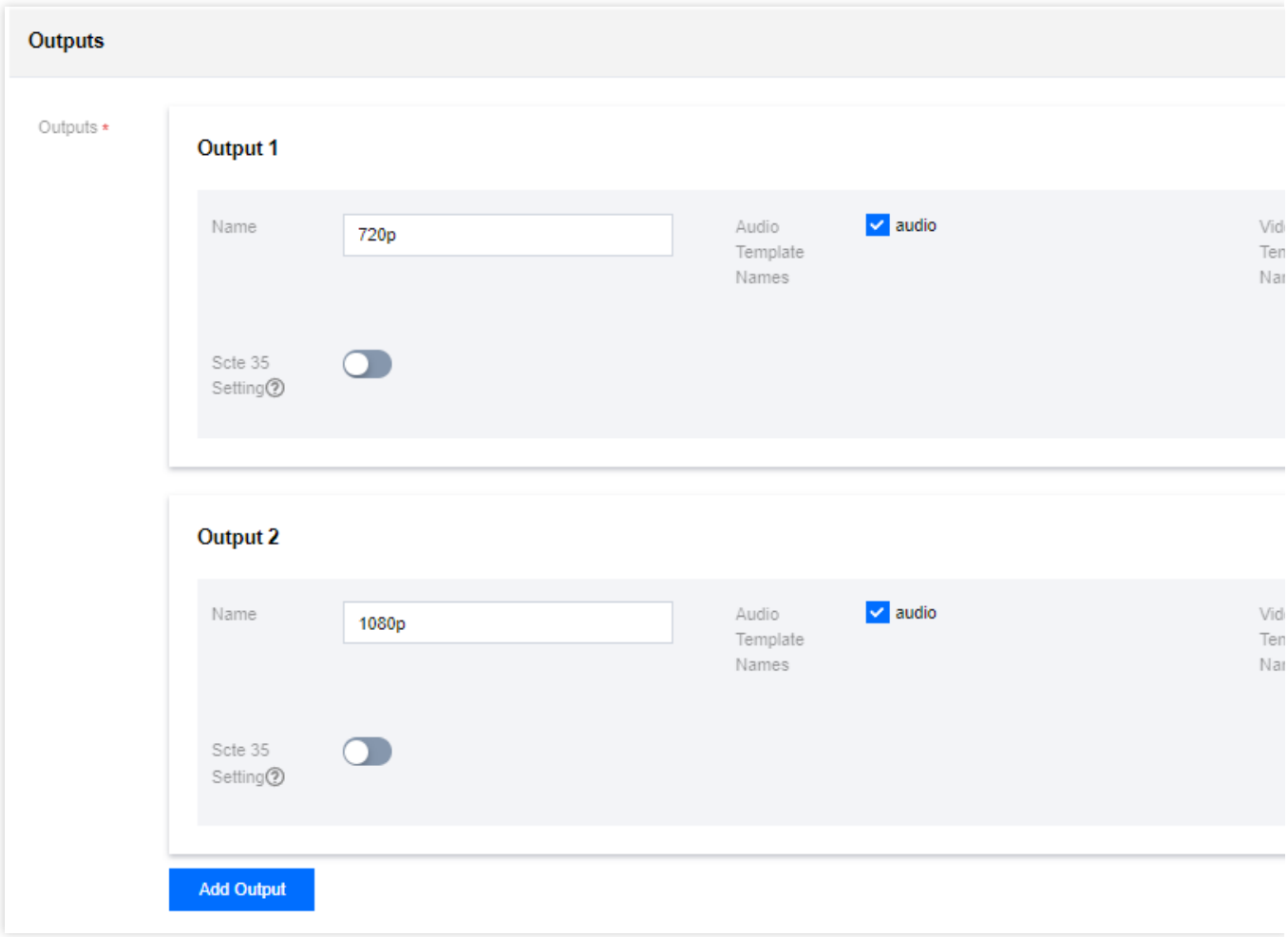

4. After the configuration, click **Done**. Now, the input of the channel will generate HLS outputs with two bitrates.

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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.

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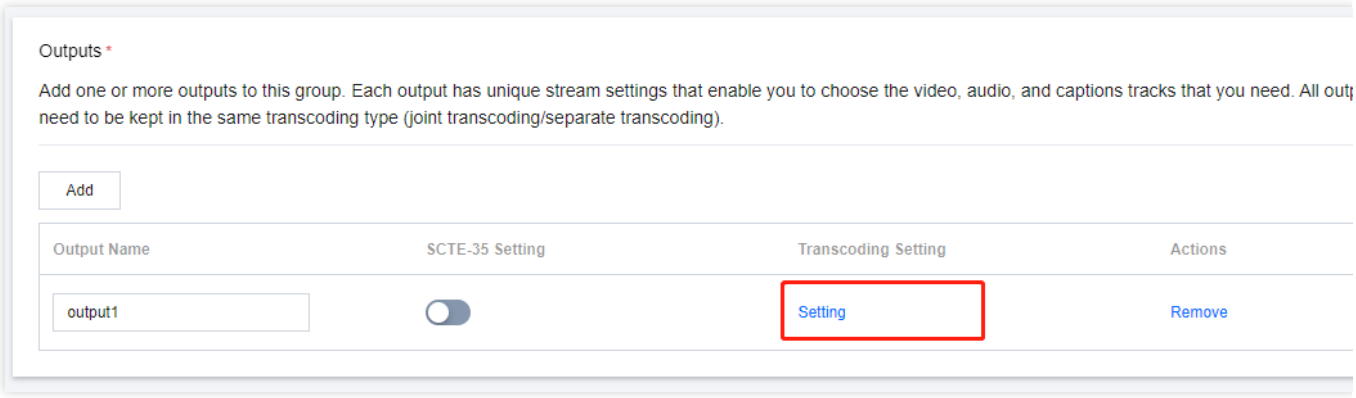
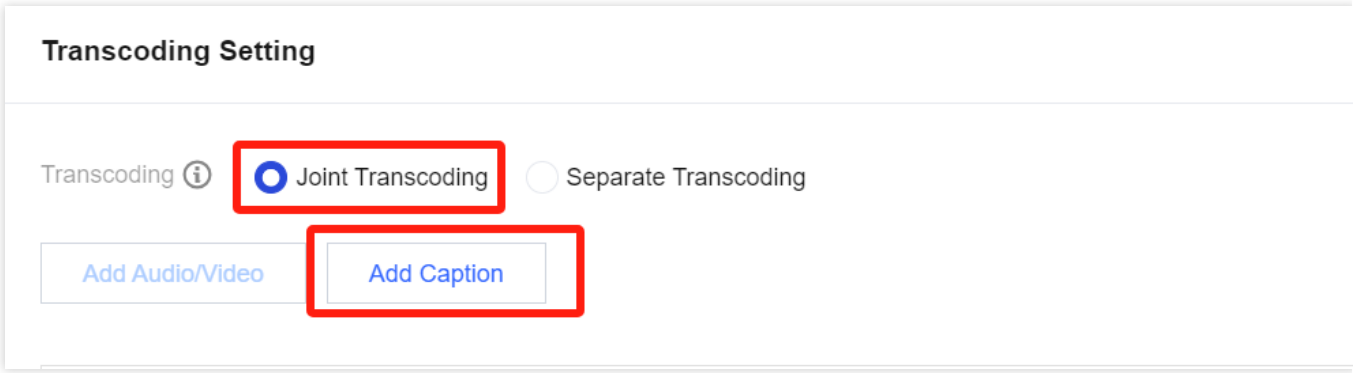
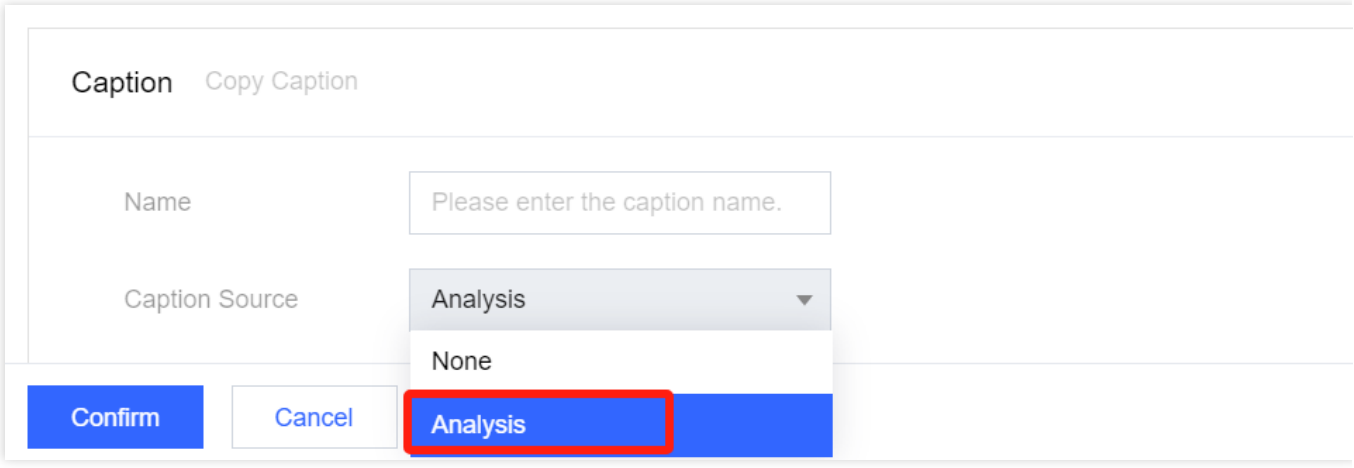


2. Select **Joint Transcoding**, and click **Add Caption**.



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

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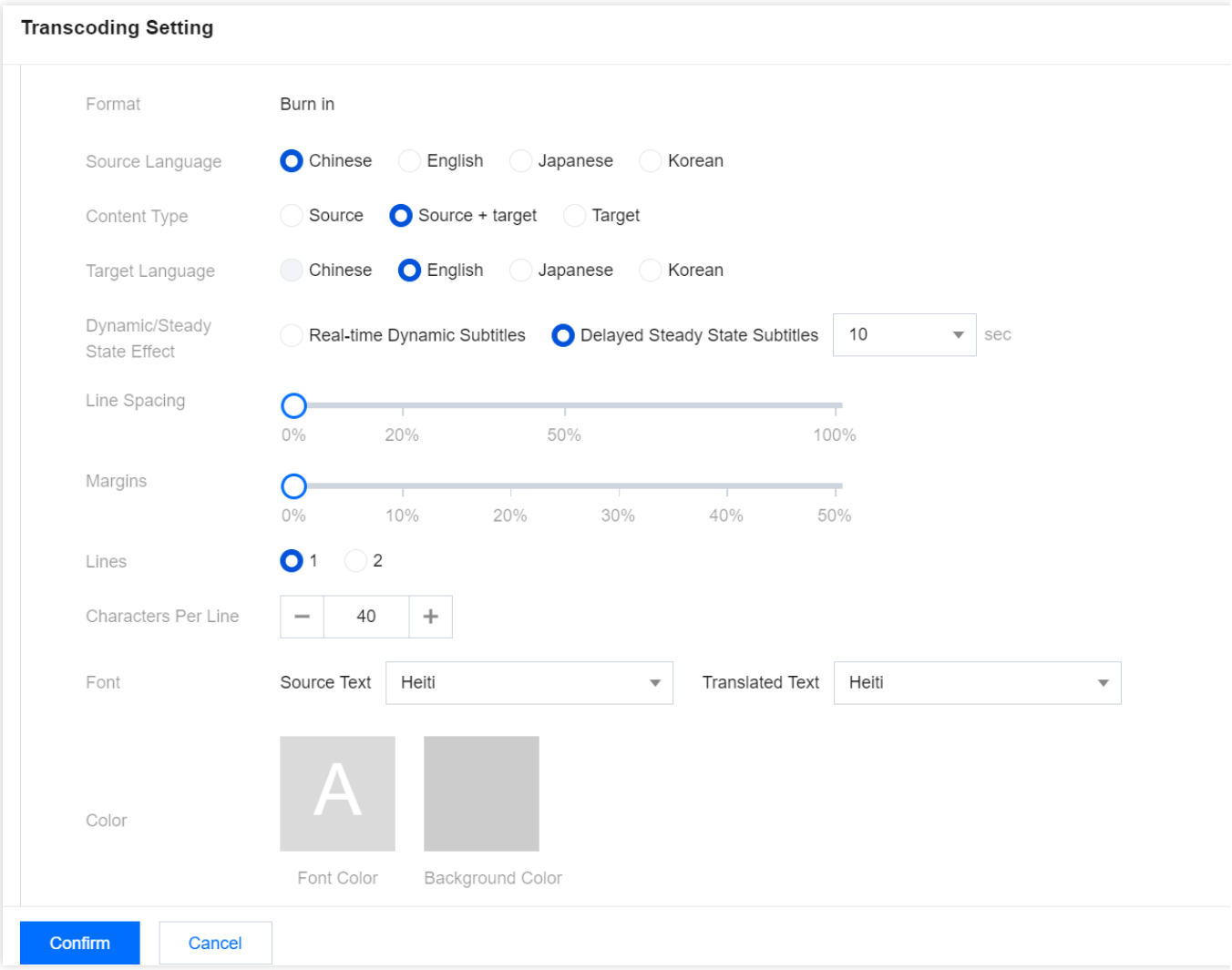
If you have not authorized before, the system will guide you through role authorization. Once you agree, you can continue configuring captions.

4. Configure caption



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.

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Language	
Dynamic/Steady State Effect	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. 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.
Line Spacing	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%.
Margins	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%.
Lines	Options are 1 or 2, with 1 selected by default. When lines exceed the displayed range, only the latest content will be displayed.
Characters Per Line	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.
Font	Options include Heiti, SimSun, Dynacw Diamond Black, and Helvetica. The font selection will vary depending on the Source language and Target language.
Color	The font color is white by default. The color can be customized. The background color is black by default. The customization of level of transparency is supported.

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.

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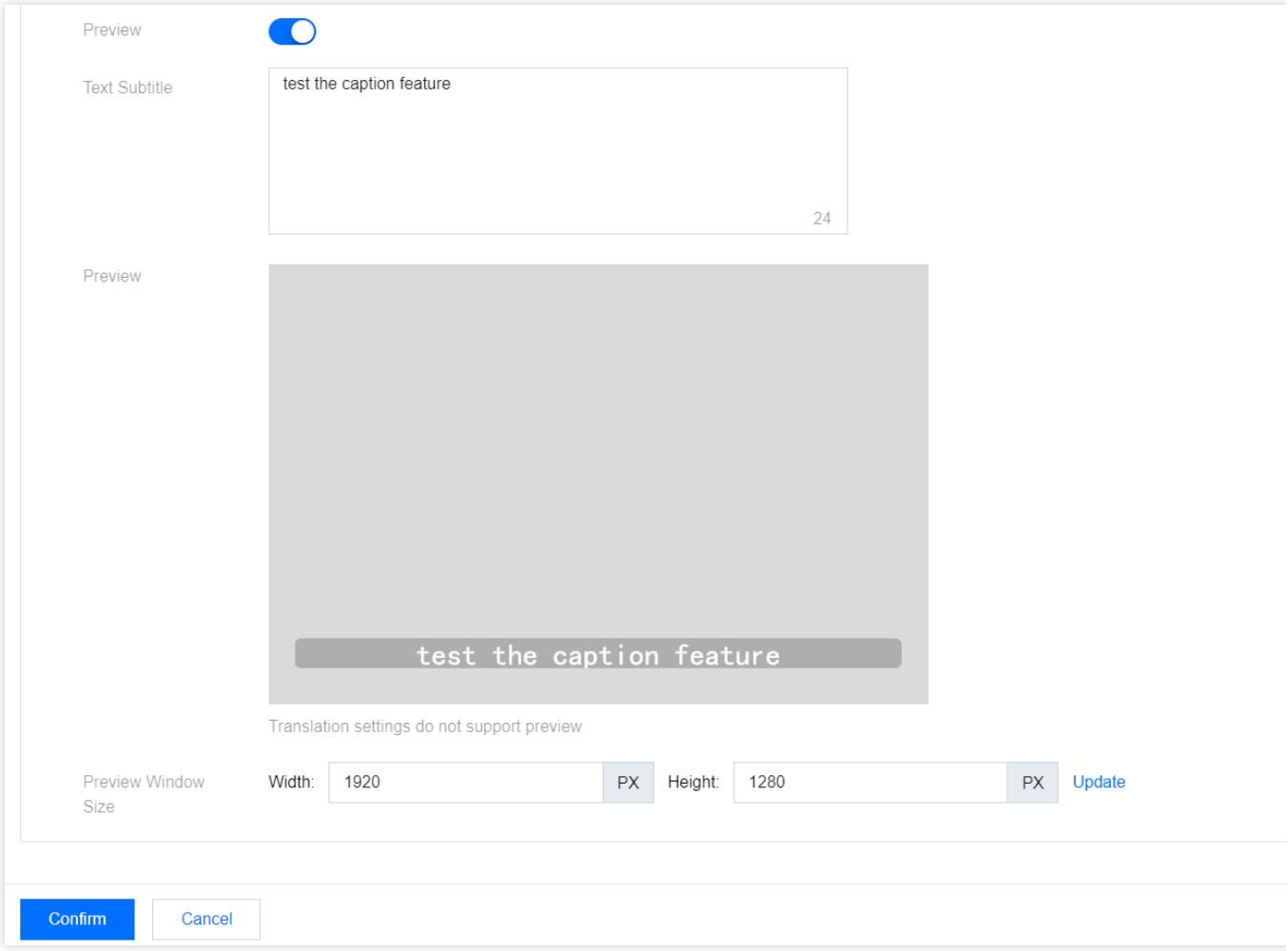

6. Click **Confirm** to save your current Transcoding Configuration and Caption Configuration.

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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 toConfigure 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.

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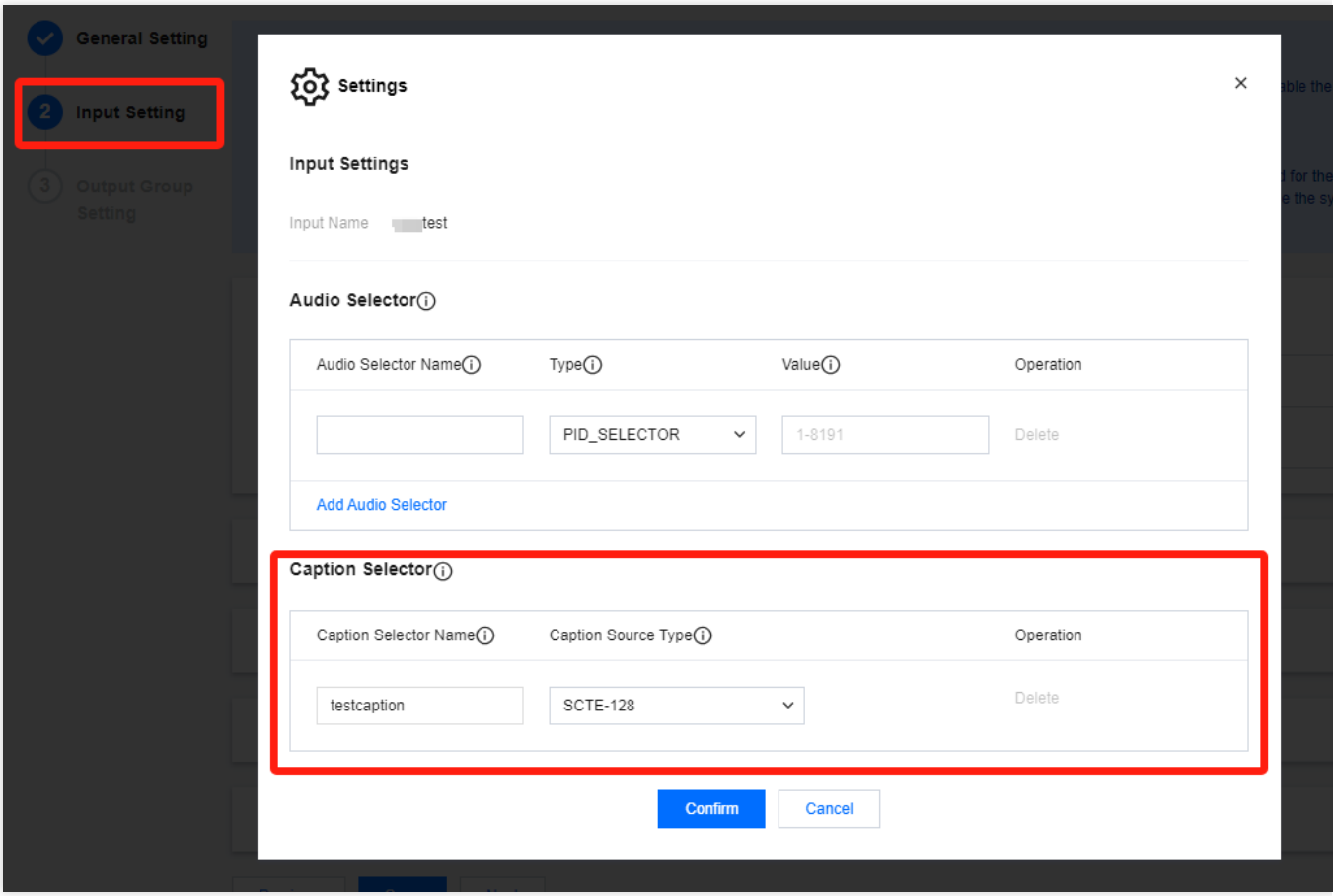

Configuration Item	Description
Caption Selector Name	You can enter 1-32 characters including letters, numbers, and underscores. After setting the caption selector here, you can then select the output caption in the output settings.
Caption Source Type	Currently, only SCTE-128 is supported. This allows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

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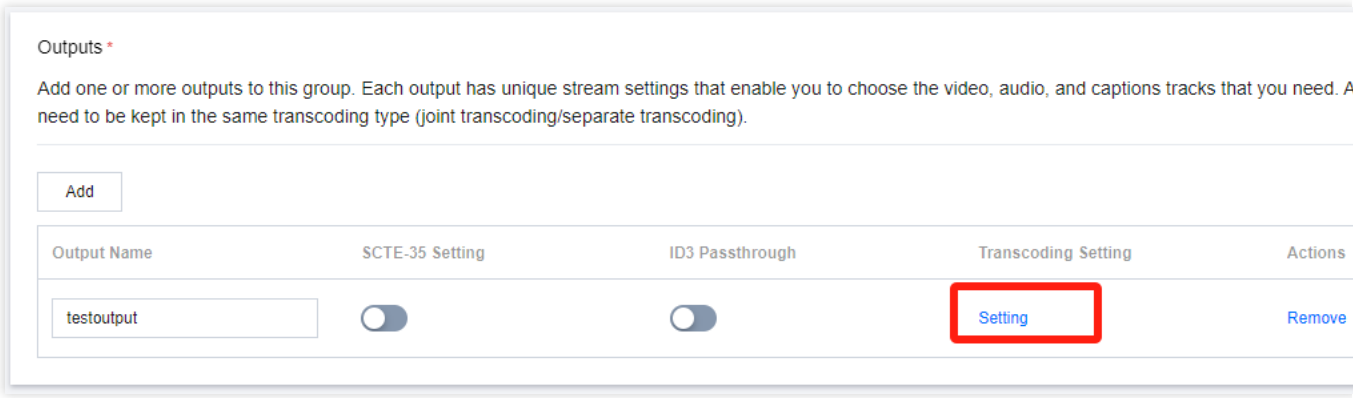
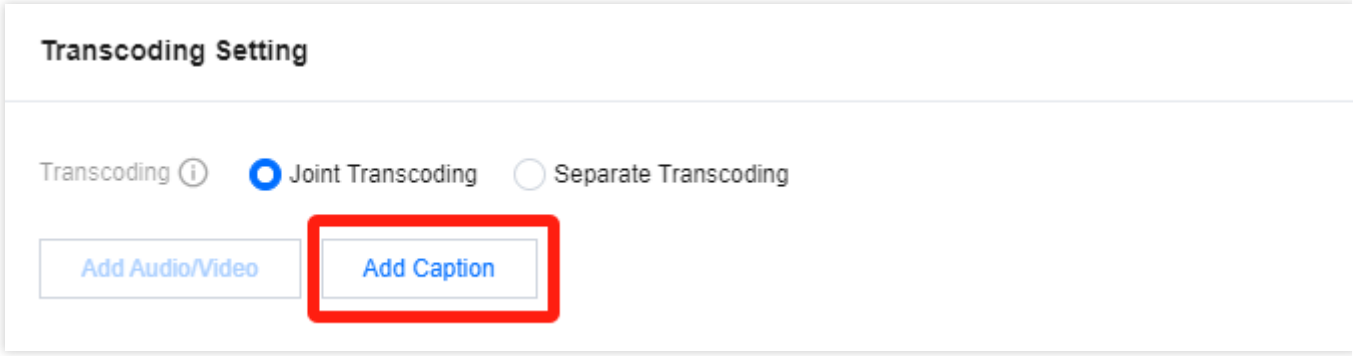
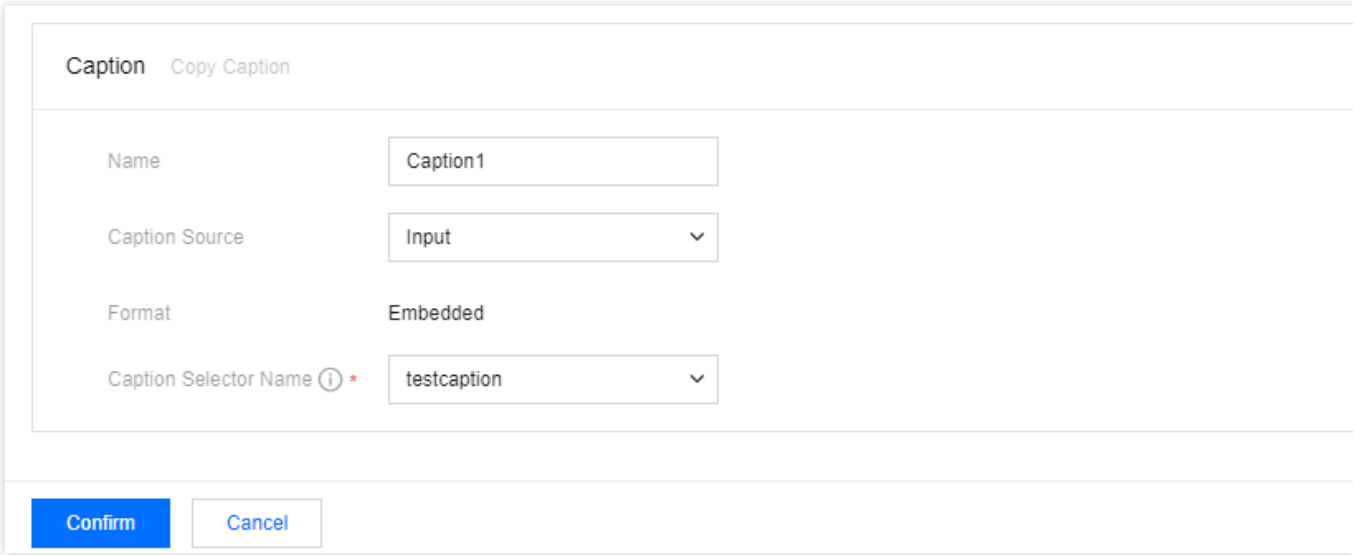




4. Configure the caption according to your needs.



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

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	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.

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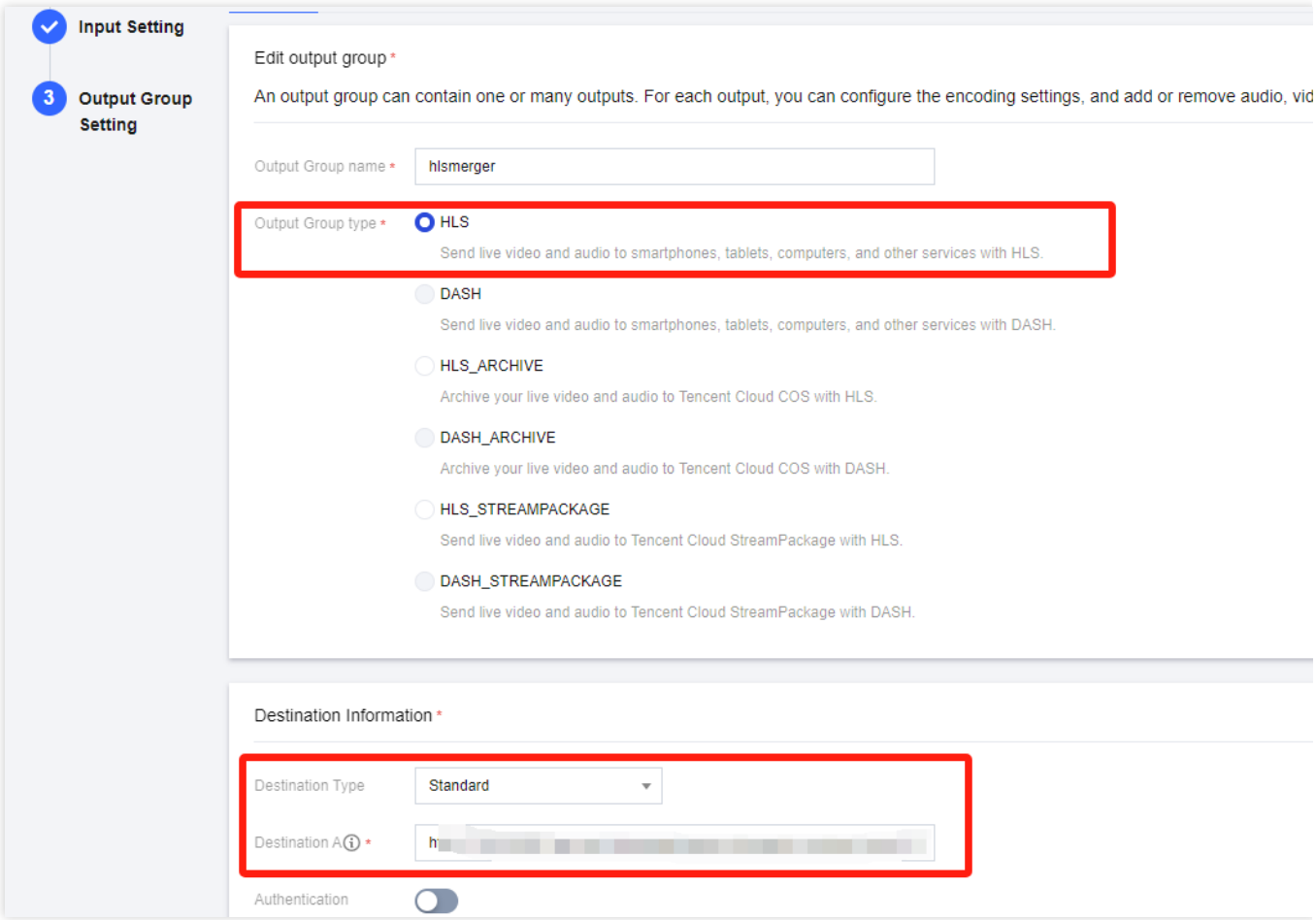
Relay

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.



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.

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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**.

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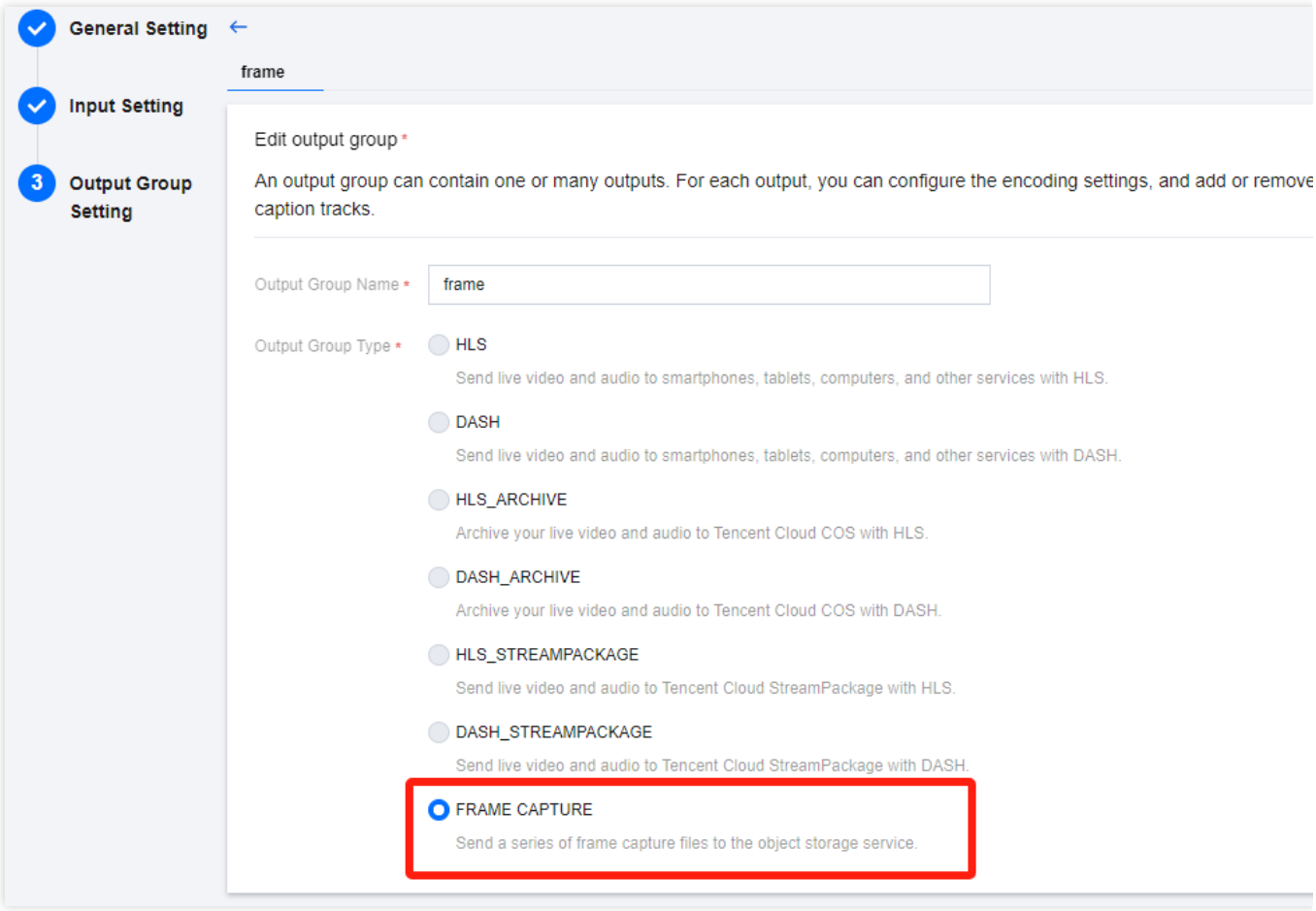
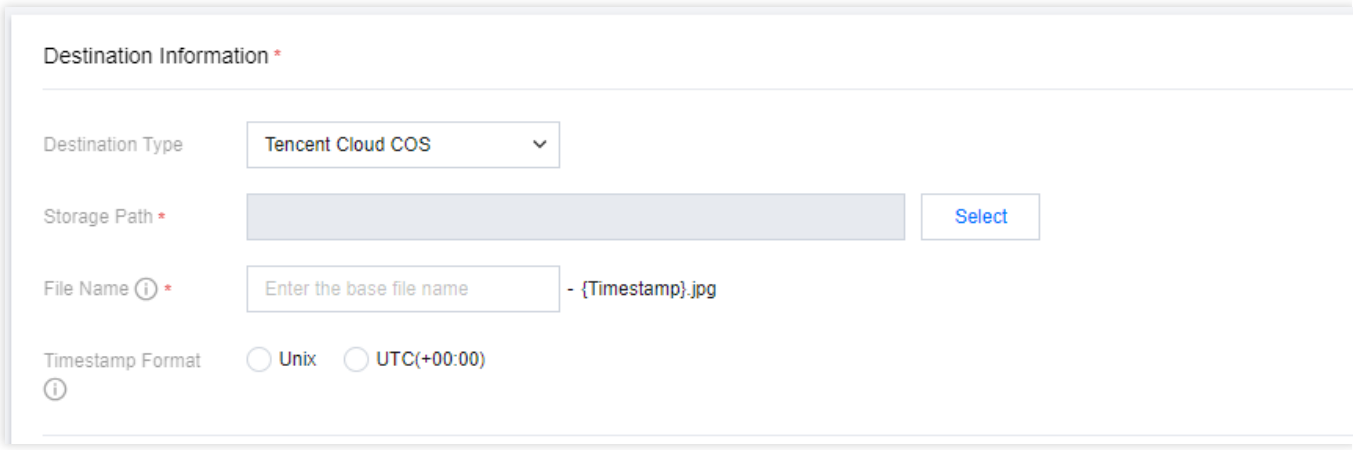


2. Fill in at least one output destination.

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



Configuration Item	Description

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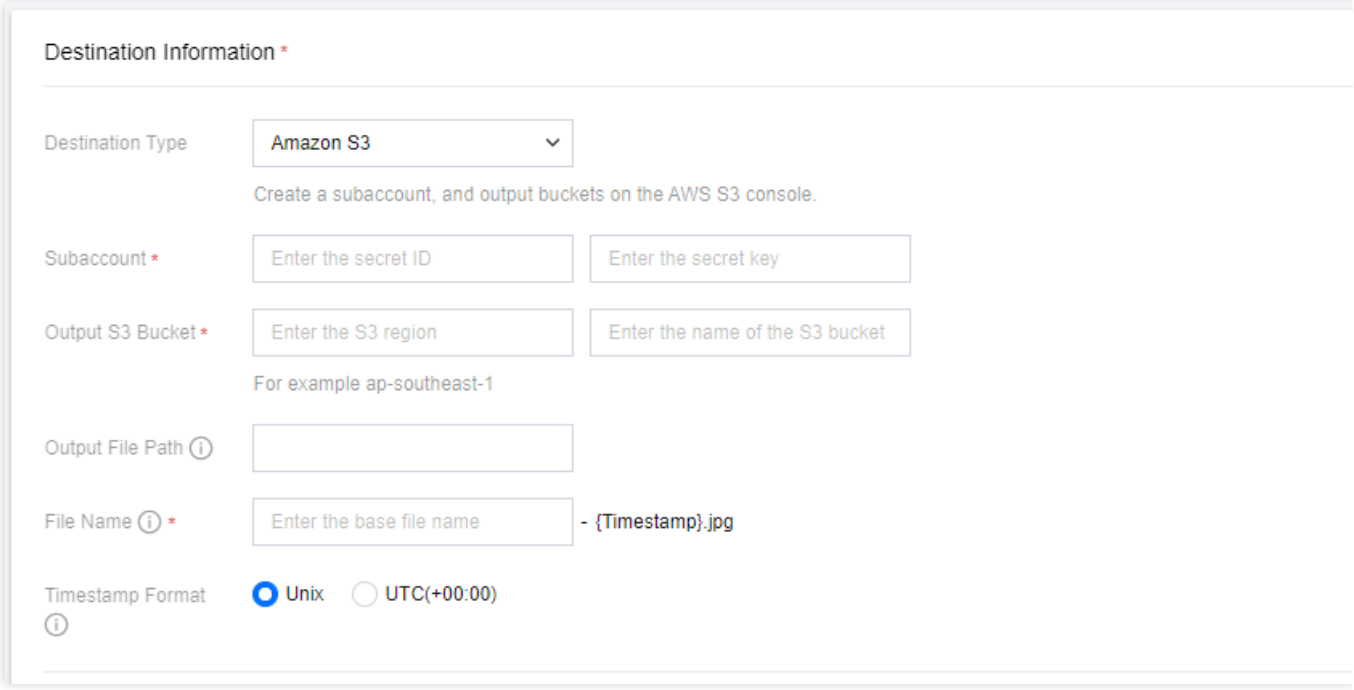
Storage path	When selecting the storage path, the system will verify whether you have authorized StreamLive the read and write permissions on Tencent Cloud COS. Only after authorization can StreamLive read the storage path information and store images in COS. If you have already authorized StreamLive with read and write permissions on COS, you can directly click **Select** to choose the storage path. 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.
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.

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**.



Configuration Item	Description

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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.

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

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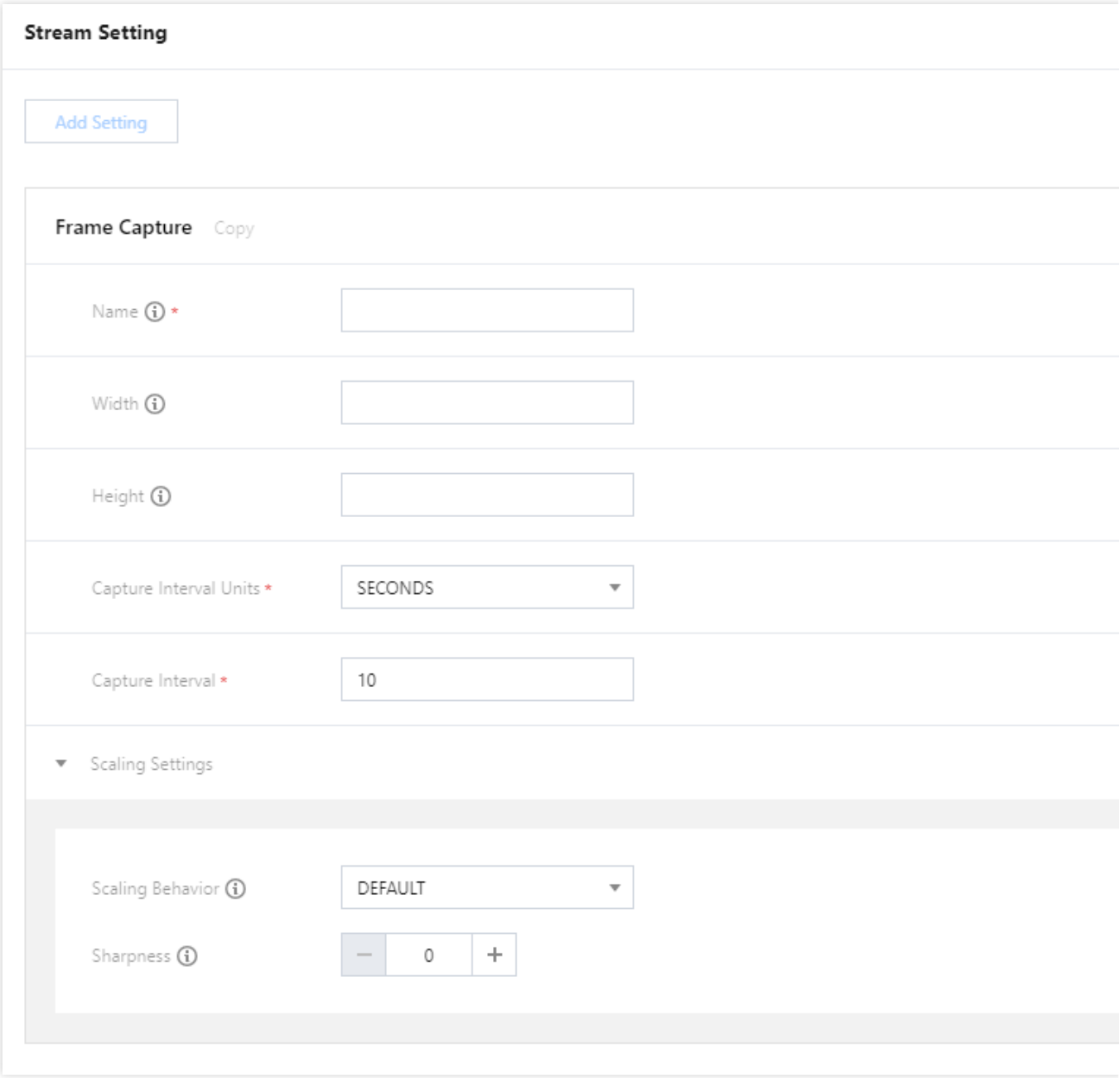

Configuration Item	Description
Name	The following detailed parameters will be saved under this name. You can enter 1-20 characters consisting of letters and numbers. You can also reuse existing parameter template by clicking **Copy** above.
Width,Height	Enter the resolution of the output image, specifying 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.

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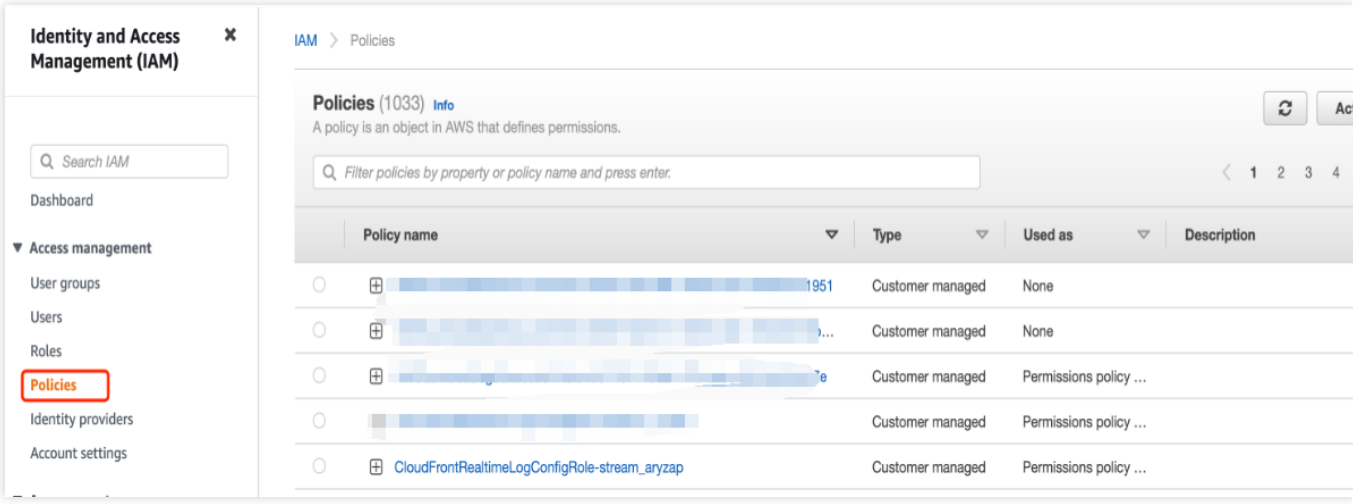
Scaling Behavior	When there is a discrepancy between the source stream resolution and the set output resolution, you can define the image scaling behavior: DEFAULT: Insert black boxes around the image to provide the specified output resolution. STRETCH_TO_OUTPUT: Stretch the image to the specified output 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:

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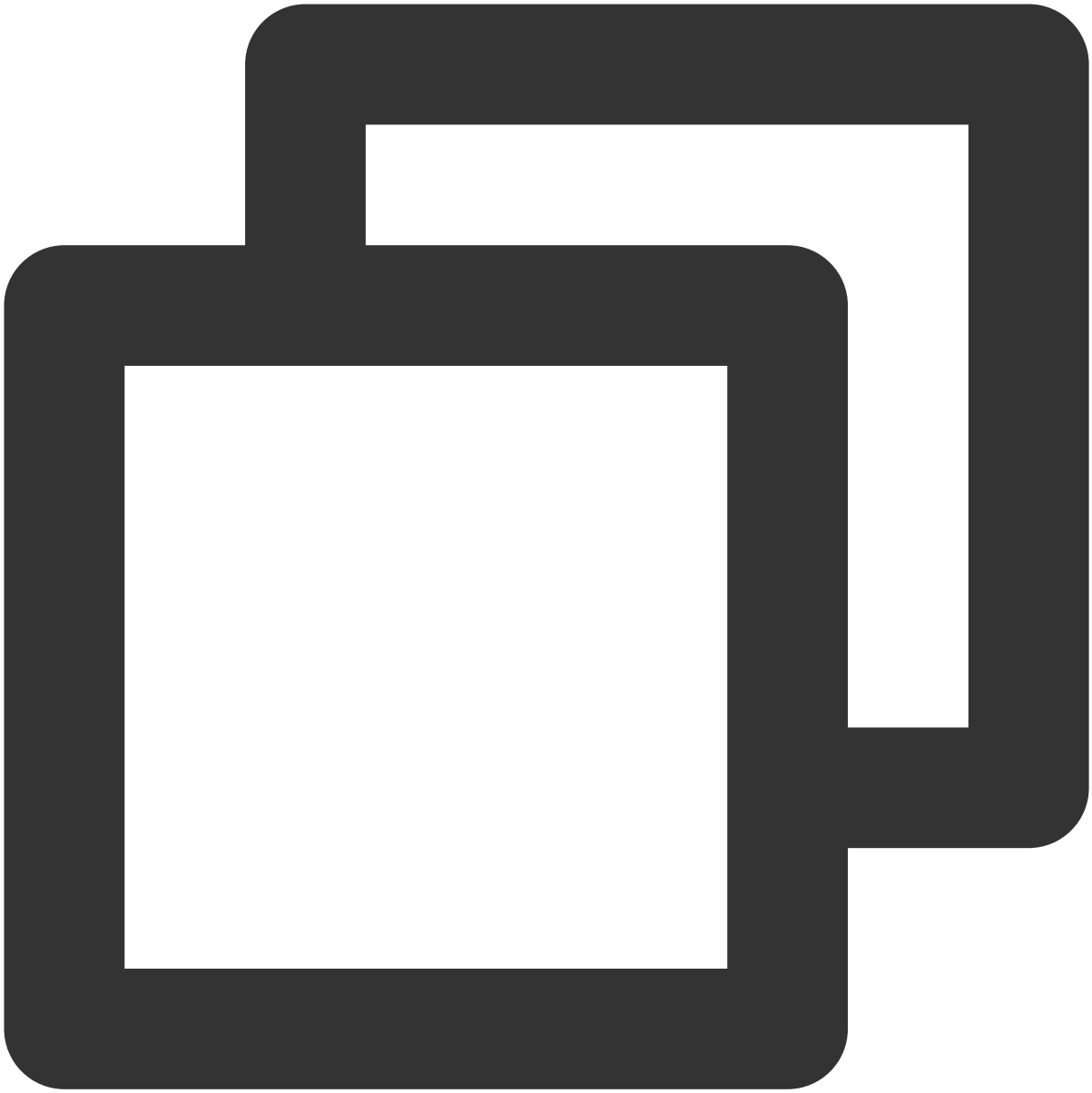

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "Statement1",
            "Effect": "Allow",
            "Action": [
                "s3:PutObject"
            ],
            "Resource": [
                "arn:aws:s3:::thebucketname/*"
```

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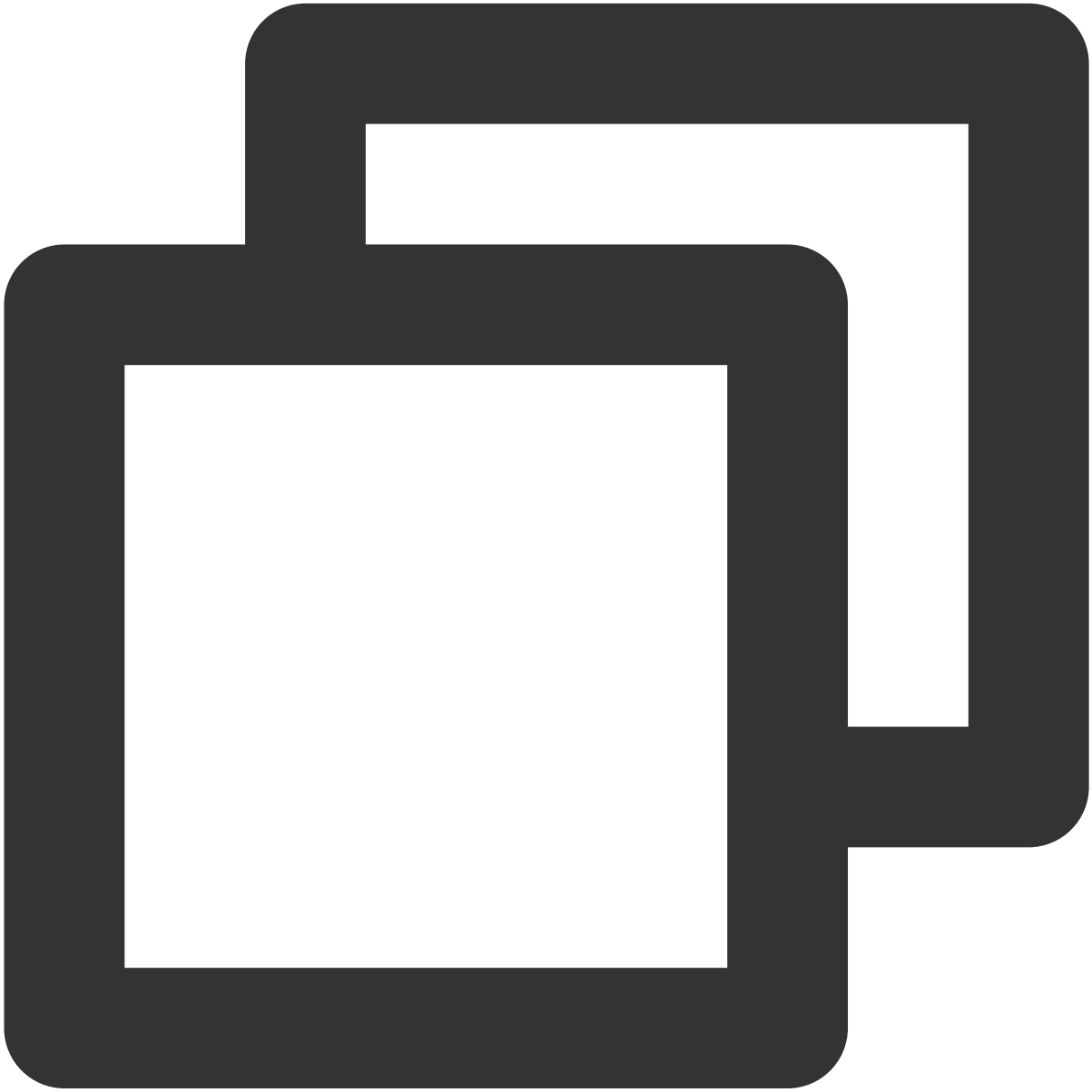
```
            ]
        }
    ]
}
```

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",
```

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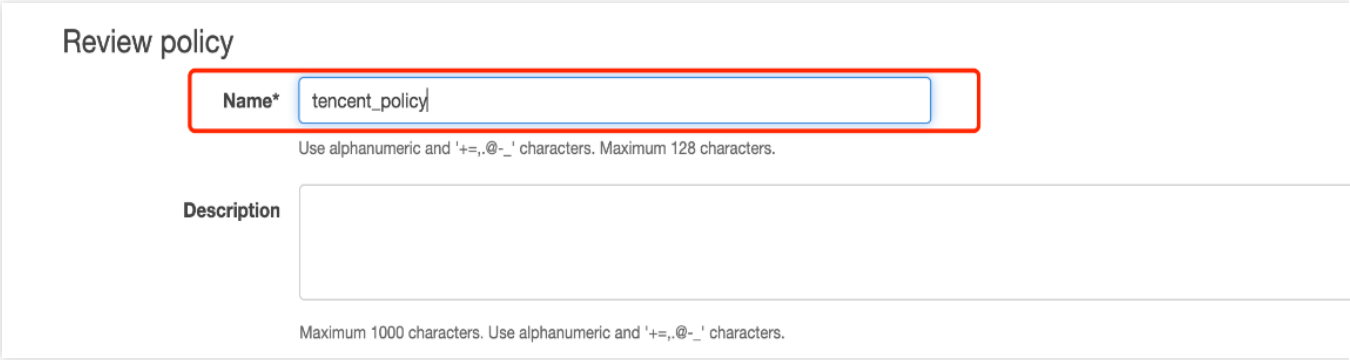
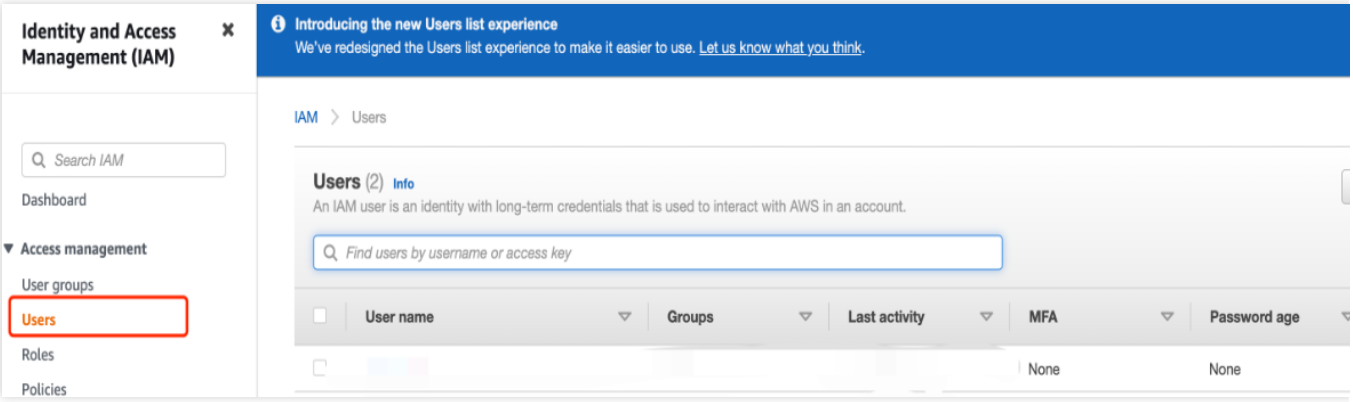
```
            "Effect": "Allow",
            "Action": [
                "s3:PutObject"
            ],
            "Resource": [
                "*"
            ]
        }
    ]
}
```

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



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.



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.

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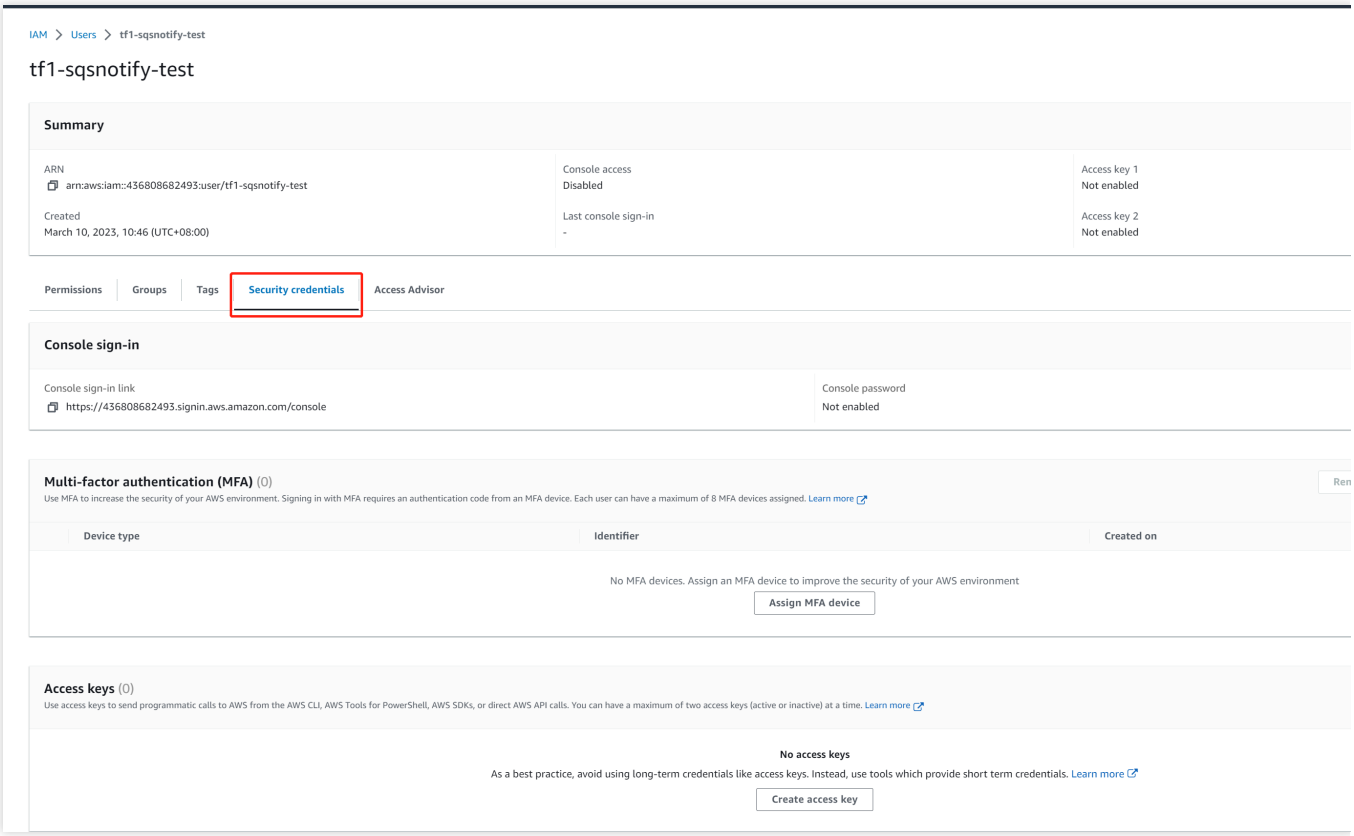
3. Obtain the sub-account's Access key ID and Secret access key

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



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

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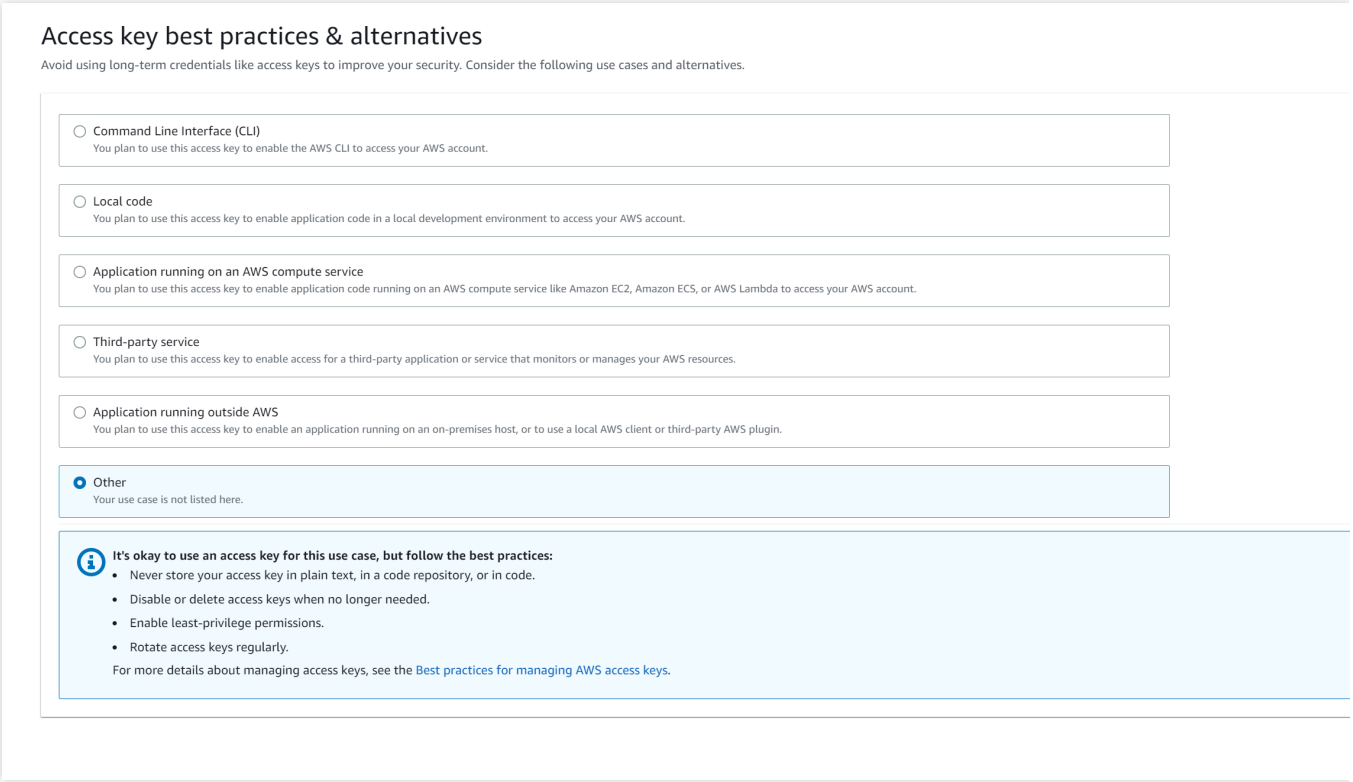

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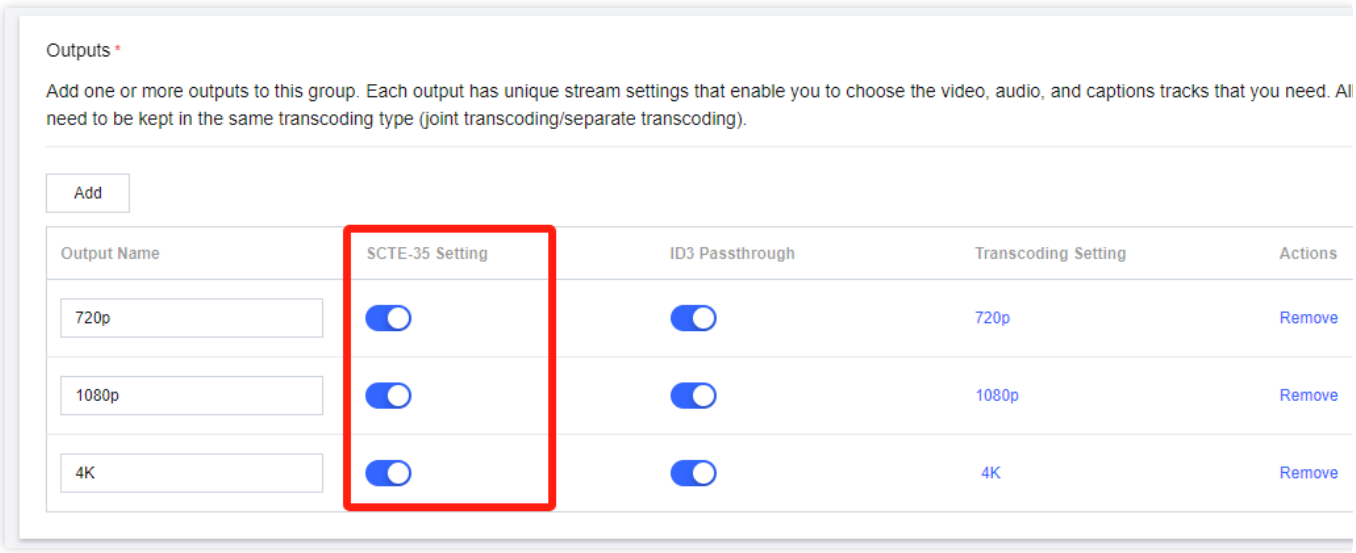
SCTE-35

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**.



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.

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PDT (HLS)

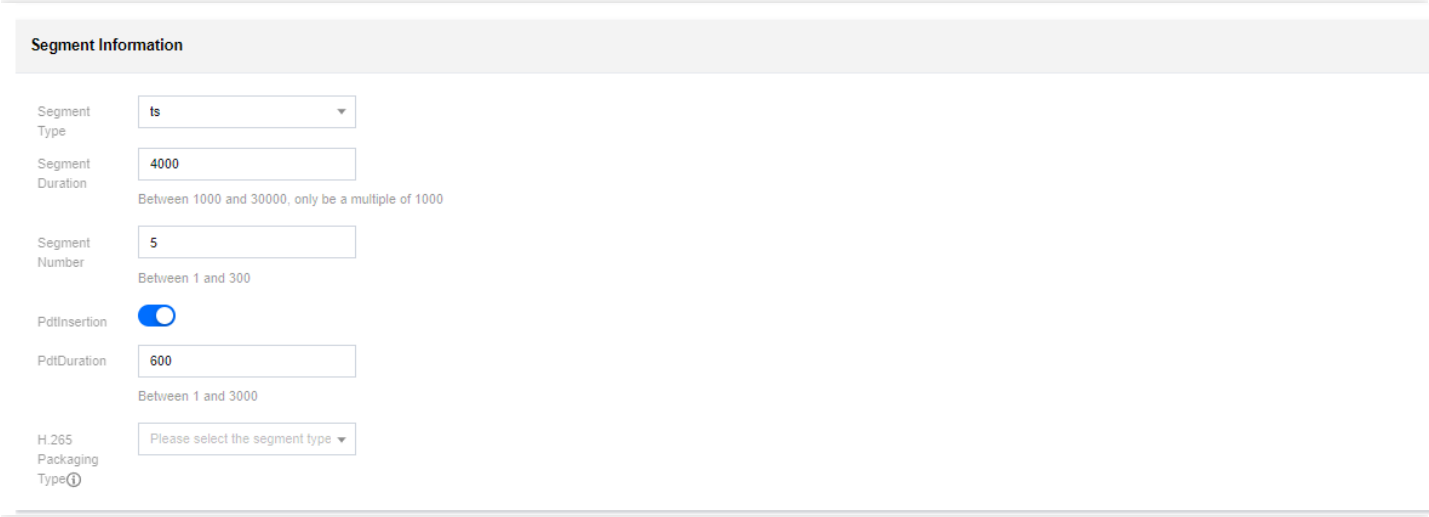
Last updated：2022-09-14 11:01:31

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:

```
#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.



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.

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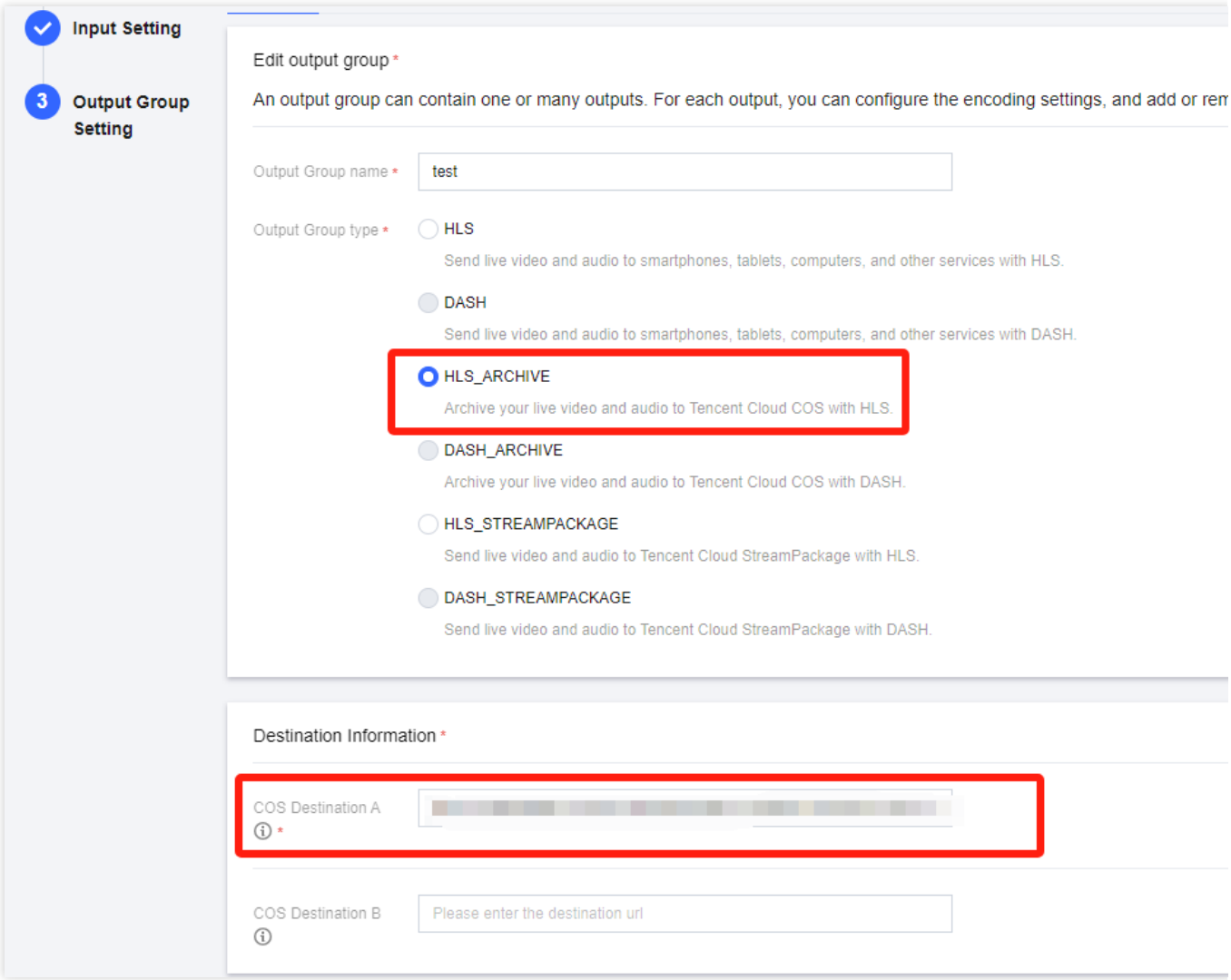
Archiving (Recording)

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

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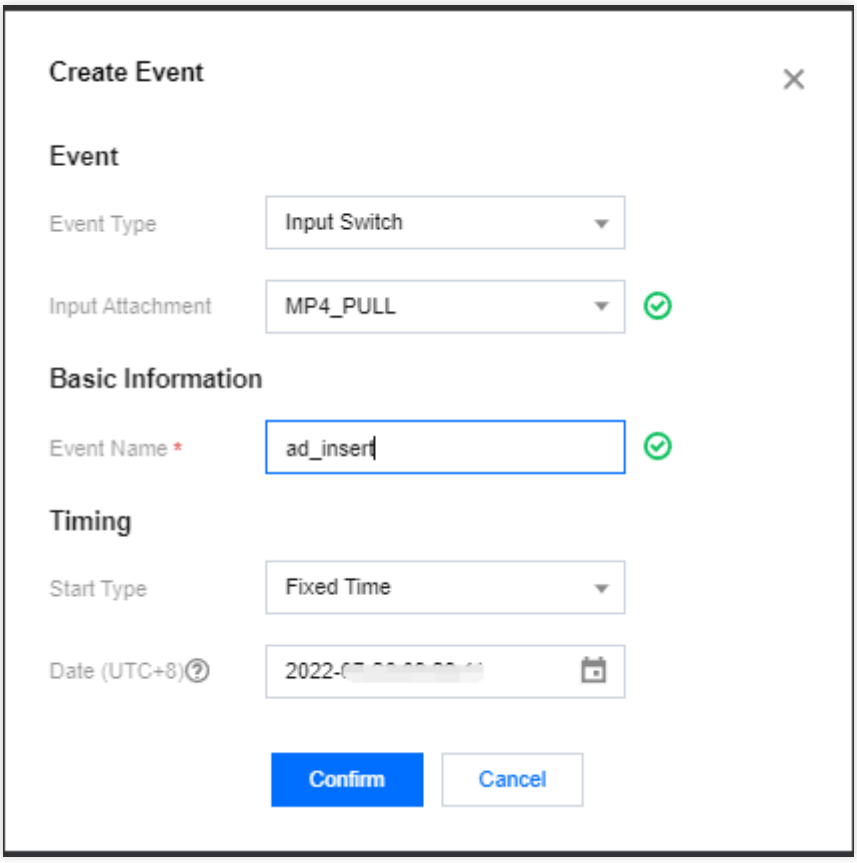
Ad Insertion

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.



   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.

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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**.

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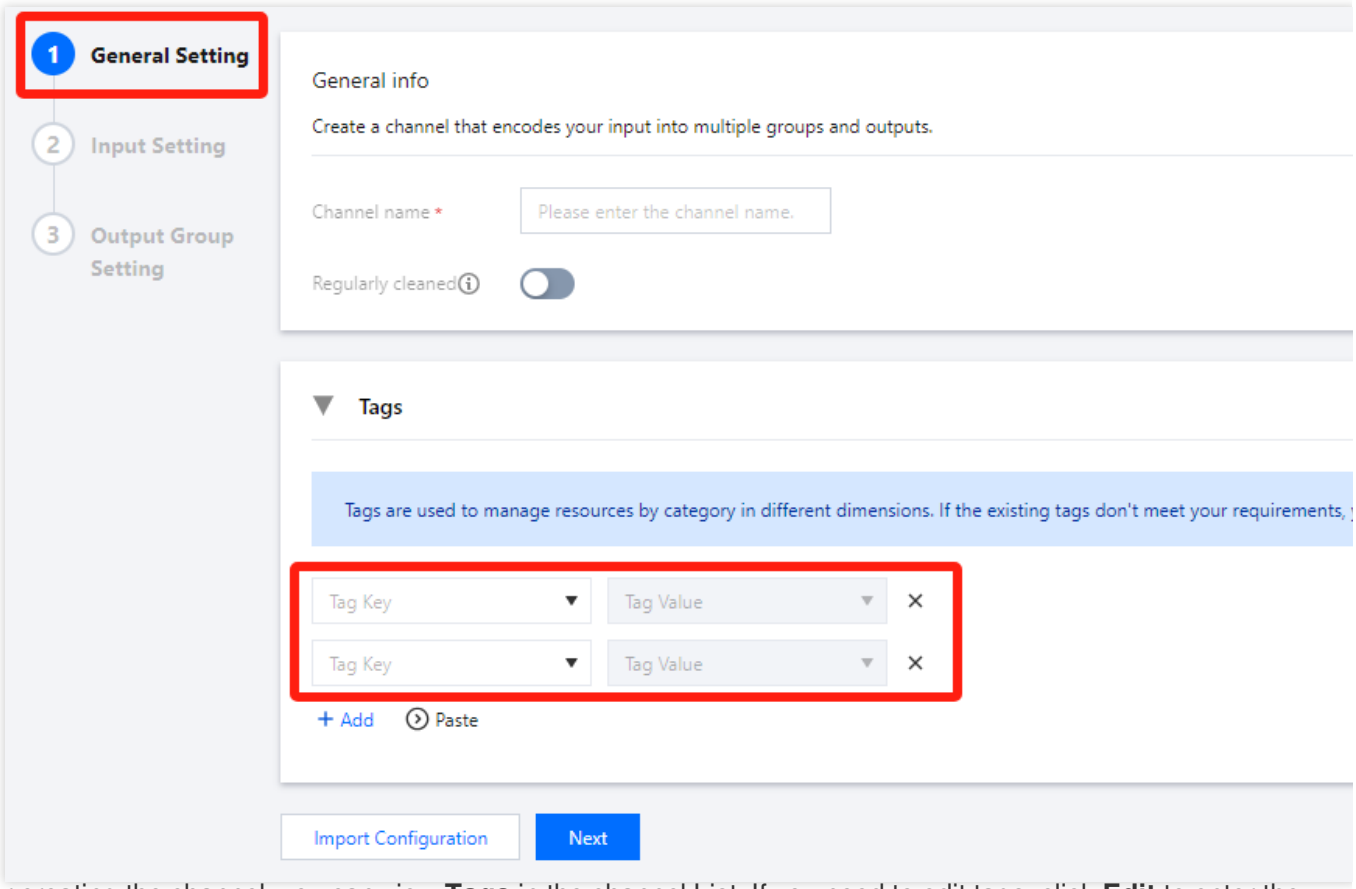
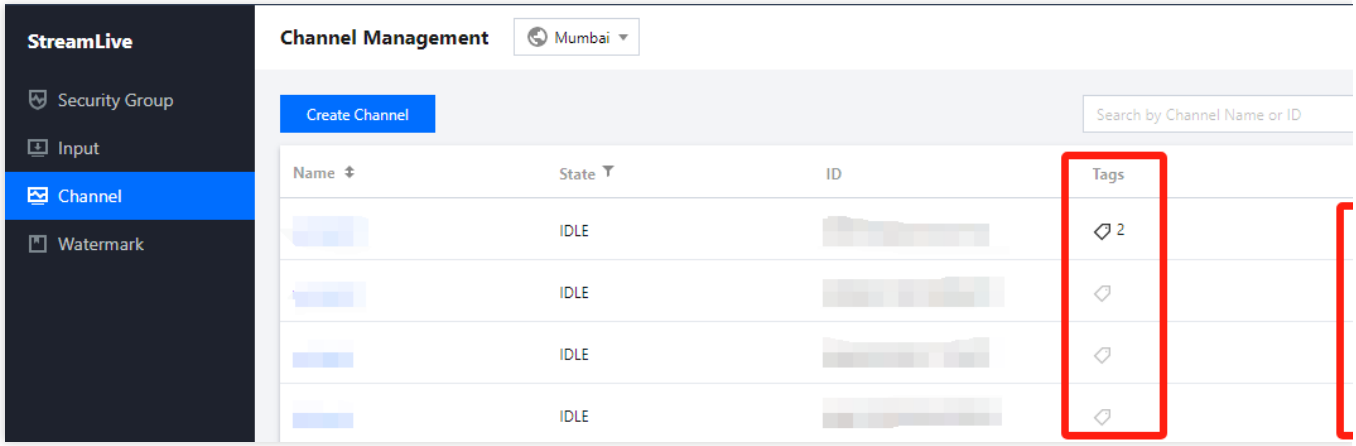


3. After creating the channel, you can view **Tags** in the channel List. If you need to edit tags, click **Edit** to enter the **Channel Edit Page**.



Method 2: API

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

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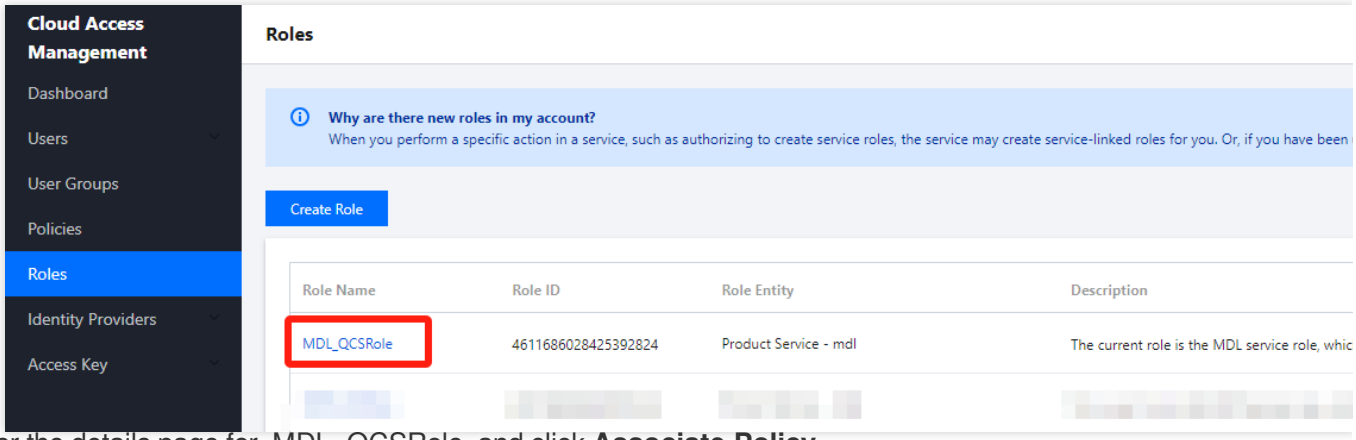

2. Enter the details page for MDL_QCSRole, and click **Associate Policy**.

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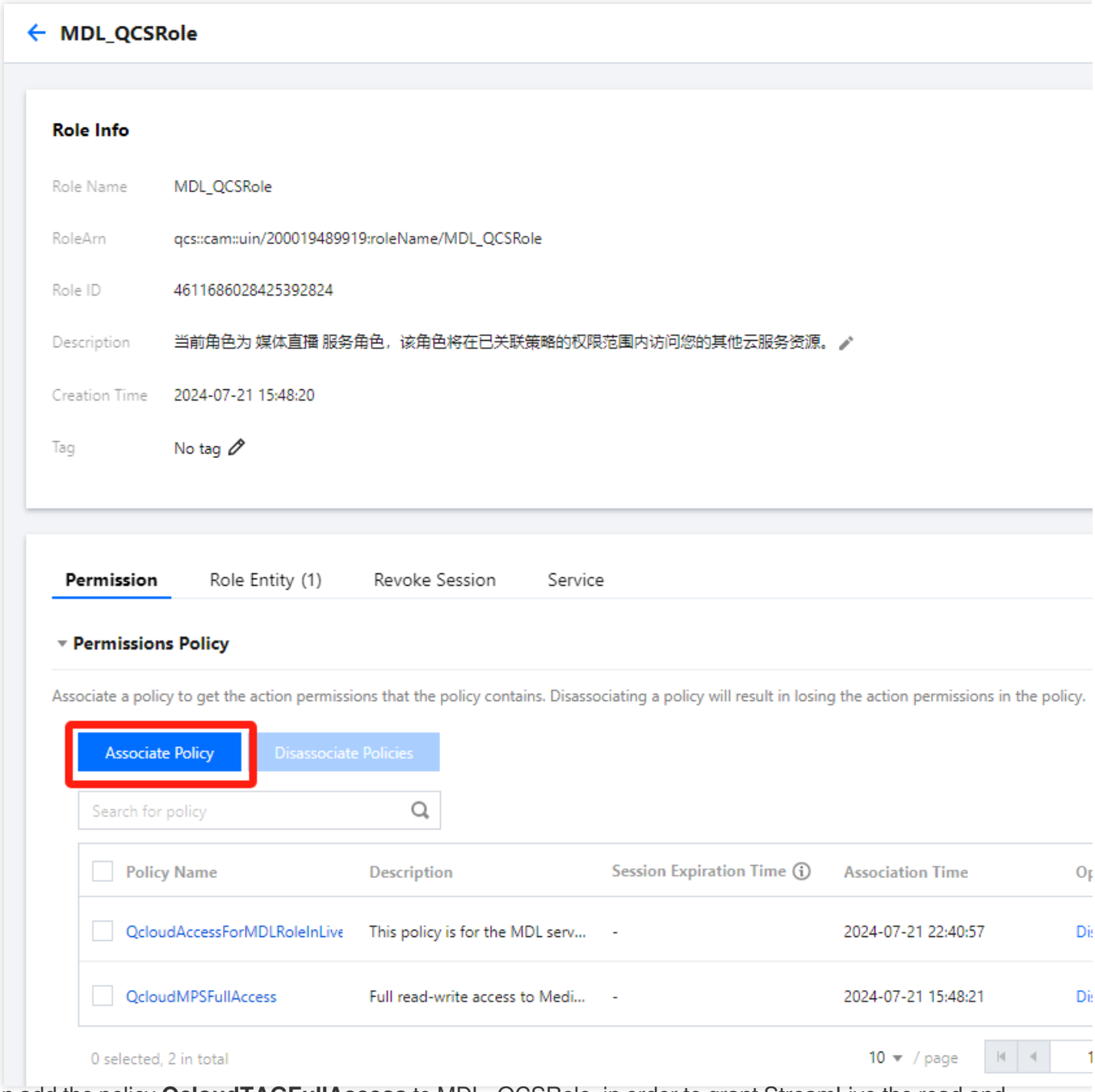

3. Then add the policy **QcloudTAGFullAccess** to MDL_QCSRole, in order to grant StreamLive the read and operation permissions on tag data.

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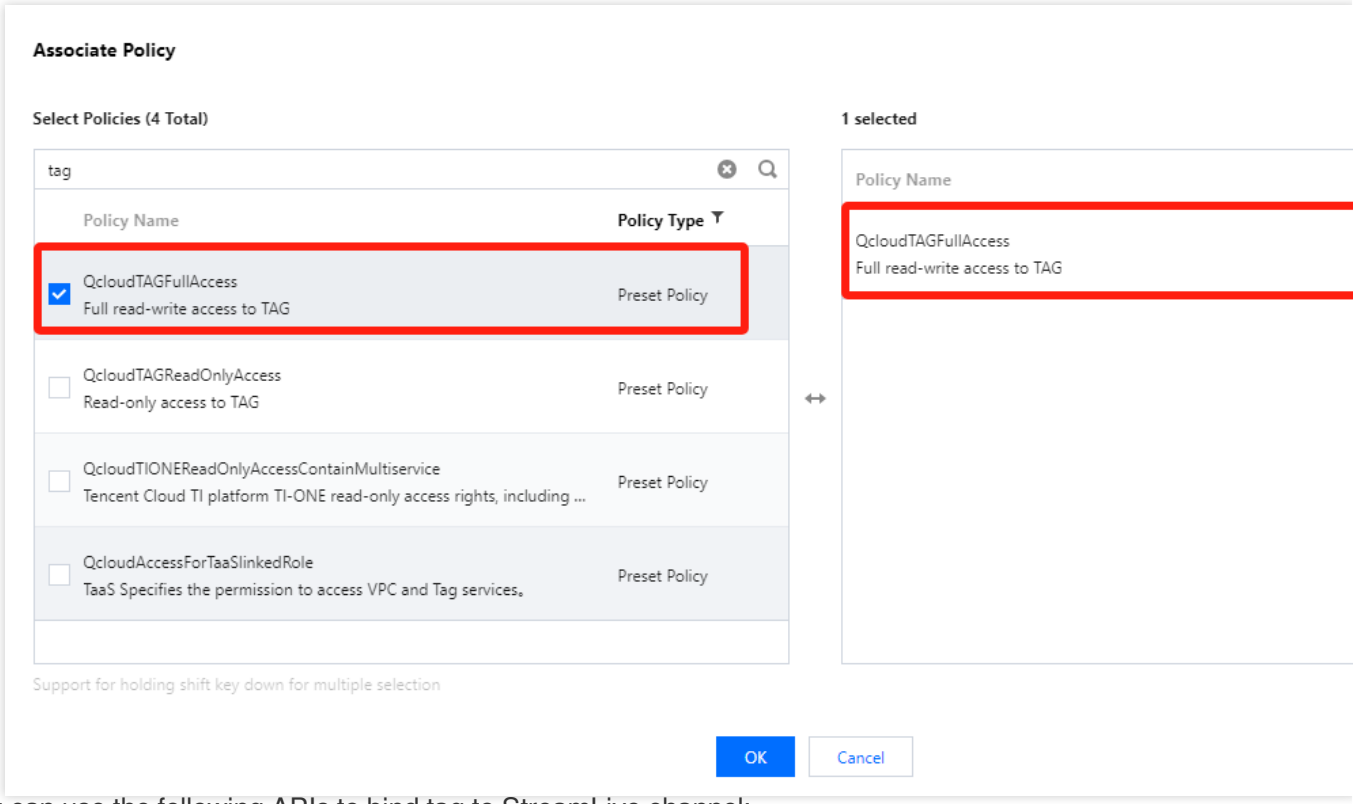

4. You can use the following APIs to bind tag to StreamLive channel:

CreateStreamLiveChannel

ModifyStreamLiveChannel

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