

Cloud Streaming Services Console 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

Console Guide

Console Overview

Overview

Domain Management

Adding Domain Names

Adding Your Own Domain

Configuring CNAME

Push Domain Name Management

Push Configuration

Recording Configuration

Time Shifting Configuration

Screencapture and Porn Detection Configuration

Watermark Configuration

Callback Configuration

Standby Stream Configuration

Latency Control

IP Blocklist/Allowlist Configuration

Delayed Playback

Moderation Configuration

Remote Authentication Configuration

Playback Domain Name Management

Playback Configuration

Playback Authentication Configuration

Referer Configuration

Template Configuration

HTTPS Configuration

Region Configuration

Origin Server Configuration

Bandwidth Cap Configuration

IP Blocklist/Allowlist Configuration

Blocking Playback by Protocol

Latency Control

HTTP Response Header Configuration

Access Control by Region Configuration

Remote Authentication Configuration



Certificate Management

Stream Management

Package Management

Feature Configuration

Live Watermarking

Live Transcoding

Live Recording

Recording to VOD

Recording to COS

Time Shifting

Time Shifting

Viewing Time Shifting Details

Live Screencapture

Live Stream Moderation

Live Stream Moderation

Custom Dictionary

Adaptive Bitrate

Standby Streams

Live Stream Callback

DRM

Configuring DRM Encryption

Obtaining a FairPlay Certificate

Obtaining the UID and Key Information

Live Subtitling

Relay

Laboratory

ROI Intelligent Recognition

Billing Usage Statistics

Monitoring

Operation Analysis

Stream Data Query

Errors

Stream Interruption Records

Log Service

Real-Time Log Analysis

Toolkit

Web Push

Address Generator



Self-Diagnosis

OOTB live

CAM-Based Access Control



Console Guide Console Overview

Last updated: 2023-10-17 17:45:00

To help you quickly get started with the CSS console, this document will introduce some frequently used CSS services. They are grouped into four modules based on user needs: Basic Services, Scenario-Specific Services, Data Center, and CSS Toolkit.

Basic Services

This module provides basic services of CSS. If you only want to use basic live streaming services, this is the right module for you.

Feature	Description
Overview	You can view live streaming value-added features, their application scenarios, and functional characteristics. You can view relevant data such as billing bandwidth/traffic trends, live streaming real-time data, and concurrent connection numbers. You can switch billing modes or change the time granularity as needed.
Domain Management	Add and manage your own acceleration domains and configure CNAME for them. Generate live streaming URLs. You can apply created templates for recording, transcoding, screencapture, timeshifting, watermarking, and callbacks to live streaming domains. You can configure live streaming domains with authentication, HTTPS protocol, acceleration regions, bandwidth caps, delayed playback, IP blacklists and whitelists, HTTP response headers, origin server information, and more.
Stream Management	Manage live, historical, and disabled streams and disable and resume streams.
Resource Package Management	View usage of traffic and transcoding packages.

Live+

Live+ gathers various value-added services for Cloud Streaming Services, including transcoding, watermarking, screencapture, standby stream, pull and relay, and more. If you need to use these services, you can configure them in this module.



Feature	Description
Feature Configuration	We provide configuration template services for various features required in live streaming, such as watermarking, recording, transcoding, screencapture, time-shifting, adaptive bitrate, callbacks, and DRM management. To reduce the complexity of page navigation, we have added a new process for binding templates to domain names.
Pull and Relay	We offer the ability to pull live video or on-demand files from third-party platforms and push them to Cloud Streaming Services. You can directly perform operations such as mixing, recording, and more on the audio and video content. This feature allows for easy cross-platform distribution and the capability to convert on-demand content to live streaming.

Data Center

Data analysis provides users with professional data analysis services. You can query the consumption of traffic/bandwidth, transcoding, watermarking, relaying, and screencapture within a specific time granularity. Additionally, it offers log analysis functionality, making it convenient for users to monitor resources and obtain useful data.

Feature	Description
Billing Usage Statistics	You can query the billing items, including the related data generated by push and pull stream traffic/bandwidth, recording, time-shifting, screencapture, transcoding, and relaying.
Operation Analysis	You can view live streaming playback data analysis, user distribution, and origin server back-to-origin data, among other information.
Stream Data Query	You can query the data details of a single video stream, such as push, playback, live streaming records, callback events, etc., and export the data to your local machine.
Errors	You can query abnormal events that occur during live streaming push.
Stream Interruption Records	You can query the records and reasons for live streaming push interruptions.
SDK Quality Monitoring	You can query the push data information of the live SDK for the past 3 days.

CSS Toolkit



The Live Toolbox mainly provides some auxiliary features for ensuring live streaming processes and the use and management of live SDKs.

Feature	Description
Web Push	Quickly experience the Web push feature, with input sources including camera capture, screen sharing, and local file collection. It also supports multi-stream mixing, enabling push testing in various scenarios.
Address Generator	Provide the necessary information to splice push/playback URLs.
Self-Diagnosis	Quickly diagnose common live streaming push/playback issues. The diagnostic results are for reference only.
MLVB SDK	In conjunction with the Live SDK, you can add and manage official licenses and bind related resource packages.



Overview

Last updated: 2024-06-07 15:21:39

In the CSS console, you can manage domain name and streams, configure transcoding, recording, and acceleration, as well as push streams (web) and monitor resources.

Prerequisites

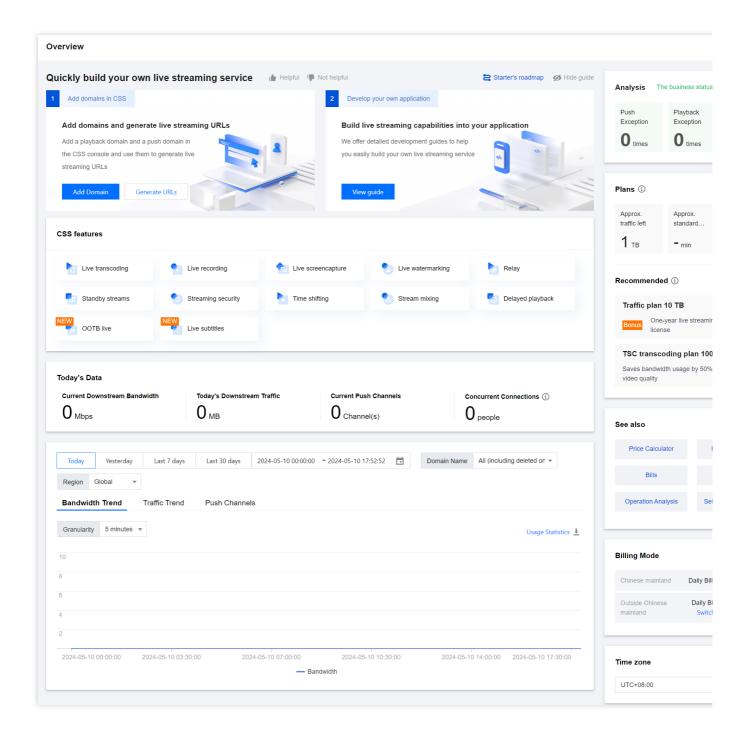
You have activated CSS.

You have logged in to the CSS console.

Overview

By clicking on the **Overview** in the left sidebar, you can view a variety of data, including real-time downstream bandwidth, today's downstream traffic, the current number of push channels, concurrent connections, and trends for billed bandwidth, billed traffic, and the number of push channels over the past 30 days. Additionally, you can view the **Business Analysis**, switch **Billing Mode** as required, or adjust the time granularity. For beginner's guidance, you can click on the **Guide** in the upper right corner to view instructions for getting started with CSS.





Today's Data

This section displays the downstream peak bandwidth, downstream traffic usage, the current number of push channels, and the number of concurrent connections of the day.

Item	Description
Current Downstream Bandwidth	The peak bandwidth consumed for acceleration by all playback domain names.
Today's Downstream Traffic	The total traffic consumed for acceleration by all playback domain names on the current day.



Current Push Channels	The number of current push channels.
Concurrent Connections	If the playback protocol is RTMP or FLV, Concurrent Connections indicates the number of online viewers. If the playback protocol is HLS, Concurrent Connections cannot be used as an indication of the number of online viewers.

Usage Trends

This section displays usage trends (**Bandwidth Trend**, **Traffic Trend**, and **Push Channels**) for today, yesterday, the last 7 days, and the last 30 days.

Item	Description
Bandwidth Trend	The sum of the peak bandwidth consumed for acceleration by all playback domain names in the query period.
Traffic Trend	The total traffic consumed for acceleration by all playback domain names in the query period.
Push Channels	The number of push channels under the selected domain names in the query period.

Changing the Granularity

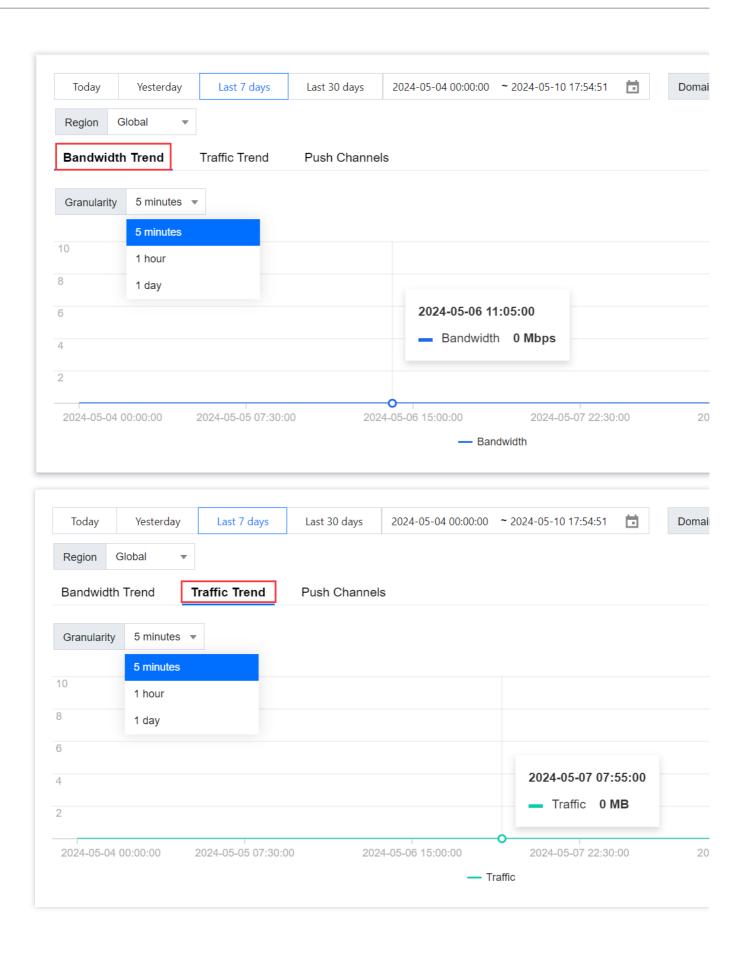
You can click the drop-down list box next to **Granularity** to change the granularity of the usage trend data.

Bandwidth Trend

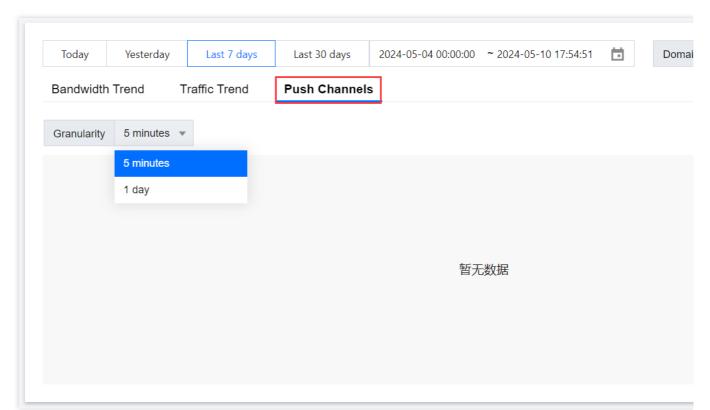
Traffic Trend

Push Channels









Business Analysis

Note:

The real-time data statistics and reporting on the business analysis page may experience delay (about 1 hour).

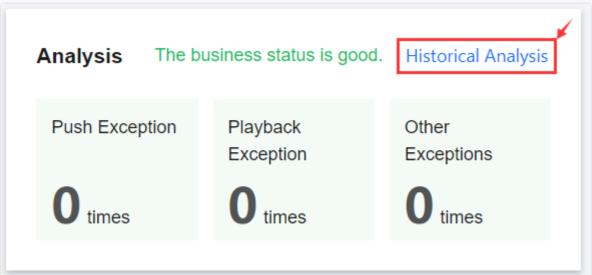
Querying Business Analysis Data

By default, the business analysis feature displays the current day's business usage data. It supports filtering by domain name and flow ID. Also, it supports querying data from the last 7 days.

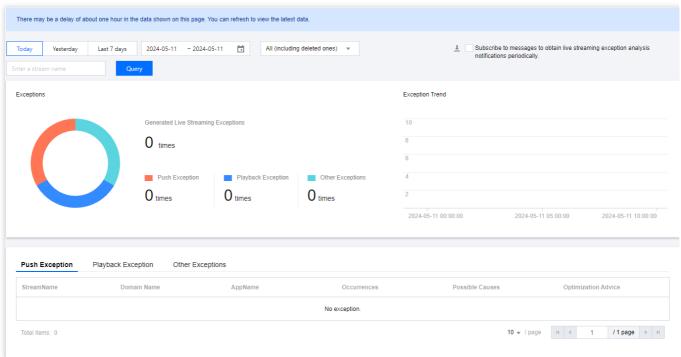
Scenario 1: When the business status is good.

1.1 If the business condition is good, click Historical Analysis .





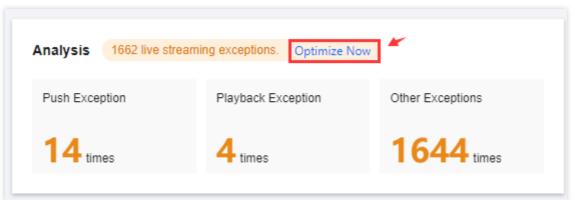
1.2 Navigate to the business analysis page to query relevant data.



Scenario 2: When there is an exception during streaming.

If there is an exception during streaming, click **Optimize Now** to enter the business analysis page.





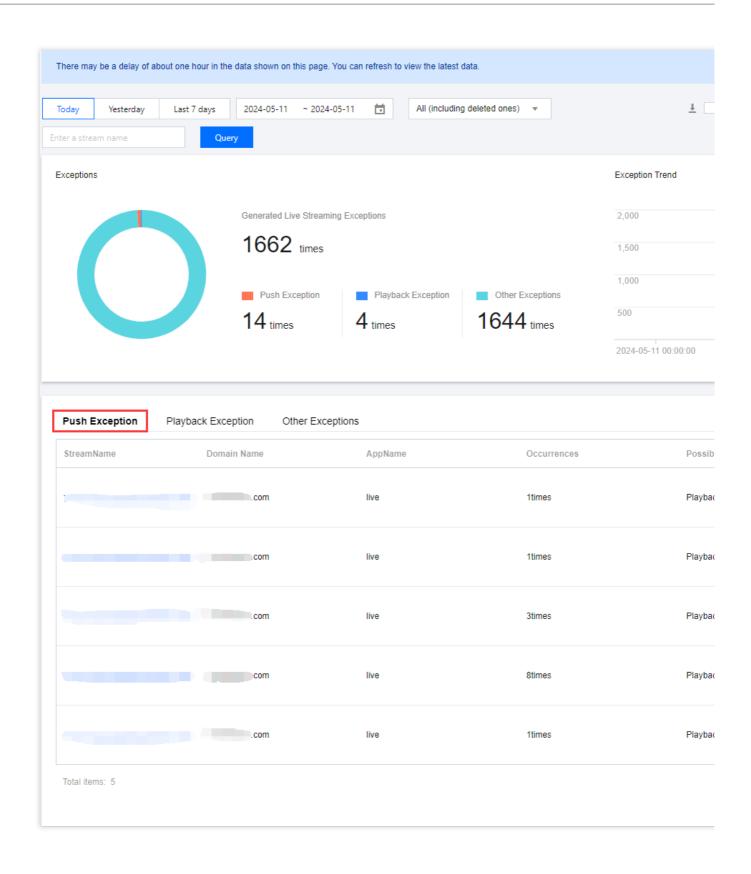
After entering the business analysis page, you can view information on the number of exceptions, exception trends, **Push Exception**, **Playback Exception**, and **Other Exceptions**. And understand the potential reasons for the exceptions and optimization suggestions.

Push Exception

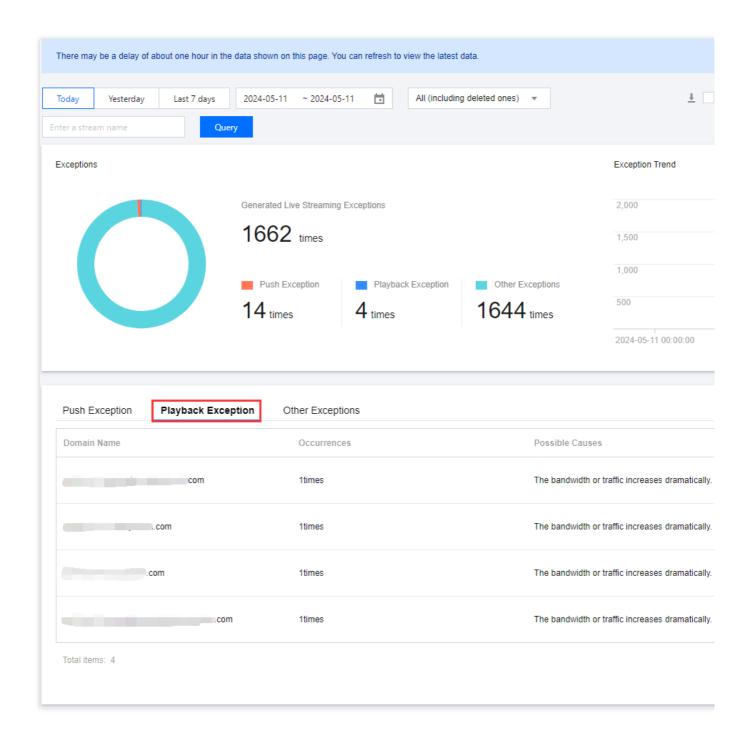
Playback Exception

Other Exceptions

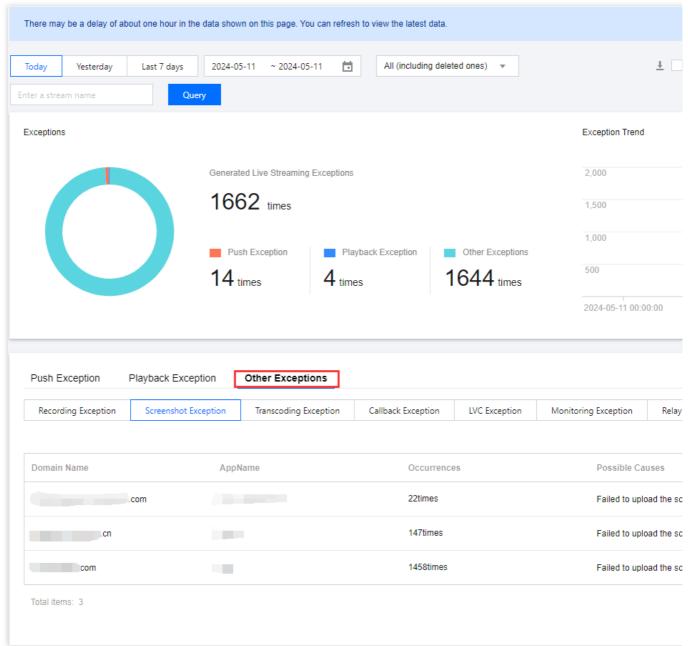










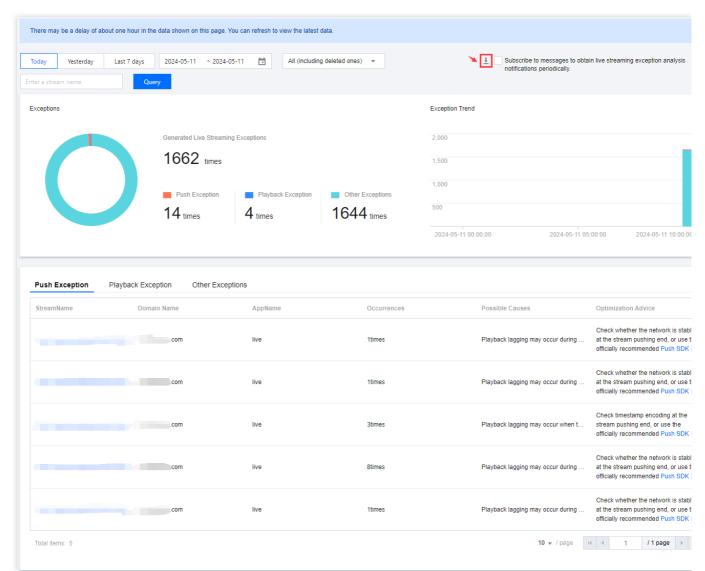


Downloading Exception Data

1. Based on your actual business needs, you can click

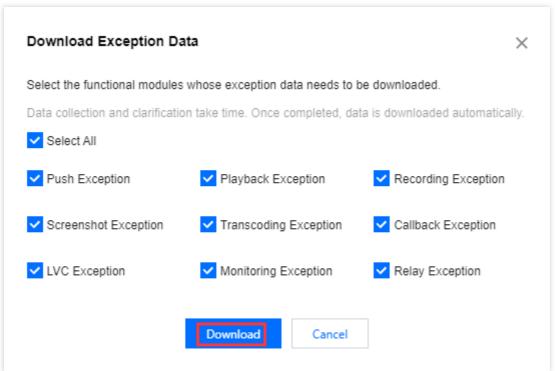
to download the business analysis report. This PDF document contains the streaming exception result information detected within the last 7 days. You can review and analyze it.





2. When downloading abnormal data, all modules are selected by default. You can also manually select the necessary modules.

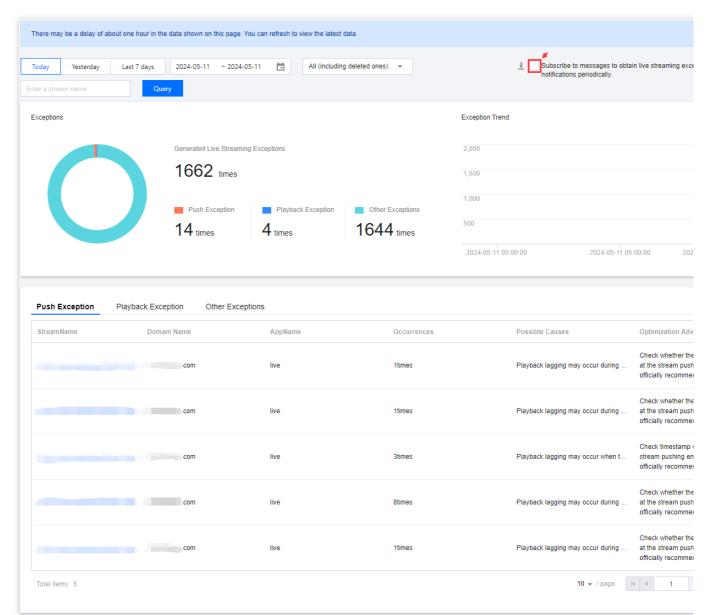




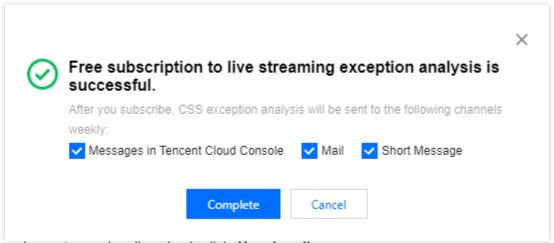
Streaming Exception Analysis Free Subscription

1. We offer a message subscription service. Based on your actual business needs, simply check the subscription option to regularly receive streaming exception analysis notifications.

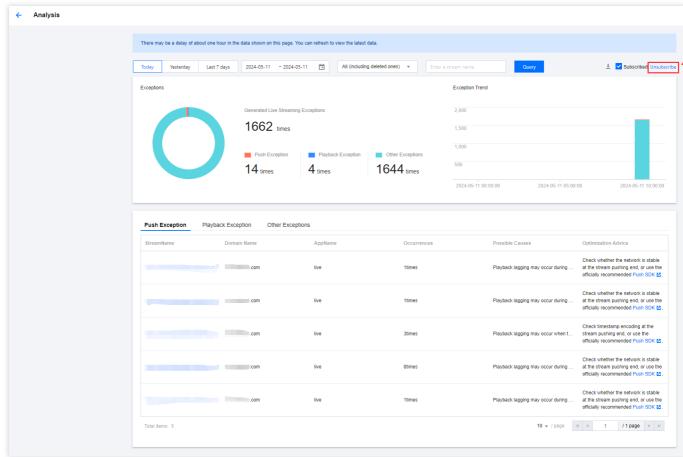




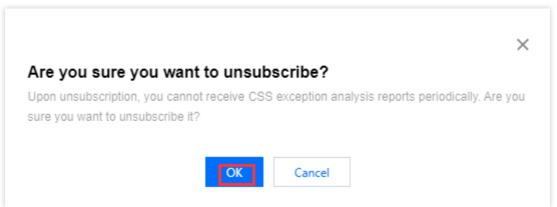
2. Once subscribed, we will send your CSS business exception analysis to the following channels on a weekly basis: message center, email, and SMS.



3. If you choose to unsubscribe, simply click Unsubscribe.



4. A pop-up reminder appears, and you need to click **OK** again to complete the unsubscription process. We recommend keeping your subscription active to regularly receive streaming exception analysis notifications.



Resource Package

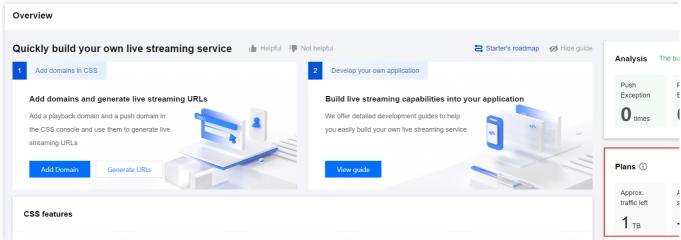
Note:

The remaining amount of resource packages displayed on the overview page is not real-time data. The update time coincides with the settlement time of the account statement.

Viewing Resource Package Consumption Details

Click Manage on the right to enter the Resource Package/Plugin Management page.

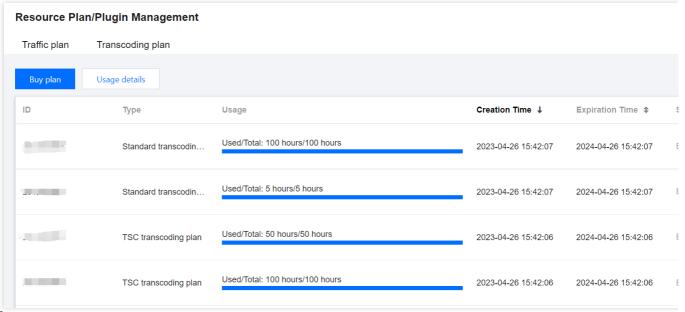




You can view the **Usage**, **Creation Time**, **Expiration Time**, **Status**, and **Auto-renewal** of traffic resource packages/transcoding resource packages.

Auto-renewal (renew automatically when it is exhausted or expired) is supported for streaming traffic resource packages and streaming transcoding resource packages (including standard transcoding and top speed codec transcoding). For details, see Renewal documentation.

Purchasing Traffic Resource Package: Click Buy under the traffic package statistics, and you will enter the CSS Traffic Resource Package Purchase Page to purchase related packages.



Note:

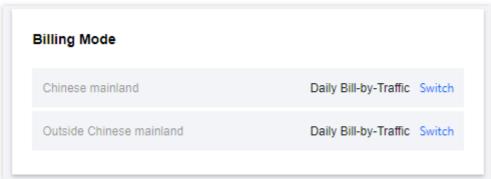
For information on billing prices, see Pricing Overview.

Billing

Switching Billing Mode

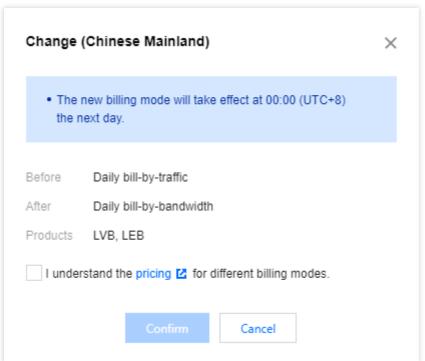
Based on your actual business needs, if your current billing mode is daily bill-by-traffic or daily bill-by-bandwidth, you can click **Switch** to change the billing mode.





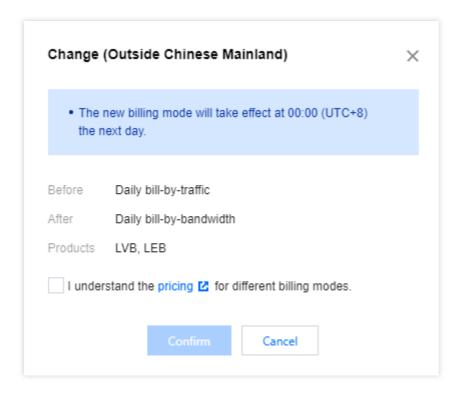
To view billing switch reminders, click **Confirm** to complete the switch of billing mode. For more detailed information on billing changes, see Changing Billing Modes.

Chinese Mainland Billing Mode:



Outside Chinese Mainland Billing Mode:







Domain Management Adding Domain Names Adding Your Own Domain

Last updated: 2023-10-08 14:13:06

To use CSS, you must have at least **two** domains, one push domain and one playback domain. You cannot use the same domain for both push and playback.

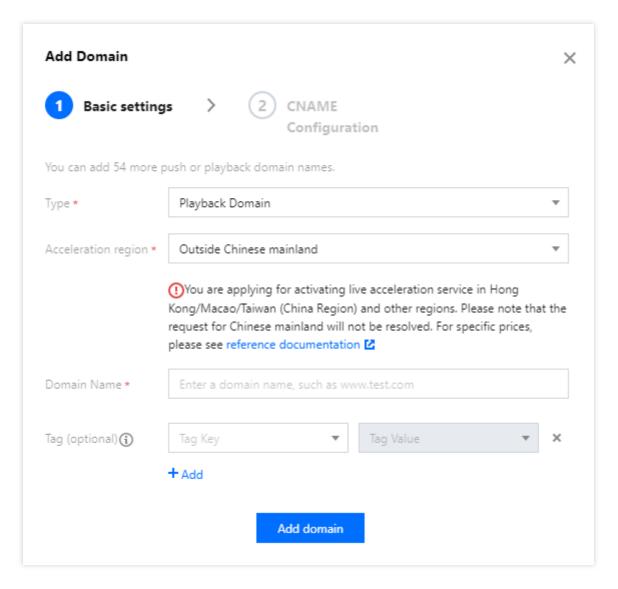
Prerequisites

1. You have activated CSS.

Adding Your Own Domain

- 1. Log in to the CSS console and select **Domain Management** on the left sidebar.
- 2. Click Add Domain and complete the following settings in the pop-up window:
- 2.1 If you need to add a **push domain**: Enter the domain name and select the domain type as **Push Domain**.
- 2.2 If you need to add a **playback domain**: Enter the domain name, select the domain type as **Playback Domain**, and choose the acceleration region, with the default being **Chinese mainland**.
- 2.3 Tags are used to categorize and manage resources from different dimensions. If the existing tags do not meet your requirements, you can also go to the Tag Console to manage tags uniformly.
- 2.4 Click on Add Domain.





Caution

The domain name can be up to 45 characters long and cannot contain uppercase letters.

By default, you can add up to 100 domains under each Tencent Cloud account. If you you need to add more than 100 domains, please submit a ticket to raise the limit.

You can change the acceleration region of a domain added. On the **Domain Management** page, click the name of the domain or click **Manage** on the right. Select the **Advanced Configuration** tab, click **Edit** in the **Region configuration** area, select the acceleration region again in the pop-up window, and click **Save**.

Verifying Your Domain

To make sure that a domain can only be added by its owner, you need to verify your ownership of a domain before you can add it in the CSS console. For example, to add <code>a.test.com</code>, you need to verify your ownership of <code>test.com</code>. You don't need to verify again when adding domains with the same parent domain, such as



b.test.com . You can verify a domain either by adding a DNS record or by uploading an HTML file. If a previously added domain is not verified, when you add a domain with the same parent domain, verification is still required.

DNS record

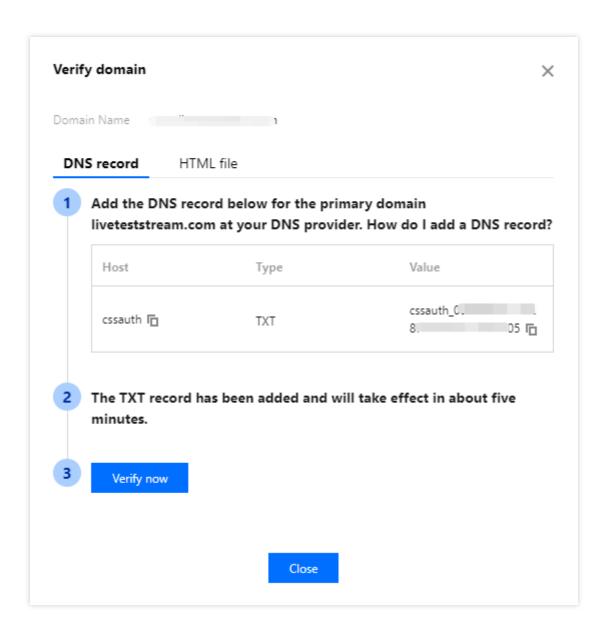
You can verify your ownership of a domain by adding a DNS record at your DNS provider. If you use Tencent Cloud's DNS service, follow the steps below to add a DNS record.

- 1. Log in to the DNSPod console.
- 2. Select **DNS** > **My Domains** on the left sidebar and click the parent domain of the domain you want to add.
- 3. On the **Record Management** page, click **Add Record**.
- 4. Enter the following information:

Parameter	Description
Host	Enter "cssauth".
Record Type	Select "TXT".
Record Value	CSS assigns a unique record value for each domain. You can view it in the CSS console when adding your domain.

- 5. Click **Confirm**. The TXT record will take effect in about five minutes.
- 6. Return to the CSS console, click **Verify now**. If the verification succeeds, you can proceed to the next step.



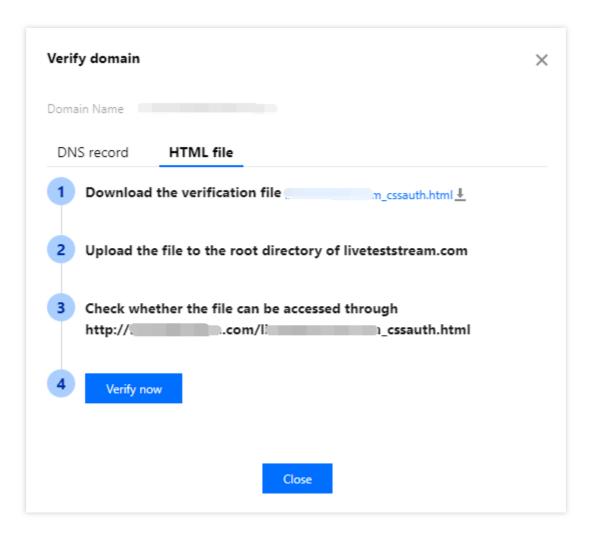


HTML file

You can also verify your domain by uploading an HTML file.

- 1. When asked to verify your domain in the CSS console, select HTML file.
- 2. Download the file.
- 3. Upload the file to the root directory of the second-level domain.
- 4. Make sure you can access the file via http://second-level domain/second-level
 domain_cssauth.html .
- 5. Click **Verify now**. If the verification succeeds, you can proceed to the next step.





Caution

After finishing the **Basic settings**, you can proceed to the **CNAME configuration** step. For more information about CNAME configuration, see Configuring CNAME for Domain Name.



Configuring CNAME

Last updated: 2023-11-20 17:00:36

After the domain is connected to CSS, the system will automatically assign a CNAME domain for you (the CNAME suffix for the push domain is .tlivepush.com, and the CNAME suffix for the playback domain is
.txlivecdn.com)., which you can view in Domain Management. To make your domain accessible, you need to add a CNAME record at your DNS service provider. You can use CSS only after the configuration takes effect.

Notes

CNAME resolution is required for both playback and push domains.

For detailed directions on how to add a CNAME record, please consult your DNS service provider.

CNAME configuration generally takes effect in about 15 minutes. If you configure multiple levels of CNAMEs, CSS will be unable to track the resolution result. If your domain can be accessed, then the CNAME configuration is successful. If CNAME configuration fails to take effect after a long time, refer to Domain Configuration to troubleshoot the issue.

Prerequisites

You have registered a domain.

You have verified the domain and added it in Domain Management of the CSS console. You haven't added a CNAME record for the domain (the icon in the **CNAME** column is

(

Directions

The following part shows you how to configure a CNAME record at Alibaba Cloud, Baidu Al Cloud, Wanwang, and Xinnet. The directions in this document are for reference only. Please follow the directions of your DNS service provider. To check whether your CNAME configuration has taken effect, see Verifying CNAME Records.

Alibaba Cloud

If your DNS service provider is Alibaba Cloud, use the following steps to add a CNAME record:

- Log in to the Alibaba Cloud console and go to Alibaba Cloud DNS > Manage DNS.
- 2. Click the domain for which you want to add a CNAME record to go to the **DNS Settings** page.



3. Click Add Record and complete the following settings:

Type: Select CNAME .

Host: Enter the subdomain. For example, if your playback domain is <code>play.myqcloud.com</code>, enter <code>play</code>; if you want to resolve <code>myqloud.com</code>, enter <code>@</code>; if you want to add a wildcard record, enter <code>*</code>.

ISP Line: Default is recommended.

Value: Enter the CNAME of the domain. You can view your domain's CNAME (domain.txlivecdn.com) on the **Domain Management** page of the CSS console.

TTL: 10 minutes is recommended.

4. Click OK.

Baidu Al Cloud

If your DNS service provider is Baidu Al Cloud, use the following steps to add a CNAME record:

- 1. Log in to the Baidu Al Cloud console and go to Domain Name System.
- 2. Select the domain you added to CSS and click **Resolve** in the **Operation** column.
- 3. Add a DNS record:

Record type: Select CNAME record .

Resolution line: Default is recommended.

Record value: Enter the CNAME. You can view your domain's CNAME (domain.txlivecdn.com) on the

Domain Management page of the CSS console.

TTL: 10 minutes is recommended.

4. Click Confirm.

Wanwang

If your DNS service provider is Wanwang, use the following steps to add a CNAME record:

- 1. Log in to the Wanwang Member Center.
- 2. On the left sidebar, click **Product Management** > **My Cloud Resolution** to enter the cloud resolution list page.
- 3. Click the domain name to be resolved to enter the resolution record page.
- 4. On the resolution record page, click **Add Resolution**.
- 5. To add a CNAME record, select CNAME as the record type. For the host record, enter the domain prefix (such as www). For the record value, enter the CNAME to point to. Keep the default resolution line and TTL.
- 6. After completing the settings, click **Save**.

Xinnet



If your DNS service provider is Xinnet, add a CNAME record by setting an alias (CNAME record).

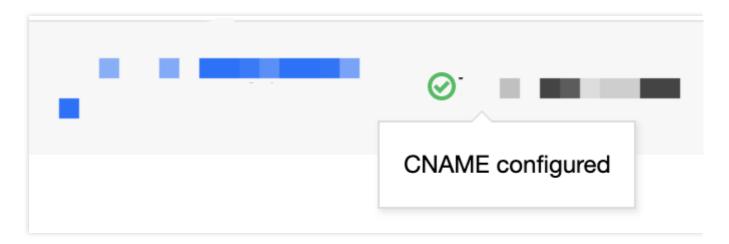
An alias record allows you to map multiple names to the same computer and is generally used for computers providing both www and mail services. Suppose a computer named host.mydomain.com (A record) provides both www and mail services. To facilitate user access, you can set two aliases (CNAME records) starting with www and mail for this computer.

Verifying CNAME Records

A new CNAME record generally takes effect within 30 minutes. The exact time needed varies with provider. You can check whether a record has taken effect using the following methods.

Method 1: Go to Domain Management of the CSS console. If the icon in the CNAME column is

, CNAME configuration is successful.



Method 2: When you add your domain in the CSS console, after completing the basic settings, in the **CNAME configuration** step, you can view the CNAME status of the domain.

Method 3: On Linux/macOS, run the dig command (dig your domain). If the first row displays the destination domain provided by CSS, CNAME configuration is successful.



Method 4: On Windows, open a Command Prompt window and enter nslookup your domain . If the destination domain name provided by CSS is displayed, CNAME configuration is successful.



Note

If CNAME configuration fails to take effect after a long time, refer to Domain Configuration to troubleshoot the issue.



Push Domain Name Management Push Configuration

Last updated: 2023-10-07 11:55:10

To protect your live streaming content, push authentication is enabled for push domains by default. You can use the address generator on the details page of a push domain to generate a push URL, which you can use to push streams (upload live videos) to the CSS platform.

Must-Knows

CSS provides a test domain name xxxx.tlivepush.com. You can use it to push streams for test purposes, but the test domain should not be used in production environments.

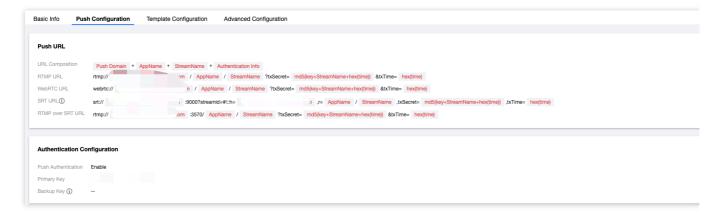
A push URL is valid before the expiration time you specify. After it expires, you need to generate a new URL.

Prerequisites

You have activated CSS.

Authentication Configuration

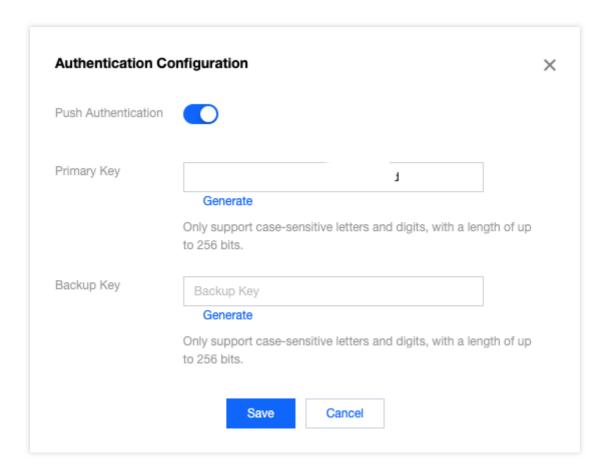
- 1. Go to Domain Management, click the target **push domain name** or click **Manage** to enter the domain details page.
- 2. Click Push Configuration and, in the Authentication Configuration area, click Edit.



3. In the pop-up window, toggle on **Push Authentication**.



4. Enter the primary key and backup key, and click Save.



Note

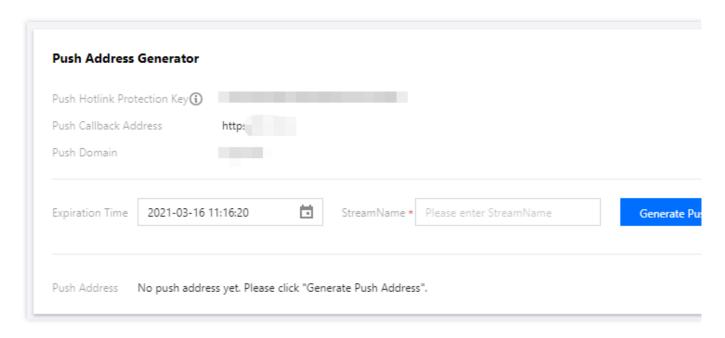
The primary key is required and the backup key is optional. Entering both allows you to switch to the other key when one key is disclosed.

Push Address Generator

Directions

- 1. Go to Domain Management, click the target domain name or click **Manage** on its right to enter the details page.
- 2. Select Push Configuration and, in Push Address Generator, complete the following settings:
- **2.1 Select an expiration time, such as** 2022-11-24 16:00:35.
- 2.2 Enter a custom stream name (StreamName).
- 2.3 Click Generate Push Address to generate a push URL containing the StreamName.





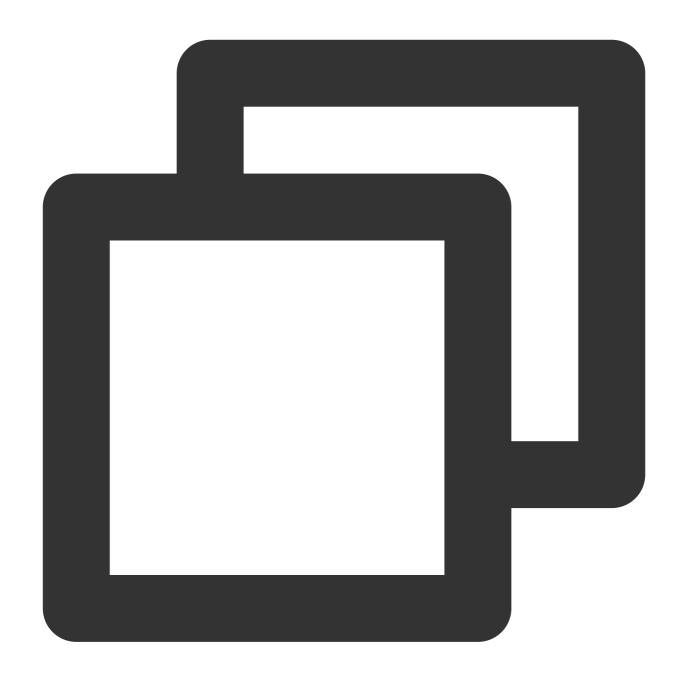
3. If you haven't enabled authentication for your push domain, then you will also find RTMP, WebRTC, SRT, and RTMP over SRT URLs in the **Push URL** area. Replace StreamName in your playback URL with the stream name used for push, and you can use the URL to play the stream.



Push URL format

An RTMP push URL looks like this:





Parameter description

domain: The push domain name.

AppName : The live streaming application name, which is live by default and is customizable.

StreamName : The custom stream name used to identify a live stream.

 ${\tt txSecret} \ : \textbf{The authentication string generated after push authentication is enabled}.$

txTime: The expiration timestamp for the push URL.

Caution



If you have enabled authentication, txTime indicates the expiration time of the URL.

For the sake of convenience, the console allows you to specify the URL expiration time in human-readable format. If you enable authentication, when generating push URLs, the system will convert it to a hex timestamp (the value of txTime).

As long as you start push or playback before the expiration time and the stream is not interrupted, the push or playback can continue even after the URL expires.

Sample Code of Push URL

We offer sample code in PHP, Java, and Go for generating push URLs. To view the code, follow the steps below:

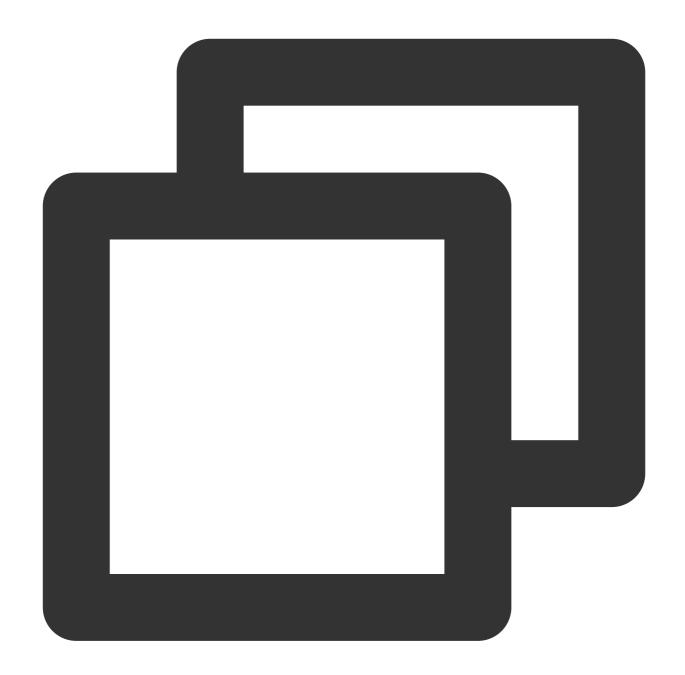
- 1. Log in to the CSS console and click Domain Management.
- 2. Click a push domain name or click Manage on the right to enter its details page.
- 3. Select Push Configuration and scroll down to find Push Address Sample Code.
- 4. Click the tab to view the sample code for PHP, Java, or Go.

PHP

Java

GO

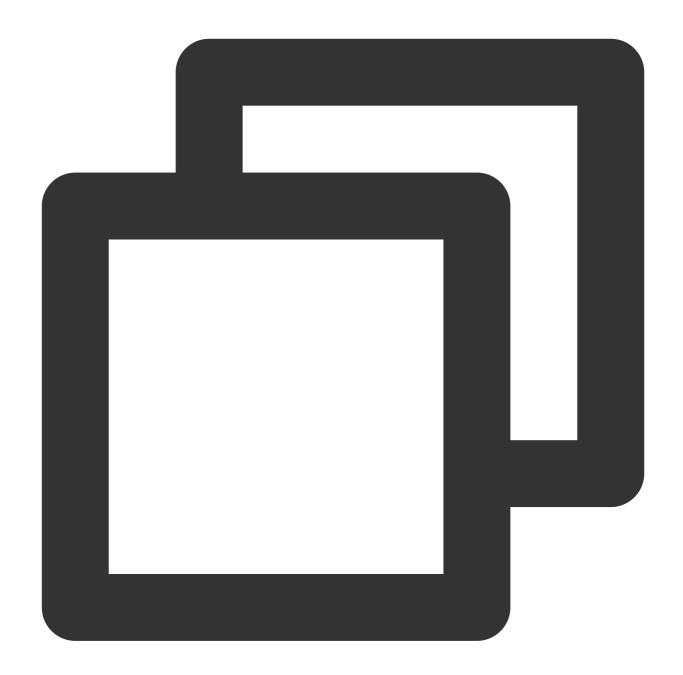




```
/**
 * Get the push URL
 * If you do not pass in the authentication key and URL expiration time, a URL witho
 * @param domain: Your push domain name.
 * streamName: A unique stream name to identify the push URL.
 * key: The authentication key.
 * time: The URL expiration time (example: 2016-11-12 12:00:00).
 * @return String url
 */
function getPushUrl($domain, $streamName, $key = null, $time = null){
    if($key && $time){
```







```
package com.test;

import java.io.UnsupportedEncodingException;
import java.security.MessageDigest;
import java.security.NoSuchAlgorithmException;

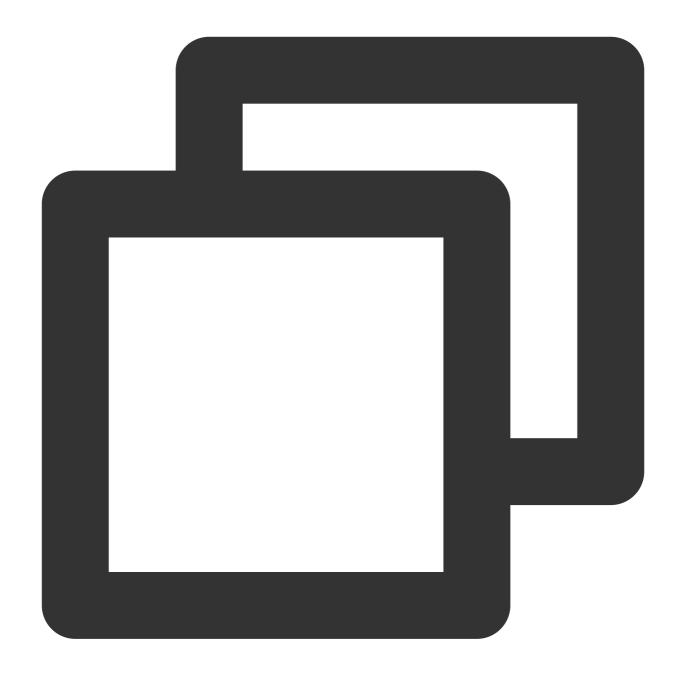
public class Test {

    public static void main(String[] args) {
        System.out.println(getSafeUrl("txrtmp", "11212122", 1469762325L));
    }
}
```



```
private static final char[] DIGITS_LOWER =
            {'0', '1', '2', '3', '4', '5', '6', '7', '8', '9', 'a', 'b', 'c', 'd',
      /*
      * KEY+ streamName + txTime
      * /
     private static String getSafeUrl(String key, String streamName, long txTime)
            String input = new StringBuilder().
                              append (key).
                              append(streamName).
                              append(Long.toHexString(txTime).toUpperCase()).toStri
            String txSecret = null;
            try {
                  MessageDigest messageDigest = MessageDigest.getInstance("MD5");
                  txSecret = byteArrayToHexString(
                              messageDigest.digest(input.getBytes("UTF-8")));
            } catch (NoSuchAlgorithmException e) {
                  e.printStackTrace();
            } catch (UnsupportedEncodingException e) {
                  e.printStackTrace();
            }
            return txSecret == null ? "" :
                              new StringBuilder().
                              append("txSecret=").
                              append(txSecret).
                              append("&").
                              append("txTime=").
                              append(Long.toHexString(txTime).toUpperCase()).
                              toString();
      }
     private static String byteArrayToHexString(byte[] data) {
            char[] out = new char[data.length << 1];</pre>
            for (int i = 0, j = 0; i < data.length; <math>i++) {
                  out[j++] = DIGITS_LOWER[(0xF0 & data[i]) >>> 4];
                  out[j++] = DIGITS_LOWER[0x0F & data[i]];
            }
            return new String(out);
      }
}
```





```
package a

import (
    "crypto/md5"
    "fmt"
    "strconv"
    "strings"
    "time"
)

func GetPushUrl(domain, streamName, key string, time int64) (addrstr string) {
```



```
var ext_str string
    if key != "" && time != 0{
        txTime := strings.ToUpper(strconv.FormatInt(time, 16))
        txSecret := md5.Sum([]byte(key + streamName + txTime))
        txSecretStr := fmt.Sprintf("%x", txSecret)
        ext_str = "?txSecret=" + txSecretStr + "&txTime=" + txTime
    addrstr = "rtmp://" + domain + "/live/" + streamName + ext_str
    return
}
/*
*domain: 123.test.com
*streamName: streamname
*key: 69e0daf7234b01f257a7adb9f807ae9f
*time: 2022-04-26 14:57:19 CST
*/
func main(){
    domain, streamName, key := "123.test.com", "streamname", "69e0daf7234b01f257a7a
    //CST: ChinaStandardTimeUT, "2006-01-02 15:04:05 MST" must be const
    t, err := time.Parse("2006-01-02 15:04:05 MST", "2022-04-26 14:57:19 CST")
    if err != nil{
        fmt.Println("time transfor error!")
        return
    fmt.Println(GetPushUrl(domain, streamName, key, t.Unix()))
    return
}
```

Related Operations

You can start pushing streams after the push URL is generated. For details, see Live Push.



Recording Configuration

Last updated: 2024-07-26 14:44:12

The live recording feature is disabled by default. This document describes how to bind a recording template to a push domain to enable the recording feature, as well as how to unbind a template to disable the feature.

Use Limits

After enabling the recording feature, please make sure that your VOD or COS service is in normal status. If VOD or COS is not activated or is suspended due to overdue payments, live recording will fail. No recording files will be generated. Nor will fees be incurred.

A template takes effect about 5-10 minutes after it is bound to a domain.

After a template is successfully bound to a push domain, recording will be enabled for push addresses under that domain.

One domain can be bound with only one recording template. After binding, all streams under that domain will be recorded according to the template.

Mixed-stream recording does not support mixing streams inside the Chinese mainland with those outside. It will cause an error and playback will fail.

Prerequisites

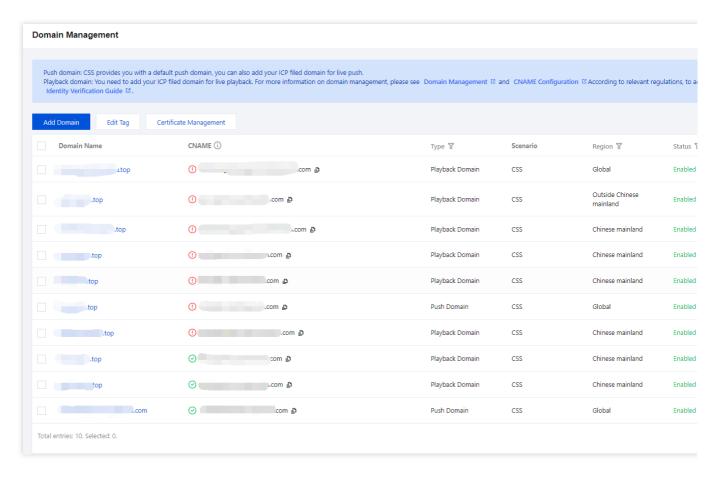
You have logged in to the CSS console and added a push domain.

You have created a recording template.

Binding a Recording Template

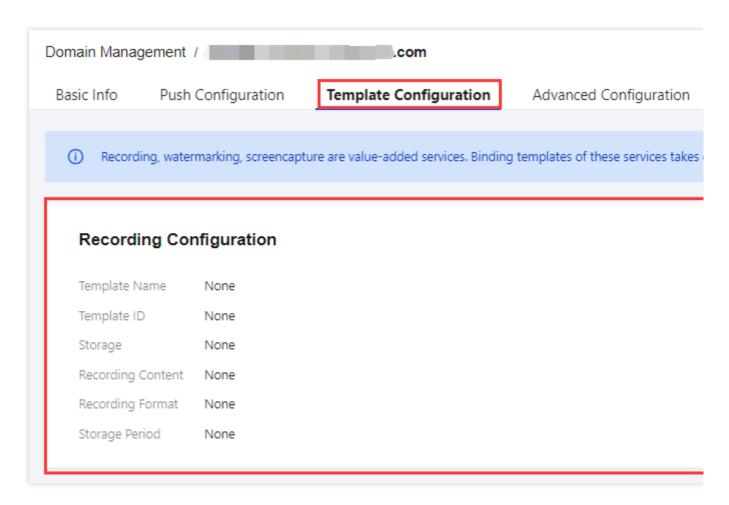
1. Go to Domain Management, and click the target push domain or click Manage to enter the domain details page.





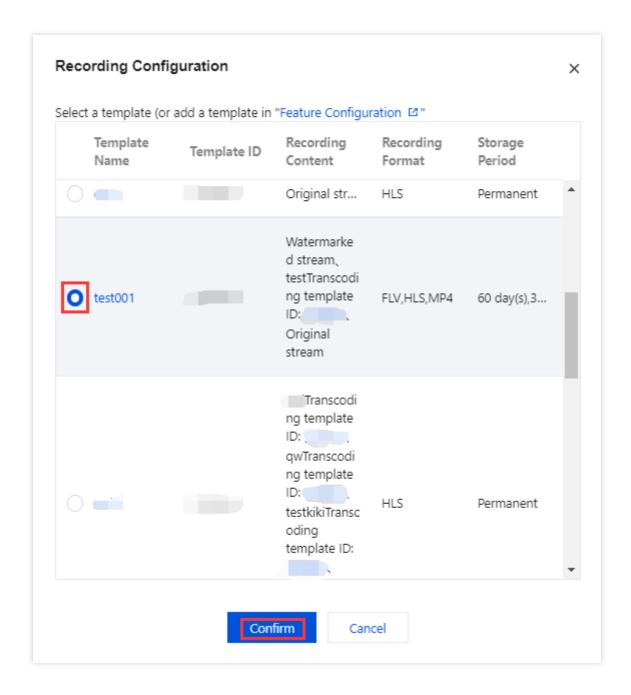
2. Select the Template Configuration tab and click Edit in the Recording configuration area.



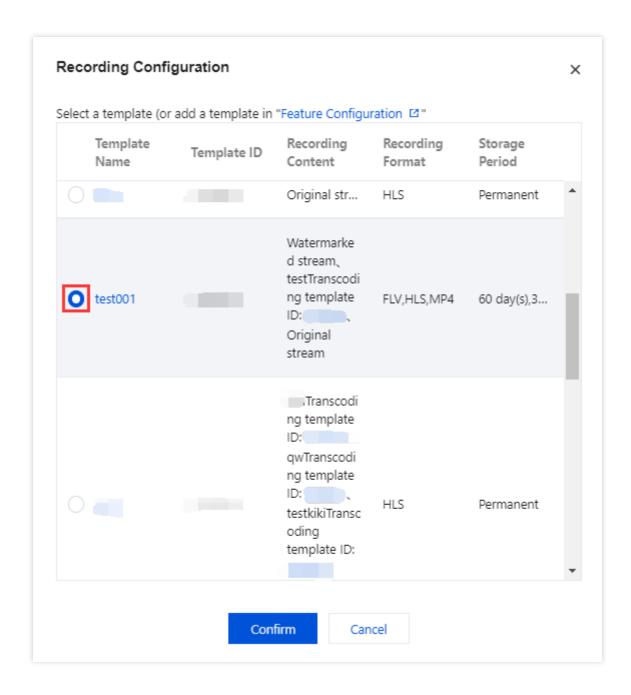


3. Select a recording template and click **Confirm**.





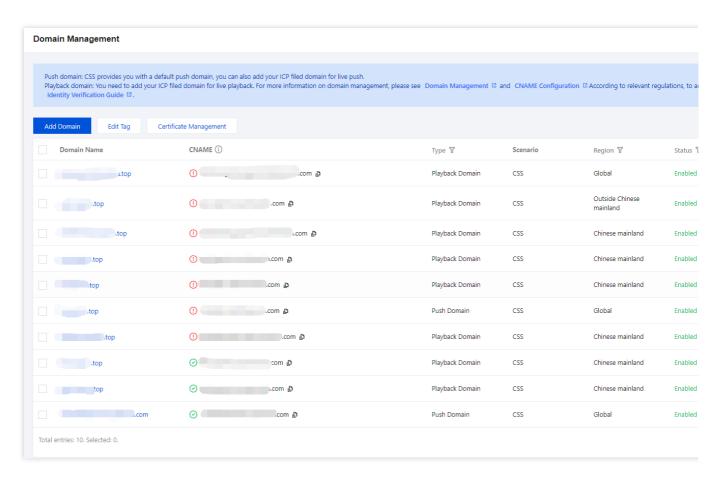




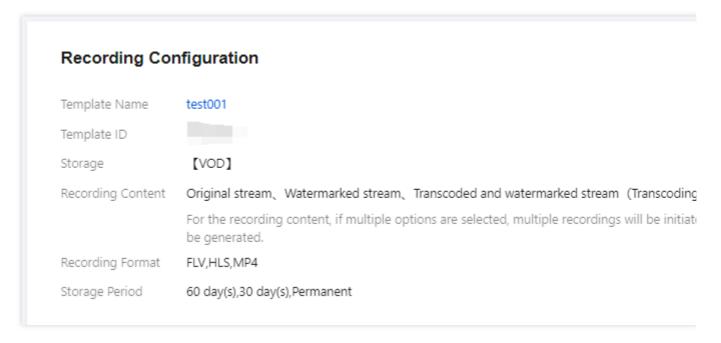
Unbinding a Recording Template

1. Go to Domain Management, and click the target push domain or click Manage to enter the domain details page.



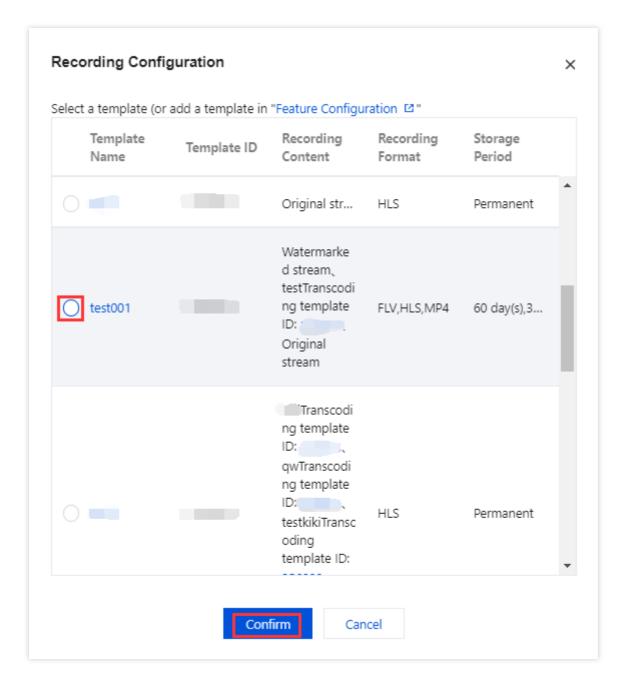


2. Select the **Template Configuration** tab and click **Edit** in the **Recording configuration** area.



3. Unselect the template and click Save.





Note:

Unbinding a recording template will not affect ongoing live streams.

To cancel recording for ongoing streams, stop the streams and push them again.

Obtaining Recording Files

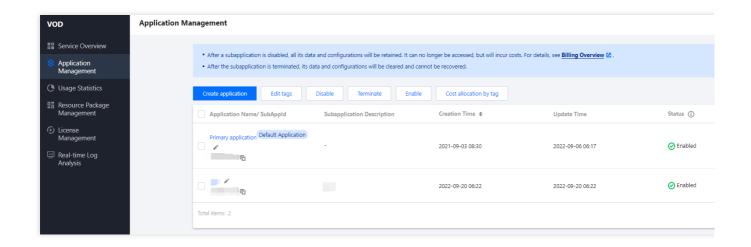
You can obtain recording files in the following ways:

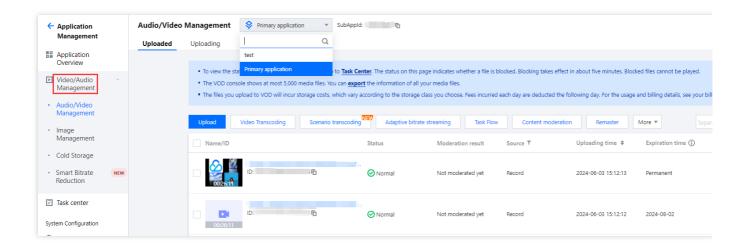
Recording to VOD

From the VOD console



Log in to the VOD console, select the target subapplication, and click **Video/Audio Management** on the left sidebar. You can view all your recording files on this page.





From recording callbacks

If you have configured a recording callback address in the console or using an API, after a recording file is generated, a notification will be sent to the callback address configured. For details about the fields of the callback, see How to Receive Event Notification.

Note:

The recording callback method is recommended for its reliability and real-timeliness.

Using a VOD API

You can also call the SearchMedia API of VOD to guery recording files.

Recording to COS



From the COS console

Log in to the COS console, click Bucket List on the left sidebar, and then click the target bucket. You will be able to find the recording files in the file list.



Time Shifting Configuration

Last updated: 2024-05-07 19:04:45

This document shows you how to bind a time shifting template to a push domain to enable time shifting for the domain, as well as how to unbind a template to disable the feature. Time shifting is disabled by default.

Use Limits

A template takes effect about 5-10 minutes after it is bound to a domain.

After a template is successfully bound to a push domain, time shifting will be enabled for push addresses under that domain.

One domain can be bound to only one time shifting template. After binding, time shifting will be enabled for all streams under the domain.

Prerequisites

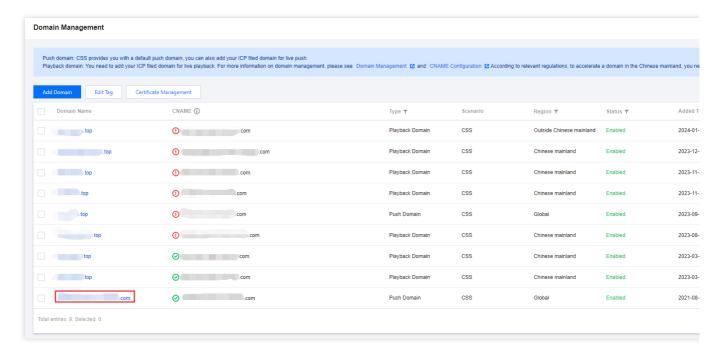
You have logged in to the CSS console and added a push domain.

You have created a time shifting template.

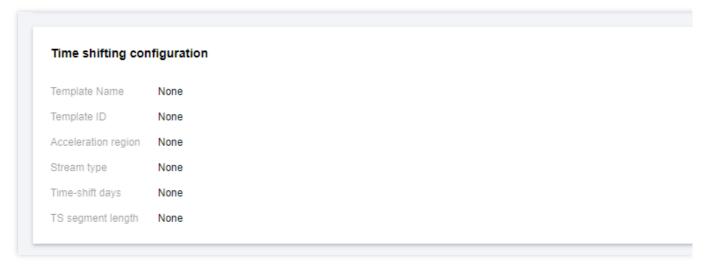
Binding a Time Shifting Template

1. Go to Domain Management, and click the target **push domain** or click **Manage** to enter the domain details page.



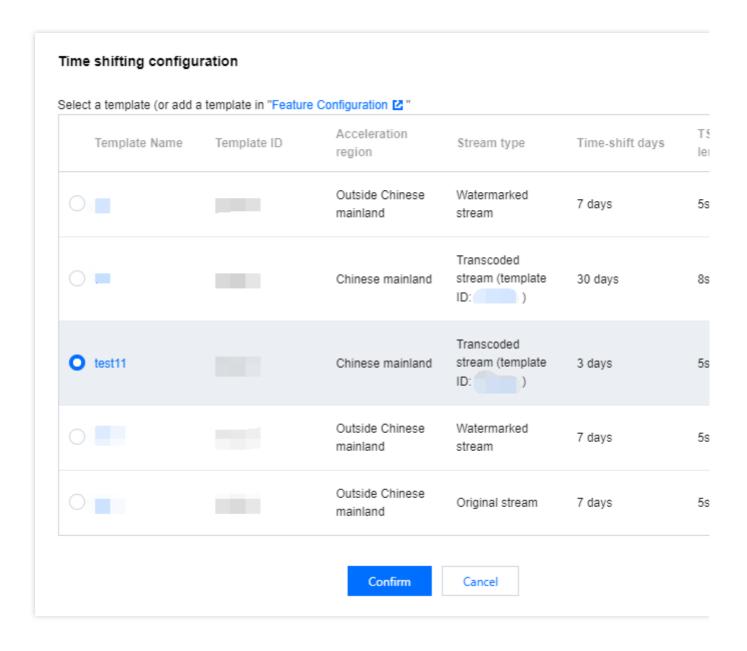


2. Select the Template Configuration tab and click Edit in the Time shifting configuration area.



3. Select a time shifting template and click Confirm.

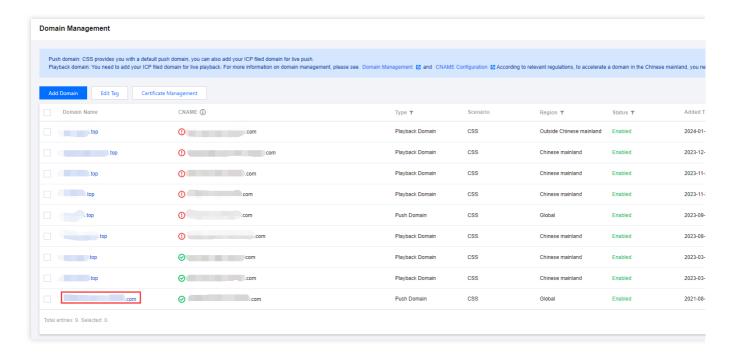




Unbinding a Time Shifting Template

1. Go to Domain Management, and click the target **push domain** or click **Manage** to enter the domain details page.



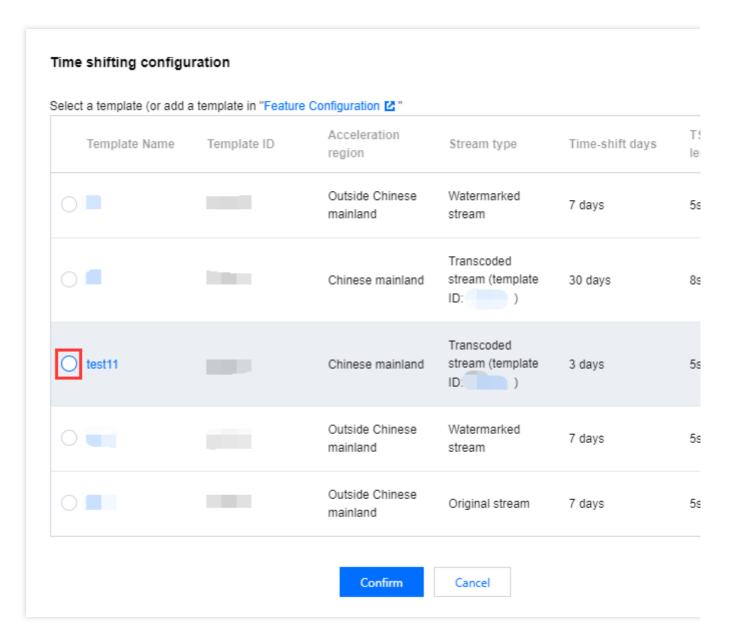


2. Select the Template Configuration tab and click Edit in the Time shifting configuration area.



3. Unselect the template and click Save.





Note:

Unbinding a time shifting template will not affect ongoing live streams.



Screencapture and Porn Detection Configuration

Last updated: 2024-06-25 15:51:16

Live streaming push is set to have the screenshot feature turned off by default. This article will guide you on how to enable the screenshot feature on a specified push domain and establish a connection with a screenshot template, as well as how to unbind the template and disable the screenshot feature.

Notes

The template configuration will take effect in about 5 – 10 minutes.

After completing the screenshot template configuration, you also need to configure the callback template to receive the screenshot results. For callback template configuration, please refer to Callback Configuration.

A domain can only be associated with one screenshot template. After the association, all streams under that domain will have screenshot tasks performed according to that template.

Prerequisites

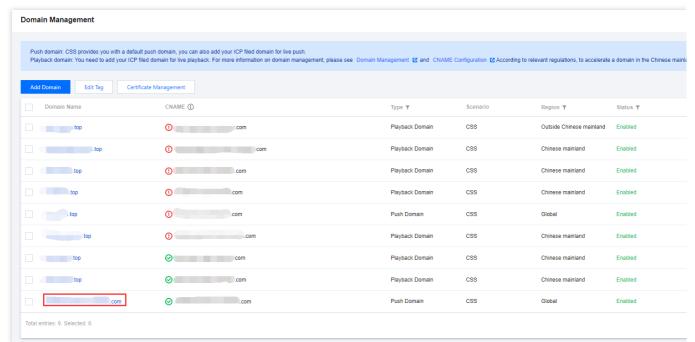
You have logged in to the CSS console and added a push domain name.

You have already created a Screenshot Template.

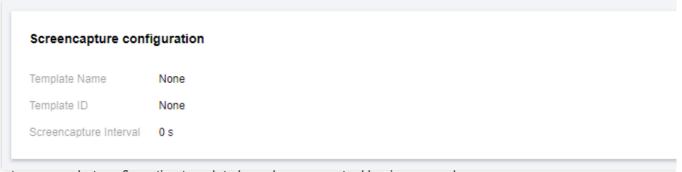
Bind Screencapture Template

1. Go to Domain Management, and click the target push domain or click Manage to enter the domain details page.



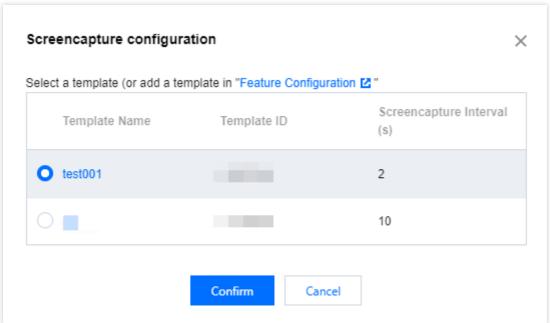


2. Select the **Template Configuration**, and click on the **Edit** button in the upper right corner of the **Screenshot Configuration** tab.



3. Select a screenshot configuration template based on your actual business needs.

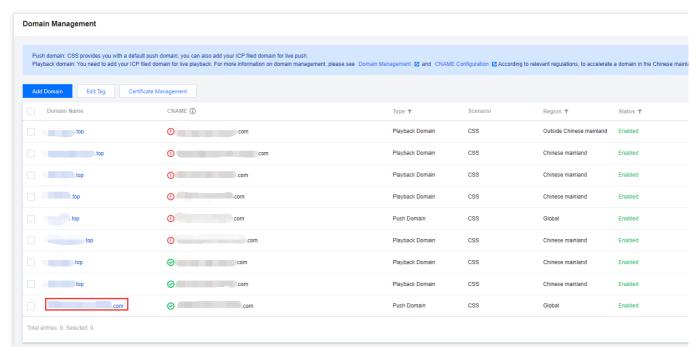




4. Click **Confirm** to complete the configuration.

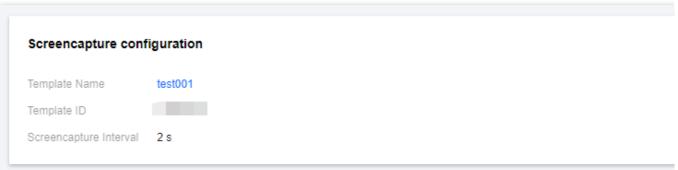
Unbind screenshot template

1. Go to Domain Management and click the push domain name to be configured or **Manage** to enter the domain name details page.

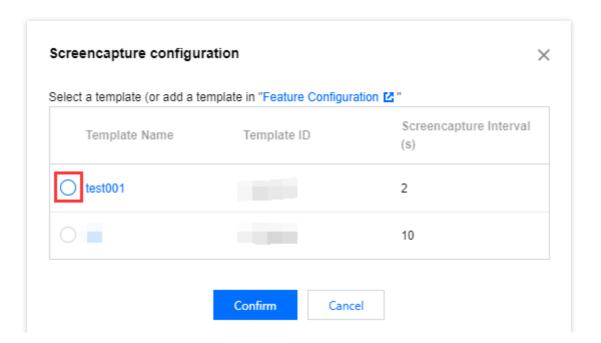


2. Select the **Template Configuration** tab, and click on the **Edit** button in the upper right corner of the **Screenshot Configuration** tab.





3. Based on your actual business needs, uncheck the corresponding template and click ${f Confirm}$.





Watermark Configuration

Last updated: 2024-06-18 14:40:42

The watermark feature is disabled by default for live push. This document describes how to bind/unbind a push domain name to/from a watermark template to enable/disable the watermark feature.

Notes

The template configuration will take effect in about 5–10 minutes.

After the template is bound successfully, the watermark feature will be enabled for push addresses under the specified push domain name.

One domain name can be bound to only one watermark template. After they are bound, all streams under the domain name will be watermarked according to this template.

Prerequisites

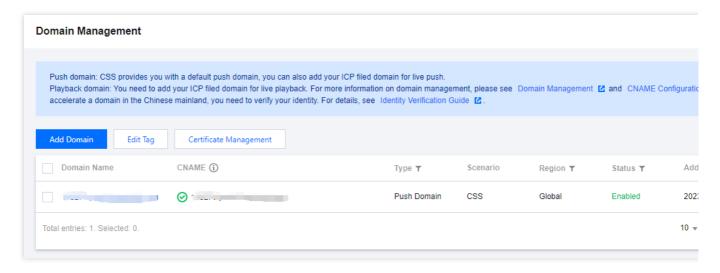
You have logged in to the CSS console and added a push domain name.

You have created a watermark template.

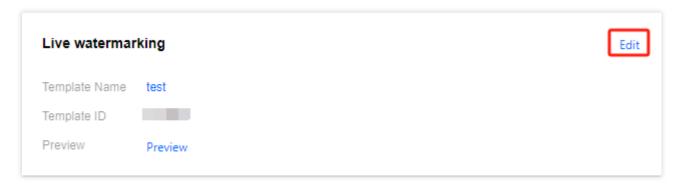
Binding Watermark Template

1. Go to **Domain Management** and click the **push domain name** to be configured or **Manage** to enter the domain name details page.



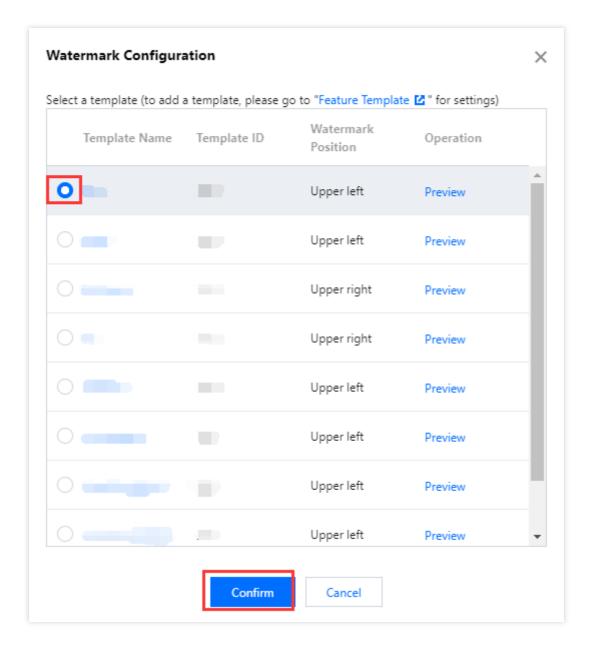


2. Click Template Configuration and, in the Live Watermarking area, click Edit.



3. Select a watermark template and click **Confirm**.





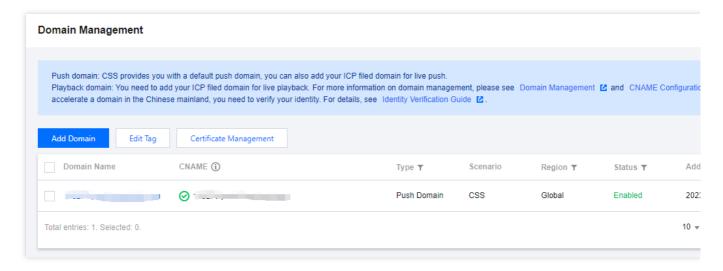
Note:

You can click **Preview** in the Operation column to view the watermark.

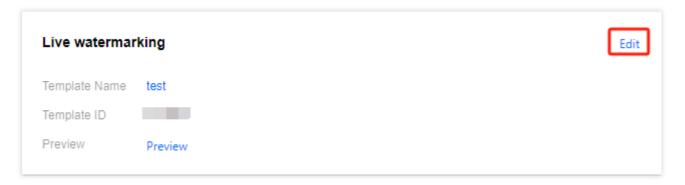
Unbinding Watermark Template

1. Go to **Domain Management** and click the **push domain name** to be configured or **Manage** to enter the domain name details page.



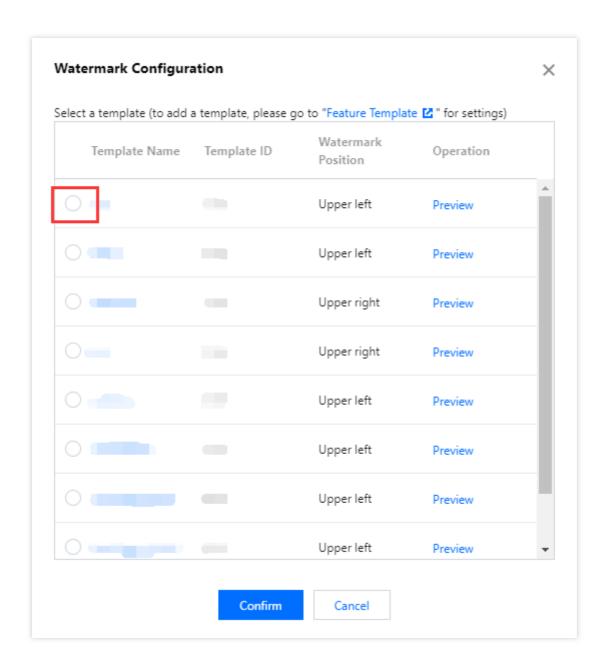


2. Select Template Configuration and click Edit in the Live Watermarking section.



3. Clear the target template and click **Confirm**.







Callback Configuration

Last updated: 2024-06-25 15:52:05

The callback feature is disabled by default for Cloud Streaming Services (CSS) push. After a push domain name is bound to a callback configuration, the callback feature will be enabled for all push addresses under this domain name. If a callback event is triggered by the configured template during live streaming, Tencent Cloud will send a request to the customer's server which is responsible for the response. After verification, the customer can obtain a JSON packet containing the callback information.

This document describes how to bind/unbind a push domain name to/from a callback template to enable/disable the callback feature.

Notes

The template configuration will take effect in about 5–10 minutes.

When a CSS event is triggered after the callback feature is enabled, you can receive the event information through the event message notification.

The callback templates are managed at the domain name level in the console, and rules created by APIs cannot be canceled for the time being. If you bound a template to a specified stream through the callback APIs and want to unbind it, you need to call the DeleteLiveCallbackTemplate API.

One domain name can be bound to only one callback template. After binding, all streams under it will be called back according to this template.

Prerequisites

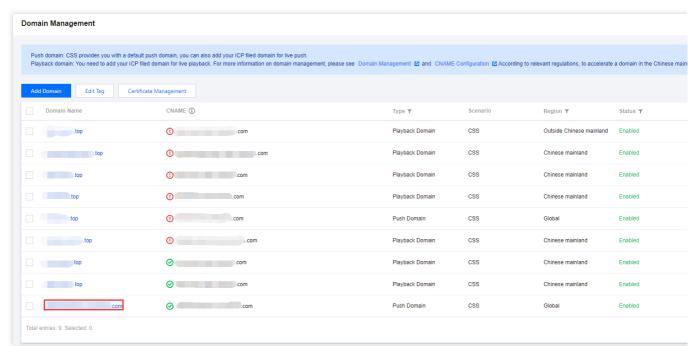
You have logged in to the CSS console and added a push domain name.

You have created a callback template.

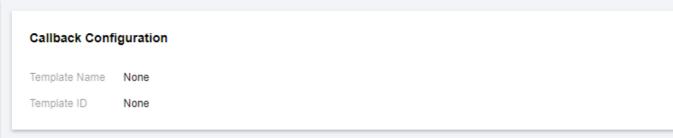
Binding Callback Template

1. Go to Domain Management, and click the target **push domain name** or **Manage** to enter the domain details page.



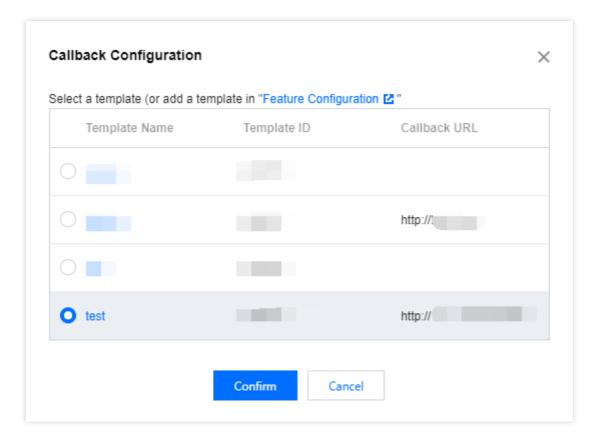


2. Select Template Configuration and click Edit in the upper right corner of the Callback Configuration tab.



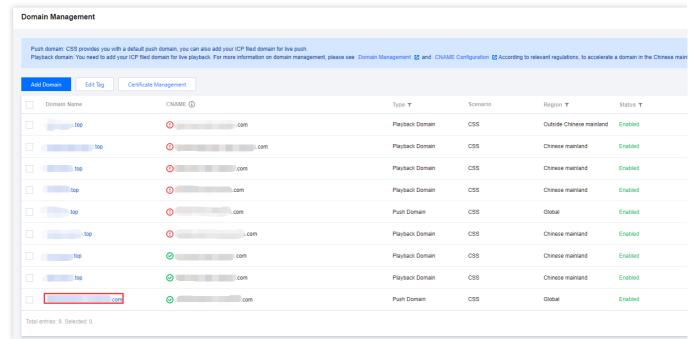
3. Select the corresponding callback template, and click Confirm.





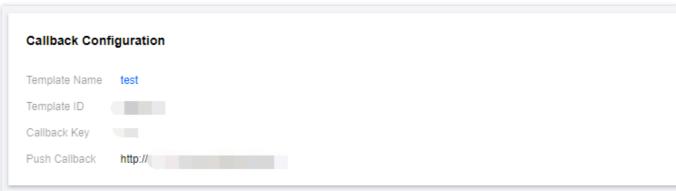
Unbinding Callback Template

1. Go to Domain Management, and click the target **push domain name** or **Manage** to enter the domain details page.

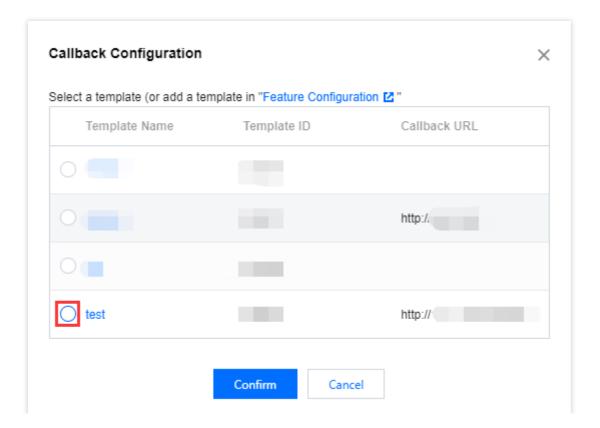


2. Select **Template Configuration** and click **Edit** in the upper right corner of the **Callback Configuration** tab.





3. Uncheck the associated template and click **Confirm**.





Standby Stream Configuration

Last updated: 2024-05-07 19:04:45

This document shows you how to bind a standby stream template to a push domain to enable the standby stream feature for that domain, as well as how to unbind a template to disable the feature. The standby stream feature is disabled by default.

Notes

A template takes effect about 5-10 minutes after it is bound to a domain.

After a template is successfully bound to a push domain, the standby stream configured will take effect for all push addresses under that domain.

Prerequisites

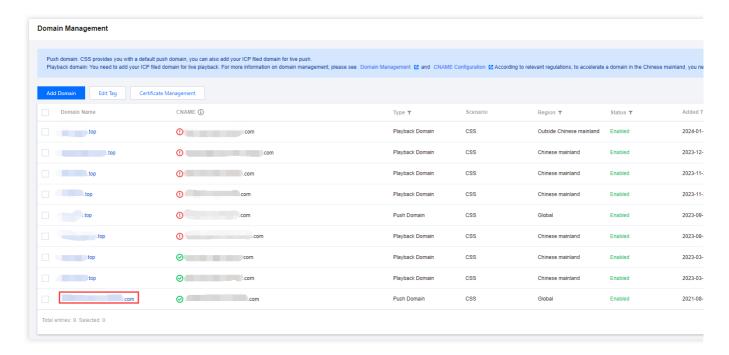
You have logged in to the CSS console and added a push domain.

You have created a standby stream template.

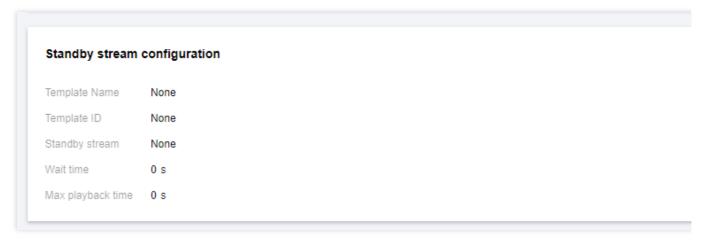
Binding a Standby Stream Template

1. Go to Domain Management, and click the target push domain or click Manage to enter the domain details page.



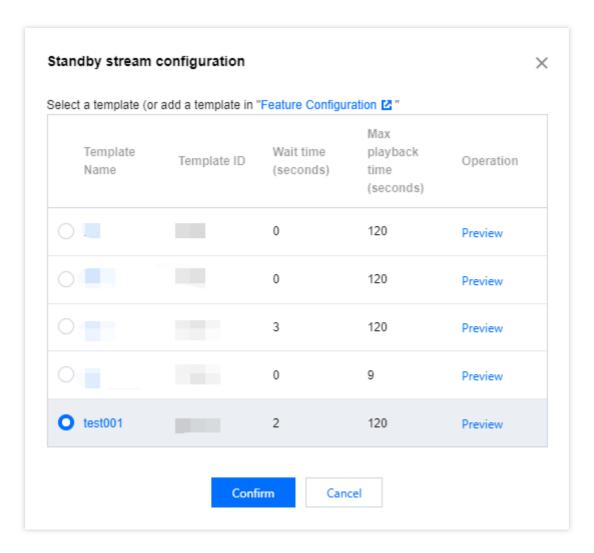


2. Select the Template Configuration tab and click Edit in the Standby stream configuration area.



3. Select a standby stream template and click Confirm.





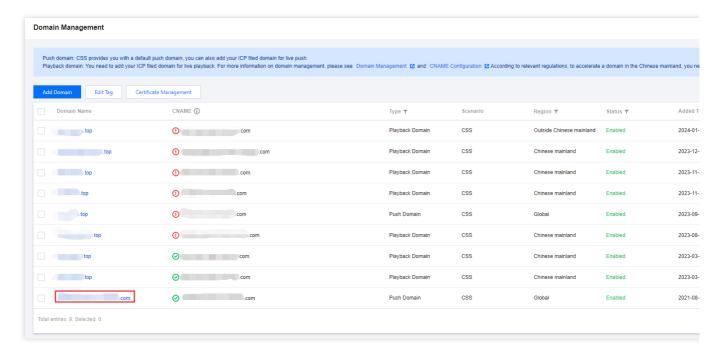
Note:

You can click **Preview** in the **Operation** column to preview the standby stream.

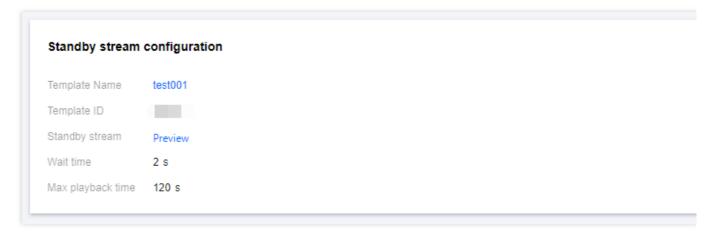
Unbinding a Standby Stream Template

1. Go to Domain Management, and click the target **push domain** or click **Manage** to enter the domain details page.



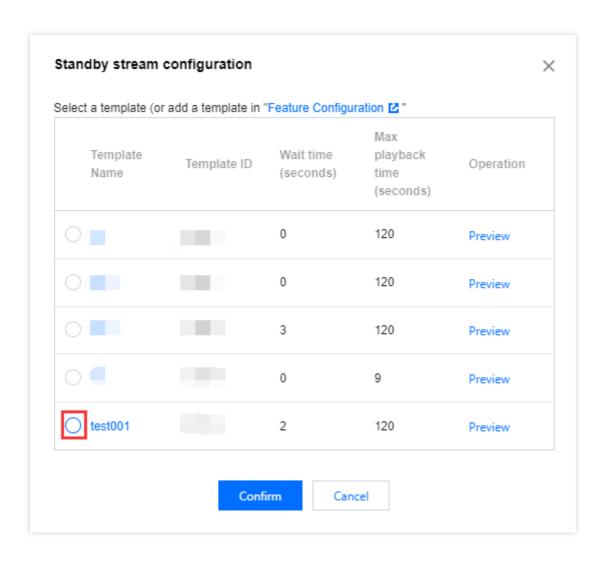


2. Select the Template Configuration tab and click Edit in the Standby stream configuration area.



3. Unselect the template and click Save.







Latency Control

Last updated: 2024-05-28 10:29:07

It is possible to control the latency of HLS playback by adjusting the size and number of HLS segments. Note that setting the latency too low may cause playback to stutter.

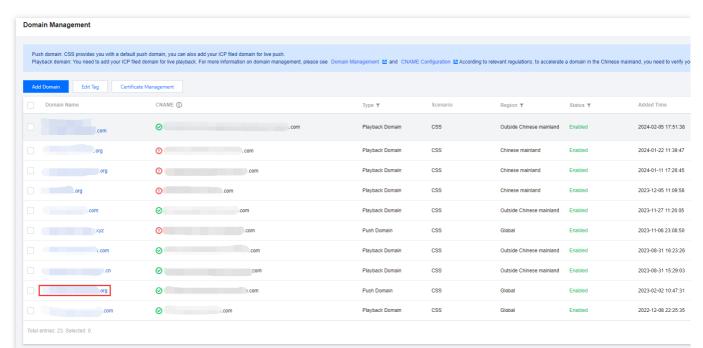
Prerequisites

You have activated CSS and logged in to the CSS console.

You have added a push domain name.

Latency control

1. Select Domain Management on the left sidebar and click the target **push domain** or click **Manage** on the right to enter the details page.



2. In Advanced Configuration > Playback latency configuration , you can configure the latency for HLS.



Push Configuration	Template Configuration	Advanced Configuration
Playback latency configuration ① HLS latency High		
	tency configuration (i) High	tency configuration ③

3. Based on your actual business needs, select appropriate latency parameters.

Select different configurations, corresponding to HLS segments configurations, high for 5 seconds 4 segments, medium for 4 seconds 3 segments, and low for 2 seconds 3 segments. The actual slice duration is related to the GOP length. Each TS should contain at least one GOP. It is recommended to set the push stream GOP to 1s 3 segments.

4. When GOP is set to two seconds, the latency is as follows:

Setting	High	Medium	Low
Estimated Latency	20-25s	10-15s	6-8s



IP Blocklist/Allowlist Configuration

Last updated: 2024-05-16 17:26:18

This document shows you how to configure an IP allowlist/blocklist to filter requests and control access to streaming content.

How It Works

IP allowlist: Only the configured IP addresses are allowed to push streams to Cloud Streaming Services.

IP **blocklist**: Only the configured IP addresses are restricted from pushing streams to Cloud Streaming Services.

Reminders

An IP allowlist/blocklist takes effect about ten minutes after configuration.

For an IP allowlist/blocklist configuration to apply to ongoing streams, you need to restart the streams.

Prerequisites

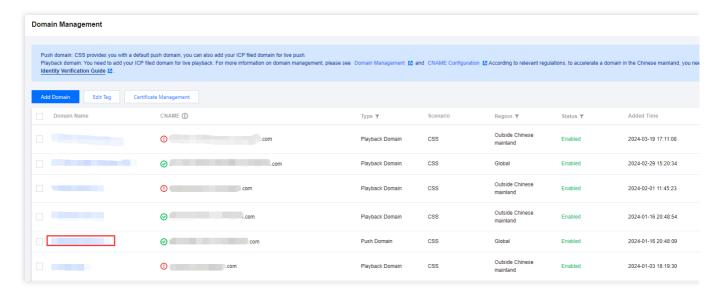
You have activated CSS and logged in to the CSS console.

You have added a push domain.

Configuring an IP Allowlist/Blocklist

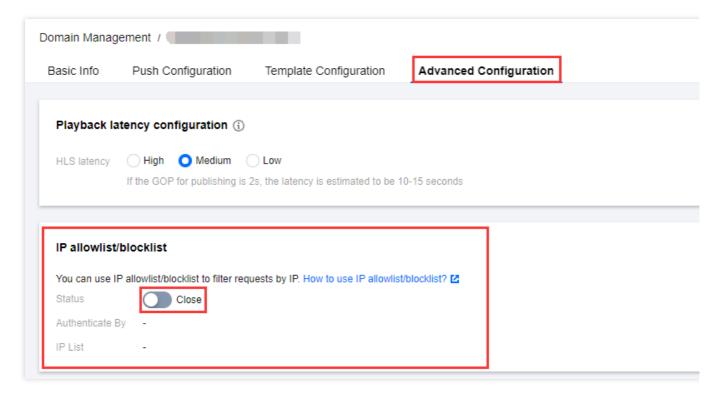
1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.





2. Within the Advanced Configuration> IP allowlist/blocklist, click on

to enable the IP Allowlist/Blocklist.



3. After enabling the **IP Allowlist/Blocklist**, enter the **IP Allowlist/Blocklist** configuration page and perform the following configuration:

Blocklist

Allowlist



IP Allowlist/Blocklist Configuration

 Enter one IP or IP range (/8/16/24 for example) per line and separate IPs/IP ranges with line breaks. The format of IP:port is not supported.

Authenticate By

Blocklist

The 403 error will be returned for requests from client IPs not allowlist.

IP List

Enter IPs or IP ranges

You can enter 200 more IPs/IP ranges.

Save

Cancel



IP Allowlist/Blocklist Configuration

 Enter one IP or IP range (/8/16/24 for example) per line and separate IPs/IP ranges with line breaks. The format of IP:port is not supported.

Authenticate By

Blocklist

The 403 error will be returned for requests from client IPs not allowlist.

IP List

Enter IPs or IP ranges

You can enter 500 more IPs/IP ranges.

Save

Cancel

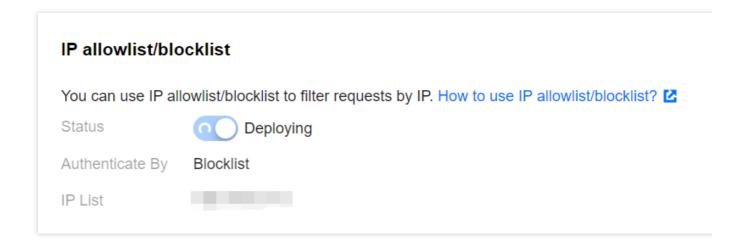
Configuration Item	Description
Authenticate By	Allowlist or blocklist: You cannot select both. If you configure an allowlist, only IP addresses on the list will be able to access your streaming content. If you configure a blocklist, IP addresses on the list cannot access your streaming content.
IP List	The IP blocklist supports a maximum configuration of 200 rules, and the IP allowlist supports up to 500 rules. Please separate entries with a newline character.



You can enter IP addresses or IP ranges (/8/16/24). The "IP address: port number" format is not supported.

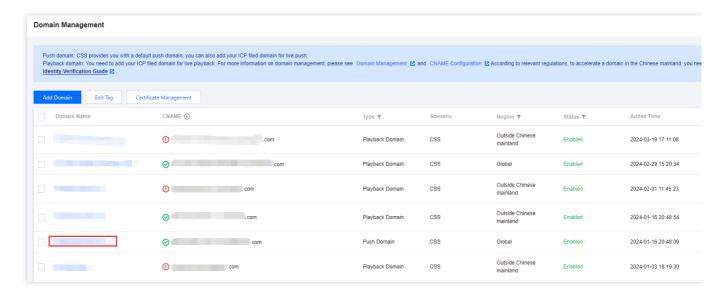
IPv6 is not supported currently.

4. Click **Save** to save the configuration (it takes a while for the configuration to take effect).



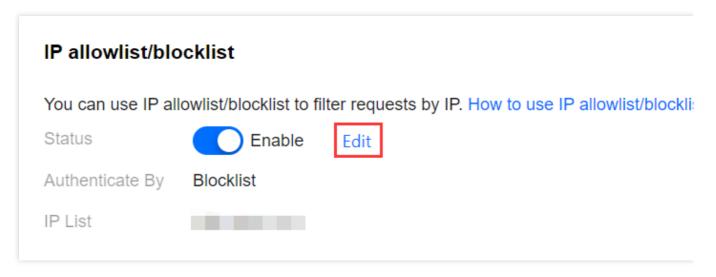
Modifying an IP Allowlist/Blocklist

1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.



2. Select the Access Control tab. In the IP allowlist/blocklist area, click Edit.



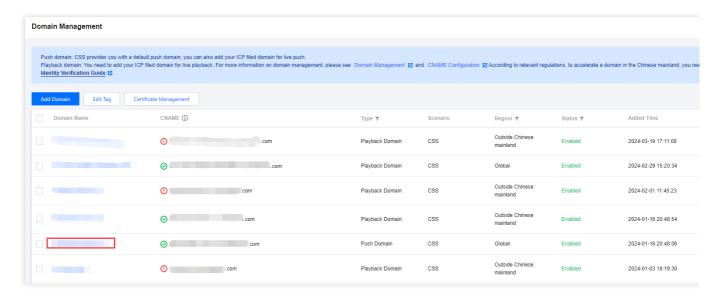


3. Modify the configuration and click Save.

Disabling IP Allowlist/Blocklist

Follow the steps below to disable IP allowlist/blocklist:

1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.



2. Select the Access Control tab. In the IP allowlist/blocklist area, click

to disable IP allowlist/blocklist.



IP allowlist/blocklist

You can use IP allowlist/blocklist to filter requests by IP. How to use IP allowlist/block

Status



le Edit

Authenticate By

Blocklist

IP List



Delayed Playback

Last updated: 2023-12-01 19:10:06

Delayed playback is a feature that processes streams in the cloud, enabling the playback end to operate with a set delay. This delay is distinct from the inherent delay of the protocol itself. Delayed playback is applicable to significant live steaming events. To prevent unforeseen circumstances during the events, if you need to prepare control and response measures in advance, you can configure this feature directly through the console. For instance, during the live streaming of a large-scale evening party, if you set a delay of 5 minutes in advance, the online audience will see the picture 5 minutes later than the actual event. In case of an unexpected incident, the director will have a 5-minute pre-processing time period to switch machine positions or backup streams through the director's console, thereby mitigating live streaming risks.

Notes

You can enable delayed playback via three methods:

Configure it in the Cloud Streaming Services (CSS) console.

Call the playback delaying API.

Add a txDelayTime parameter to the end of a push URL. For details, please see Push Configuration.

Note:

Currently, the API method is not recommended because calling an API involves configuration caching, which makes it difficult to estimate when the feature takes effect. You are advised to quickly enable the feature using the first or third method.

After enabling delayed playback, you need to add a delayed playback configuration in the console or using an API before the feature can take effect. After it takes effect, extended feature fees will be incurred for streams published. Delayed playback will take effect after waiting for 5 minutes once the configuration is completed.

Prerequisites

You have activated the Cloud Streaming Services (CSS) and logged in to the CSS console.

You have added a push domain.

Configuring Delayed Playback

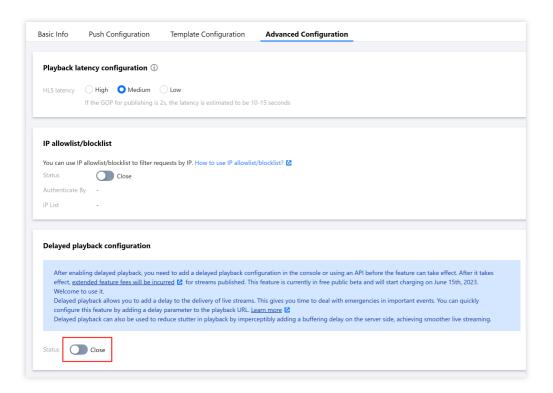
1. Go to Domain Management and click the **push domain** to be configured or click **Manage** on the right to enter the domain details page.



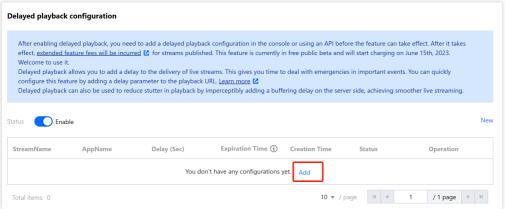
2. Select the Advanced Configuration tab. In the Delayed playback configuration area, click



to enable the delayed playback configuration.

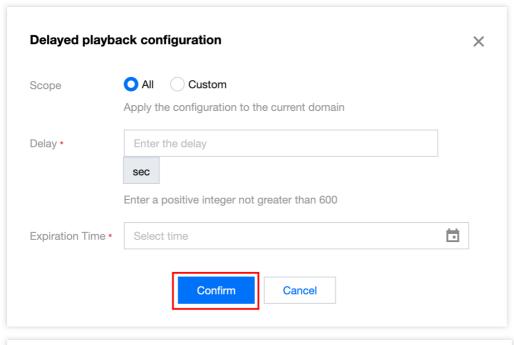


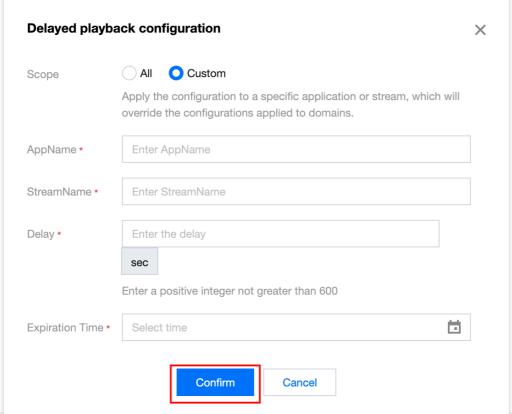
2.1. To add a new congifuration, click Add.



3. Complete the following settings based on your needs:





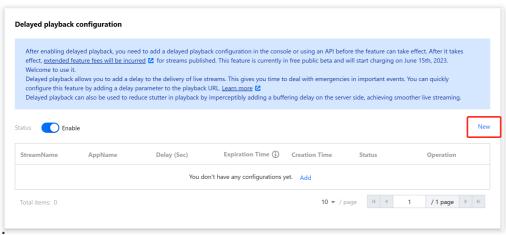


Configuration Item	Description
Scope	Select All or Custom: All: Apply the configuration to the current domain. Custom: Apply the configuration to a specific application or stream, which will override the configurations applied to All.
AppName	When there are configurations for the same AppName and StreamName, the most recently



	created configuration takes effect.	
StreamName	When there are configurations for the same AppName and StreamName, the most recently created configuration takes effect.	
Delay	A positive integer no greater than 600.	
Expiration Time	The maximum selectable time is no more than 7 days from the current time.	

- 3.1. Click **Confirm** to save the configuration.
- 3.2. Based on your actual business needs, click **New** on the right side to continue adding **Delayed playback configuration**.



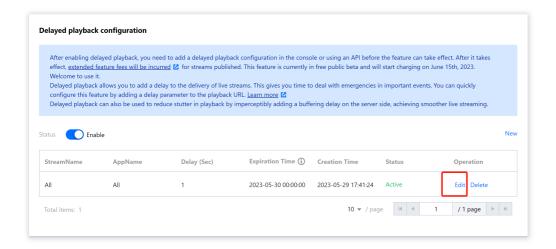
Note:

You can add up to 50 delayed playback configurations.

Modifying Delayed Playback Configuration

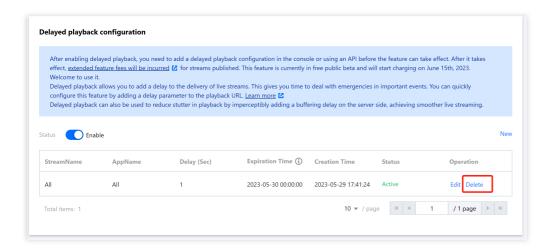
- 1. Select Domain Management, and click the **push domain** to be configured or click **Manage** on the right to enter the domain details page.
- 2. Select the **Advanced Configuration** tab. In the **Delayed playback configuration** area. Click **Edit** on the right side to enter the delayed playback configuration page.
- 3. Update the configurations based on your needs, and click **Confirm** to save the modifications.





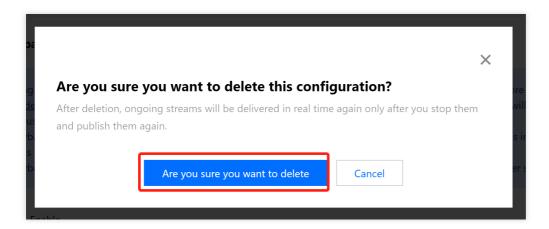
Deleting Delayed Playback Configuration

- 1. Select Domain Management, click the **push domain** to be configured, or click **Manage** on the right to enter the domain details page.
- 2. Select the **Advanced Configuration** tab. In the **Delayed playback configuration** area, select the configuration to be deleted and click **Delete** on the right side.



3. Confirm whether to delete this **Delayed playback configuration**, and click **Are you sure you want to delete** to successfully delete it.





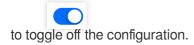
Note:

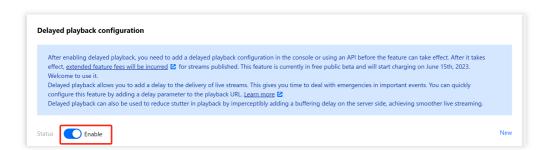
After deletion, ongoing streams will be delivered in real time again only after you stop them and publish them again.

Disabling Delayed Playback

If you want to disable delayed playback configuration after enabling it, follow these steps:

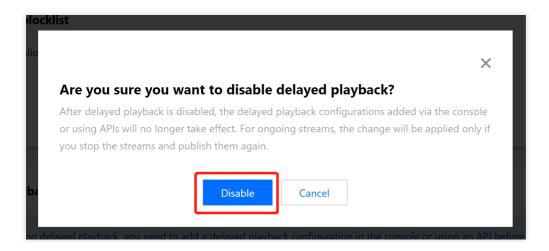
- 1. Select Domain Management, click the **push domain** to be configured, or click **Manage** on the right side to enter the domain details page.
- 2. Select Advanced Configuration tab. In the Delayed playback configuration area, click





3. Confirm whether to disable this delayed playback configuration, and click **Disable**.





Note:

After delayed playback is disabled, the delayed playback configurations added via the console or using APIs will no longer take effect. For ongoing streams, the change will be applied only if you stop the streams and publish them again.



Moderation Configuration

Last updated: 2024-07-10 16:39:06

The moderation feature of live stream pushing feature is off by default. This document introduces instructions on how to associate a moderation template with a specific push domain to activate the moderation feature and how to disassociate the template to deactivate the moderation with successful association completed.

Notes

The configuration of the template comes into effect approximately 5-10 minutes post completion.

With successful association of the template completed, the moderation feature is activated for push URL under the specified push domain.

Only one moderation template can be associated with a domain. Once associated, all streams under that domain will be moderated in accordance with the associated template.

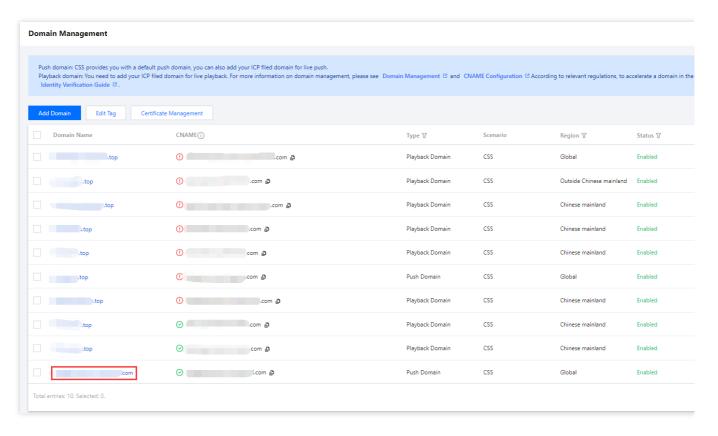
Prerequisites

You have successfully logged in to the CSS console and have completed Adding Your Own Domain. A moderation template has been created.

Associating Moderation Template

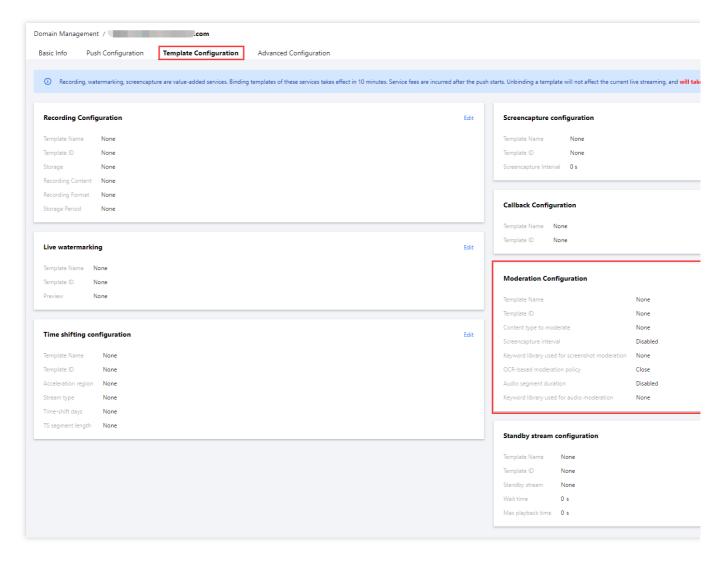
1. Go to Domain Management. Click **Domain Name** you want to configure or **Manage** to enter the domain details page.





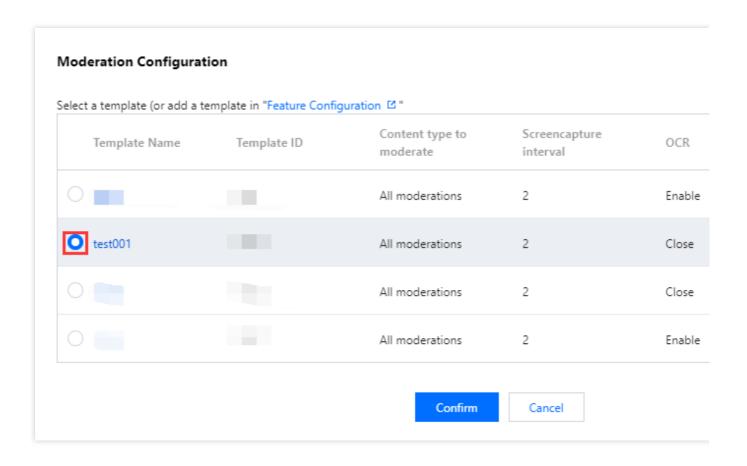
2. Select the **Template Configuration** tab. Click **Edit** in the right upper corner of the **Moderation Configuration** tag.





3. Choose a moderation configuration template according to your business requirements and click **Confirm** to complete the configuration.

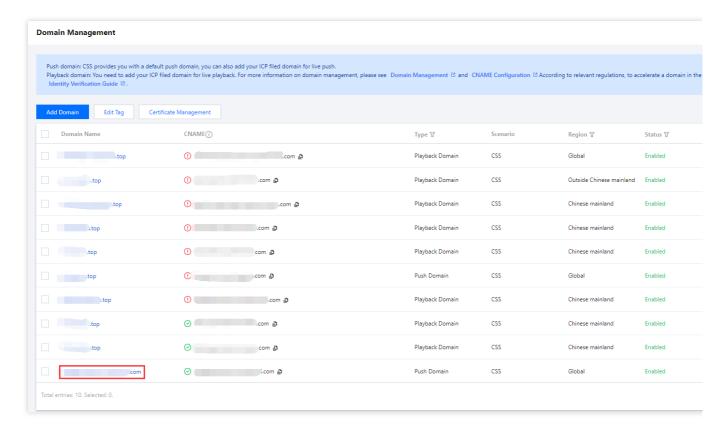




Unbinding Moderation Template

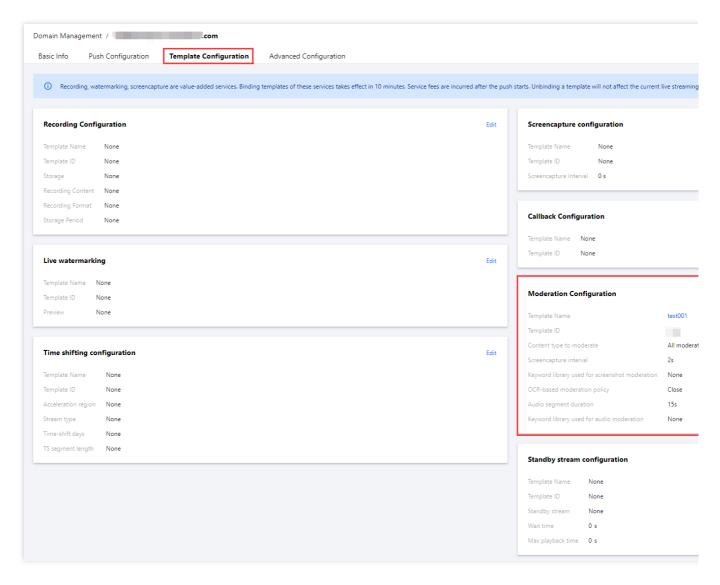
1. Go to Domain Management. Click **Domain Name** you want to configure or **Manage** to enter the domain details page.





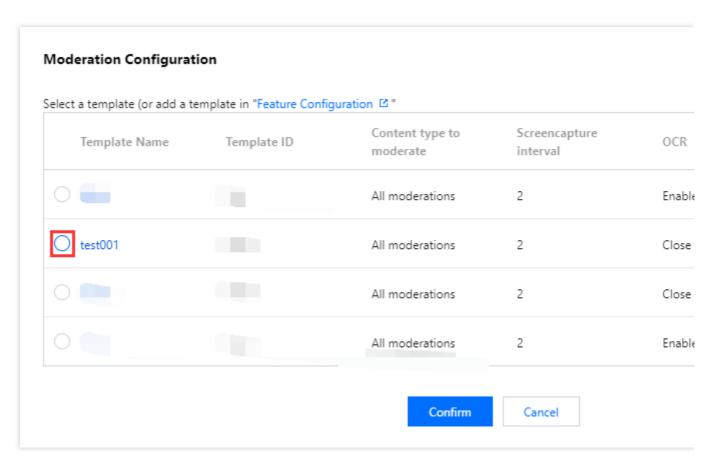
2. Select Template Configuration tab, click Edit in the top-right corner of the Moderation Configuration tag.





3. Based on your business requirements, uncheck the relevant template and click **Confirm** to proceed.





Note:

Unbinding the moderation template does not affect the ongoing live streams.



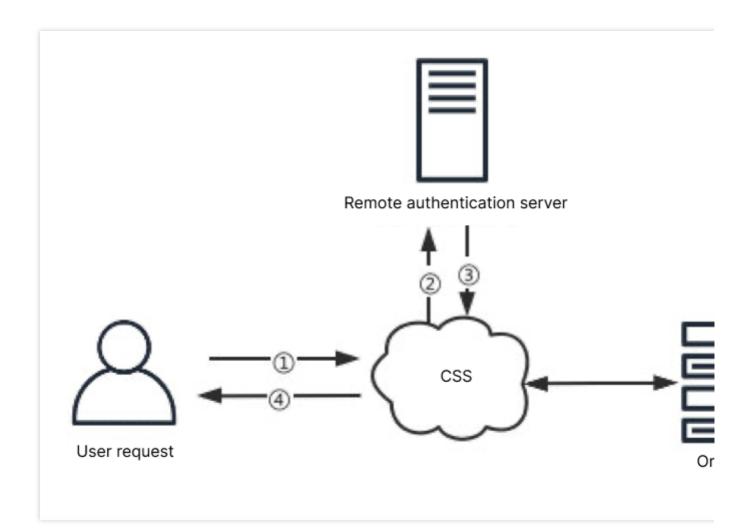
Remote Authentication Configuration

Last updated: 2024-06-17 17:32:29

With remote authentication, after authenticating a push/playback request for hotlink protection, CSS will call your server API to send the request to your server so that you can determine whether the request is legitimate. Based on the result your server returns, CSS will approve or reject the push/playback request. This ensures more precise authentication and improves security. However, you need to develop your own authentication server.

Workflow

Remote authentication works as follows:



No	Description
1	A request is sent to CSS.



2	If remote authentication is enabled for the domain, CSS will process the request as specified and then send it to your authentication server.	
3	Your authentication server returns the result. The HTTP status code 200 indicates that the request should be approved, while the code 403 indicates that the request should be rejected.	
4	CSS approves or rejects the request based on the result.	

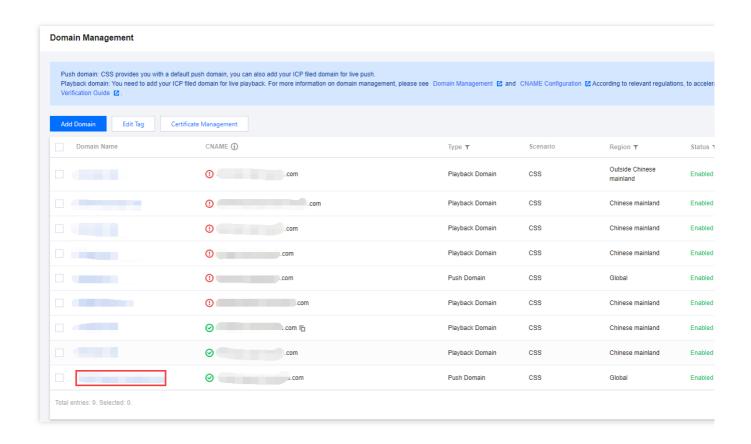
Prerequisites

You have activated CSS and logged in to the CSS console.

You have added a push domain.

Configuring Remote Authentication

1. Log in to the CSS Console, and select Domain Management on the left sidebar. Click the the **push domain** you want to configure remote authentication for, or click on **Manage** on the right side to enter the Domain Management page.





2. Under the **Advanced Configuration** tab, find **Remote authentication**.

Remote authentication ()

Passes through requests to your own authentication server so that you can determine whether to approve a request. This ϵ

Remote authentication

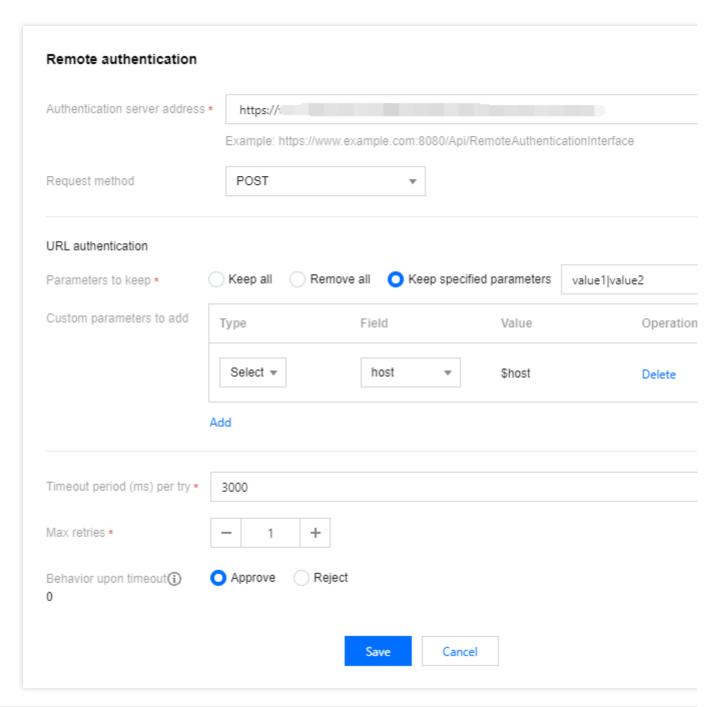


3. Click



to enable remote authentication and complete the following settings:





Configuration Item		Description	
Authentication server address		The address of your authentication server (required). Format: http(s)://+Domain or IP address+Port+Path.	
Request method		POST is selected by default. You can also use HEAD or GET.	
URL authentication	Parameters to keep	All URL parameters are kept by default. You can also specify parameters to keep or remove all parameters. If you select Keep specified parameters , you need to enter the parameters to be retained in the input box. Chinese characters and	



		spaces are not supported. Separate multiple parameters with " ", for example: value1 value2 . Authentication parameters are case-sensitive; "key" and "KEY" are considered as two different parameters.
	Custom parameters to add	Click Add, and the parameter type can be either Select Parameter or Custom. (Up to 50 parameters can be added) Select Parameter supports choosing host, uri, query, client_ip, and cdn_ip parameters. host: The push domain. uri: The original request URL. client_ip: The request client IP. cdn_ip: The request CDN-side IP. When you select Custom, you need to fill in the parameter and value fields. Chinese characters and spaces are not supported. Authentication parameters are case-sensitive; "key" and "KEY" are considered as two different parameters.
Timeout period (ms) per try		This is required. Enter a value between 500 and 3000. The default is 3000.
Max retries		Enter a value between 0 and 3. The default is 1.
Behavior upon timeout		This specifies whether to approve or reject a request if the system does not receive a response (HTTP status code 200 or 403) after the total timeout period elapses (Total timeout period = Timeout period per try x (Max retries + 1)). The default is Approve . You can also set it to Reject .

4. Click Save.

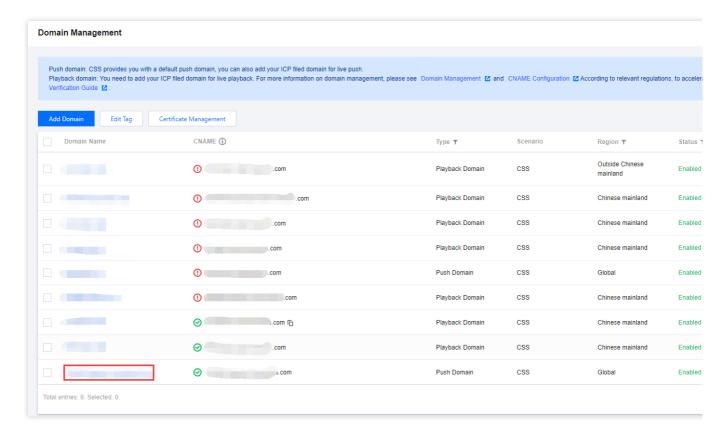
Note:

The remote authentication configuration will take effect about 10 minutes after completion.

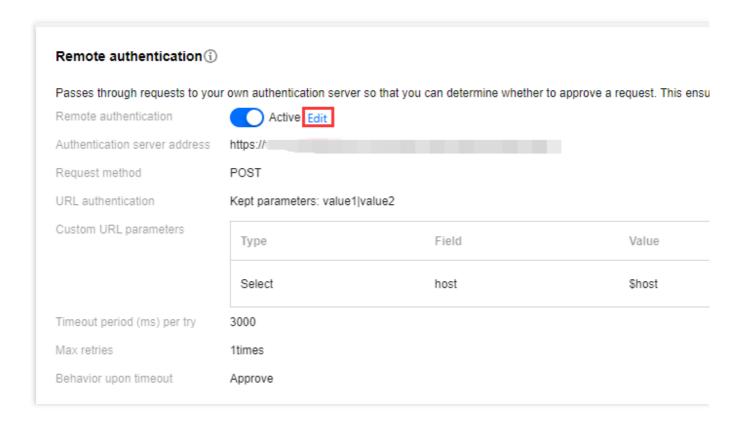
Modifying Remote Authentication Settings

1. Select Domain Management on the left sidebar. Click the push domain you want to configure remote authentication for, or click on **Manage** on the right side to enter the Domain Management page.





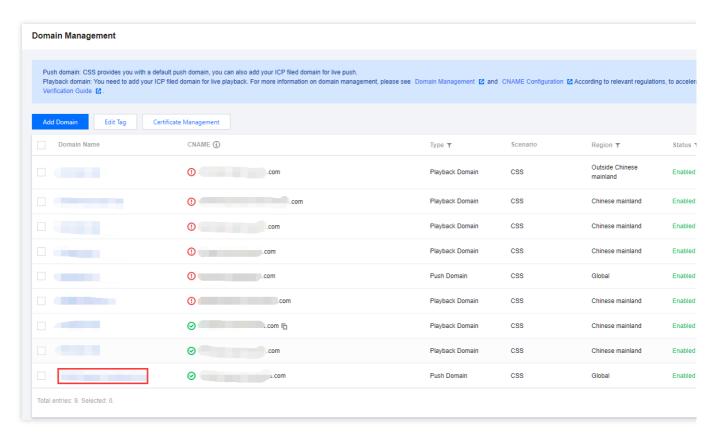
- 2. Under the Advanced Configuration tab, find Remote authentication and click Edit.
- 3. Modify the settings and click Save.





Disabling Remote Authentication

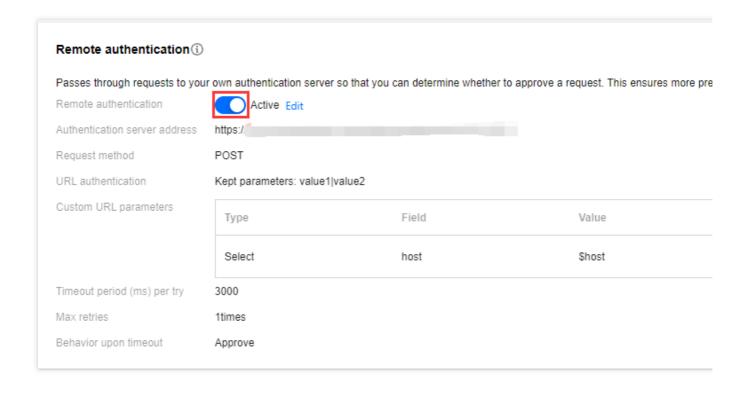
1. Select Domain Management on the left sidebar. Click the **push domain** you want to disable remote authentication for, or click **Manage** on the right to enter the Domain Management page.



2. Under the Advanced Configuration tab, find Remote authentication and click

to disable remote authentication.







Playback Domain Name Management Playback Configuration

Last updated: 2024-05-28 10:27:20

After pushing a stream successfully, you can use the address generator of the CSS console to generate a playback URL (you need to enter the StreamName, which should be the same as the stream ID in the push URL).

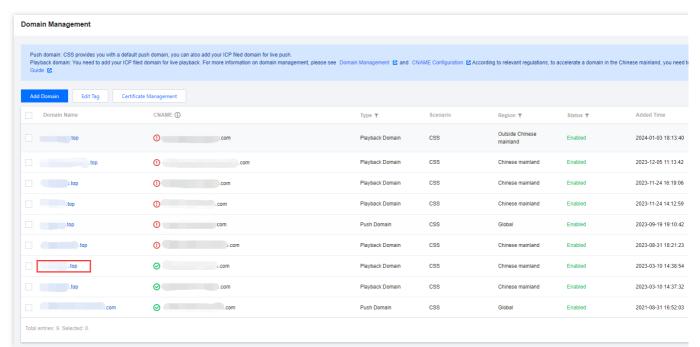
Prerequisites

You have logged in to the CSS console.

You have added a playback domain. For directions on how to add a domain, see Adding Your Own Domain Name.

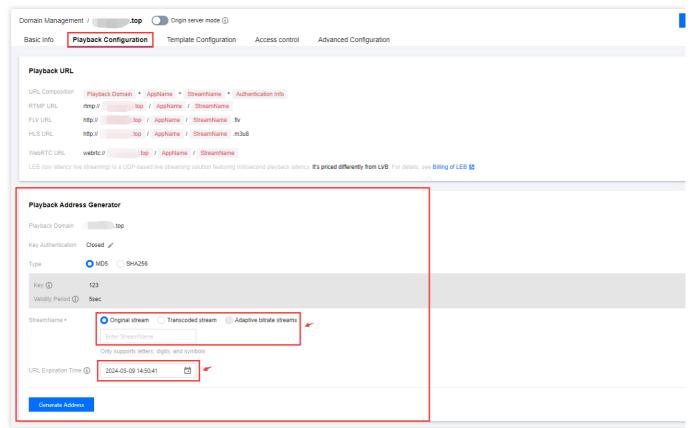
Directions

1. Select Domain Management on the left sidebar and click the name of your playback domain or click **Manage** on the right.



2. Select Playback Configuration and, in Playback Address Generator, complete the following settings:





- 2.1 You are required to select an **encryption type**. Make your choice based on your security needs and performance considerations. The options for encryption types include MD5 and SHA256, with MD5 being the default.
- 2.2 Select the type of stream to play, which can be the original stream, the transcoded stream, or adaptive bitrate streams. If you select Transcoded stream, you need to specify a transcoding template. If you select Adaptive bitrate streams, you need to specify an adaptive bitrate template.
- 2.3 Enter the StreamName.

Only supports English letters, digits, and symbols.

such as liveteststream. Make sure it's the same as the StreamName in your push URL.

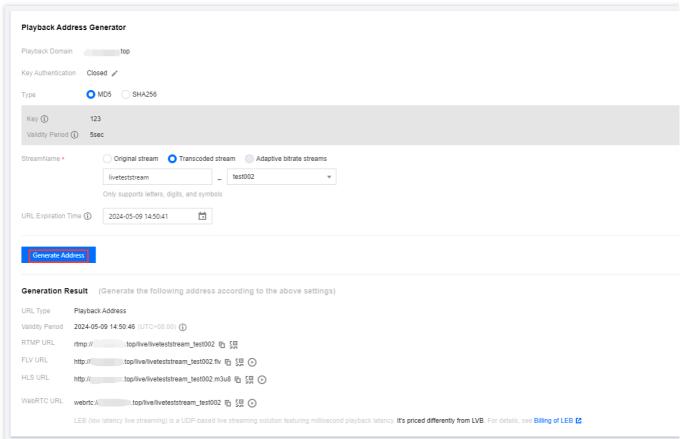
- 2.4 After you select an adaptive bitrate template, the names of the streams in the template will be listed in descending order by bitrate.
- 2.5 Select an URL Expiration Time, such as 2024-05-09 14:50:41.

Note:

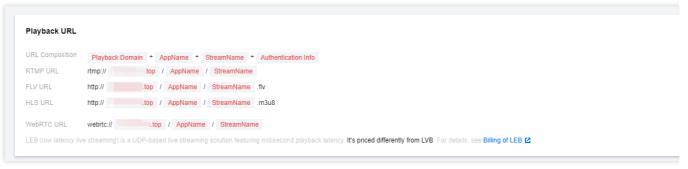
The URL expiration time refers to the hex(time) in the authentication information, and modifying it will change the playback URL. The actual validity period is the sum of the URL expiration time and the authentication validity period. Beyond this actual validity period, new requests will be denied, preventing further streaming through that address.

3. Click Generate Address.





4. If you haven't enabled authentication for your playback domain, in the **Playback URL** area on the same page, you can find playback URLs for RTMP, FLV, HLS, and UDP. Replace StreamName in the URLs with the stream ID in your push URL, and you can use the URLs to play the stream.



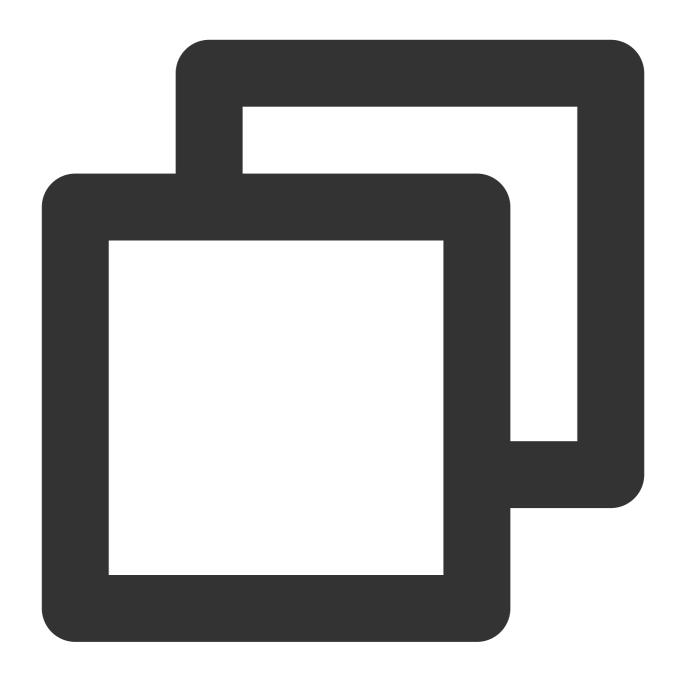
Note:

For more information, see Live Playback.

Playback URL Format

Playback URL for the original stream





RTMP format: `rtmp://domain/AppName/StreamName?txSecret=Md5(key+StreamName+hex(time FLV format: `http://domain/AppName/StreamName.flv?txSecret=Md5(key+StreamName+hex(t M3U8 format: `http://domain/AppName/StreamName.m3u8?txSecret=Md5(key+StreamName+hex(time format: webrtc://domain/AppName/StreamName?txSecret=Md5(key+StreamName+hex(time))

domain: Your playback domain name.

AppName: The live streaming application name, which is live by default and is customizable.

StreamName: The stream ID, which uniquely identifies a stream and is customizable.

txSecret: The authentication string generated after playback authentication is enabled.



txTime: The expiration timestamp of the playback URL configured in the console.

Note:

If you have enabled authentication, the actual expiration time of a URL will be txTime plus the validity period of the authentication key.

For the sake of convenience, the console allows you to specify the URL expiration time in human-readable format. If you enable authentication, when generating playback URLs, the system will convert it to a hex timestamp (the value of txTime).

As long as you start push or playback before the expiration time and the stream is not interrupted, the push or playback can continue even after the URL expires.

Playback URL for the transcoded stream

If a transcoding template is bound to your playback domain, and you want to play the transcoded stream, you need to append the template name (_transcoding template name) to the original playback URL.

For example, if the original playback URL is http://domain/AppName/StreamName.flv?

txSecret=Md5(key+StreamName+hex(time))&txTime=hex(time) and the name of the transcoding template bound is hd , the playback URL of the transcoded stream would be

```
http://domain/AppName/StreamName_hd.flv?
txSecret=Md5(key+StreamName_hd+hex(time))&txTime=hex(time) .
```

Adaptive bitrate playback URL

Only HLS and WebRTC are supported for adaptive bitrate playback. The URL formats for the two protocols are different.

To get an HLS adaptive bitrate URL, add the template name (_adaptive bitrate template name) after StreamName of the original playback URL.

For example, suppose the original playback URL is http://domain/AppName/StreamName.m3u8?
txSecret=Md5 (key+StreamName+hex(time)) &txTime=hex(time) and the name of the adaptive bitrate template bound is autobitrate.

The HLS adaptive bitrate URL would be http://domain/AppName/StreamName_autobitrate.m3u8?
txSecret=Md5(key+StreamName_autobitrate+hex(time))&txTime=hex(time) .

The format of a WebRTC adaptive bitrate URL is:

```
Playback domain (domain) + Application name (AppName, which is live by default),

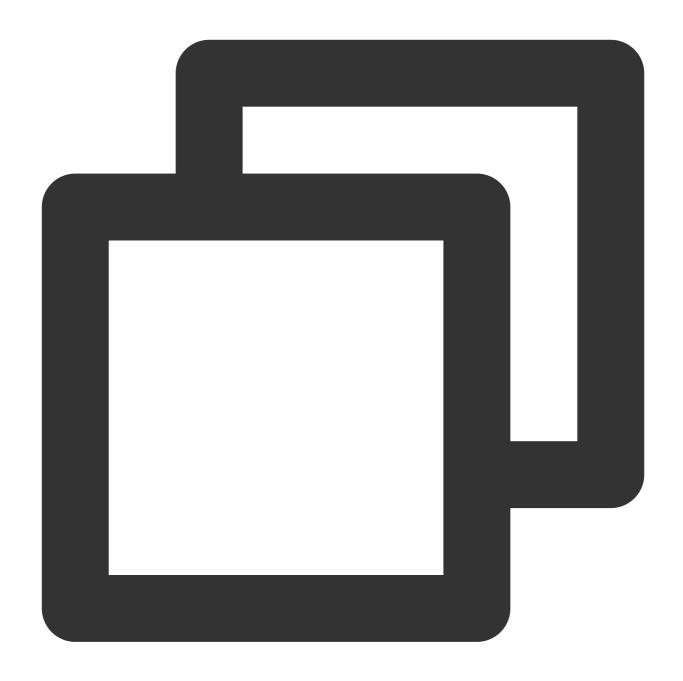
Stream ID (StreamName) + Authentication information + Adaptive bitrate stream names

+ Name of the initially played stream + Bitrate control mode.
```

Note:

The adaptive stream names are listed in descending order by bitrate.

Suppose the adaptive bitrate template bound has three streams. Their names are "test 1", "test 2", and "test 3", and their bitrates are 200 Kbps, 300 Kbps, and 400 Kbps respectively. The WebRTC adaptive bitrate URL would be:



webrtc://domain/AppName/StreamName?txSecret=Md5(key+StreamName+hex(time))&txTime=he

H.265 playback URL

CSS supports pushing and playing H.265 streams. If the original stream is an H.264 stream, you can configure a transcoding template to transcode it into an H.265 stream. For details about how to do this in the console or by calling an API, see Live Remuxing and Transcoding.



Playback Authentication Configuration

Last updated: 2024-06-19 16:08:10

Overview

By default, the content of Cloud Streaming Services (CSS) is publicly accessible, allowing you to view the live streaming content as soon as you obtain the playback address. If you require access control over the live streaming content during the use of Live Video Broadcasting (LVB) or Live Event Broadcasting (LEB), this can be achieved through authentication settings to protect the content of the live streaming resources. Key authentication is used to generate the authentication txSecret field in the live streaming address, which can prevent unauthorized use of the live streaming due to domain name leaks. We recommend that you enable the key authentication feature to enhance the security of your live streaming content.

How to Configure

To enable URL authentication, a CSS user needs to generate an encrypted URL and provide it to other users. When a user requests content using the encrypted URL from a CSS acceleration node, the node will check the authentication information of the request to determine whether the request is valid. If it is, the node will return the content normally; otherwise, the node will reject the request, protecting your live streaming content.

Prerequisites

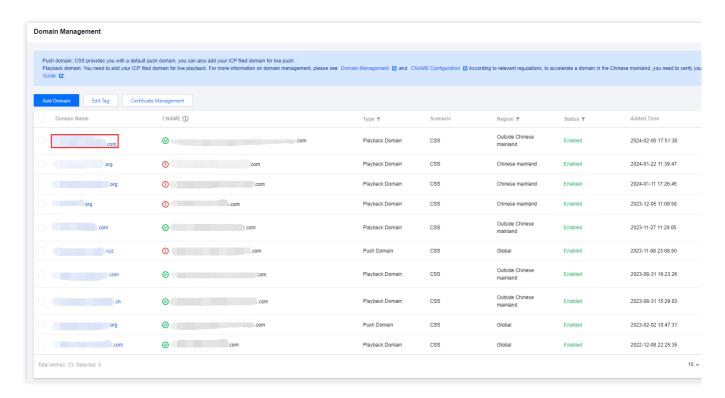
CSS has been activated, and you have logged in to the CSS console.

You have added a playback domain name.

Enabling Key Authentication

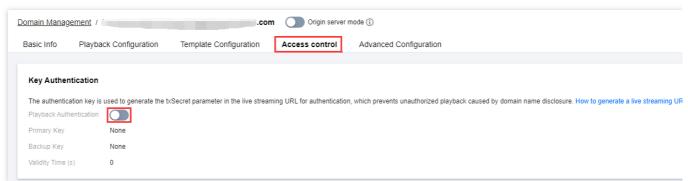
1. Select **Domain Management** and click the **playback domain name** for which you want to enable authentication or click **Manage** to enter the domain name management page.





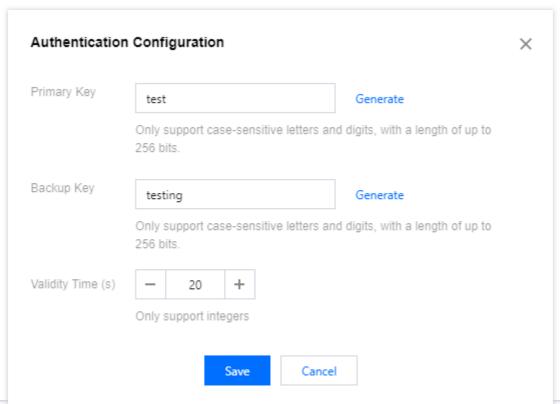
2. In the Access control > Key Authentication section, click

to enable key authentication.



3. Complete the following settings on the authentication configuration page:





Configuration Item	Description
Primary Key	When configuring a primary key for authentication, based on your actual needs and security policy, you can select a primary key randomly generated by the system, or enter a custom primary key, for example, test. It supports only uppercase letters, lowercase letters, and digits, with a maximum length of 256 characters.
Backup Key	When configuring a backup key for authentication, based on your actual needs and security policy, you can select a backup key randomly generated by the system, or enter a custom backup key, for example, testing. It supports only uppercase letters, lowercase letters, and digits, with a maximum length of 256 characters.
Validity Time (s)	It supports only integers. Enter the signature validity period, such as 20.

Note:

Playback authentication of a playback domain name is **disabled** by default.

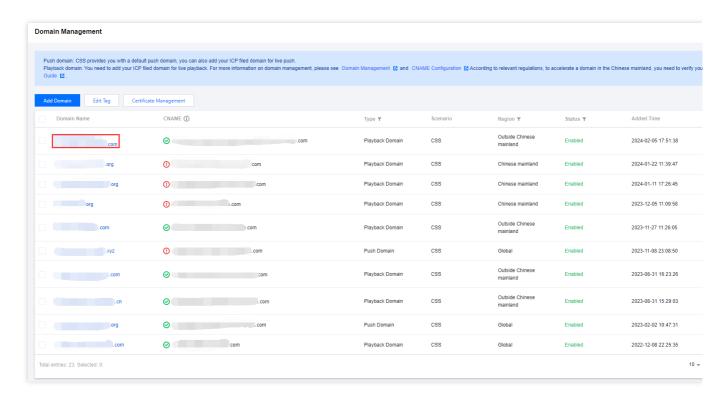
Authentication Key: It includes a primary key (required) and a backup key (optional). You can switch smoothly to the backup key if your primary key is disclosed.

4. Click **Save** to save the configuration.

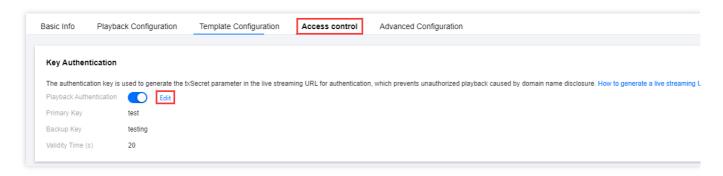


Modifying Key Authentication

1. Select **Domain Management**, and click the **playback domain name** that requires authentication configuration or click **Manage** to enter the domain name management page.



2. In the **Access control** > **Key Authentication** section, click **Edit** to enter the key authentication configuration page.



3. Modify the configuration item information according to your actual needs, and click **Save** to complete the modification.

Disabling Key Authentication

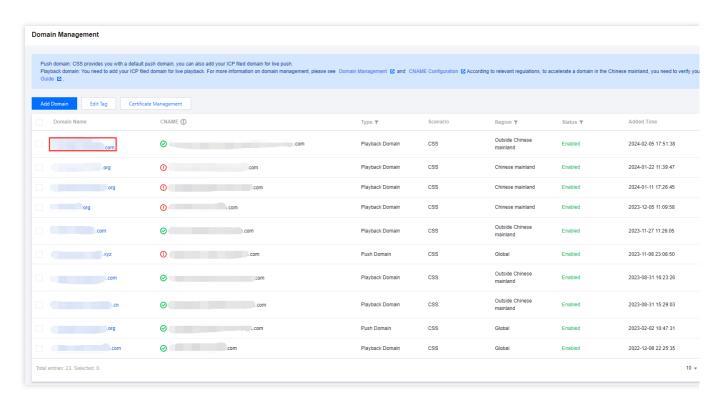


Note:

When you choose to disable key authentication, make sure you understand the risks involved. Disabling key authentication may expose your live streaming service to piracy, resulting in additional service fees. Therefore, we recommend that you keep key authentication enabled to protect your live streaming content.

After Enabling Key Authentication, if you need to disable this feature, follow these steps:

1. Select **Domain Management**, and click the **playback domain name** that requires authentication configuration or click **Manage** to enter the domain name management page.



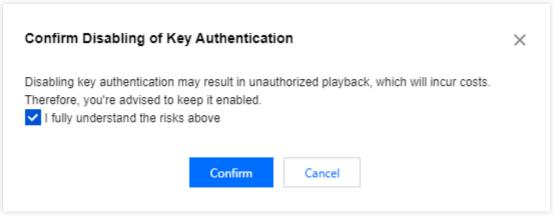
2. In the Access control > Key Authentication section, click

to disable key authentication.



3. Before disabling key authentication, confirm once more if you really wish to proceed. If you understand and accept the risks, click **Confirm** to proceed.





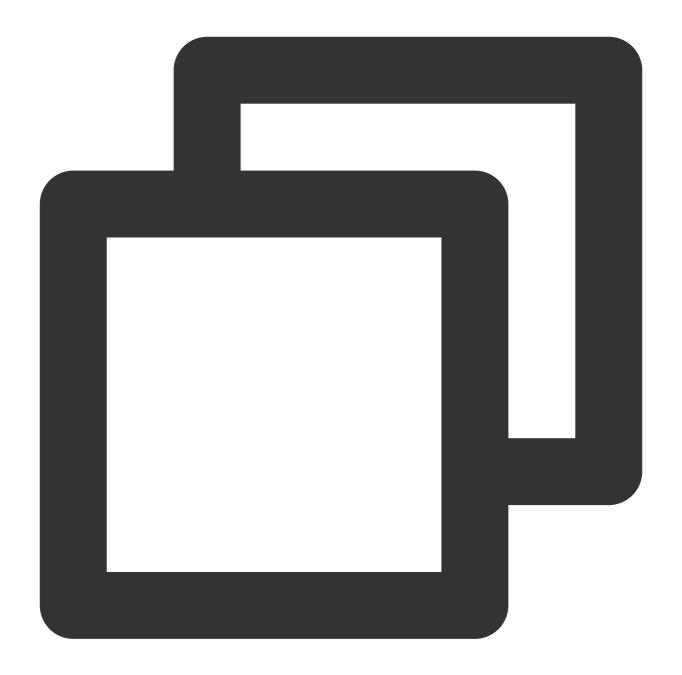
Note:

After authentication is enabled for the playback domain name, the original playback URL will be inaccessible and an error 403 will be returned. Before enabling this feature, please make sure that your live streaming platform is compatible with the following authentication algorithm so that your streaming services will not be affected.

Example

Original playback URL:

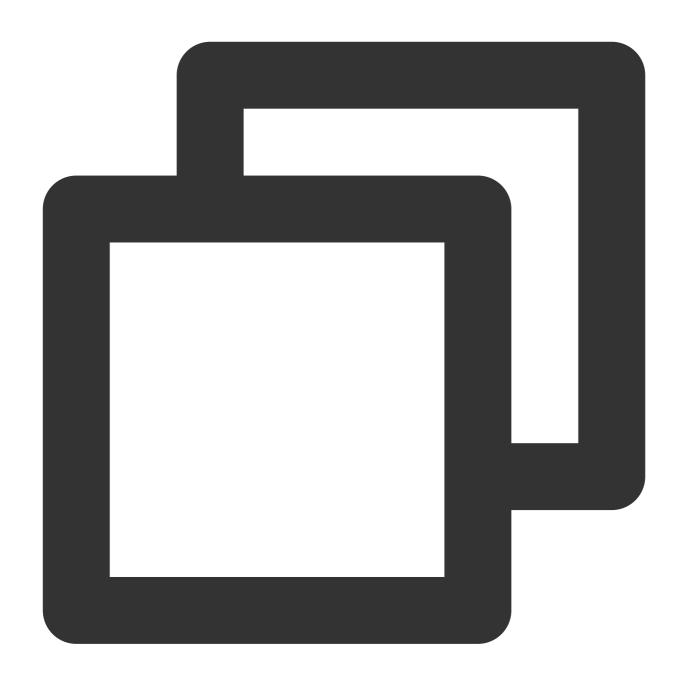




http://www.test.com/live/test01.flv

The authentication parameters configured are as follows:





Primary key: ngoeiq03

Backup key: -

Validity period: 12495 seconds

Note:

If you have enabled authentication, the actual expiration time of a URL will be <code>txTime</code> plus the validity period of the key.

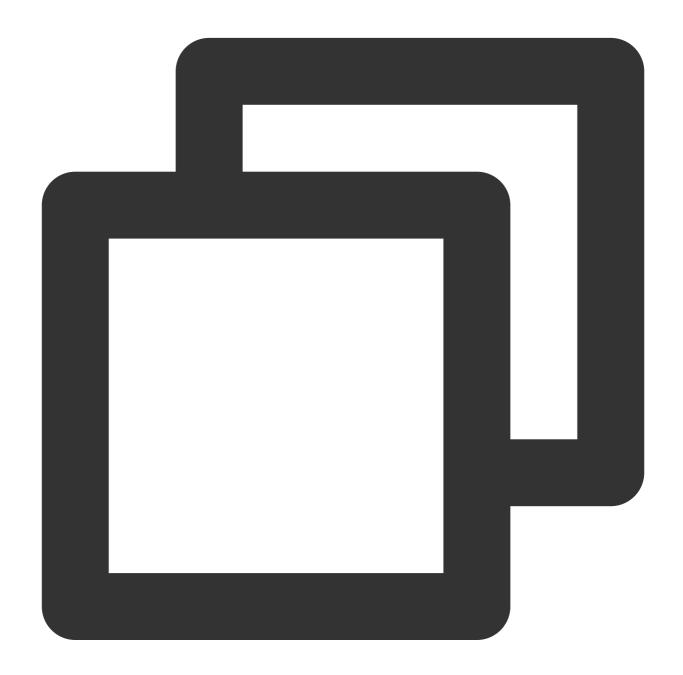
For the sake of convenience, the time you set in the console is the actual expiration time. If you have enabled authentication, the system will calculate the txTime when generating playback URLs.



If you use FLV or RTMP methods to start pulling the stream before the expiration time, the stream will be maintained normally as long as the connection is not interrupted or stopped, even if the expiration time has passed.

If you use the HLS method to start pulling the stream before the expiration time, the stream will be stopped when the expiration time is reached.

Timestamp calculation:



Setting time: 2018.12.01 08:30:00
Decimal Unix timestamp: 1543624200

Hexadecimal Unix timestamp: 5C01D608 (case-insensitive). CSS uses hexadecimal times



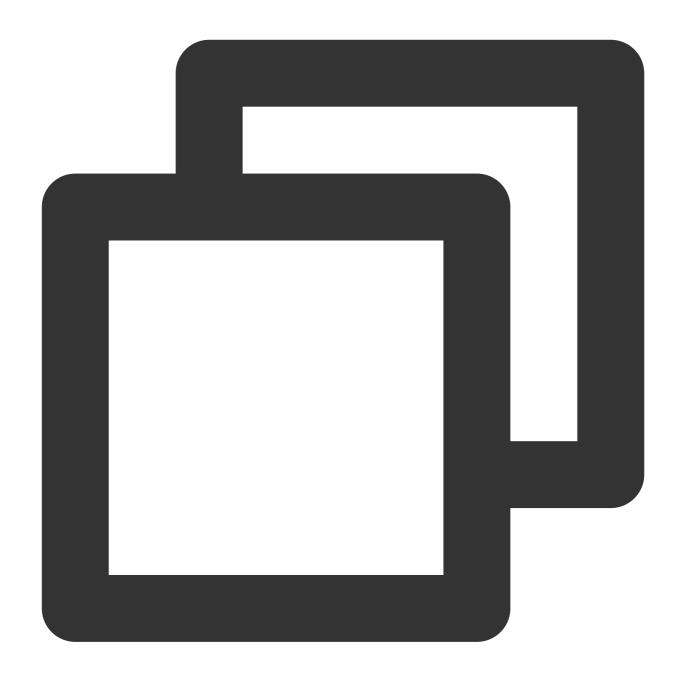
Authentication signature calculation:



```
txSecret = MD5(key+StreamName+txTime)
StreamName is the stream name, which is the same as the StreamID
txTime is the timestamp
key is the authentication key
txSecret = MD5(ngoeiq03+test01+5C01D608)
txSecret = MD5(ngoeiq03test015C01D608)
txSecret = ce797dc6238156d548ef945e6ad1ea20
```

New playback URL:





http://www.test.com/live/test01.flv?txSecret=ce797dc6238156d548ef945e6ad1ea20&txTim

The expiration time of this URL is 2018.12.01 08:30:00 + 12495 seconds, i.e., 2018.12.01 11:58:15 Beijing time. If authentication fails or the URL expires, CSS will return 403.



Referer Configuration

Last updated: 2024-06-18 14:44:09

You can set referer blocklist/allowlist and rules to block/allow playback requests so as to protect live streaming content. You can also choose whether to allow empty referer.

How to Configure

Referer URL is based on the HTTP protocol. CSS uses the referer field in an HTTP request to identify the source and verify the request, and then determine whether to accept or reject the request.

Notes

Referer information is included in HTTP requests. Therefore, referer configuration is ineffective for non-HTTP (such as RTMP, WebRTC, QUIC) requests. If you want to restrict the access of RTMP requests so as to prevent malicious users from bypassing referer hotlink protection through RTMP pull, perform configurations in the protocol disablement settings.

Enabling, disabling, or modifying the referer takes effects in 15-20 minutes after the configuration. You don't need to push streams again.

The referer hotlink protection feature verifies the referer information in the header of an HTTP request so as to check whether the request is valid and allow or reject live streaming accordingly. However, there may be cases where a forged referer bypasses the verification to hotlink the service. Therefore, we recommend you not strongly rely on referer for content protection.

Prerequisites

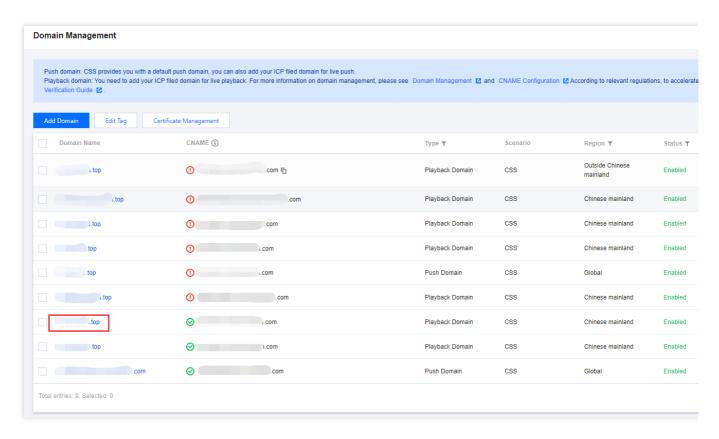
You have activated the CSS service and logged in to the CSS console.

You have added a playback domain name.

Enabling Referer

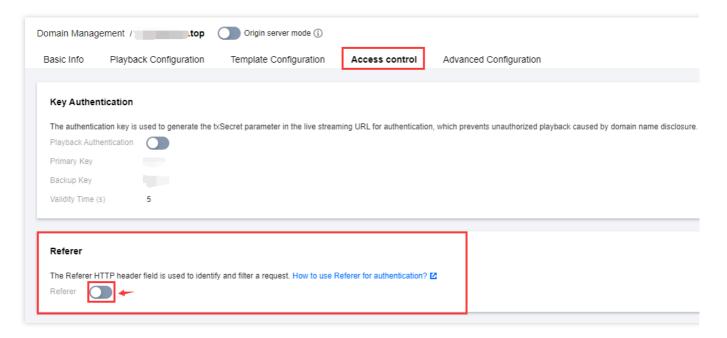
 Select <u>Domain Management</u>, and click the target <u>playback domain</u> or click <u>Manage</u> on the right to enter the domain management page.





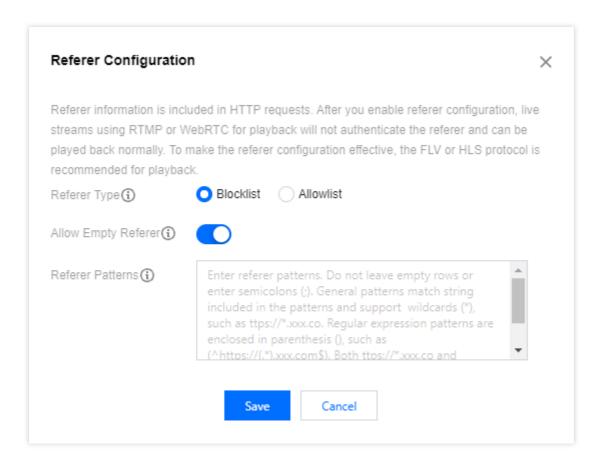
2. In Access Control > Referer Configuration, click

to enable Referer Hotlink Protection.



3. And configure as follows:





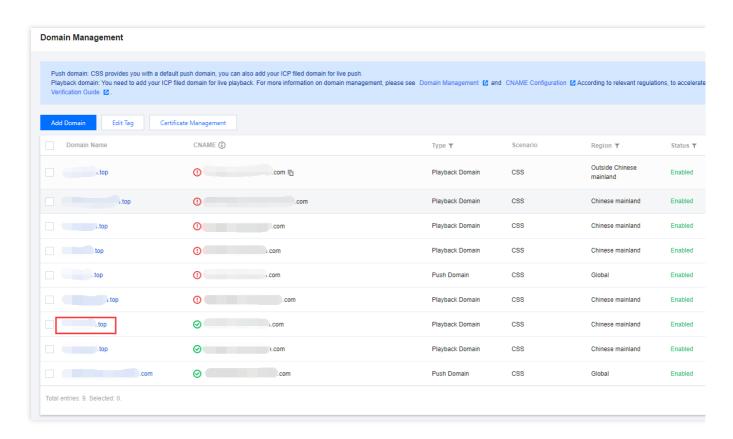
Configuration Item	Description
Referer Type	Select Blocklist or Allowlist as the referer type. You cannot select both of them, When the referer allowlist is configured, request sources on the list will be allowed to access the live streaming content while those not on the list will be blocked. When the referer blocklist is configured, request sources on the list will be blocked to access the live streaming content while those not on the list will be allowed.
Allow Empty Referer	When this feature is enabled, access will be allowed for HTTP requests with empty or no referer field. Users can access the live stream URL directly via browsers. When this feature is disabled, requests with empty referer will be rejected.
Referer Patterns	You can enter up to 100 patterns. Please separate them with line breaks, Do not leave empty rows or enter semicolons (;). You can enter IPs or domain names. The field supports path prefixes (domain names and IPs) and wildcards (domain names) for match. For example: If you enter 101.1.0.1 and www.test.com ,the configuration will take effect for both 101.1.0.1/157 and www.test.com/tencent. If you enter *.test.com , the configuration will take effect for both www.test.com and a.test.com . If you enter no referer pattern, the blocklist/allowlist is not configured.



4. Click **Save** to save the configuration.

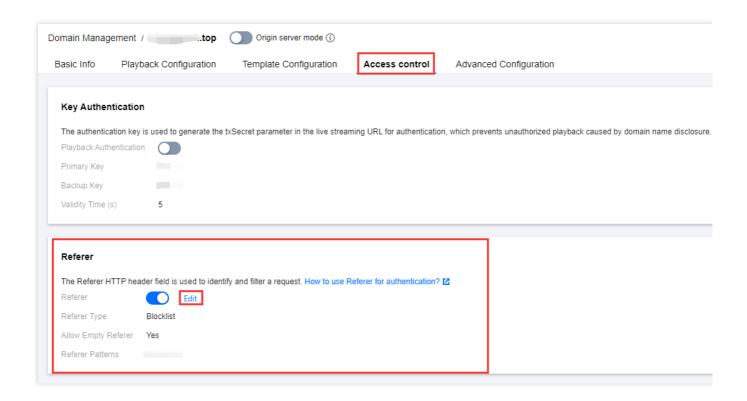
Modifying Referer

1. Select **Domain Management**, and click the target **playback domain** or click **Manage** on the right to enter the domain management page.



- 2. In Access Control > Referer Configuration, click Edit to enter the referer configuration page.
- 3. Modify the configuration items and click **Save**.



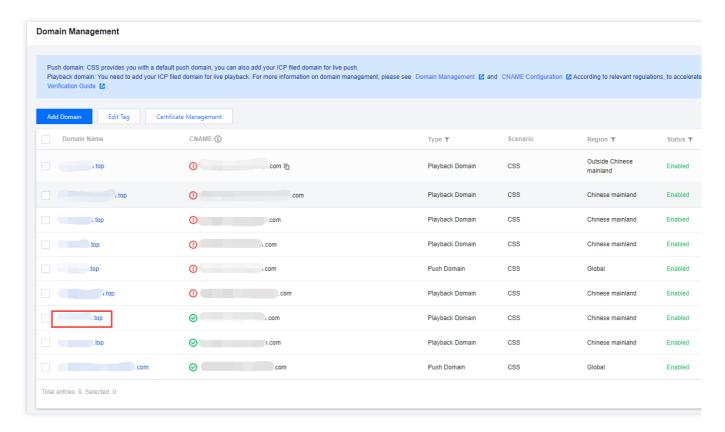


Disabling Referer

After enabling the referer, you can disable it by performing the following steps:

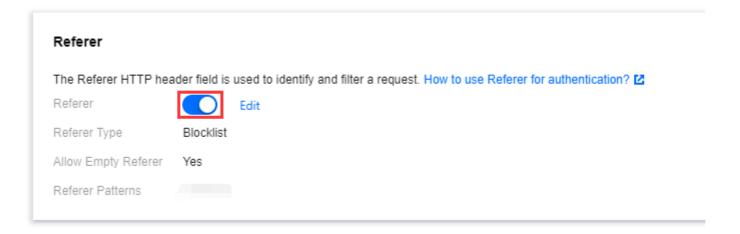
1. Select **Domain Management**, and click the target **playback domain** or click **Manage** on the right to enter the domain management page.





2. In Access Control > Referer Configuration, click

to disable the referer.





Template Configuration

Last updated: 2024-05-28 10:26:22

With CSS, the original bitrate is used for playback by default. To use a different playback bitrate, you can bind your domain with a transcoding or adaptive bitrate template. This document shows you how to bind a template to and unbind a template from a playback domain.

Notes

A template takes effect about 5-10 minutes after it is bound to a domain.

After you specify a transcoding template, the backend will generate playback URLs of different formats for the transcoded stream. To avoid image distortion, push the stream at a resolution as close as possible to the original resolution.

H.265 is supported by fewer players than H.264. Playback may fail if a player does not support H.265. To solve this issue, you can configure a transcoding template to transcode your video to H.264.

Loading may take some time for the first user accessing the URL that uses a different playback bitrate.

One domain can be bound with multiple transcoding templates. After you bind a template, videos will be transcoded as specified in the template.

You can create up to **50** transcoding templates.

Prerequisites

You have logged in to the CSS console and added a playback domain name.

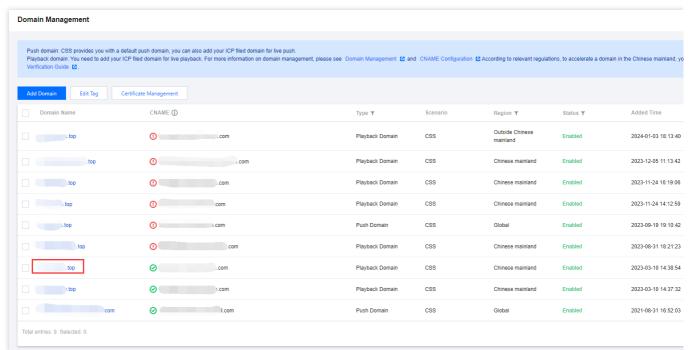
You have created a transcoding template or an adaptive bitrate template.

Transcoding Template

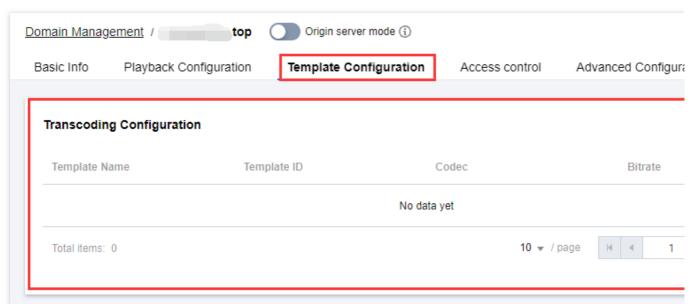
Binding a transcoding template

1. Go to Domain Management. Click the name of your playback domain or Manage on the right.





2. Select **Template Configuration > Transcoding Configuration**, and click **Edit** in the upper-right corner of the **Transcoding Configuration** tab.

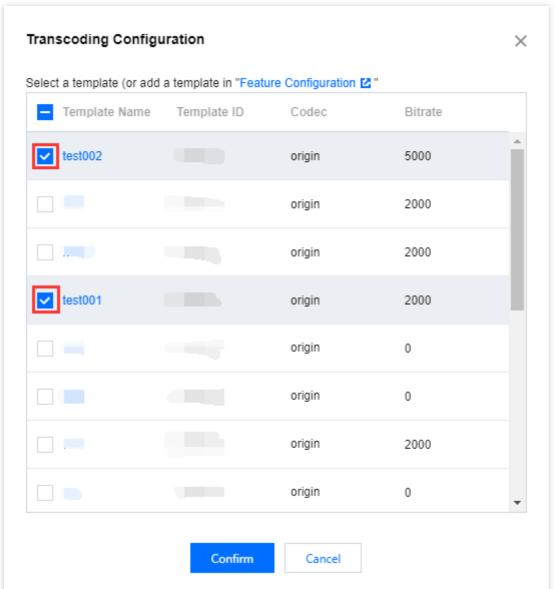


3. Based on your actual business needs, choose different transcoding configuration templates.

Note:

Choosing different transcoding configuration templates will specify the encoding method and bitrate settings set by the transcoding template for the playback URL under that domain.



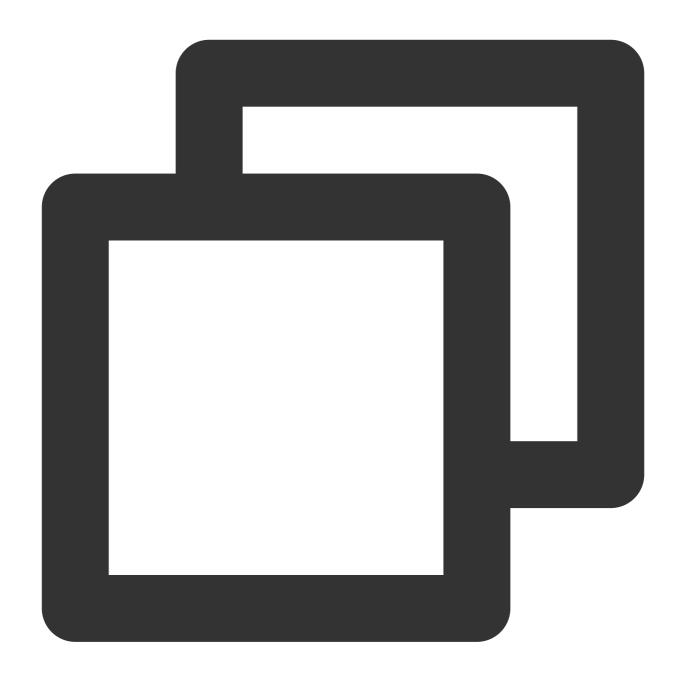


4. Click Confirm.

URL format for transcoded streams

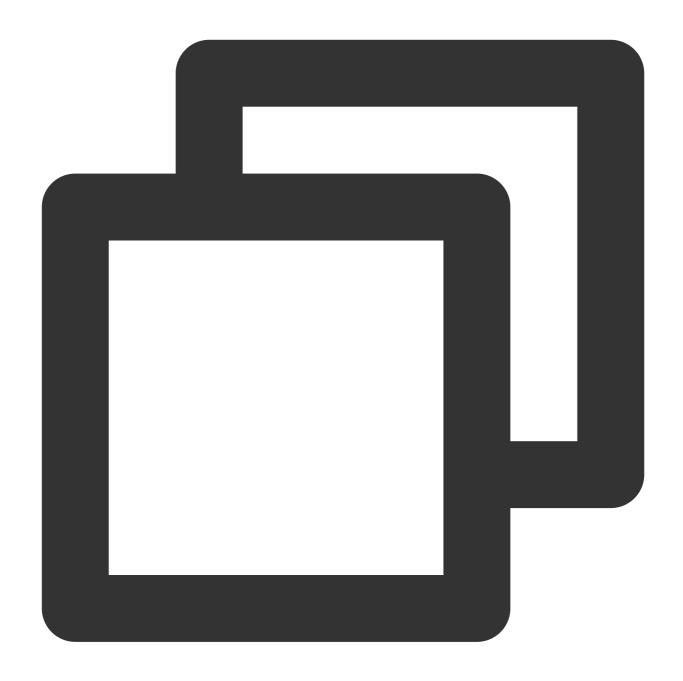
After binding a transcoding template, append its name to your playback URL (playback URL_transcoding template name). If you do not append the template name, the original stream will be played. For more information on playback URLs, see Playback Configuration.

Suppose the name of the transcoding template bound is **hd**, and the original playback URL is as follows:



http://domain/AppName/StreamName.flv?txSecret=Md5(key+StreamName+hex(time))&txTime=

To play the transcoded stream, you need to use the following URL:

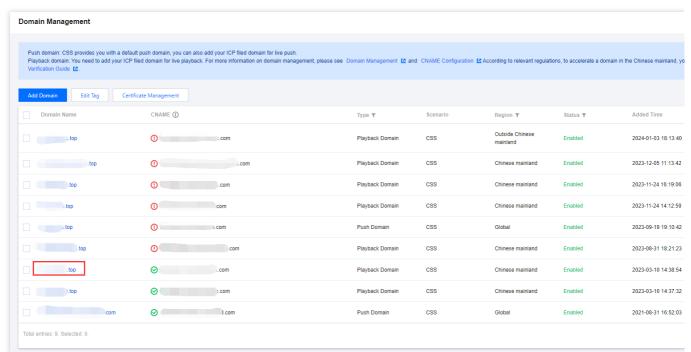


http://domain/AppName/StreamName_hd.flv?txSecret=Md5(key+StreamName_hd+hex(time))&t

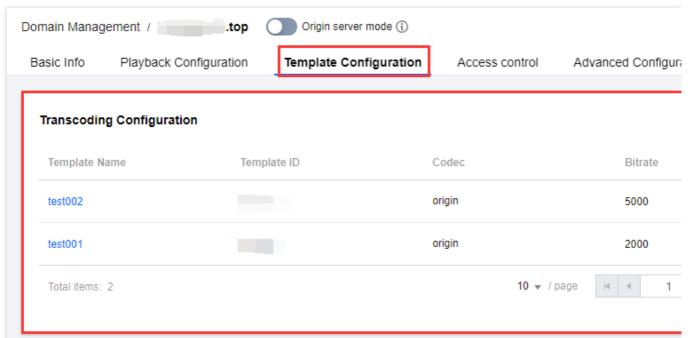
Unbinding a transcoding template

1. Go to Domain Management. Click the name of your playback domain or click **Manage** on the right.



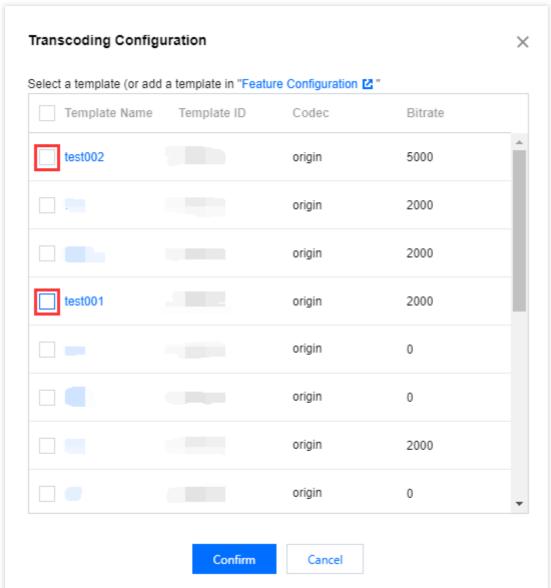


2. Select **Template Configuration > Transcoding Configuration**, and click **Edit** in the upper-right corner of the **Transcoding Configuration** tab.



3. Based on your actual business needs, deselect the corresponding templates.





4. Click Confirm.

Note

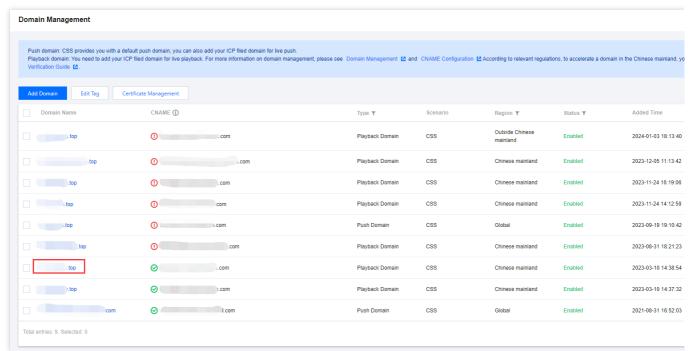
To delete a template, you need to unbind it first and then go to **Feature Configuration** > Live Transcoding to delete it. For details, see Deleting a Template.

Adaptive Bitrate Template

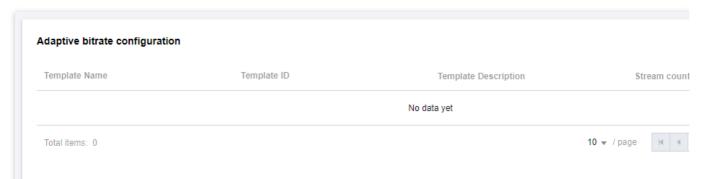
Binding an adaptive bitrate template

1. Go to Domain Management. Click the name of your playback domain or **Manage** on the right.





2. Select **Template Configuration > Adaptive bitrate configuration**, and click **Edit** in the upper-right corner of the **Adaptive bitrate configuration** tab.

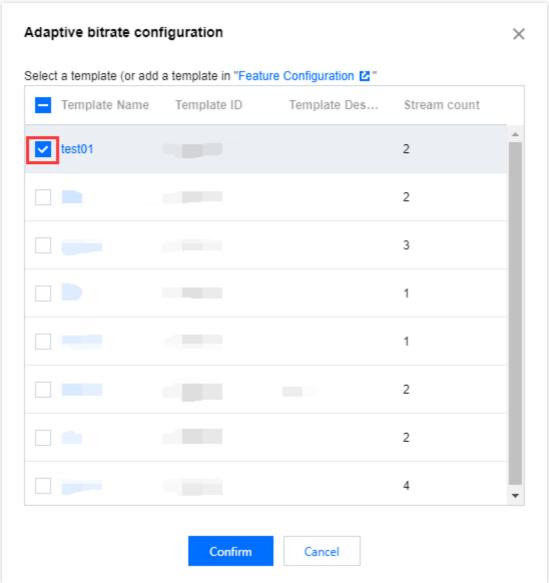


3. Based on your actual business needs, choose the appropriate adaptive bitrate configuration template.

Note:

Choosing different adaptive bitrate configuration templates will specify the sub-stream information set by the adaptive bitrate template for the playback URL under that domain.





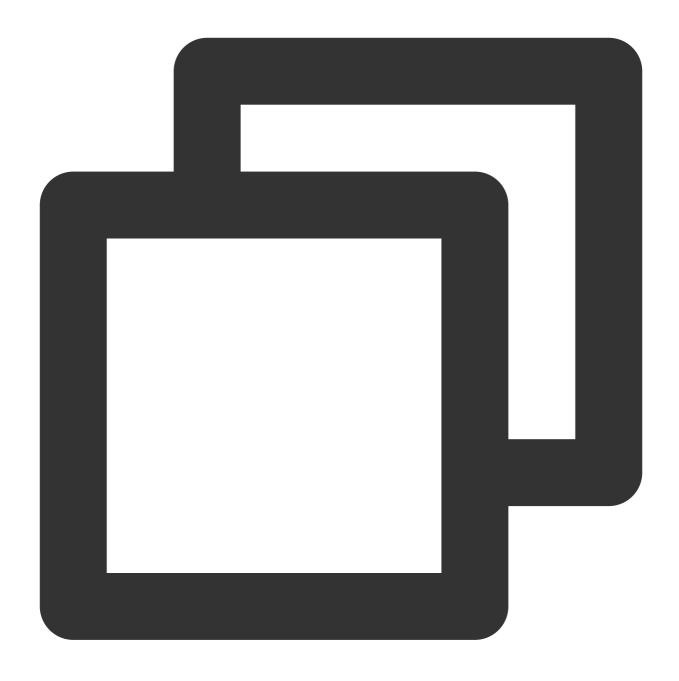
4. Click Confirm.

Adaptive bitrate URL format

Only HLS and WebRTC are supported for adaptive bitrate playback. The URL formats for the two protocols are different. For details, see Playback Configuration.

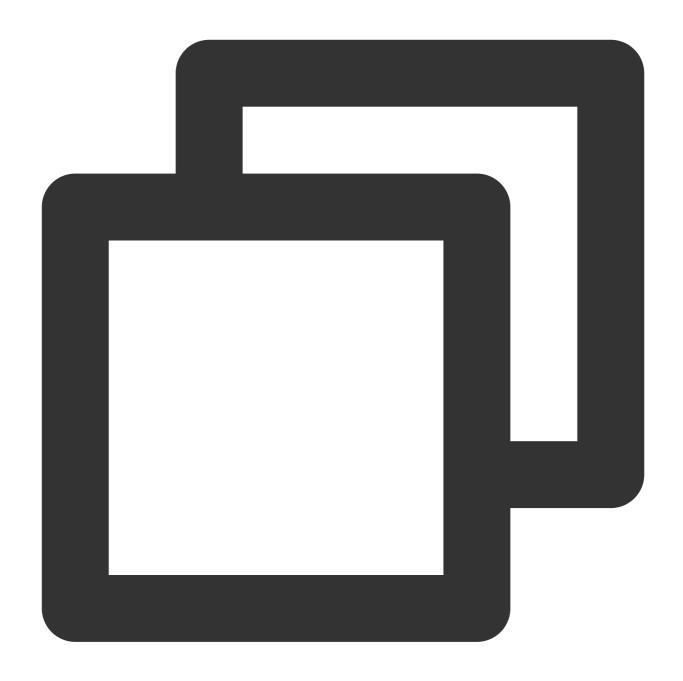
HLS URL:

Suppose the name of the adaptive bitrate template bound is **autobitrate**, and the original playback URL is as follows:



To play the transcoded stream, you need to use the following URL:

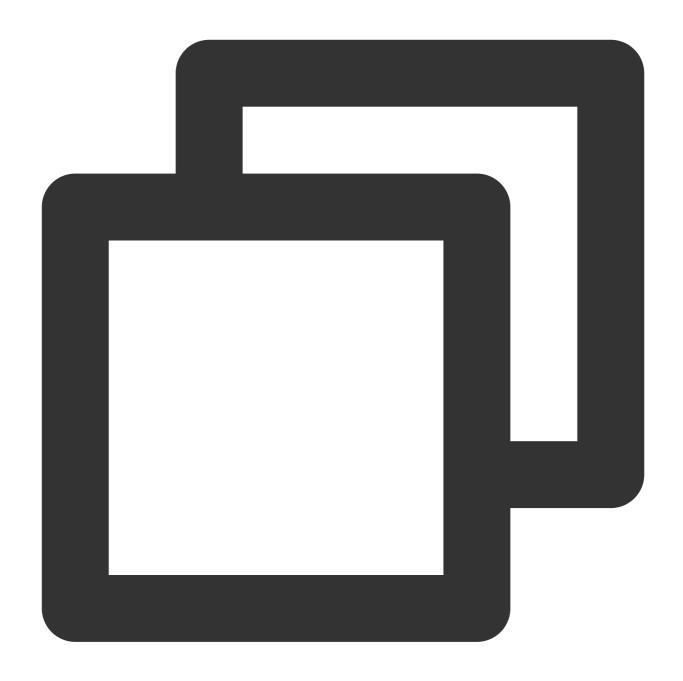




WebRTC URL:

Suppose the adaptive bitrate template bound has three streams. Their names are "test 1", "test 2", and "test 3", and their bitrates are 200 Kbps, 300 Kbps, and 400 Kbps respectively.

The adaptive bitrate playback URL would be as follows:

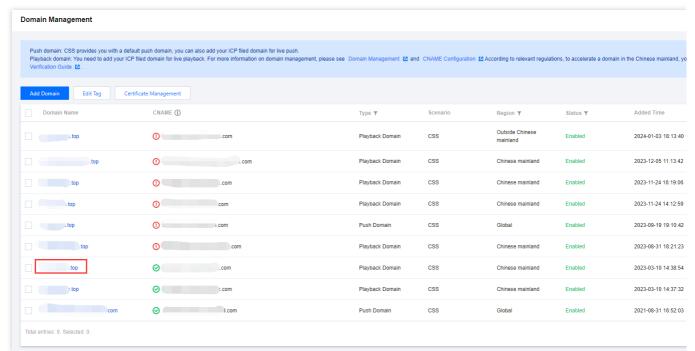


webrtc://domain/AppName/StreamName?txSecret=Md5(key+StreamName+hex(time))&txTime=he

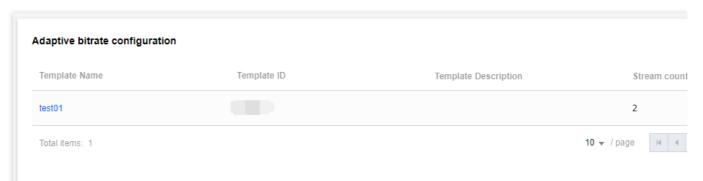
Unbinding an adaptive bitrate template

1. Go to Domain Management. Click the name of your playback domain or click **Manage** on the right.



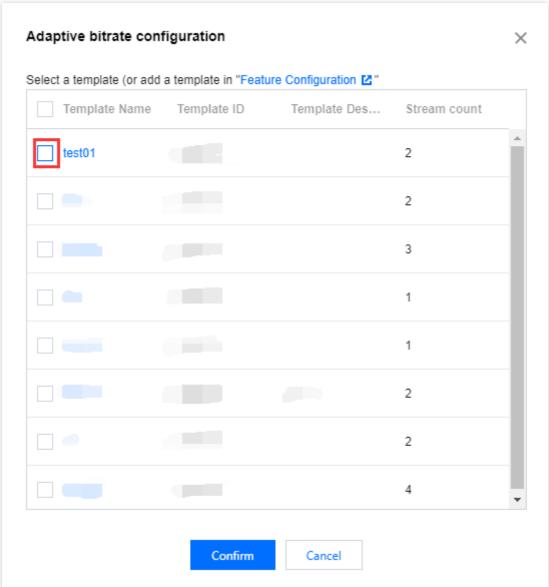


2. Select **Template Configuration > Adaptive bitrate configuration**, and click **Edit** in the upper-right corner of the **Adaptive bitrate configuration** tab.



3. Based on your actual business needs, deselect the corresponding templates.





4. Click Confirm.

Note

To delete a template, you need to unbind it first and then go to **Feature Configuration** > Live Transcoding to delete it. For details, see Deleting a Template.



HTTPS Configuration

Last updated: 2024-07-02 15:44:17

Overview

The HTTPS protocol is a network protocol built based on the SSL and HTTP protocols for encrypted transfer and authentication, which is more secure than the HTTP protocol. If you want to enable HTTPS acceleration, you can do so by enabling the HTTPS feature for the playback domain name and configuring a correct and valid certificate. You can purchase a certificate from Tencent Cloud SSL Certificate Service. If you already have one, you can upload it to the CSS console for configuration. Currently, CSS only supports the PEM format. If your certificate is in another format, you need to convert it to PEM format first. The format requirements and configuration method for the certificate are as follows:

Prerequisites

You have logged in to the CSS console.

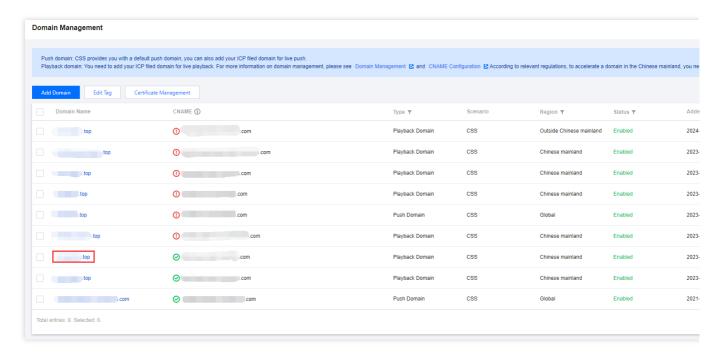
You have added a playback domain name.

Directions

Step 1. Edit the HTTPS configuration

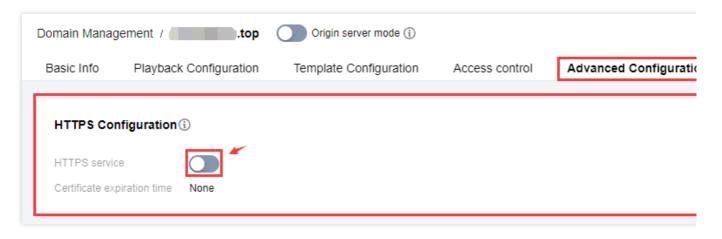
1. Enter **Domain Management** and click the **playback domain name** to be configured or **Manage** on the right to enter the domain name details page.





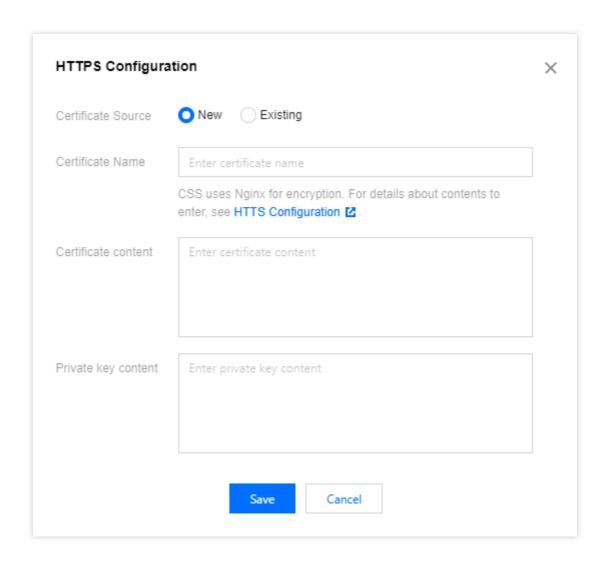
2. Select Advanced Configuration > HTTPS Configuration, then click

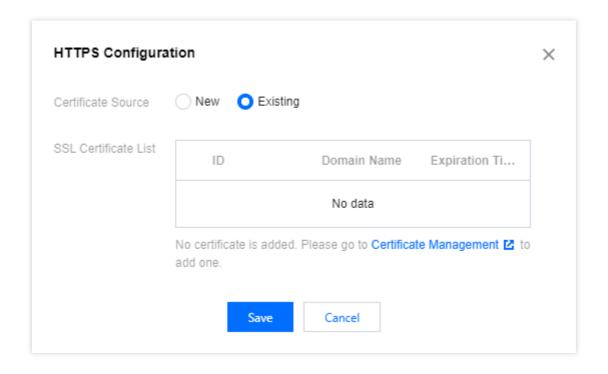
to enable the HTTPS service.



3. After enabling the HTTPS service, enter the HTTPS Configuration page and proceed with the following settings:









4. Select the source of the certificate to be configured, enter relevant information, and click Save.

Certificate Source	Required Configuration Items	
Self-owned certificate	Certificate Name: enter a custom name used to identify the certificate. Certificate Content: enter the content of the .crt file for Nginx. For more information, please see Certificate content. Private Key Content: enter the content of the .key file for Nginx. For more information, please see Certificate key.	
Tencent Cloud-hosted certificate	Certificate List: select an uploaded certificate in SSL Certificate Service.	

Note:

The HTTPS feature will take effect approximately 2 hours after configuration is completed, please be patient.

Certificate Description

A certificate provided by the CA includes Apache, IIS, Nginx, and Tomcat files. The encryption service of CSS uses Nginx, so you should select the content of the Nginx files for the configuration.

Go to **SSL Certificate Service console** > **Certificate Management**, select the target certificate, click **Download** in the "Operation" column, and decompress the downloaded package to get the following files:



Certificate content:

enter the entire content between ----BEGIN CERTIFICATE---- and ----END CERTIFICATE---- in the .crt file for Nginx.

Sample content:





Note:

If your certificate is issued by an intermediate CA and contains multiple certificates, the certificate content should be spliced as follows:

```
----BEGIN CERTIFICATE-----
----BEGIN CERTIFICATE-----
----BEGIN CERTIFICATE-----
```

Certificate

```
private key:
```

```
enter the entire content between ----BEGIN RSA PRIVATE KEY---- and ----END RSA PRIVATE KEY---- in the .key file for Nginx.
```

Sample content:





Step 2. Verify the configuration

The HTTPS configuration will take effect in about 2 hours. Please visit the domain name about 2 hours after the certificate is submitted. If HTTPS is displayed in the address bar of the browser, the configuration is successful.

https://console.cloud.tencent.com/live

Step 3. Modify the configuration

The HTTPS feature can be enabled and disabled. Once it is disabled, CSS will no longer provide HTTPS service for the domain name. If the certificate has expired, it should be replaced with a new valid one.

FAQs

What format of the certificate should be filled in for the live HTTPS configuration? How to identify whether a certificate is in PEM format or DER format?



Region Configuration

Last updated: 2024-07-10 16:39:06

To use content delivery, acceleration, and playback services in a different region, you can change the acceleration region for your playback domain in the CSS console.

Prerequisites

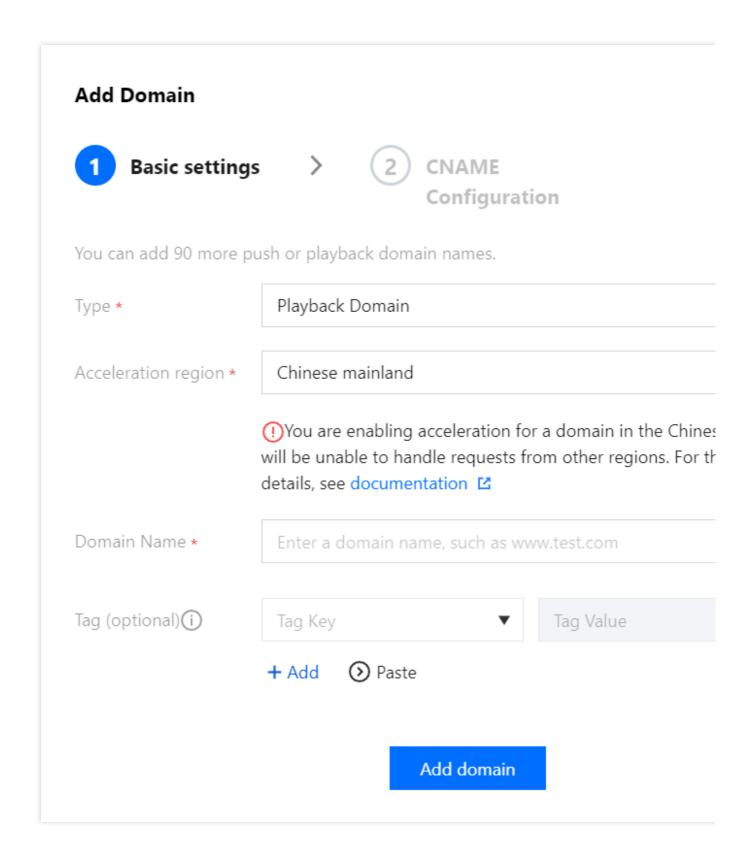
You have logged in to the CSS console.

You have added a playback domain name.

Note:

In the process of adding a new domain and selecting a playback domain, please choose the acceleration region required for live broadcast distribution, such as "Chinese mainland". Subsequently, fill in the domain name and tag information optionally. Click on **Add Domain and proceed to the next step**.





Notes

CSS pricing differs inside and outside the Chinese mainland. For details, see Pricing Overview.

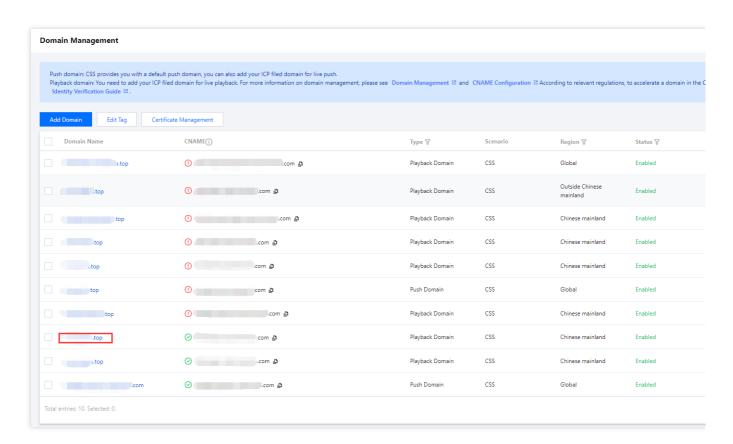
A playback domain cannot be used outside its acceleration region.



If the accelerated region includes the Chinese mainland, you need to apply for ICP filing for your playback domain. Changing the acceleration region will reset the bandwidth cap. You need to configure it again.

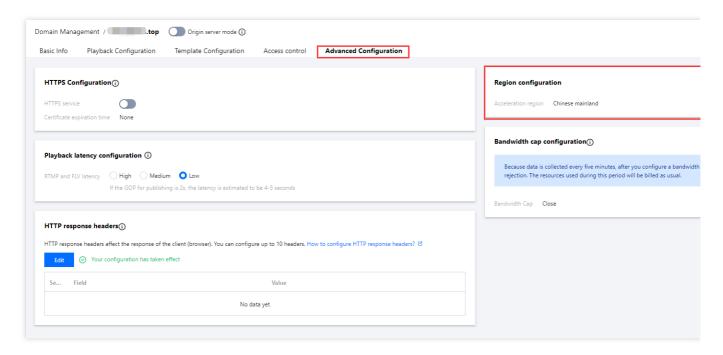
Directions

1. Go to Domain Management. Click the name of your playback domain or Manage on the right.

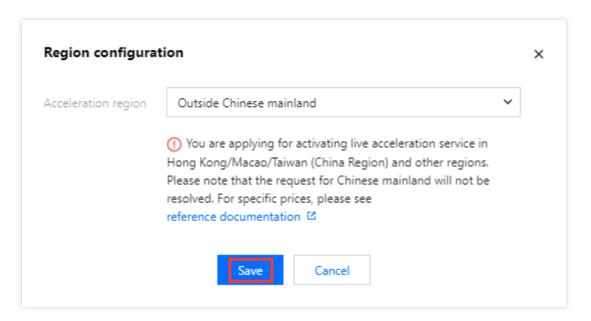


- 2. Select the Advanced Configuration tab and find Region configuration.
- 3. Click **Edit**. In the pop-up window, you can change the acceleration region to **Chinese mainland**, **Global**, or **Outside Chinese mainland**.





4. Click Save.



Acceleration Region	ICP Filing Required	Description
Chinese mainland	Yes	Cannot handle requests outside the Chinese mainland.
Global	Yes	Acceleration is supported globally, but prices differ inside and outside the Chinese mainland.
Outside Chinese mainland	No	Cannot handle requests inside the Chinese mainland. Prices differ inside and outside the Chinese mainland.





Origin Server Configuration

Last updated: 2024-07-10 17:25:39

If you have a self-built origin server and live streaming source, CSS can pull streams from your origin server and distribute the content for you. This document describes how to configure origin server information for a playback domain in the CSS console.

Limits

Origin server configuration takes effect about one hour after configuration is complete.

After configuring an origin server for a playback domain, you can no longer bind a push domain to the playback domain by specifying a StreamName . Nor can you configure watermarking, transcoding, recording, screenshot, or porn detection tasks for the playback domain.

Prerequisites

You have logged in to the CSS console.

You have built a live streaming origin server.

You have added a playback domain name.

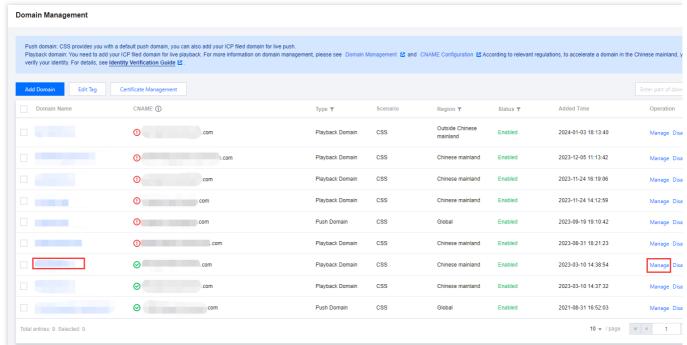
Origin-Pull Configuration

You can edit a domain's origin server information, including the basic information, protocol, and host in the console.

1. In the CSS console, select Domain Management on the left sidebar. Click the name of your Playback

Configuration or click Manage on the right.





2. Beside Domain Management/Domain, click

to enable or disable **Origin server mode**.



3. If the origin server mode is already enabled, you can modify its settings on this page.

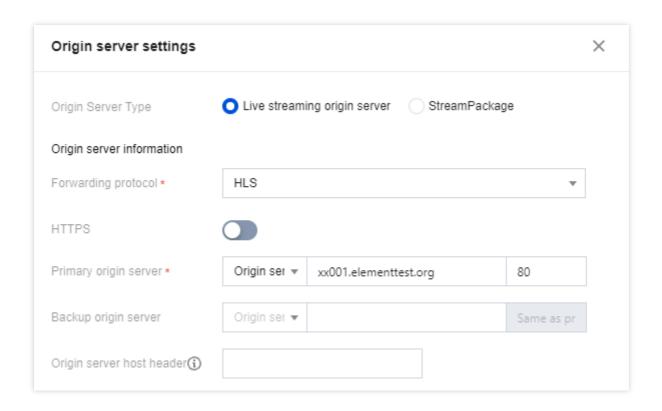
Basic Configuration Description

Origin server information

Origin Server Information	Description
Origin Server Type	Supports two types: Live Streaming Origin Server and StreamPackage.
Forwarding protocol	Supports RTMP, HTTP-FLV, and HLS protocols.
HTTPS	If the FLV or HLS protocol is used, you can enable HTTPS. If you enable HTTPS, port 443 will be used. Post-redirection HTTPS is also supported. There are no port restrictions.
Primary origin server	The address of the primary origin server, which can be an IP address or domain. You can also configure a backup origin server. The addresses will be polled.



Backup origin server	The address of the backup origin server (optional).	
Origin server host header	By default, the origin server address is used as the Host header if it is not configured.	



Host header

If the FLV or HLS protocol is used, you can configure an HTTP host header that specifies the exact domain that CSS accesses when pulling from the origin server. If not configured, the origin address is used as the Host header by default.

Notes

The difference between an origin server address and a host header is as follows:

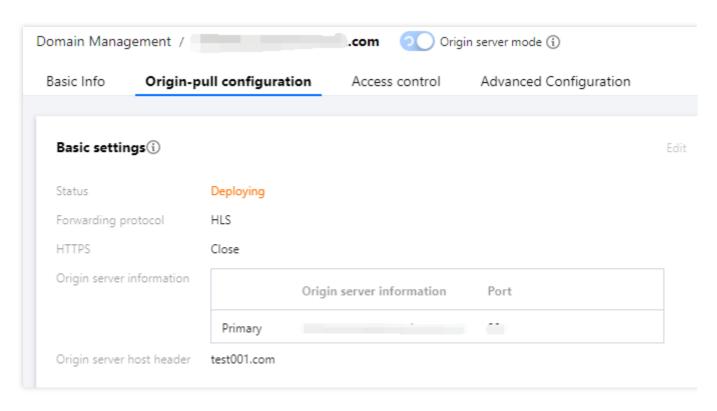
An origin server address is the IP address an origin-pull request is sent to.

A host header specifies the domain of the origin server address a request is sent to.

Configuration example

1. An origin server is configured for the playback domain xx001.elementtest.org as follows:





2. The process of pulling from the origin server would be as follows:

When the user accesses the resource by opening <code>http://xx001.elementtest.org/index.m3u8</code>, because the resource is not yet cached in Tencent Cloud, CSS will resolve the domain <code>test001.com</code> to get the server address of the origin server. Suppose it is 1.1.1.1. CSS will access the 1.1.1.1 server, find the <code>index.m3u8</code> file in the web server <code>test002.com</code>, and then return the resource to the user.

Remuxing

If the RTMP or HTTP-FLV protocol is used, you can enable HLS remuxing. Below are the formats of an RTMP, HTTP-FLV, and HLS address.

RTMP: rtmp://Playback domain/AppName/StreamName

FLV: http://Playback domain/AppName/StreamName.flv

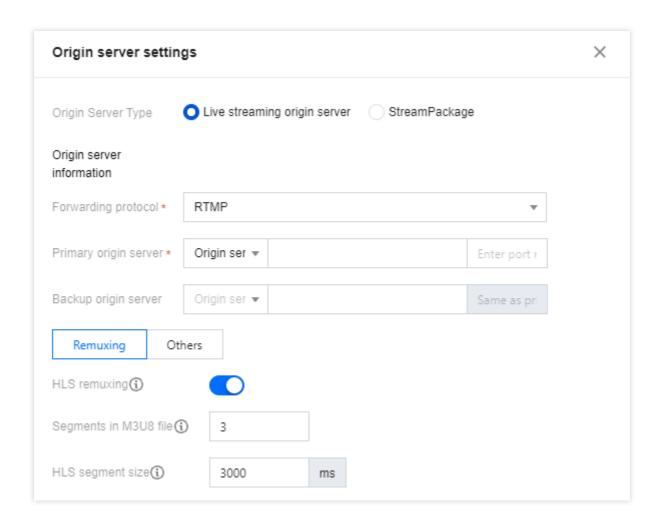
M3U8: http://Playback domain/AppName/StreamName.m3u8

Notes

Number of HLS segments: Three by default. Value range: 3-10.

HLS segment size: Three seconds by default. Value range: 3-10. The actual segments generated will not be smaller than the GOP size.





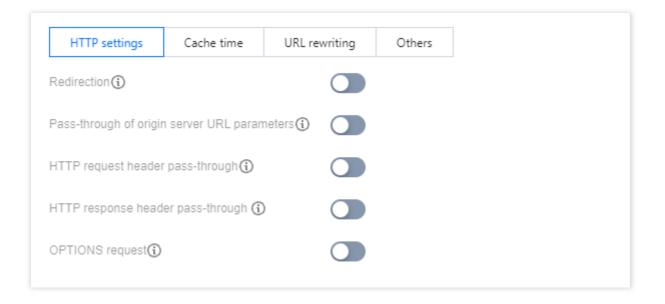
HTTP configuration

If the HLS protocol is used, you can configure the **HTTP settings**.

Description
If you enable this, Tencent Cloud will not cache the 301 or 302 status code. When 301 or 302 is returned by the origin server, Tencent Cloud will automatically redirect until it obtains the requested resource (max 10 redirects) and return the resource to the user. No redirects are needed on the user end. If you disable redirection, Tencent Cloud will return the 301 or 302 status code to the user end, which will redirect to get the resource.
By default, URL parameters are not passed through. If you enable this, parameters may be added to the URL without performing URL encoding or decoding.
By default, HTTP request headers are not passed through. You can enable this to pass through the headers. Duplicate headers (case-insensitive) are not supported currently.



HTTP response header pass- through	By default, HTTP response headers are not passed through. You can enable this to pass through the headers. Duplicate headers (casesensitive) are supported currently.	
OPTIONS request	By default, GET request is supported, and Option request is supported after enabling it.	



Cache configuration

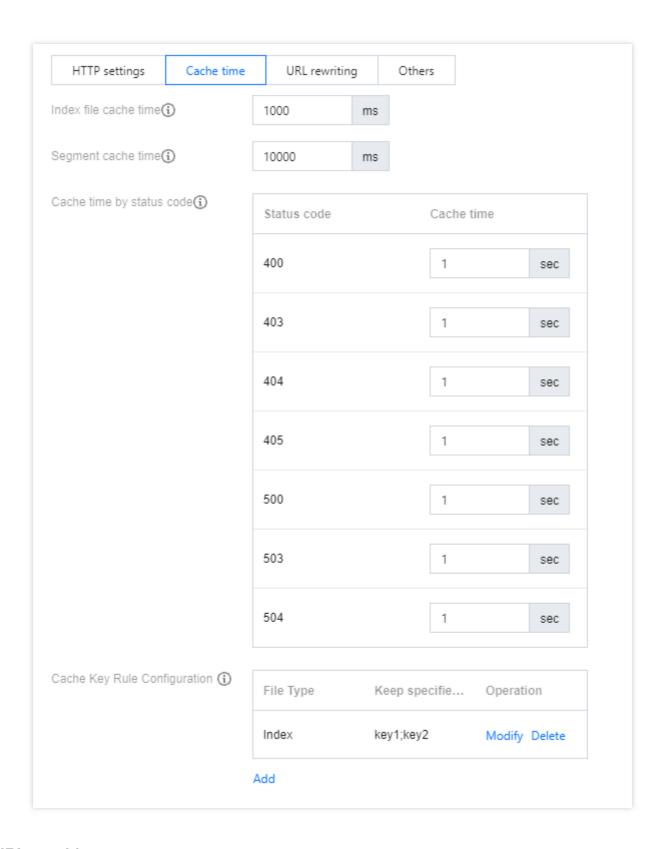
If the HLS protocol is used, you can configure the resource cache time. After Tencent Cloud obtains the requested resource successfully from the origin server (status code 200), it will cache the index file and segments as configured.

Item	Description
Index file cache time	The time to cache the index file when the origin server returns the 200 status code. The default cache time is 1,000 ms. The maximum time that can be set is 60,000 ms.
Segment cache time	The time to cache the TS/M4S/MP4 segments when the origin server returns the 200 status code. The default cache time is 1,000 ms. The maximum time that can be set is 60,000 ms.
Cache time by status code	According to the status code corresponding to the configured cache, if the same request is received within the cache time, there is no need to visit the origin server, and the status code can be returned directly. The default cache time is 1s. When the origin server returns a non-200 status code, if it is unable to handle it immediately, and you don't want to pass through all subsequent requests to the origin server, you can cache the status code and return it directly to the user. This can reduce the load on the origin server.



	Currently, the following status codes can be cached, regardless of the file type: 4XX: 400, 403, 404, 405 5XX: 500, 503, 504
Cache key rule configuration	For the cache key rule configuration, retain the parameters that have an impact on the resource content as the cache key, convert a category of requests for the same resource into a unified cache key and hit the same cache to improve the hit rate. File Type Choose file types. There are options of index or shard, Index is selected by default. Retain specified parameters Only English, characters and numbers can be entered. Multiple parameters are separated by ";". Up to 30 groups of parameters are supported. Each parameter name should not exceed 20 characters. If a parameter is specified, even if the parameter does not have a value, it will be cached separately from the parameters with the same name that have value. Note: You must enable the origin-pull URL parameter passthrough in HTTP settings before configuring the cache key rules.





URL rewriting

If the HLS protocol is used, you can configure URL rewriting.

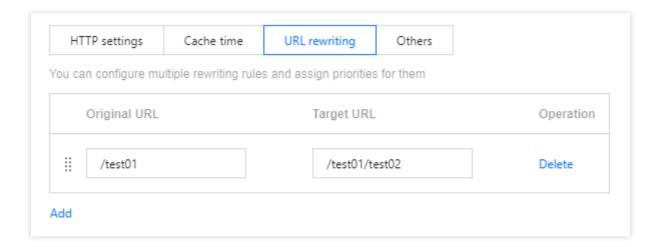
Tencent Cloud allows you to rewrite the actual URL CSS pulls from to a URL that better matches your origin server. Currently, you can only rewrite the URL path.



Notes

Original URL: Requests are matched by prefix. For example, if you enter <code>/test01</code>, the rewriting rule will be applied to all requests under <code>/test01</code>. Regular expressions are not supported currently.

Target URL: Requests are matched by prefix. For example, if you enter /test01/test02 , all requests under /test will be rewritten to /test01/test02 . Regular expressions are not supported currently.



Limits

You can configure at most 10 rewriting rules for each playback domain.

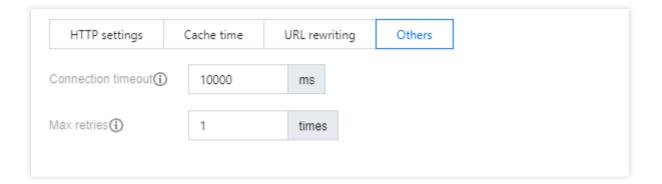
Spaces and the following special characters are not supported: < > " # { } | \\ ^ ~ [] `

You can re-arrange the rules to adjust their priorities. Rules at the top have higher priorities.

Others

Item	Description
Connection timeout	The timeout period for establishing a TCP connection. The default time is 10,000 ms, and the value range is 2000-60000 (ms). Please set the timeout period according to your origin server conditions and network conditions. If the timeout period is too short, when a pull request fails due to network issues, CSS may switch origin servers too frequently. If the timeout period is too long, CSS may wait a long time before it tries a different origin server, causing playback failure at the client end.
Max retries	The maximum number of retry attempts. If multiple origin server addresses have been configured, when a request fails, CSS will try a different address. Value range: 1-10.







Bandwidth Cap Configuration

Last updated: 2024-05-28 10:25:05

CSS allows you to set a bandwidth cap for your playback domain. In the acceleration region of your domain, if the peak downstream bandwidth in a reference period hits the cap you set, a 403 error will be returned to playback requests. This feature is disabled by default.

Note:

If the bandwidth cap configuration is enabled, the scanning granularity is 5 minutes. If there is a sudden increase in usage within a short period of time, the previous scan may not have triggered the threshold, and the next scan may directly exceed the threshold. In this scenario, there will be a certain delay (approximately 5 minutes) in the access interception operation, and the consumption during this period will be billed normally.

Prerequisites

You have logged in to the CSS console.

You have added a playback domain name.

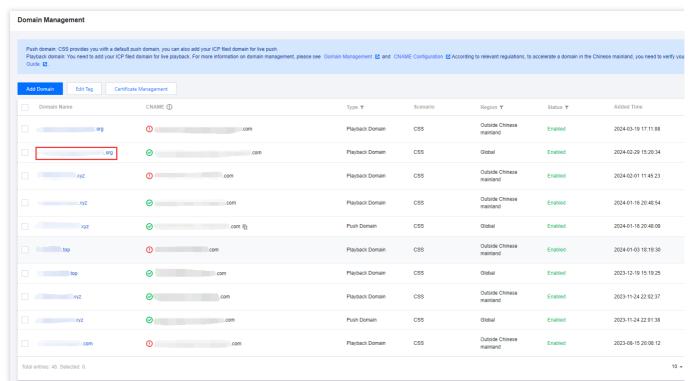
Limits

Acceleration Region	Default Bandwidth Capping Region	Remarks
Chinese mainland	Chinese mainland	You can only set a cap for the Chinese mainland.
Outside the Chinese mainland	Outside the Chinese mainland	You can only set a cap for outside the Chinese mainland.
Global acceleration	Global acceleration	You can set different caps for inside and outside the Chinese mainland. You can also set a global cap.

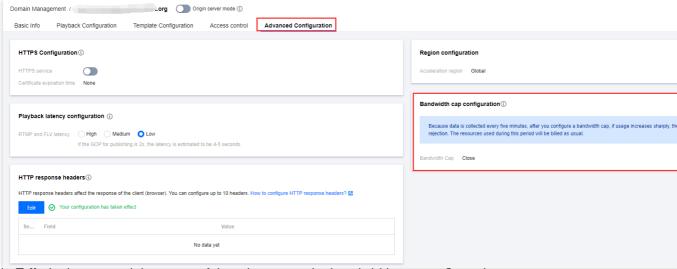
Configuring Bandwidth Cap

1. Go to Domain Management. Click the name of your playback domain or **Manage** on the right.



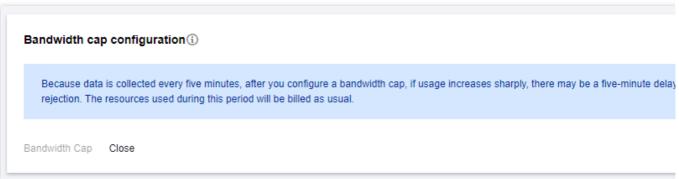


2. Select Advanced Configuration > Bandwidth cap configuration to view the Bandwidth cap configuration tab.



3. Click **Edit** in the upper-right corner of the tab to enter the bandwidth cap configuration page.



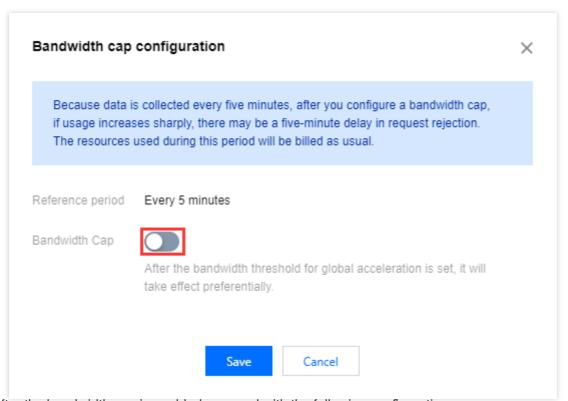


4. Click



Note:

After the bandwidth threshold for global acceleration is configured, it will take effect preferentially.



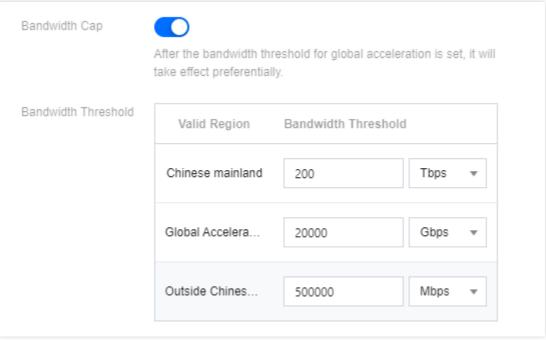
4.1 After the bandwidth cap is enabled, proceed with the following configuration:

Bandwidth Threshold

Valid Region is determined based on the acceleration region type of the playback domain name. For related configuration rules, refer to Limits.

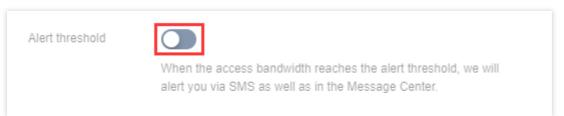
Fill in the bandwidth threshold based on your actual business needs. Choose the threshold unit as Mbps, Gbps, or Tbps.



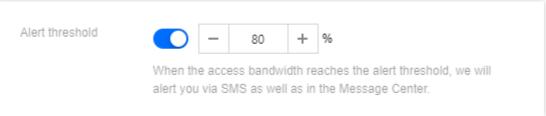


5. Click



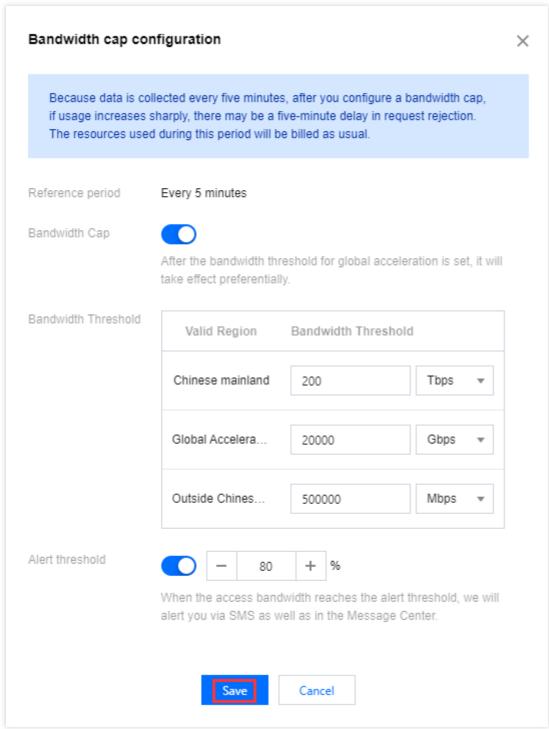


5.1 After the alert threshold is enabled, set the **alert threshold percentage** based on your actual business needs. When the access bandwidth/bandwidth threshold reaches the alert threshold, the system will alert you through the Message Center and other methods.



6. Click Save.





Note:

The conversion factor between the bandwidth units is 1,000: 1 Tbps = 1,000 Gbps; 1 Gbps = 1,000 Mbps.

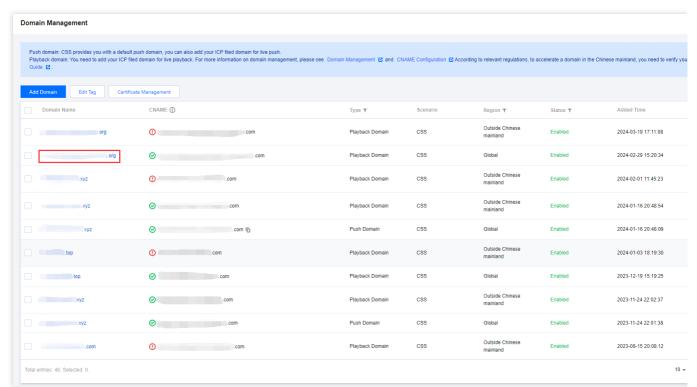
If you change the acceleration region for your domain, you need to configure the bandwidth cap again.

The default alert threshold is 80% of the bandwidth cap. Value range: 0-100.

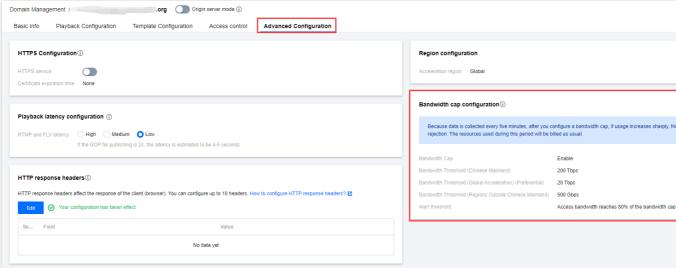
Disabling Bandwidth Cap

1. Go to Domain Management. Click the name of your playback domain or **Manage** on the right.





2. Select the Advanced Configuration tab to view the Bandwidth cap configuration tab.



3. Click **Edit** in the upper-right corner of the tab to enter the bandwidth cap configuration page.



Bandwidth cap configuration ()

Because data is collected every five minutes, after you configure a bandwidth cap, if usage increases sharply, there may be a five-minute delay rejection. The resources used during this period will be billed as usual.

Bandwidth Cap

Bandwidth Threshold (Chinese Mainland)

Bandwidth Threshold (Global Acceleration) (Preferential)

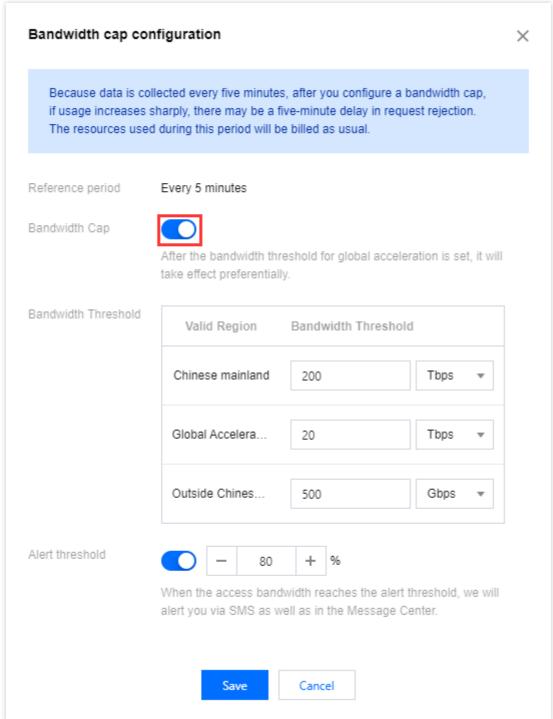
Bandwidth Threshold (Regions Outside Chinese Mainland)

Access bandwidth reaches 80% of the bandwidth cap

4. Click

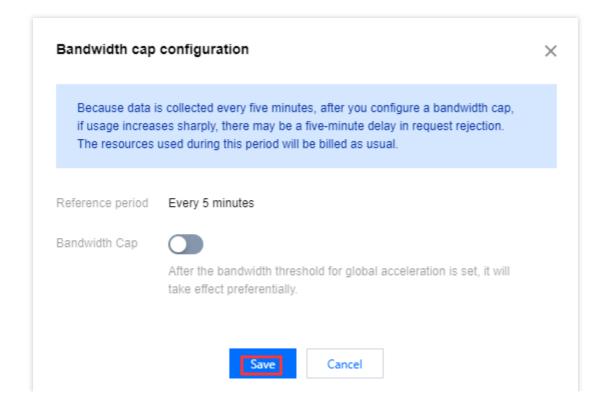
to disable Bandwidth Cap.





5. Click Save.







IP Blocklist/Allowlist Configuration

Last updated: 2024-06-05 15:41:31

This document shows you how to configure an IP allowlist/blocklist to filter requests and control access to streaming content.

How It Works

IP allowlist: Only IP addresses on the list can access your streaming content.

IP blocklist: IP addresses on the list cannot access your streaming content.

Must-Knows

An IP allowlist/blocklist takes effect about ten minutes after configuration.

Prerequisites

You have activated CSS and logged in to the CSS console.

When both IP Blocklist/Allowlist and Playback Region Management (Regional Block/Allowlist) are enabled at the same time, the system's judgment logic is as follows:

1.1 First, check the IP Blocklist/Allowlist:

If the IP is in the allowlist, it is directly allowed.

If the IP is in the blocklist, access is directly denied.

If the IP is not in the blocklist/allowlist, go to the next step.

1.2 Then, check the Regional Block/Allowlist (only when the IP is not in the IP Block/Allowlist):

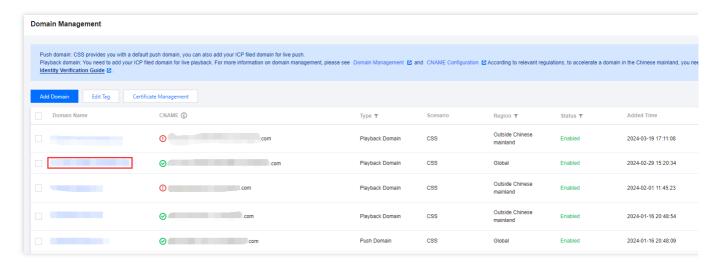
If the region is in the allowlist, then allow access; otherwise, deny access.

If the region is in the blocklist, then deny access; otherwise, allow access.

Configuring an IP Allowlist/Blocklist

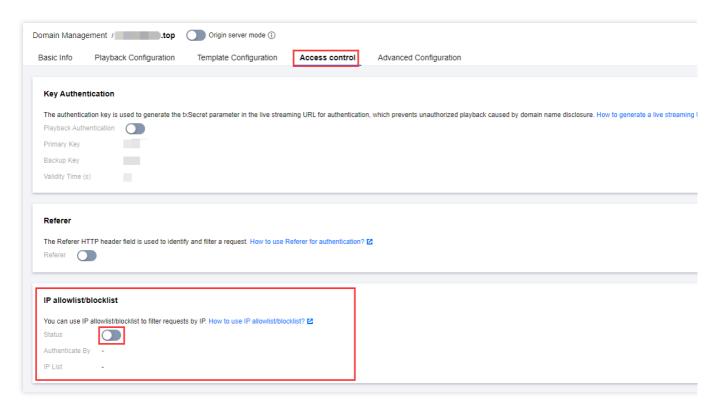
1. Select Domain Management on the left sidebar, and click the target **playback domain** or click **Manage** on the right to enter the domain management page.





2. Within the Access Control> IP allowlist/blocklist, click on





3. After enabling the **IP Allowlist/Blocklist**, enter the **IP Allowlist/Blocklist** configuration page and perform the following configuration:

Blocklist

Allowlist



IP Allowlist/Blocklist Configuration

 Enter one IP or IP range (/8/16/24 for example) per line and separate IPs/IP ranges with line breaks. The format of IP:port is not supported.

Authenticate By

Blocklist

Allowlist

The 403 error will be returned for requests from client IPs not allowlist.

IP List

Enter IPs or IP ranges

You can enter 200 more IP/IP range.

Save

Cancel



IP Allowlist/Blocklist Configuration

 Enter one IP or IP range (/8/16/24 for example) per line and separate IPs/IF ranges with line breaks. The format of IP:port is not supported.

Authenticate By

Blocklist
The 403 error will be returned for requests from client IPs not allowlist.

IP List

Enter IPs or IP ranges

You can enter 500 more IP/IP range.

Save

Cancel

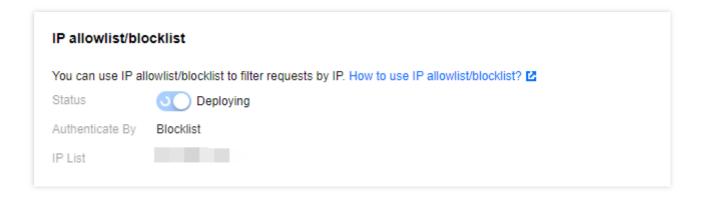
Configuration Item	Description
Authenticate By	Allowlist or blocklist: You cannot select both. If you configure an allowlist, only IP addresses on the list will be able to access your streaming content. If you configure a blocklist, IP addresses on the list cannot access your streaming content.
IP List	The IP blocklist supports a maximum configuration of 200 rules, and the IP allowlist supports up to 500 rules. Please separate entries with a newline character.



You can enter IP addresses or IP ranges (/8/16/24). The "IP address: port number" format is not supported.

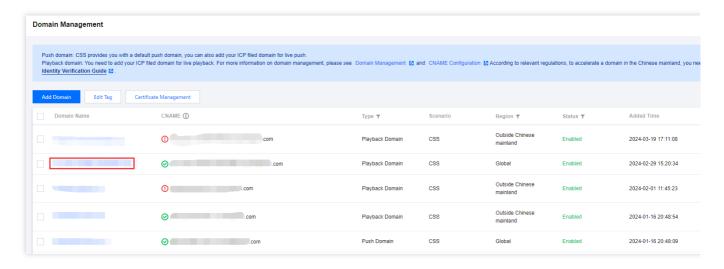
IPv6 is not supported currently.

4. Click **Save** to save the configuration (it takes a while for the configuration to take effect).



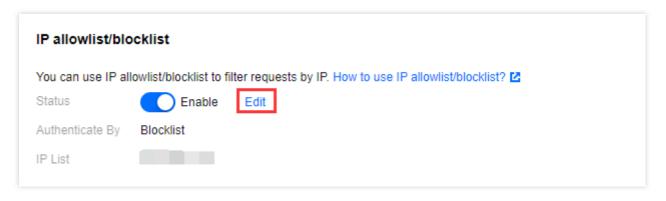
Modifying an IP Allowlist/Blocklist

1. Select Domain Management on the left sidebar, and click the target **playback domain** or click **Manage** on the right to enter the domain management page.



2. Click Access Control and, in the IP Allowlist/Blocklist area, click Edit.



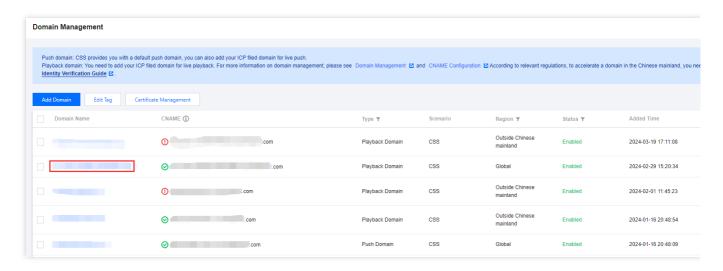


3. Modify the configuration and click Save.

Disabling IP Allowlist/Blocklist

Follow the steps below to disable IP allowlist/blocklist:

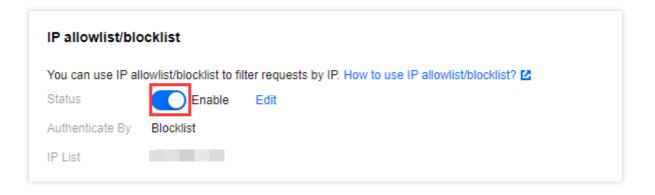
1. Select Domain Management on the left sidebar, and click the target **playback domain** or click **Manage** on the right to enter the domain management page.



2. Select the Access Control tab. In the IP allowlist/blocklist area, click

to disable IP allowlist/blocklist.







Blocking Playback by Protocol

Last updated: 2024-07-11 17:53:34

You can block playback for a domain by blocking specific protocols. Playback requests that use the blocked protocols will be rejected.

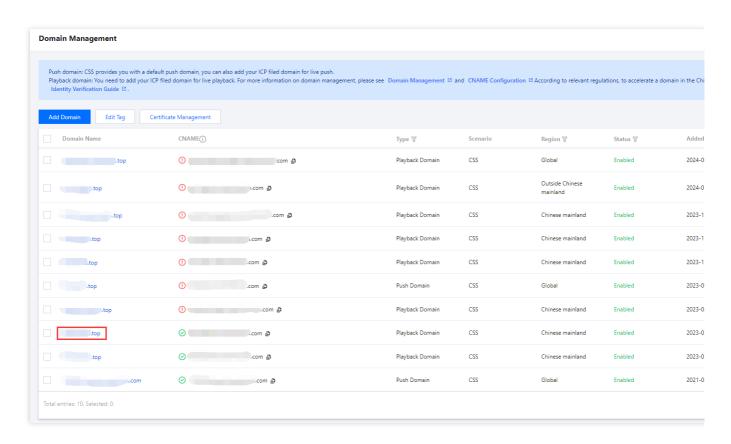
Prerequisites

You have activated CSS and logged in to the CSS console.

You have added a playback domain name.

Blocking Protocols

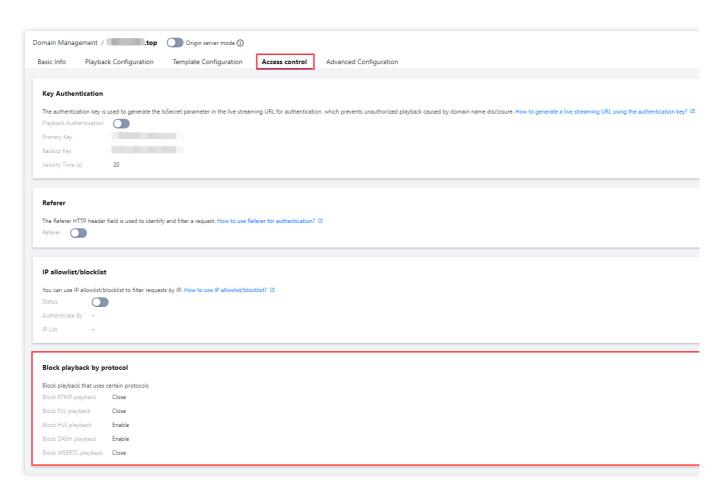
1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.



2. Select the **Access Control** tab. In the **Block playback by protocol** area, you can block playback that uses the RTMP, FLV, HLS, DASH, and WebRTC protocols.

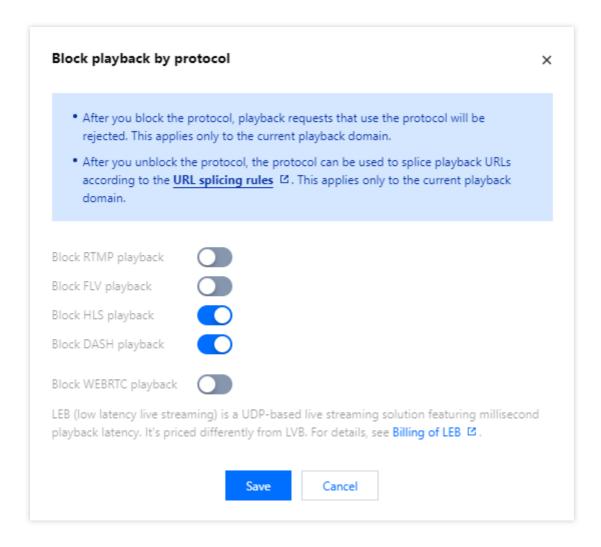


3. Click **Edit** and toggle on the protocols you want to block.



4. Click Save.





Note:

It takes a while for the blocking configuration to take effect. After configuring blocked protocols, please wait for the configuration to take effect before you block other protocols.

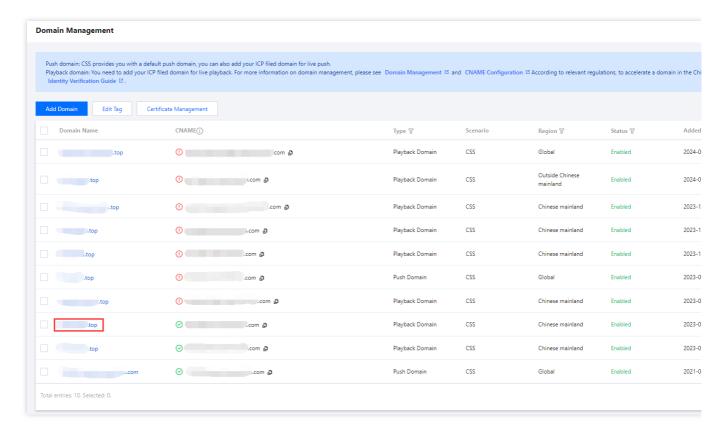
Except for HLS, protocol blocking only takes effect for new live streams. It does not affect ongoing streams.

Unblocking Protocols

To unblock a blocked protocol, follow the steps below:

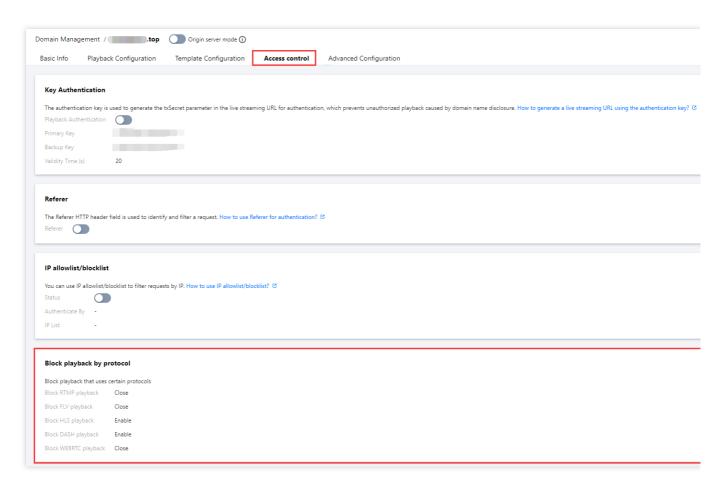
1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.





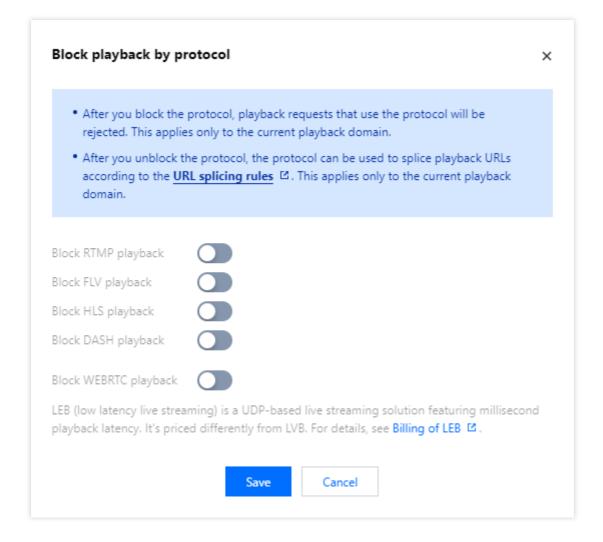
2. Select the **Access Control** tab. In the **Block playback by protocol** area, toggle off the protocol you want to unblock.





3. Click Save.







Latency Control

Last updated: 2024-05-28 10:22:55

Set a latency that fits your needs. Note that setting the latency too low may cause playback to stutter.

Note

Latency configuration will take effect approximately 10 minutes after configuration.

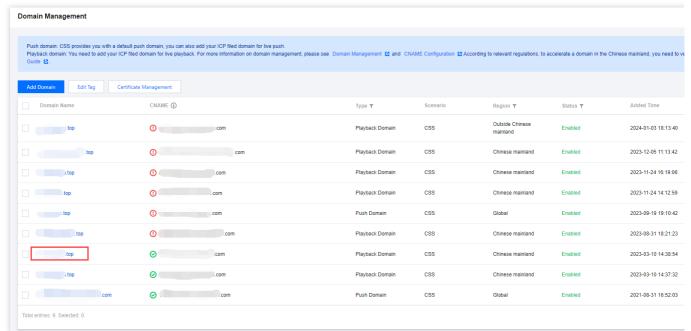
Prerequisites

You have activated CSS and logged in to the CSS console.

You have added a playback domain name.

Latency control

1. Select Domain Management on the left sidebar and click the **playback domain** for which you want to configure RTMP and FLV latency, or click **Manage** on the right to enter the details page.



2. In **Advanced Configuration** > **Playback latency configuration**, you can configure the latency for RTMP and FLV.



- 3. When live streaming latency parameters are configured, it is recommended to select appropriate latency parameters based on your actual business needs. It is advisable to set the GOP for publishing to 1-2s because the larger the GOP value, the greater the live streaming latency. Note that setting the latency too low may cause playback to stutter.
- 4. When GOP is set to two seconds, the latency is as follows:

Setting	High	Medium	Low
Estimated Latency	7-9s	5-7s	4-5s





HTTP Response Header Configuration

Last updated: 2024-05-28 10:21:53

You can use HTTP headers to define fields that carry information about HTTP transactions. Header fields work on the domain level. This means the header fields you configure will take effect for all responses under your domain.

Prerequisites

You have logged in to the CSS console.

You have added a playback domain name.

Use Limits

You can configure at most 10 header fields.

You cannot add two fields with the same name. To specify multiple values for a field, use this format: value 1, value 2, value 3.

If a field you configure is the same as a field used by the CSS backend, you will be asked to modify it.

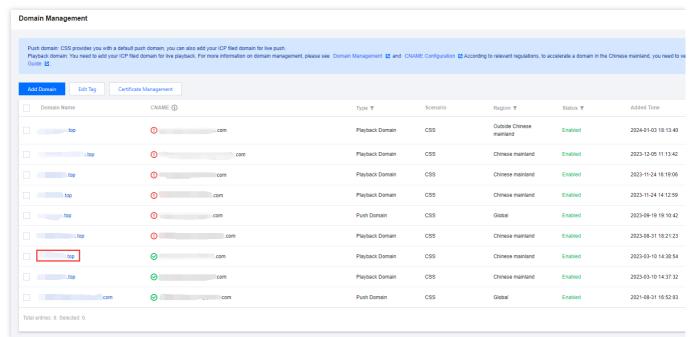
A custom field can be 1-100 characters long and can contain letters, numbers, and hyphens (-).

The value of a field cannot be empty. It can be 1-1,000 characters long and cannot contain Chinese characters.

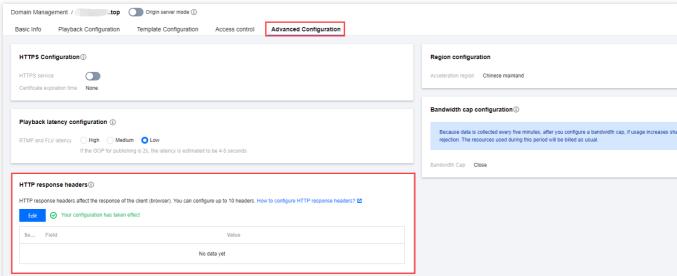
Configuring HTTP Response Header

1. Go to Domain Management. Click the name of your playback domain or click Manage on the right.



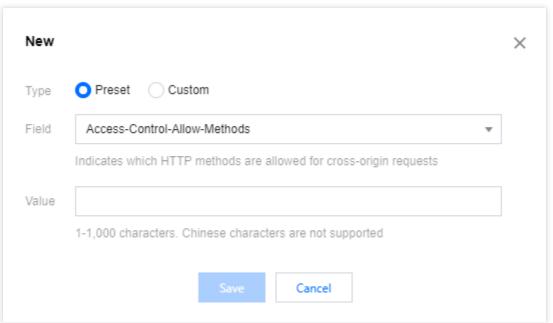


2. Select the Advanced Configuration tab.



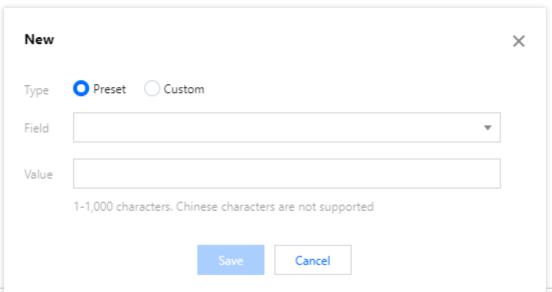
3. In the HTTP response headers area, click Edit to add new header fields or modify/delete existing header fields.





To add a header field, click New:

Select Preset to add a preset field: Access-Control-Allow-Methods , Access-Control-Max-Age , or Access-Control-Expose-Headers .



Field	Description
Access-Control-Allow- Methods	Indicates which HTTP methods are allowed for cross-origin requests. You can specify multiple methods at a time: Access-Control-Allow-Methods: POST, GET, OPTIONS.
Access-Control-Max-Age	Indicates how long (seconds) the results of a preflight request can be cached
Access-Control-Expose- Headers	Indicates which headers can be exposed to clients as part of the response



Select Custom to add a custom field.

Note:

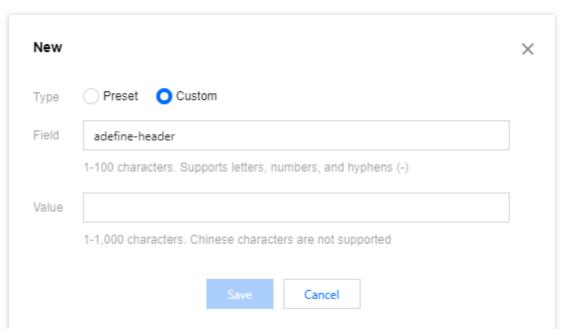
The name of a custom field can be 1-100 characters long and can contain letters, numbers, and hyphens. The value of a custom field can be 1-1,000 characters long and cannot contain Chinese characters.

The system has default support for the header parameter Access-Control-Allow-Origin, which is used to enable cross-domain requests without the need for customization. There are two specific scenarios:

When the request header does not include Origin, the returned header will be 'Access-Control-Allow-Origin: *'.

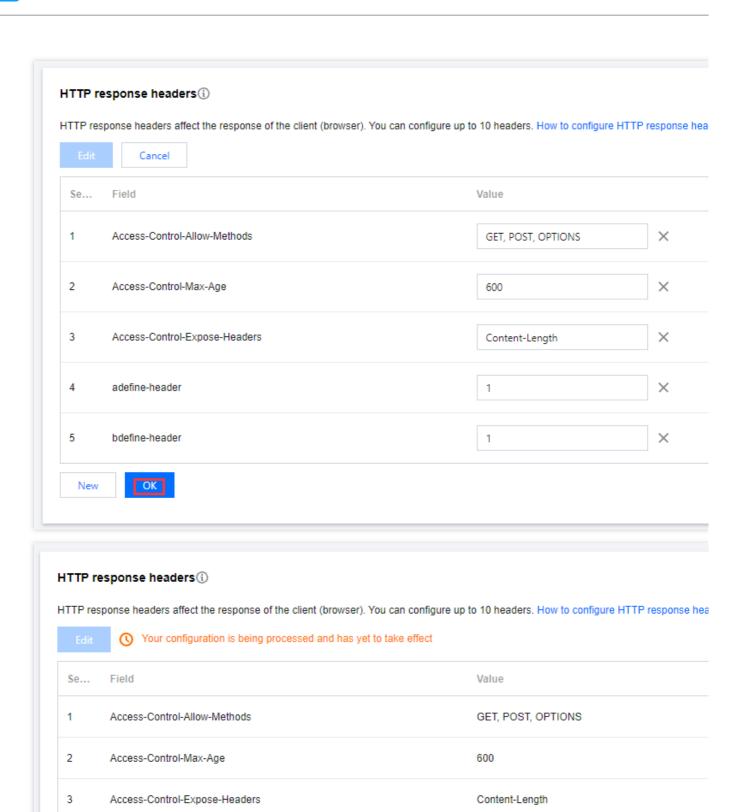
When the request header includes 'Origin: \${Origin}', the returned header will be 'Access-Control-Allow-Origin:

\${Origin}'. For example, when the request header has Origin: https://cloud.tencent.com, the returned header will be Access-Control-Allow-Origin: https://cloud.tencent.com.



4. When you are finished, Click **OK**. Your configuration may be in one of three statuses: yet to take effect, failed, or effective.





1

1

adefine-header

bdefine-header

4

5



Access Control by Region Configuration

Last updated: 2024-06-17 18:09:12

Access control by region lets you can manage a blocklist or allowlist for playback regions for the current domain, providing better control over content distribution in specific areas.

How It Works

If you are configuring a blocklist, requests from the selected regions are banned.

If you are configuring an allowlist, only requests from the selected regions are allowed.

Must-Knows

After you complete the configuration of the blocklist and allowlist for the playback region, it takes approximately 10 minutes to take effect.

If you have enabled both the IP Blocklist/Allowlist Configuration and playback region management features, note that the IP blocklist/allowlist takes precedence over playback region management.

Prerequisites

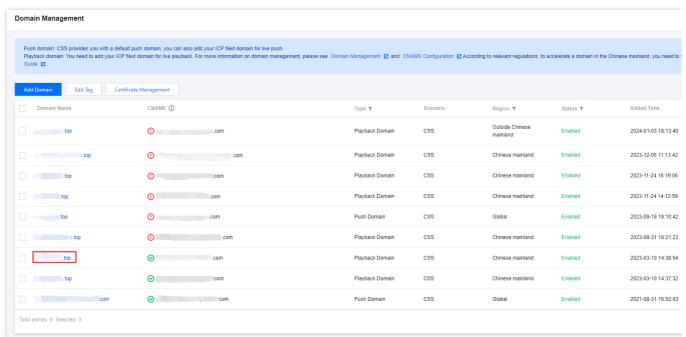
You have activated CSS and logged in to the CSS console.

You have added a playback domain.

Configuring Access Control by Region

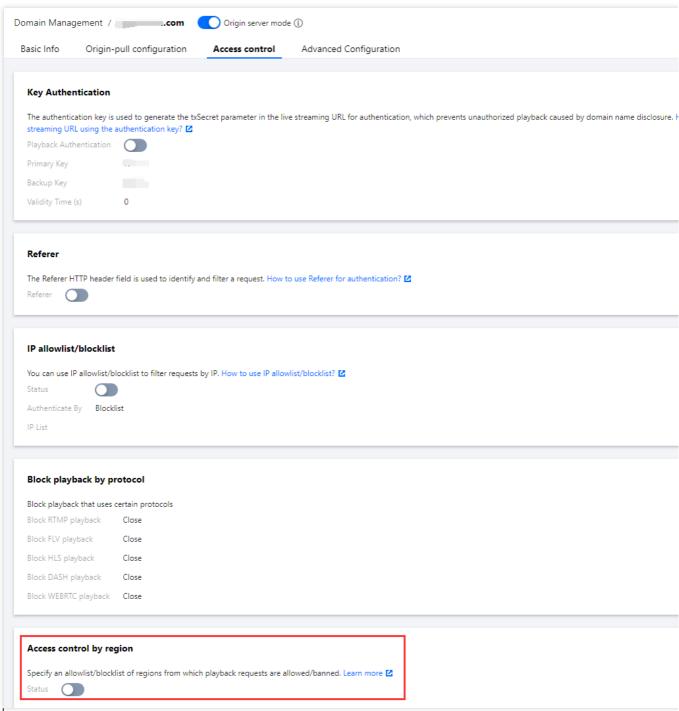
1. Select Domain Management on the left sidebar. Click the **playback domain** you want to configure region management for, or click **Manage** on the right side to enter the Domain Management page.





2. Under the Access control tab, find Access control by region.

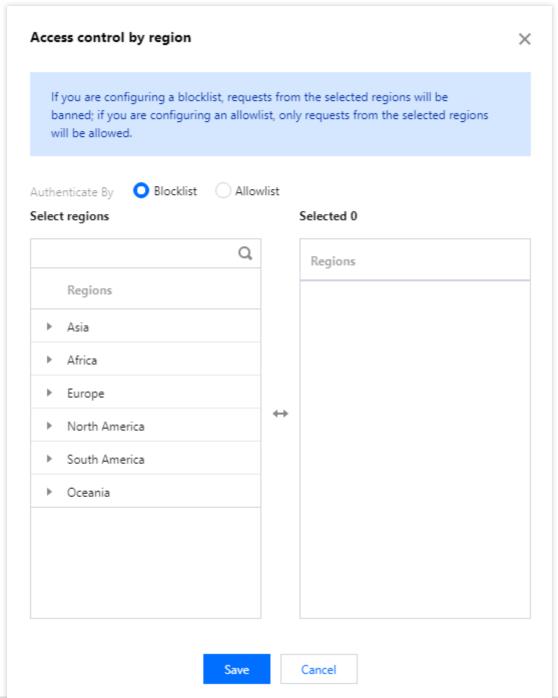




3. Click

to enable access control by region and complete the following settings:





Configuration Item	Description
Authenticate By	Choose whether to configure an Allowlist or Blocklist . An allowlist and blocklist cannot be effective at the same time. If you configure an allowlist , access to live stream content will be allowed only for the regions added to the allowlist. Access will be denied for regions that are not added to the allowlist. If you configure a blocklist , access to live stream content will be denied for the regions added to the blocklist. Access will be allowed for all regions that are not added to the blocklist.

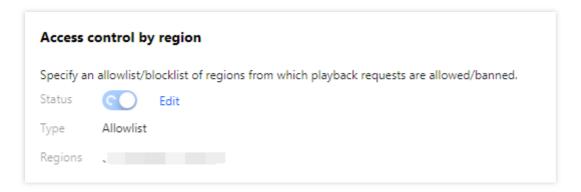


Configuring Regions

You can view and expand regions under **Asia**, **Africa**, **Europe**, **North America**, **South America**, and **Oceania** and them to the list of selected regions.

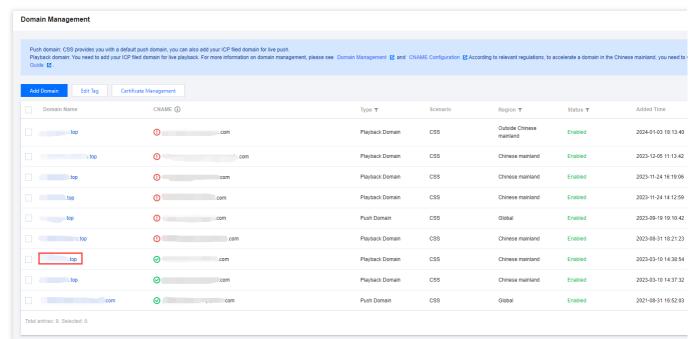
You can also search for regions to find them more quickly.

4. Click **Save** to save the configuration (it takes a while for the configuration to take effect).



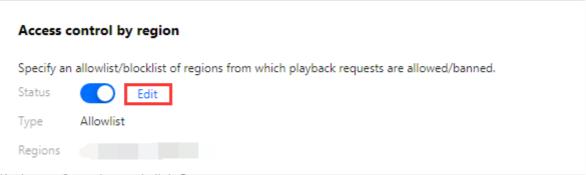
Modifying Access Control by Region

1. Select Domain Management on the left sidebar. Click the **playback domain** you want to modify the region management settings for, or click **Manage** on the right side to enter the Domain Management page.



2. Under the Access control tab, find Access control by region and click Edit.



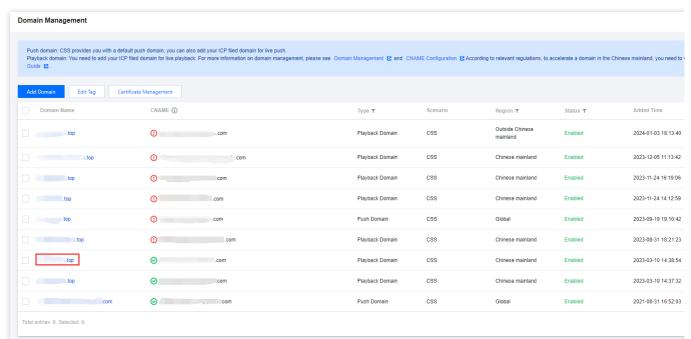


3. Modify the configuration and click Save.

Disabling Access Control by Region

Follow the steps below to disable access control by region:

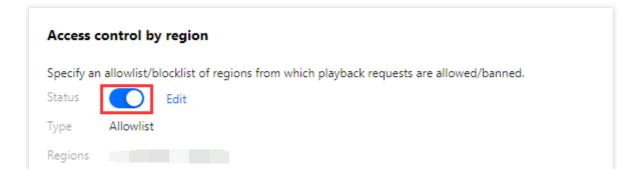
1. SelectDomain Management on the left sidebar. Click the **Playback Domain** you want to disable access control by region for, or click **Manage** on the right side to enter the Domain Management page.



2. Under the Access control tab, find Access control by region. Click

to disable access control by region.







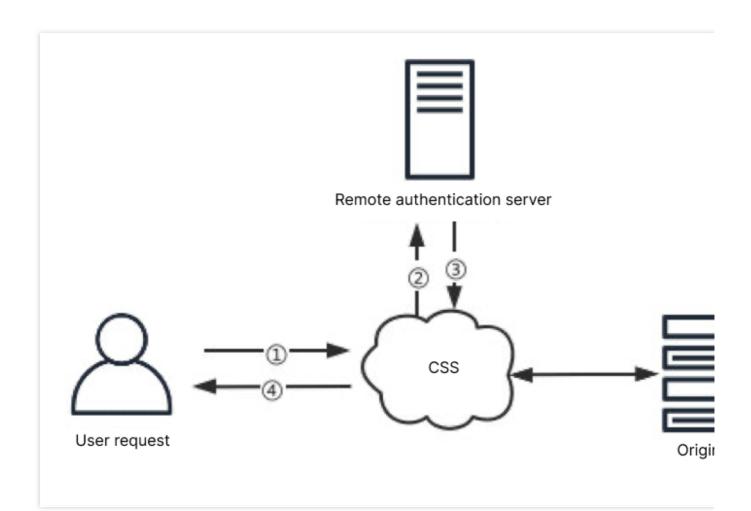
Remote Authentication Configuration

Last updated: 2024-06-17 17:00:55

With remote authentication, after authenticating a push/playback request for hotlink protection, CSS will call your server API to send the request to your server so that you can determine whether the request is legitimate. Based on the result your server returns, CSS will approve or reject the push/playback request. This ensures more precise authentication and improves security. However, you need to develop your own authentication server.

Workflow

Remote authentication works as follows:



No	Description
1	A request is sent to CSS.
2	If remote authentication is enabled for the domain, CSS will process the request as specified and then



	send it to your authentication server.
3	Your authentication server returns the result. The HTTP status code 200 indicates that the request should be approved, while the code 403 indicates that the request should be rejected.
4	CSS approves or rejects the request based on the result.

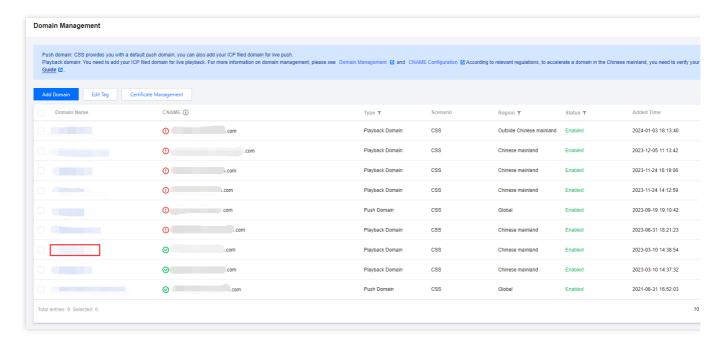
Prerequisites

You have activated CSS and logged in to the CSS console.

You have added a playback domain name.

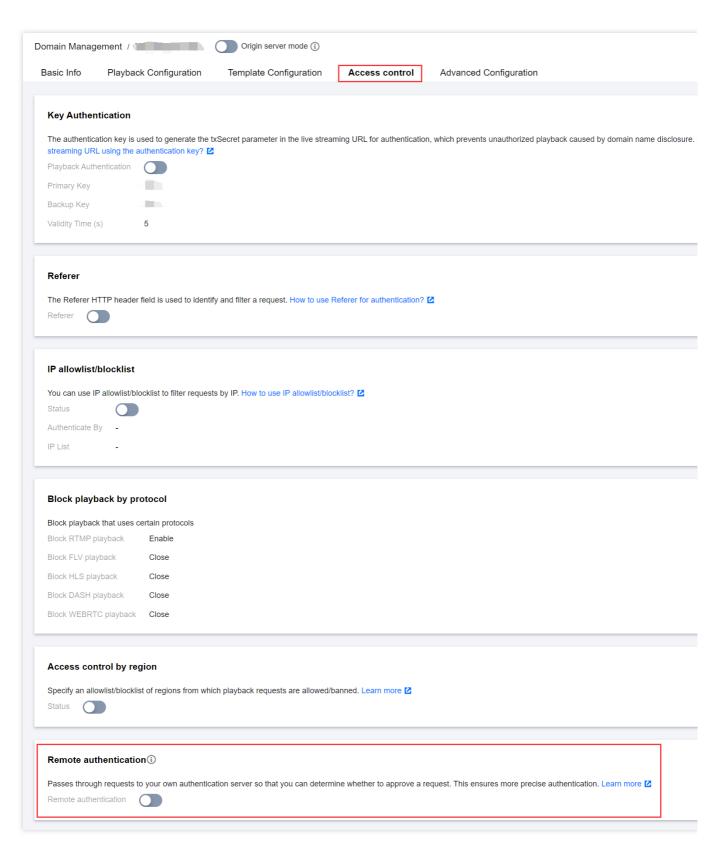
Configuring Remote Authentication

1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.



2. Under the Access Control tab, find Remote authentication.

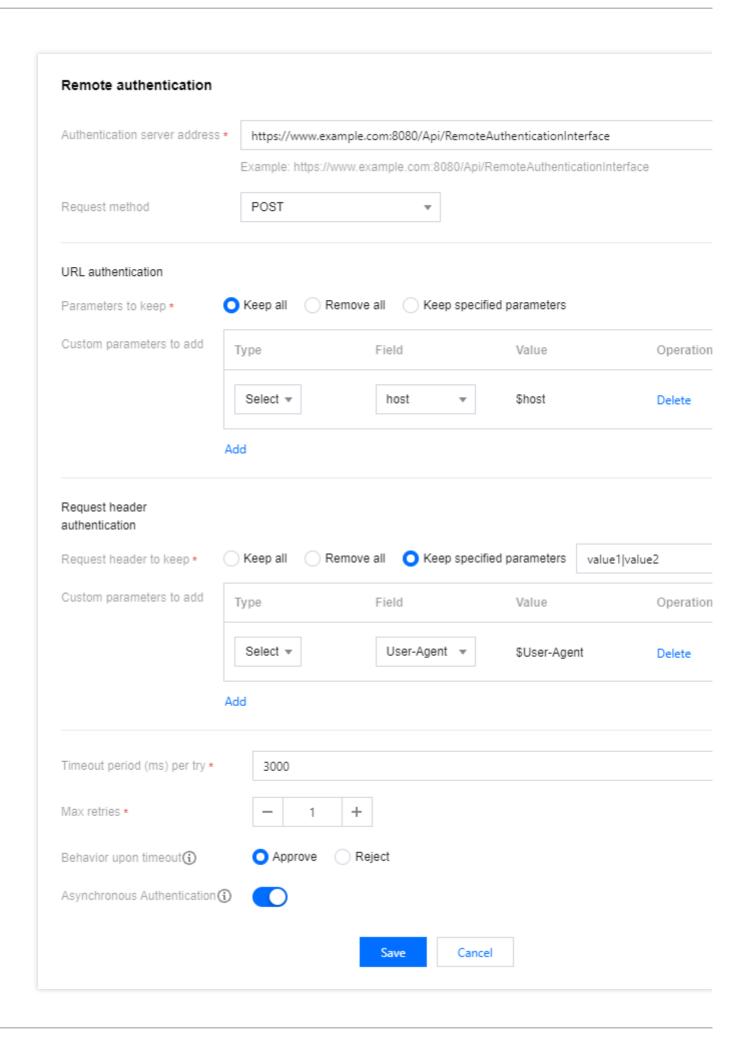




3. Click

to enable remote authentication and complete the following settings:







Configuration Item Authentication server address Request method		Description
		The address of your authentication server (required). Format: http(s)://+Domain or IP address+Port+Path.
		POST is selected by default. You can also use HEAD or GET.
	Parameters to keep	All URL parameters are kept by default. You can also specify parameters to keep or remove all parameters. If you select "Keep specified parameter", fill in the box the parameters you want to keep. Separate them with , as in value1 value2. The parameters are case-sensitive ("key" and "KEY" are different parameters).
URL authentication	Custom parameters to add	Click "Add" to add authentication parameters (max 50). You can either select a parameter to add or add a custom parameter. The parameters you can select include "host", "uri", "client_ip", and "cdn_ip", which represent the playback domain, the original request URL, the client IP address, and the CDN IP address respectively. If you select "Custom", "Parameter" and "Value" are required. The names and values are case-sensitive ("key" and "KEY" are different parameters). Chinese characters are not allowed.
Request header authentication	Request header to keep	All URL parameters are kept by default. You can also specify parameters to keep or remove all parameters. If you select "Keep specified parameter", fill in the box the parameters you want to keep. Separate them with , as in value1 value2. If you select "Keep all", the CDN node will delete the host header. If you want to keep it, select "Keep specified parameter" or add a custom parameter. The parameters are case-insensitive.
	Custom parameters to add	Click "Add" to add authentication parameters (max 50). You can either select a parameter to add or add a custom parameter. The parameters you can select include "User-Agent", "Referer", and "X-Forwarded-For", which represent the system and browser information of the user, the referer of the URL, and the URL disguise. If you select "Custom", "Parameter" and "Value" are required. The names and values are case-insensitive. Chinese characters not allowed.
Fimeout period (ms) per try		This is required. Enter a value between 500 and 3000. The default is 3000.
Max retries		Enter a value between 0 and 3. The default is 1.

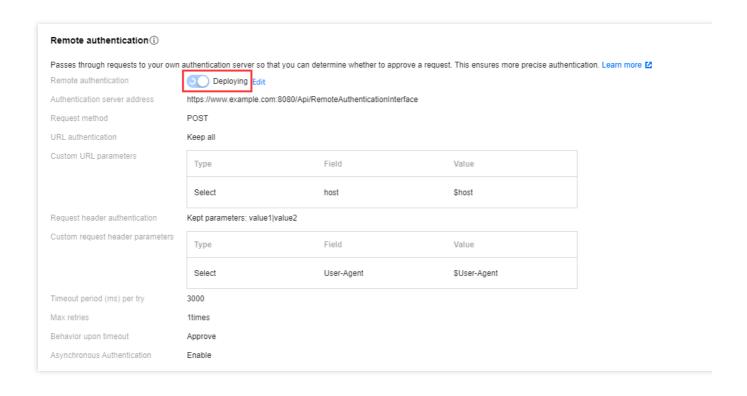


Behavior upon timeout	The default is "Approve". You can also set it to "Reject". Whether to approve or reject a request if the system does not receive a response (HTTP status code 200 or 403) after the total timeout period elapses (Total timeout period = Timeout period per try x (Max retries + 1)).
Asynchronous Authentication	Asynchronous authentication is disabled by default. You may enable this feature manually based on your specific business requirements. Once enabled, playback will commence without waiting for the remote authentication result, allowing for immediate content viewing. If the remote authentication subsequently fail, the playback will be disconnected. This approach avoids the issue of increased initial screen load time due to the latency of remote authentication. In the asynchronous authentication mode, the authentication for ts and m3u8 files in the HLS protocol will not be effective, and synchronous authentication will continue to be maintained.

4. Click Save.

Note:

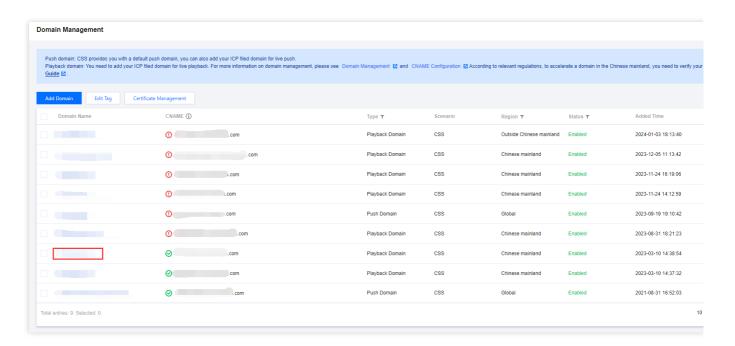
After configuring the remote authentication feature, it will take approximately 10 minutes to become effective. We appreciate your patience during this time.





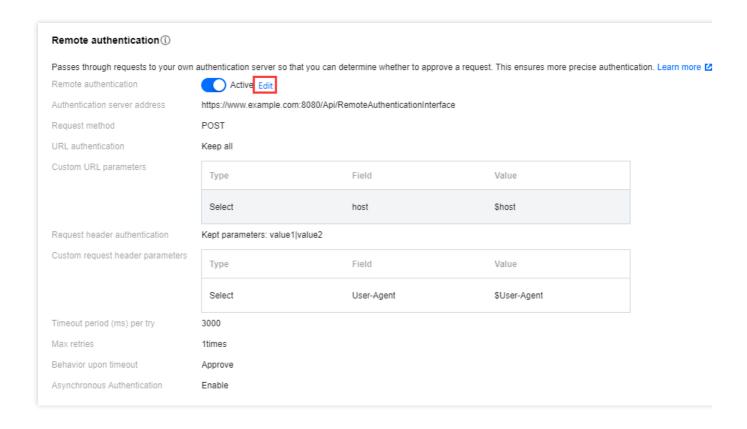
Modifying Remote Authentication Settings

1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.



- 2. Under the Access Control tab, find Remote authentication and click Edit.
- 3. Modify the settings and click Save.

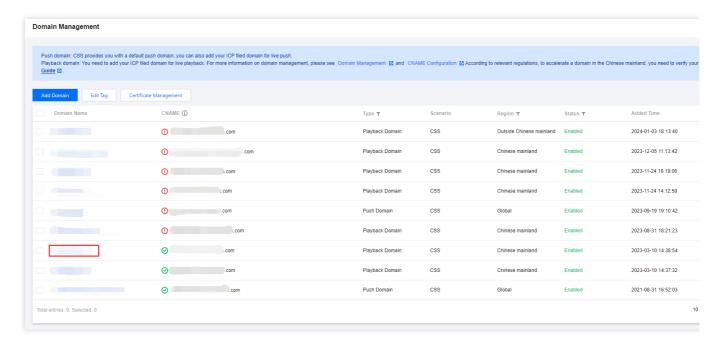




Disabling Remote Authentication

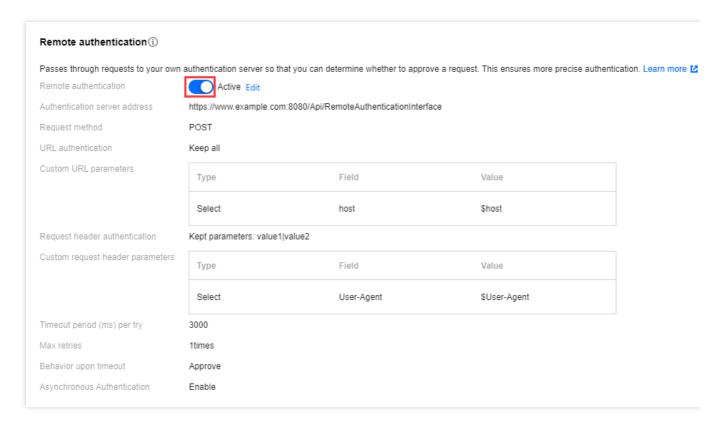
1. Select Domain Management on the left sidebar. Click the name of the target playback domain or click **Manage** on the right to enter the domain management page.





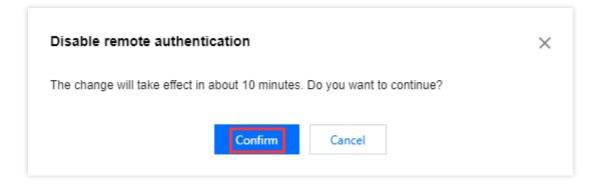
2. Under the Access Control tab, find Remote authentication, and click

to disable remote authentication.



3. To disable the remote authentication configuration, it is expected to take effect in about 10 minutes. Click **Confirm**.







Certificate Management

Last updated: 2024-07-11 17:45:00

Normally, live streaming domain names use the Hypertext Transfer Protocol (HTTP). HTTP can be converted to Hyper Text Transfer Protocol over Secure Socket Layer (HTTPS) using SSL/TLS protocol for encrypted data transmission. You can go to **Certificate Management** to query and configure SSL certificates for domain names.

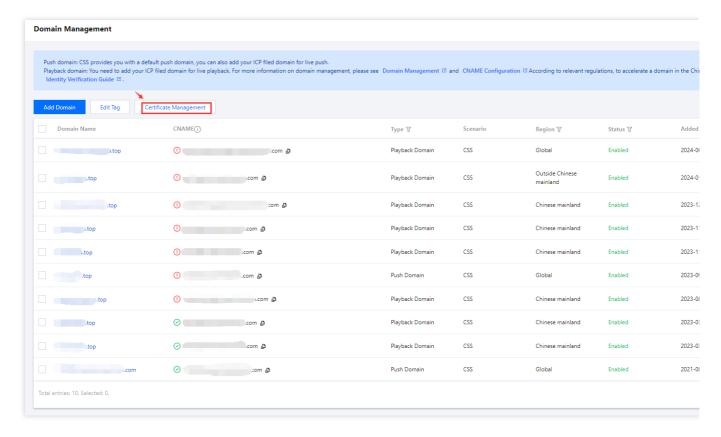
How to Configure

The purpose of configuring an SSL certificate for a domain name is to encrypt key user data for secure transmission. A Secure Sockets Layer (SSL) certificate allows a site to switch from HTTP (HyperText Transfer Protocol) to its SSL-based encrypted version HTTPS (HyperText Transfer Protocol over Secure Socket Layer).

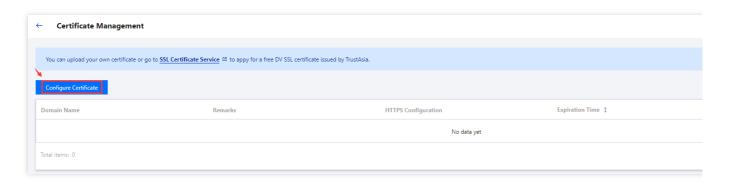
Configuring Certificate

1. Go to Domain Management in the CSS console, and click **Certificate Management** to go to the certificate management page.





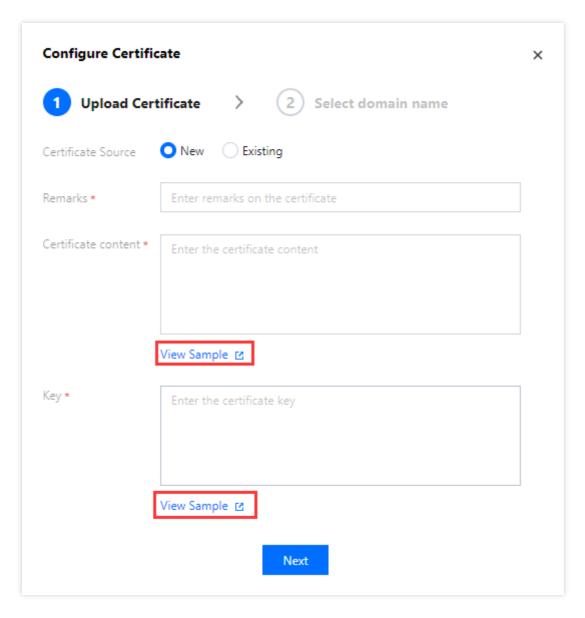
2. Click **Configure Certificate** to add a certificate configuration.



3. In the certificate configuration pop-up window, select a certificate source:

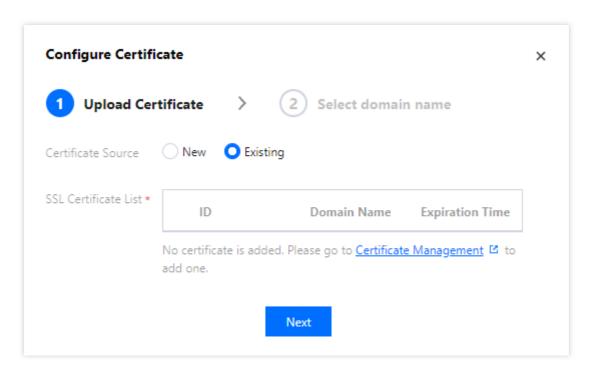
Self-owned certificate: enter remarks, content, and key of this certificate. After the configuration is saved, the certificate info will be synced to Certificate Management in the SSL Certificate Service console. For details about how to set the certificate content and key, please see HTTPS Configuration.





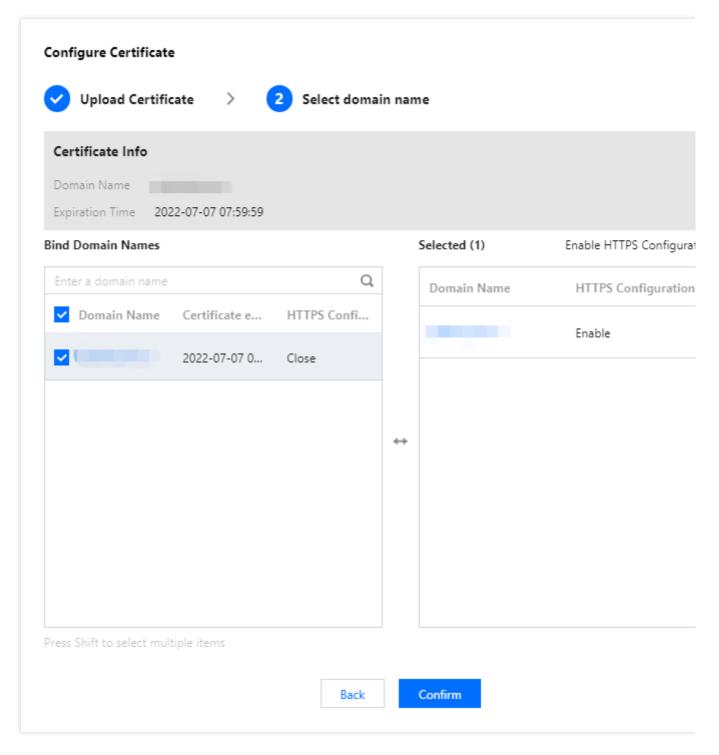
Tencent Cloud-hosted certificate: select a certificate you purchased in the SSL Certificate Service console.





- 4. After the certificate is confirmed to be available, click **Next** to enter the domain name configuration page.
- 5. In **Bind Domain Names**, select one or more playback domain names which match the certificate. If a selected domain name is already bound to a certificate, the new certificate will apply.
- 6. In Selected, you can view selected domain names and whether their HTTPS configuration is enabled.





7. Choose whether to enable HTTPS Configuration for selected domain names:

Note:

Toggling **Enable HTTPS Configuration** on will enable HTTPS configuration for the domain names.

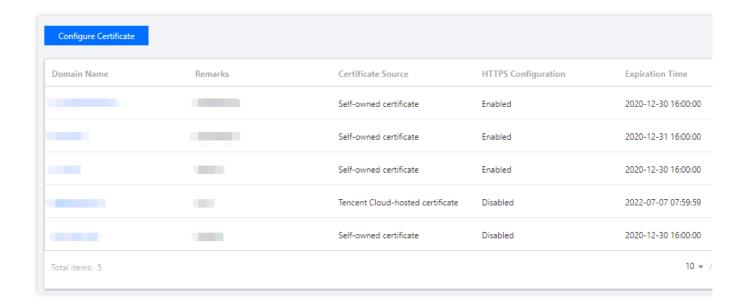
Enable HTTPS Configuration is enabled by default. If you toggle this button off, the HTTPS configuration status of the domain names will not change after binding, with only their certificate updated.

8. Click Confirm.



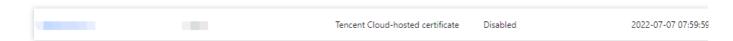
Viewing Certificate Configuration

After you configure a certificate, you can go to Certificate Management to view its configuration, including the domain name, remarks, source, HTTPS configuration, and expiration time.



Updating Certificate Configuration

1. Go to Certificate Management, find the target certificate configuration in the list, and click **Update** on its right.

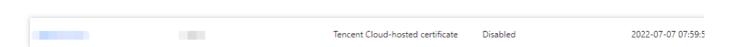


- 2. On the certificate configuration page, configure the certificate again.
- 3. Click Confirm.

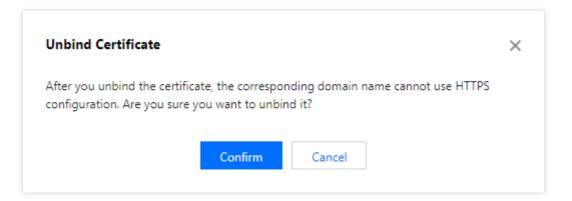
Deleting Certificate Configuration

1. Go to Certificate Management, find the target certificate configuration in the list, and click **Delete** on its right.





2. In the confirmation pop-up window, click **Confirm**.



Note:

After you unbind the certificate, the domain names cannot use HTTPS configuration.



Stream Management

Last updated: 2024-07-16 09:36:23

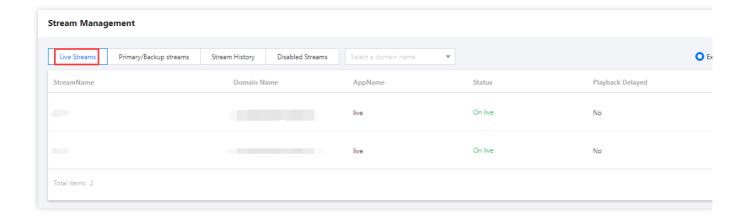
Log in to the CSS console and enter Stream Management. Stream Management includes interrupting live streams and disabling live streams, as well as viewing Live Streams, Primary/Backup Streams, Stream History, Disabled Streams, and their detailed information. Here is a brief introduction and usage of these features:

Live Streams Management

Log in to the CSS console, then navigate to Stream Management > Live Streams, and perform operations according to your actual business needs.

Preview live stream

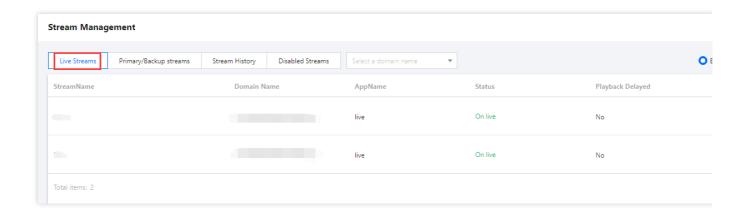
In the Live Streams list, you can select the domain and corresponding online stream you want to query. Click "Preview" on the right to view the real-time live streaming image.



View stream data

Click on the **stream data** on the right side to view detailed information of the online live stream, such as traffic, bandwidth, frame rate, bitrate, etc.



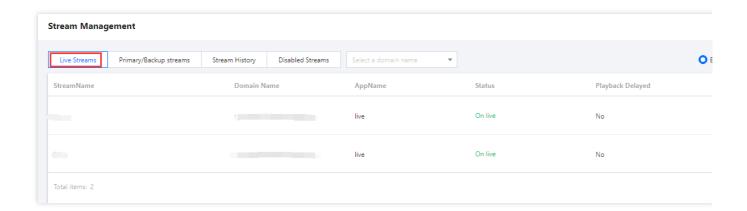


Interrupt live stream

Click **Stream Interruption** on the right to interrupt the current live stream publishing.

Note:

After the interruption, the current live stream will stop publishing. You can resume the live stream by republishing with the same Stream Name.



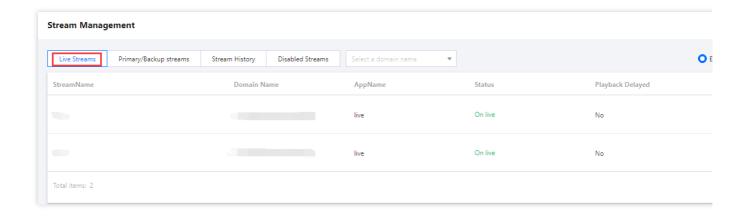
Disable live stream

Click **Disable** to disable the live stream.

Note:

After disabling, the current live stream will stop publishing (republishing is not possible for the current Stream Name until it is re-enabled). You can manually resume it or it will be automatically enabled after 7 days by default.





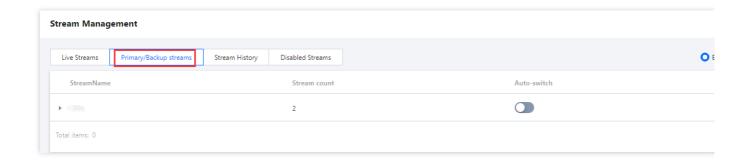
Primary and backup stream management

The primary and backup stream feature refers to the system's ability to automatically merge and output two live streams with the same **Stream ID**. The primary stream's content is prioritized for playback. If there are issues with the primary stream's content, you can **automatically** or **manually** switch to the backup stream content to ensure the stability of the live image. The primary and backup streams can be enabled or disabled for optimal scheduling. When optimal scheduling is enabled, the system will dynamically evaluate the quality of each stream and select the highest-quality stream as the primary stream.

Log in to the CSS console, then navigate to Stream Management > **Primary/Backup streams**, and perform operations according to your actual business needs.

Preview live stream

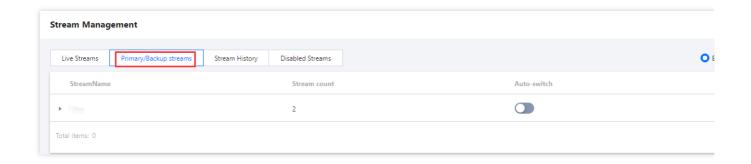
Click **Preview** on the right to view the real-time live streaming image.



View stream data

Click on the **stream data** on the right side to view detailed information of the online live stream, such as traffic, bandwidth, frame rate, bitrate, etc.



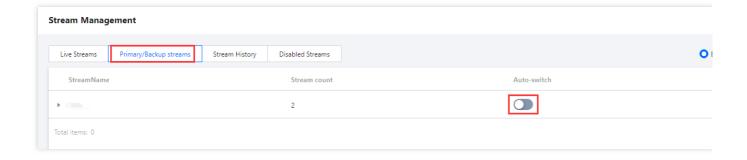


Optimal Scheduling Management

Enable optimal scheduling

Click

, to enable optimal scheduling. When optimal scheduling is enabled, the system will dynamically evaluate the quality of each stream and select the highest-quality stream as the primary stream.

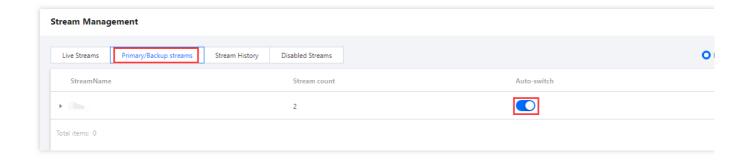


Disable Optimal Scheduling

Click

, to disable optimal scheduling.

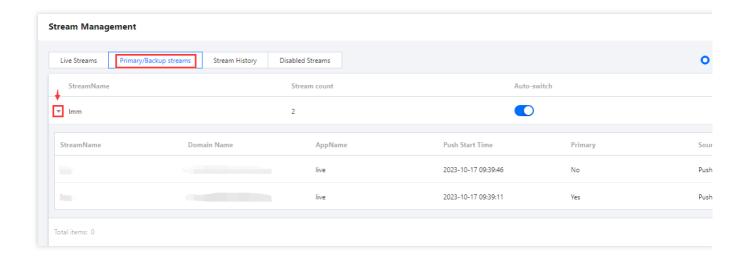




Primary and Backup Stream Switching

Click on the left-pointing triangle to expand the manual switch to the standby option.

Click the **Switch** on the right side to switch between the main and backup streams. By manually switching the main and backup streams, you can flexibly deal with issues that may arise during the live broadcast.



Stream History Management

Log in to the CSS console, then navigate to Stream Management > Stream History, You can query historical live stream data and perform operations according to your actual business needs.

Disable Historical Live Stream

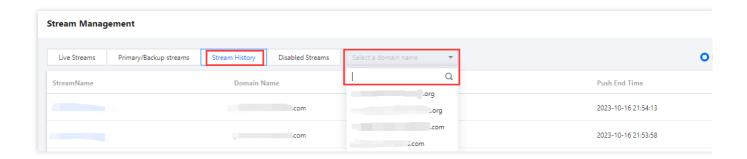
In the historical stream list, you can select the domain name to be queried and the corresponding historical live stream. Click **Disable** to disable the historical live stream.

Note:

After being disabled, the current live broadcast will stop pushing (streaming cannot be re-pushed until the current StreamName is restored). It can be manually restored or automatically enabled after 7 days by default.

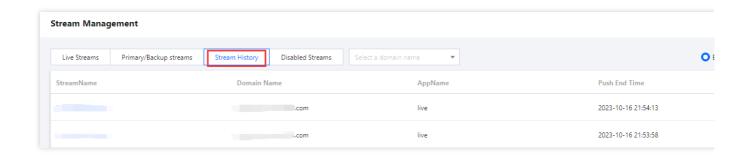


You can view stream history in the past 7 days under the **Stream History** tab or query records in the past month in **Stream Interruption Records**.



View stream data

Click on the **stream data** on the right side to view detailed information of the online live stream, such as traffic, bandwidth, frame rate, bitrate, etc.



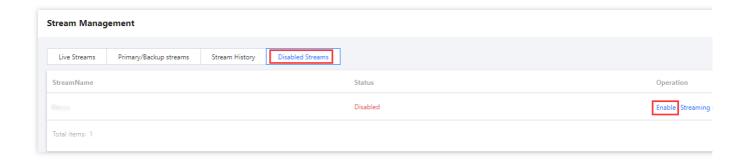
Disabled Streams Management

Log in to the CSS console, then navigate to Stream Management > **Disabled Streams**, and perform operations according to your actual business needs.

Enable live streaming

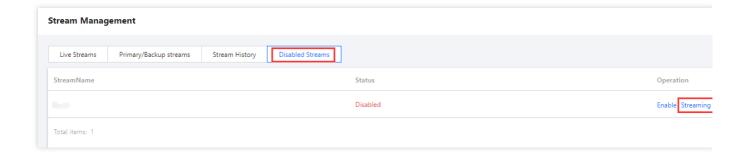
In the Disabled Streams list, select the corresponding disabled live stream and click **Enable** to resume the live stream publishing.





View stream data

Click on the **stream data** on the right side to view detailed information of the online live stream, such as traffic, bandwidth, frame rate, bitrate, etc.





Package Management

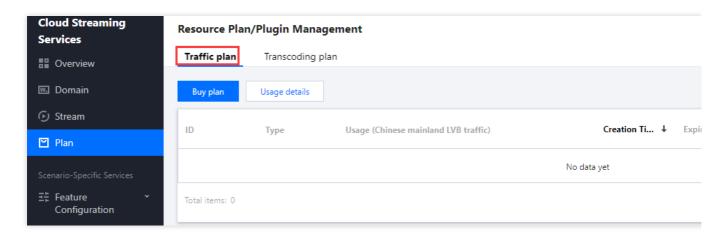
Last updated: 2023-10-30 11:17:55

You can view the usage of your traffic and transcoding plan in the CSS console.

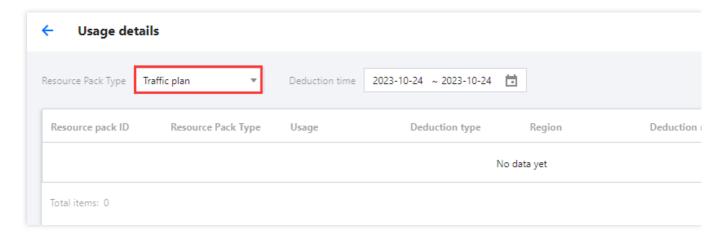
Traffic plan

Select plan on the left sidebar. You can do the following under the **Traffic plan** tab:

View the usage, purchase time, expiration time, and status (unused, in use, exhausted, expired, or frozen) of your traffic plan.



View the deduction details of your **traffic plan**, including the plan ID, plan type, usage, deduction type, deduction ratio, deducted amount, and deduction time. **Usage statistics are updated at the time of billing each day (the exact billing time may vary).** For details about how deductions work, see Prepaid plan.



View your **current billing mode** in the top right corner. Traffic plan can be used for deduction only in **daily bill-by-traffic** mode. If you use other modes, your plan will be frozen and their validity will not be extended.



Click Buy plan to go to the purchase page to buy traffic plan.

Note

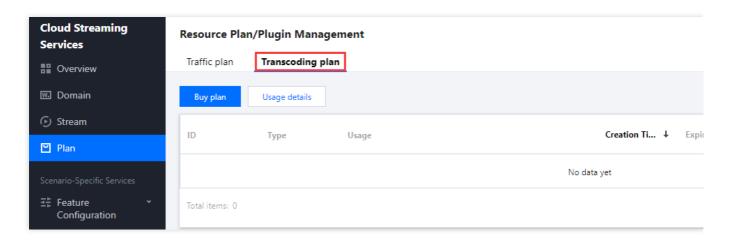
Before you buy a plan, please read Traffic plan to learn about the billing details and limits.

You can refund a plan in the console if it meets the requirements of our refund policy.

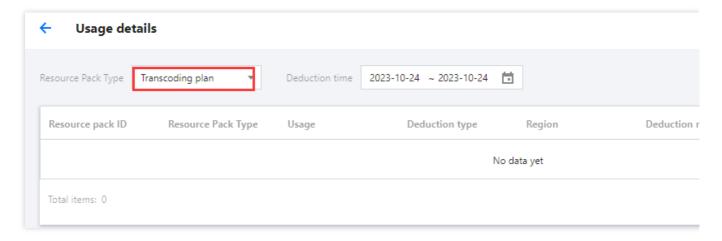
Transcoding plan

Select plan on the left sidebar. You can do the following under the **Transcoding plan** tab:

View the usage, purchase time, expiration time, and status of **standard transcoding plan** and **TSC transcoding plan**.



View the usage details of **standard transcoding plan** and **TSC transcoding plan**, including the plan ID, plan type, usage, deduction type, deduction ratio, deducted amount, and deduction time. **Usage statistics are updated at the time of billing each day (the exact billing time may vary).**



View your **current billing mode** in the top right corner. Transcoding plan can be used for deduction only in **daily bill-by-traffic** mode. If you use other modes, your plan will be frozen and their validity will not be extended.

Click **Buy plan** to go to the purchase page to buy transcoding plan.



Note

Before you buy a plan, please read Standard Transcoding plan and TSC Transcoding plan to learn about the **billing details** and **limits**.



Feature Configuration Live Watermarking

Last updated: 2023-09-26 12:53:46

CSS supports the watermark feature. It adds watermarks to the live streaming screen to protect video content from theft. This document describes how to create, modify, bind, unbind, and delete a watermark template in the console.

You can create a watermark template in the following ways:

Create a watermark template in the CSS console. For more information, please see Creating Watermark Template. Create a watermark template by calling an API. For more information, please see AddLiveWatermark.

Notes

After creating a template, you can bind it to a push domain name. The binding will take effect in 5–10 minutes. The watermark templates are managed at the domain name level in the console, and rules created by APIs cannot be canceled there for the time being. If you bound the watermark configuration to a specified stream through the watermark management API and want to unbind them, you need to call the DeleteLiveWatermark API. Binding, unbinding, and modifying a template affect only new live streams after the update but not ongoing ones. To make the new rule take effect for ongoing live streams, you need to interrupt them and push them again.

Prerequisites

You have activated the CSS service and added a push domain name.

Creating Watermark Template

- 1. Log in to the CSS console and select **Feature Configuration** > Live Watermarking.
- 2. Click Create Watermark Template.
- 3. Enter a watermark name, which can contain up to 30 letters, digits, underscores (), and hyphens (-).
- 4. Click **Select image** to upload an image as the watermark.

Note:

For the best visual effect, the watermark should be a transparent image in PNG format; the image size should be smaller than 2MB; the uploaded image file name should only support: English, numbers, and symbols -!_.*.

5. Set the watermark image preview window size:

Default width and height values: Width 1920px, Height 1080px.



Width and height value range: 360px-4096px.

Clicking **Update** the right side will automatically validate and synchronize the update of the watermark image preview window.

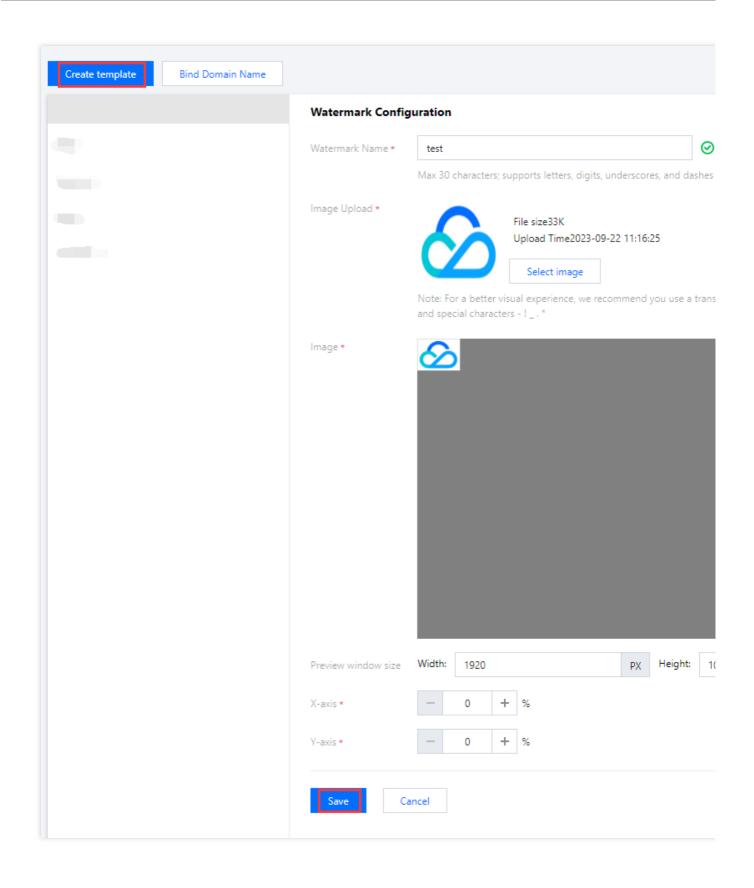
6. Specify the watermark location in the following ways:

Drag the watermark image in the configuration pane.

Adjust the coordinates of the X axis and Y axis.

7. Click Save.





Binding Domain Name

1. Log in to the CSS console and select **Feature Configuration** > Live Watermarking.

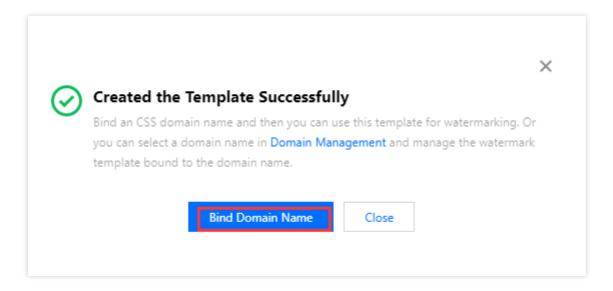


2. Enter the domain name binding page in either of the following ways:

Directly bind a domain name: click Bind Domain Name in the top-left corner.

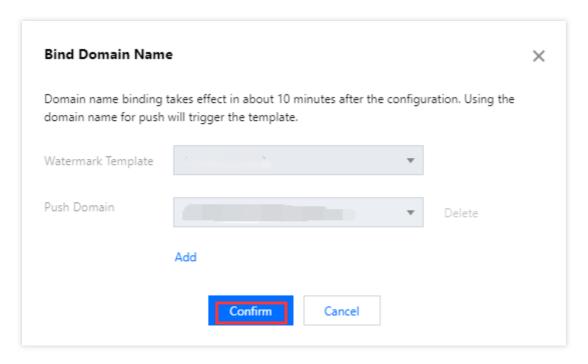


Bind a domain name after creating the watermark template: after the watermark template is created, click Bind Domain Name in the pop-up window.



3. Select a **watermark template** and a **push domain name** in the domain name binding window and then click **Confirm**.





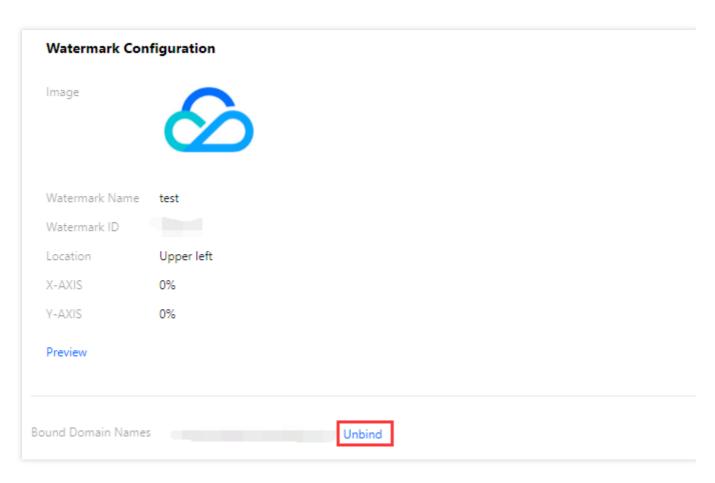
Note:

You can click **Add** to bind multiple push domain names to this template.

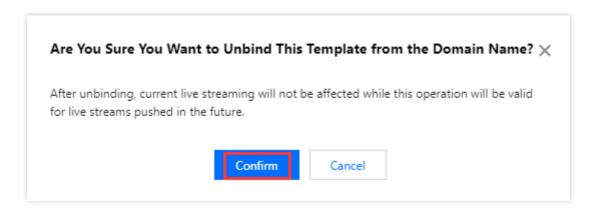
Unbinding

- 1. Log in to the CSS console and select **Feature Configuration** > Live Watermarking.
- 2. Select domain names bound to the watermark template and click **Unbind**.





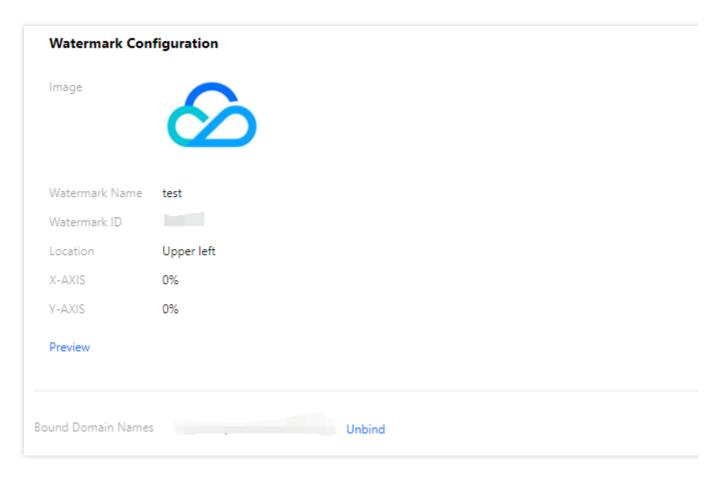
3. Confirm whether to unbind the domain name and click **Confirm** to unbind it.



Modifying Template

- 1. Go to Feature Configuration > Live Watermarking.
- 2. Select the target watermark template and click **Edit** on the right to modify the template information.
- 3. Click Save.





Note

You can click **Preview** to view how the watermark will be displayed on the screen.

Deleting Template

Note:

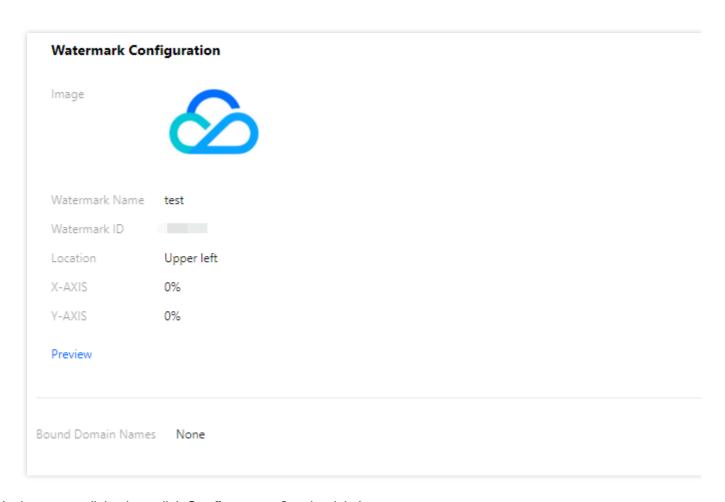
If the template is already associated, you need to Unbind it first before you can perform the delete operation.

Once the template is deleted, it cannot be recovered. Please proceed with caution.

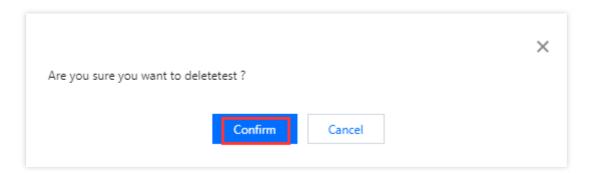
If a template has been bound to a domain name, you need to unbind the template before deleting it. For detailed directions, please see Unbinding.

- 1. Go to **Feature Configuration** > Live Watermarking.
- 2. Select the watermark template you have successfully created, and click **Delete** in the upper right corner.





3. In the pop-up dialog box, click **Confirm** to confirm the deletion.



Relevant Operations

For more information on how to **bind/unbind** a **domain name** to/from a watermark template, please see Watermark Configuration.



Live Transcoding

Last updated: 2024-02-02 09:15:57

Live transcoding (including video transcoding and audio transcoding) refers to the process where the original stream pushed from the live streaming site is converted into streams of different codecs, resolutions, and bitrates in the cloud before being pushed to viewers. This meets playback needs in varying network environments on different devices.

This document describes how to create, bind, unbind, modify, and delete a transcoding template via the CSS console.

You can create a transcoding template in two ways:

Create a transcoding template in the CSS console. For detailed directions, see Creating a standard transcoding template, Creating a TSC transcoding template, and Creating an audio-only transcoding template.

Create a transcoding template for live streams using an API. For the API parameters and examples, see CreateLiveTranscodeTemplate.

Must-Knows

CSS supports standard transcoding, Top Speed Codec (TSC) transcoding, and audio-only transcoding. Please read the billing documents before using the services.

Standard transcoding: Standard Transcoding Packages, Standard Transcoding (pay-as-you-go)

TSC transcoding: TSC Transcoding Packages, TSC Transcoding (pay-as-you-go)

Compared with **standard transcoding**, **TSC transcoding** provides higher video quality at lower bitrate. Leveraging technologies including intelligent scene recognition, dynamic encoding, and CTU/line/frame-level bitrate control, TSC transcoding allows you to provide higher-definition streaming services at lower bitrates (50% lower on average). It is widely used for game streaming, showroom streaming, and event streaming.

After creating a template, you can bind it with a playback domain name. The binding takes effect in 5-10 minutes.

After binding a template, you can add the template name (_template name) after StreamName in the original URL to generate a URL for the transcoding output. Note that the **template name** and **stream name** cannot have the same suffix. For example, if the template name is hd , and StreamName is test_a1_hd , the system will use test_a1 as the stream name and hd as the transcoding template, and playback will fail.

If you have specified the height and width or short and long sides of the transcoding output, to prevent image distortion, keep the resolution of published streams as close to the values set as possible.

On the **Live Transcoding** page of the console, you can view the domain a template is bound to, as well as finergranularity bindings performed via APIs. You can also <u>unbind</u> a template here.

You can bind one playback domain name with **multiple transcoding templates**, or bind one transcoding template with **multiple playback domain names**.

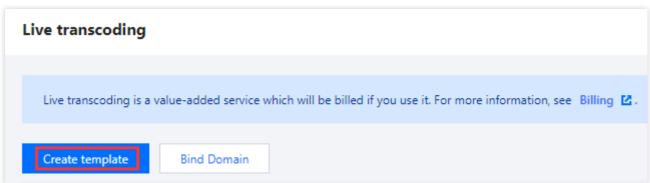
You can create up to **50** transcoding templates.



Creating a Transcoding Template

Creating a standard transcoding template

1. Log in to the CSS console and select **Feature Configuration** > **Live Transcoding**.



2. Click **Create Template**, select **Standard Transcoding** for transcoding type, and complete the following configuration:

Basic configuration: Template name, video bitrate, video resolution and more. For details, see Basic Configuration for Standard Transcoding.

Advanced configuration (optional): Click **Advanced Configuration** to show advanced settings. For details, see Advanced Configuration for Standard Transcoding.

3. Click Save.

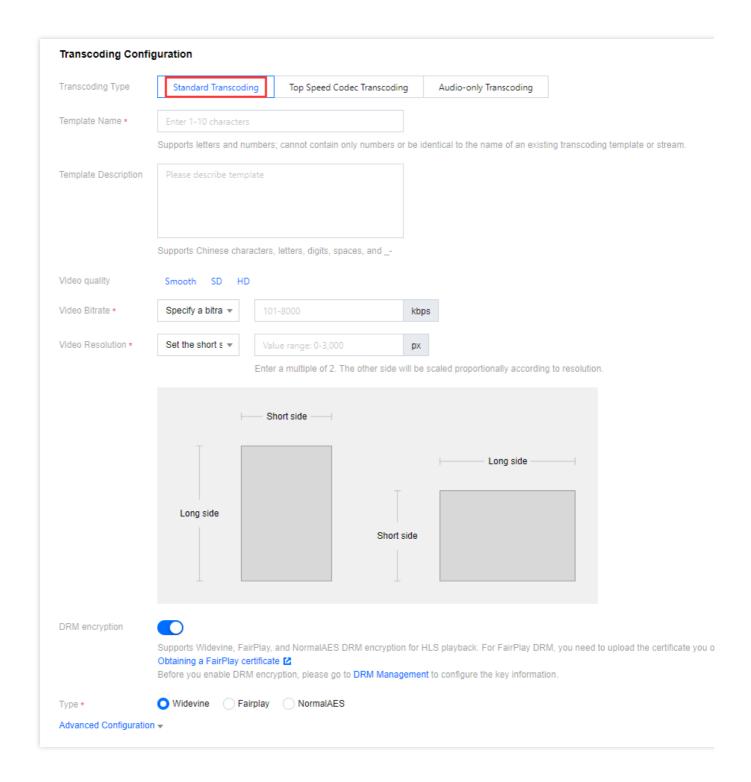
Basic Configuration for Standard Transcoding

Basic Configuration for Standard Transcoding	Required	Description
Transcoding type	Yes	The optional transcoding types, include standard transcoding, TSC transcoding, or audio-only transcoding.
Template name	Yes	Please enter 1 to 10 characters. The live transcoding template name. It only supports letters and alphanumeric combinations and does not support pure digits. The template name must not duplicate existing transcoding template names, adaptive bitrate template names, or substream names.
Template description	No	The live transcoding template description. It can only contain Chinese characters, letters, digits, spaces, underscores (_), and hyphens (-).
Video quality	No	You can choose Smooth, SD, or HD. After you select a value, the system will automatically enter the recommended



		video bitrate and height, which can be modified.
Video bitrate(in Kbps)	Yes	You can choose to keep the original bitrate, set the video bitrate, or use the default transcoding bitrate. Set the transcoding code rate, value range: 101Kbps - 8000Kbps. If you enter a value not larger than 1,000, it must be a multiple of 100. If you enter a value larger than 1,000, it must be a multiple of 500.
Video resolution (px)	Yes	Choose to keep the original resolution, set by width and height, or set by length. The default is set by long and short sides. The input value is the short side value, which can be switched to width and height settings, and the input value is the height value. Value range: 0-3000. The value must be a multiple of 2. The other side will be auto-scaled.
DRM encryption	No	It is disabled by default and can be enabled manually. To enable DRM encryption, you need to first obtain the key information in DRM Management. DRM encryption of Widevine, FairPlay, and NormalAES are supported for HLS. For FairPlay encryption, you need to upload the certificate you obtain from Apple to your player. Encryption types: default Widevine, optional Fairplay, and NormalAES.





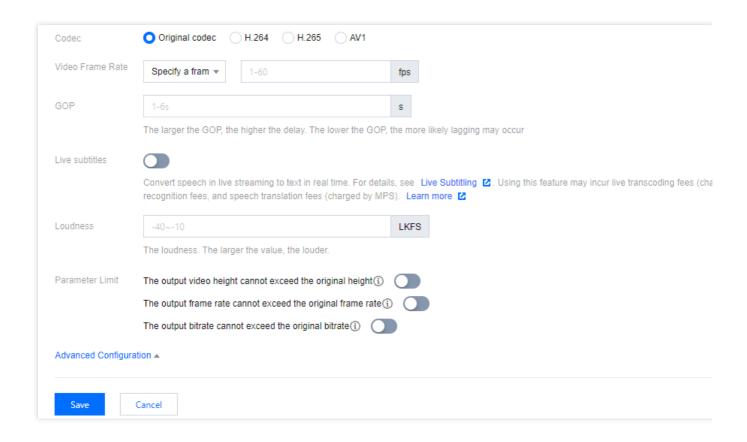
Advanced Configuration for Standard Transcoding

Advanced Configuration for Standard Transcoding	Required	Description
Codec	No	The original codec is used by default. You can choose H.264, H.265, or AV1.
Video frame rate (fps)	No	You can choose to keep the original frame rate, set the video frame rate, and keep the original frame rate by



		default. Set the video frame rate range: 1fps - 60fps.
GOP(seconds)	No	The GOP setting range is between 1 to 6 seconds. The larger the GOP, the higher the latency; a smaller GOP may potentially lead to stuttering. If not configured, the system default value will be adopted.
Live subtitles	No	The subtitle feature is deactivated by default, but can be manually activated. To activate this feature, it is necessary to bind a subtitle template. Choose a subtitle template to bind based on your business requirements. Preview and observe the effects of the subtitle template. You can adjust the subtitle template according to business needs at any time.
Loudness	No	Through this feature, the volume of the video can be adjusted. The larger the value, the greater the volume. The range for setting the volume loudness is from -40 to -10 LKFS. Currently, the simultaneous configuration of loudness and subtitle features is not supported.
Parameter limit	No	Parameter limits are disabled by default. After a limit is enabled, if you enter a value higher than the original, the original will be used. This can avoid video quality issues caused by using high video quality settings to transcode videos of low quality.





Creating a TSC transcoding template

- 1. Log in to the CSS console and select **Feature Configuration** > Live Transcoding.
- 2. Click **Create Template**, select **Top Speed Codec Transcoding** for transcoding type, and complete the following configuration:

Basic configuration: Template name, video bitrate, video resolution, etc. For details, see Basic Configuration for TSC Transcoding.

Advanced configuration (optional): Click **Advanced Configuration** to show advanced settings. For details, see Advanced Configuration for Top Speed Codec Transcoding.

3. Click Save.

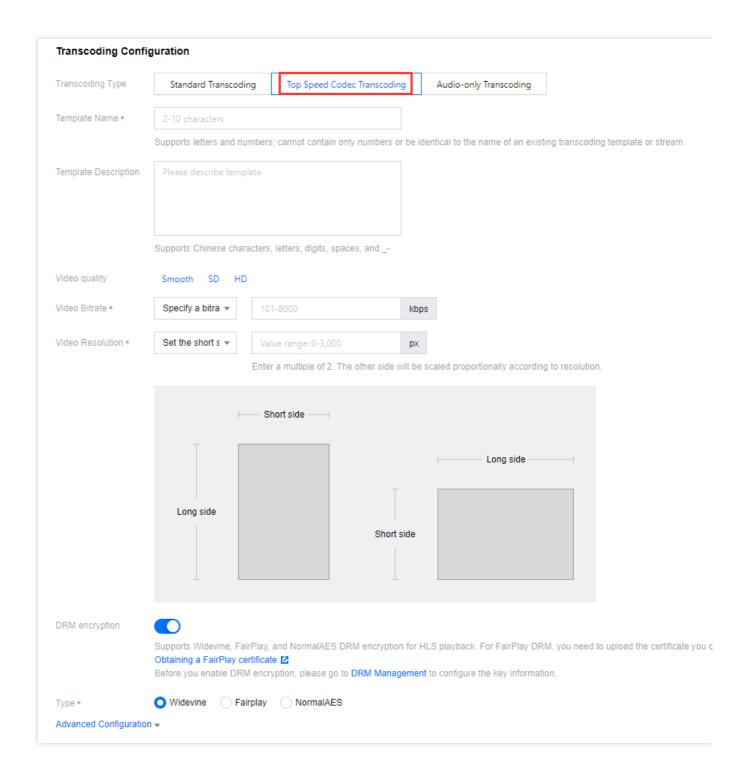
Basic Configuration for TSC Transcoding

Basic Configuration for TSC Transcoding	Required	Description
Transcoding Type	Yes	The optional transcoding types, include standard transcoding, TSC transcoding, or audio-only transcoding.
Template name	Yes	Please enter 2 to 10 characters. The live transcoding template name. It only supports letters and alphanumeric combinations and does not support pure digits.



		The template name must not duplicate existing transcoding template names, adaptive bitrate template names, or substream names.
Template description	No	The live transcoding template description. It can only contain Chinese characters, letters, digits, spaces, underscores (_), and hyphens (-).
Video quality	No	You can choose Smooth, SD, or HD. After you select a value, the system will automatically enter the recommended video bitrate and height, which can be modified.
Video bitrate(in Kbps)	Yes	You can choose to keep the original bitrate, set the video bitrate, or use the default transcoding bitrate. Set the transcoding code rate, value range: 101Kbps - 8000Kbps. If you enter a value not larger than 1,000, it must be a multiple of 100. If you enter a value larger than 1,000, it must be a multiple of 500.
Video resolution (px)	Yes	Choose to keep the original resolution, set by width and height, or set by length. The default is set by long and short sides. The input value is the short side value, which can be switched to width and height settings, and the input value is the height value. Value range: 0-3000. The value must be a multiple of 2. The other side will be auto-scaled.
DRM encryption	No	It is disabled by default and can be enabled manually. To enable DRM encryption, you need to first obtain the key information in DRM Management. DRM encryption of Widevine, FairPlay, and NormalAES are supported for HLS. For FairPlay encryption, you need to upload the certificate you obtain from Apple to your player. Encryption types: default Widevine, optional Fairplay, and NormalAES.



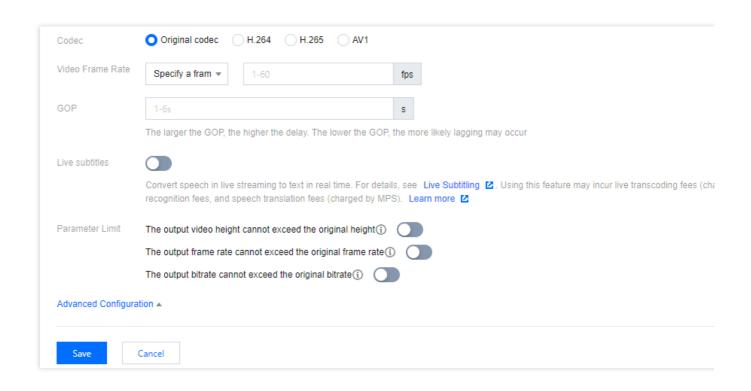


Advanced Configuration for TSC Transcoding

Advanced Configuration for TSC Transcoding	Required	Description
Codec	No	The original codec is used by default. You can choose H.264, H.265, or AV1.
Video frame rate (fps)	No	You can choose to keep the original frame rate, set the video frame rate, and keep the original frame rate by



		default. Set the video frame rate range: 1fps - 60fps.
GOP(seconds)	No	Value range: 1-6. The larger the GOP, the higher the delay. If this parameter is left empty, the default value will be used. The GOP setting range is between 1 to 6 seconds. The larger the GOP, the higher the latency; a smaller GOP may potentially lead to stuttering. If not configured, the system default value will be adopted.
Live subtitles	No	The subtitle feature is deactivated by default, but can be manually activated. To activate this feature, it is necessary to bind a subtitle template. Choose a subtitle template to bind based on your business requirements. Preview and observe the effects of the subtitle template. You can adjust the subtitle template according to business needs at any time.
Parameter limit	No	It is disabled by default and can be enabled manually. After a limit is enabled, the original value of the input stream will be used if you enter a value larger than the original. This can avoid video quality issues caused by using high video quality settings to transcode videos of low quality.





Creating an Audio-only transcoding template

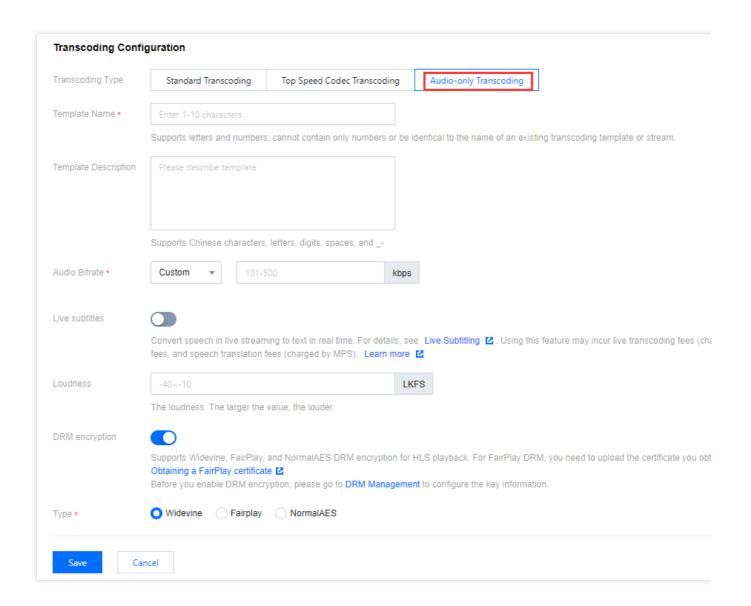
- 1. Log in to the CSS console and select **Feature Configuration** > Live Transcoding.
- 2. Click **Create Template**, select **Audio-only Transcoding** for transcoding type, complete the **configuration**, and then click **Save**.

Basic Configuration for Audio-only Transcoding	Required	Description
Transcoding type	Yes	The optional transcoding types, include standard transcoding, TSC transcoding, or audio-only transcoding.
Template name	Yes	Please enter 1 to 10 characters. The live transcoding template name. It only supports letters and alphanumeric combinations and does not support pure digits. The template name must not duplicate existing transcoding template names, adaptive bitrate template names, or substream names.
Template description	No	The live transcoding template description. It can only contain Chinese characters, letters, digits, spaces, underscores (_), and hyphens (-).
Audio bitrate (Kbps)	Yes	You can choose to keep the original bitrate or set the audio bitrate, with the default being to keep the original bitrate. To set the audio bitrate, the value range is 101kbps - 500kbps.
Live subtitles	No	The subtitle feature is deactivated by default, but can be manually activated. To activate this feature, it is necessary to bind a subtitle template. Choose a subtitle template to bind based on your business requirements. Preview and observe the effects of the subtitle template. You can adjust the subtitle template according to business needs at any time.
Loudness	No	Through this feature, the volume of the video can be adjusted. The larger the value, the louder the sound. The range for setting the volume loudness is from -40 to -10 LKFS. Currently, the simultaneous configuration of loudness and subtitle features is not supported.
DRM encryption	No	It is disabled by default and can be enabled manually.



To enable DRM encryption, you need to first obtain the key information in DRM Management.

DRM encryption of Widevine, FairPlay, and NormalAES are supported for HLS. For FairPlay encryption, you need to upload the certificate you obtain from Apple to your player. Encryption types: default **Widevine**, optional Fairplay, and NormalAES.

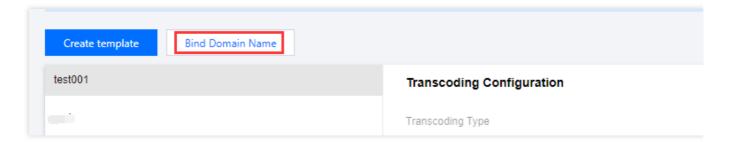


Binding a Domain Name

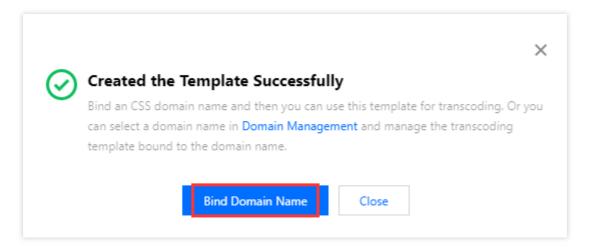
- 1. Log in to the CSS console and select **Feature Configuration** > Live Transcoding.
- 2. Bind a domain name in either of two ways:



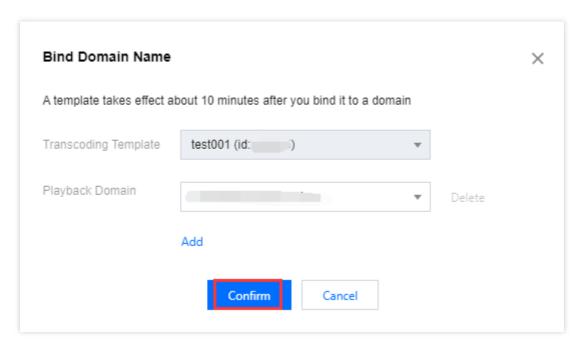
Bind a domain to an existing template: Click Bind Domain Name in the top left.



Bind a domain name after creating a transcoding template: After creating a template, click Bind Domain Name in the pop-up window.



3. Select a transcoding template and a playback domain in the domain binding window and then click **Confirm**.



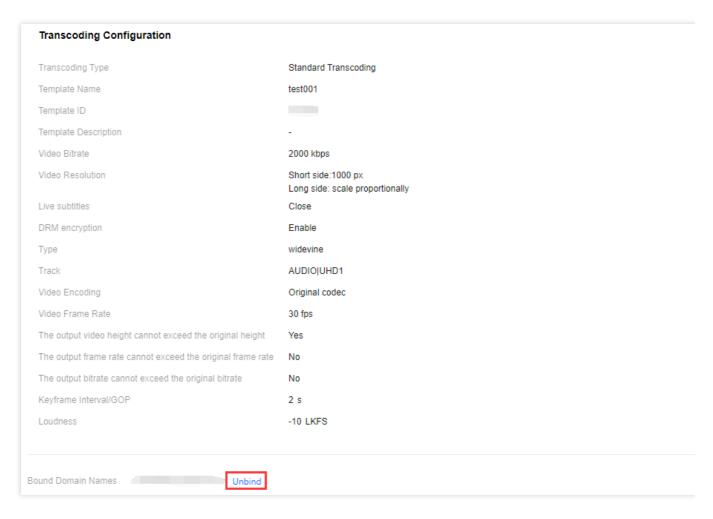
Note



You can click Add to bind a template to multiple playback domains.

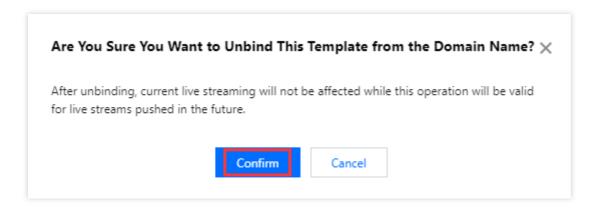
Unbinding a Domain Name

- 1. Log in to the CSS console and select **Feature Configuration** > Live Transcoding.
- 2. Select the target template and click **Unbind**.



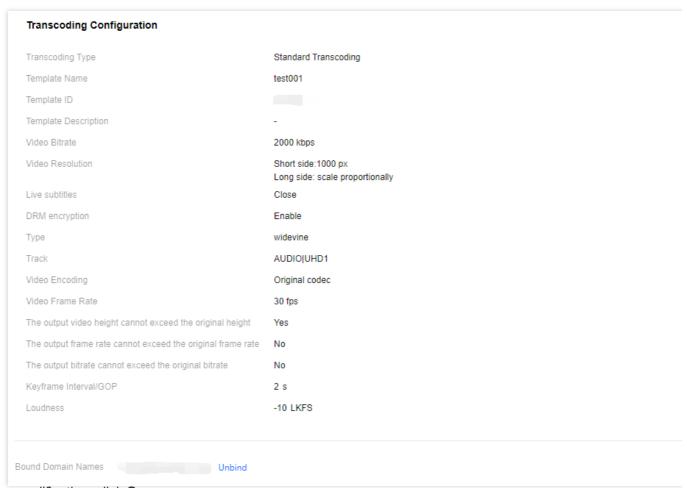
3. In the pop-up window, click Confirm.





Modifying a Template

- 1. Log in to the CSS console and select **Feature Configuration** > Live Transcoding.
- 2. Select the target transcoding template and click Edit on the right to modify it.



3. After modification, click Save.

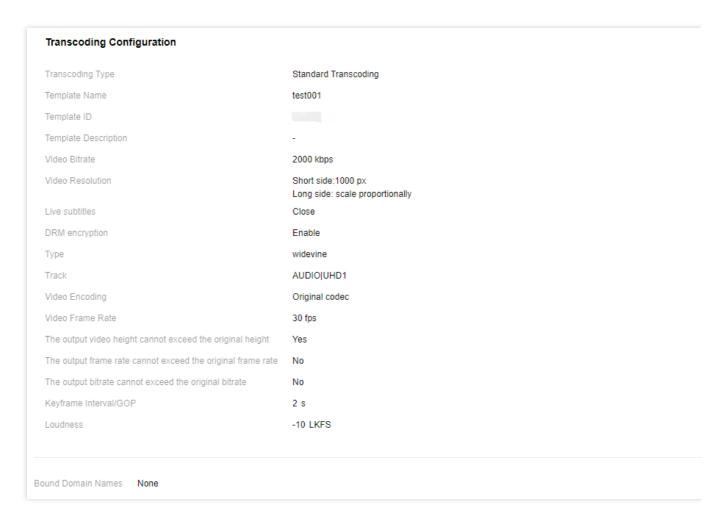


Deleting a Template

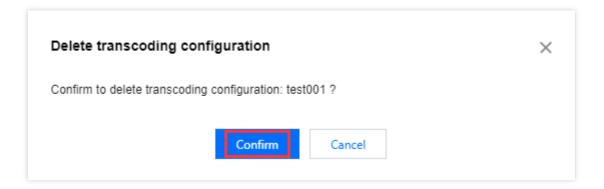
Note

If a template has been bound to domains, you need to unbind them before you can delete the template.

- 1. Log in to the CSS console and select **Feature Configuration** > Live Transcoding.
- 2. Select the target template (make sure it's not bound to a domain), and click **Delete**.



3. In the pop-up window, click Confirm.





More

You can also **unbind** and **bind** domains and transcoding templates on the **Domain Management** page. For details, see Template Configuration.



Live Recording Recording to VOD

Last updated: 2024-06-13 16:39:47

CSS supports recording live streams and storing recording files in VOD for download and preview. This document describes how to create, bind, unbind, modify, and delete recording templates.

You can create a recording template in two ways:

In the CSS console: For detailed directions, see Creating a Recording Template.

Using an API: For the API parameters and examples, see CreateLiveRecordTemplate.

Notes

Recording files are saved in VOD by default. Please activate VOD first. To avoid service suspension due to overdue payments, you can also buy VOD storage packages in advance. For more information, see Getting Started with VOD. After enabling the recording feature, please make sure that your VOD service is in normal status. If it is not activated or is suspended due to overdue payments, live recording will fail. No recording files will be generated. Nor will fees be incurred.

A recording file is available in about five minutes after recording ends. For example, if you start recording a live stream at 12:00 and stop at 12:30, you can get the recording at around 12:35.

Limited by the support of audio and video file formats (FLV/MP4/HLS) for codec types, you can only use the H.264 and H.265 video codec and the AAC audio codec.

After creating a recording template, you can bind it with push domain names. For detailed directions, see Recording Configuration. The binding takes effect in about 5-10 minutes.

For the naming rules of generated recording files, see VodFileName.

Binding, unbinding, or modifying a template affects only new live streams and not ongoing ones. To make the change apply to ongoing live streams, you need to stop them and push them again.

Mixed-stream recording does not support mixing streams inside the Chinese mainland with those outside. It will cause an error and playback will fail.

Prerequisites

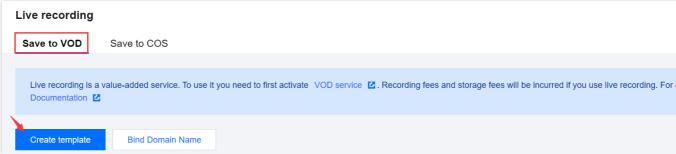
You have activated CSS and added a push domain.

You have activated the VOD service.



Creating a Recording Template

- 1. Log in to the CSS console and select **Feature Configuration** > Live Recording on the left sidebar.
- 2. In the live recording settings, choose Save to VOD.



3. Click Create template to set the template information and proceed with the following configurations:

Basic recording configuration: This includes the template name, recording content, recording format, and other configuration items. For details, see Basic Recording Configuration Instructions.

Basic recording format configuration: This includes HLS file segmentation, max recording time per file, resumption timeout, and other configuration items. For details, see Basic Recording Format Configuration Instructions. (Optional) Advanced recording format configuration: By clicking **Advanced Configuration**, you can access and select additional configurations. For details, see Advanced Recording Format Configuration Instructions. Upon completion, click **Save**.

Basic Recording Configuration Instructions

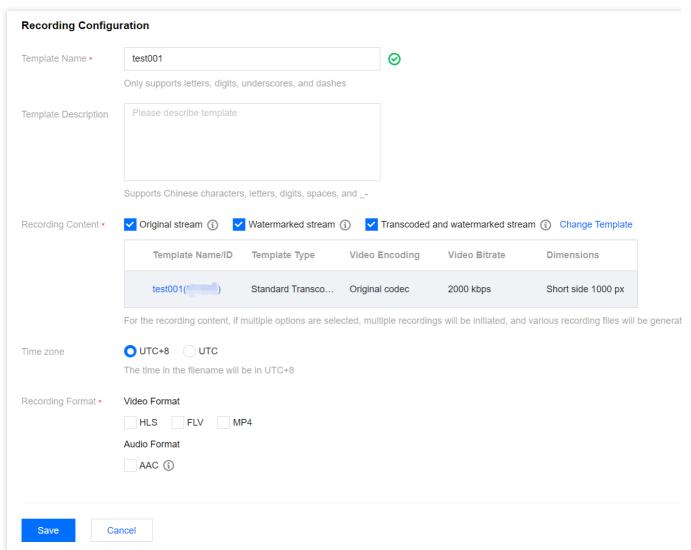
Note:

When recording the original stream via WebRTC streaming, both HLS and MP4 formats can record and play audio normally, but the FLV format will lose audio. It is recommended to select HLS or MP4 format.

When an audio-only transcoding template is selected during specified transcoded stream recording, the HLS/FLV/MP4 recording file will miss the initial 2 seconds of content due to format conversion. Please plan your push and recording schedule accordingly.

Initiating a transcoding task is required for recording transcoded streams, which will incur additional transcoding costs. However, if the same transcoding template is used for playback, charges will not be duplicated.





	The template name, which can contain Chinese characters, letters, digits, underscores (_), and hyphens (-).
otion	The template description, which can contain Chinese characters, letters, digits, underscores (_), and hyphens (-).
Original stream	Record videos before transcoding, watermarking, and stream mixing.
Watermarked stream	Record videos after they are watermarked according to the specified watermark template.
Transcoded and watermarked stream	Click Transcoded and watermarked stream . You can select an existing transcoding template or click the name of a template to modify its configuration.
) 1	Original stream Watermarked stream Transcoded and watermarked



Choosing this configuration will automatically initiate transcoding based on the transcoding template ID after push, and recording will proceed. If the transcoding template has been mistakenly deleted, the effect will be the same as recording content as watermarked streams. Time zone	You can select UTC+8 or UTC. When UTC+8 is selected as the timezone, the naming of the recording files will use the UTC+8 time. When UTC is selected as the timezone, the naming of the recording files will use the UTC time.
Recording Format	Videos can be output in formats of HLS, MP4, FLV, and AAC (for audio-only recording).

Basic Recording Format Configuration Instructions

Note:

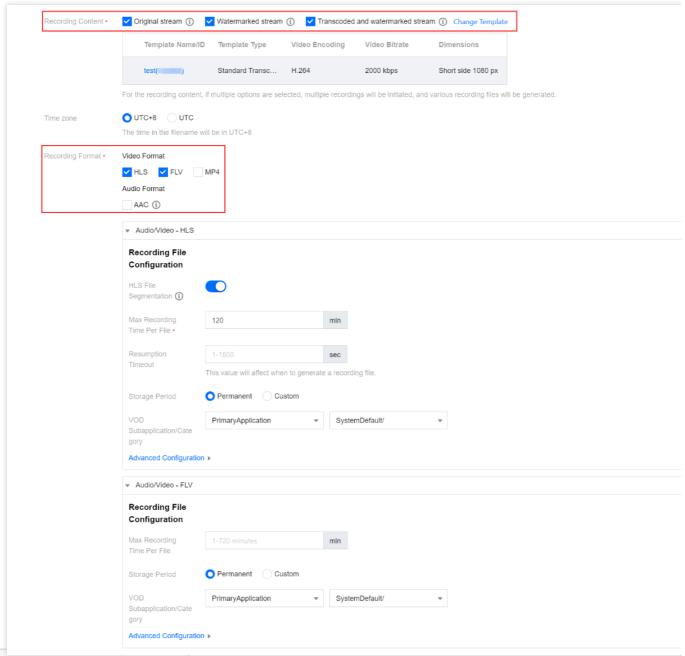
Since the recording file is uploaded as it is recorded, it is impossible to ascertain the end time before uploading, preventing the inclusion of the end time in the file name.

Enabling simultaneous recording and uploading ensures files are uploaded immediately after recording ends. A single recording file supports a duration of up to 12 hours and enhances FLV recording's disaster recovery capability.

Playback files may experience lag when being dragged for online playback, but this does not affect local playback.

1. Select the recording content and formats and complete the following settings:





Basic Recording Format Configuration Item	Description
HLS File Segmentation	The HLS file segmentation feature is disabled by default. If post-processing services are needed, it is recommended to enable HLS file segmentation and set the duration of individual HLS recording files. If HLS file segmentation is enabled, the duration of individual HLS recording files can be configured, allowing for the definition of the duration of files produced by post-recording processing. If HLS file segmentation is disabled, recording will continue uninterrupted until the live stream ends. If post-recording processing has been configured, it will be initiated after the recording is complete.
Max Recording Time Per File	Audio/Video - HLS format



(min)	There is no upper limit on the recording duration of a file in HLS format. If the waiting time for continuation of recording is exceeded, a new recording file will be generated to continue recording. When an HLS recording file is saved to VOD, the duration of a single TS file is set to 60 seconds by default. When HLS file segmentation is enabled, the duration of a single HLS recording file can range from 1 to 720 minutes. Audio/Video - FLV format The duration of a single file recorded in FLV format is limited to 1 to 720 minutes. Audio/Video - MP4 format The duration of a single file recorded in MP4 format is limited to 1 to 120 minutes. Audio-only - AAC Format The duration of a single file recorded in AAC format is limited to 1 to 120 minutes.
Resumption Timeout (sec)	The resumption timeout period directly affects the time it takes to generate a recording file. When the interval of stream interruption does not exceed the set resumption timeout period, a single live stream will generate only one file. However, the recording file will be received after the resumption timeout period has elapsed, and recording costs will be incurred during the resumption timeout period. Please set a reasonable resumption timeout period. Only HLS format supports resuming recording after stream interruptions, with the resumption timeout period being configurable from 1 to 1,800 seconds.
Storage Period (days)	You can select Permanent to save a recording file permanently or Custom to specify a storage period (up to 1,500 days). If you set the period to 0, recording files will be saved permanently. If a specified time is chosen, in accordance with national regulations, operators must record live video content and ensure storage backup. It is recommended to store recording files for 60 days to 3 years.
VOD Subapplication/Category	Recording to a specified VOD category in VOD application is supported. By default, the recording is stored in the main application of the account, and only applications with an open write status are supported.

2. Click Save.

Advanced Recording Format Configuration Instructions

1. You can switch between different tabs to view the configuration requirements for Audio/Video - HLS format, Audio/Video - FLV format, Audio/Video - MP4 format, and Audio-only - AAC format.

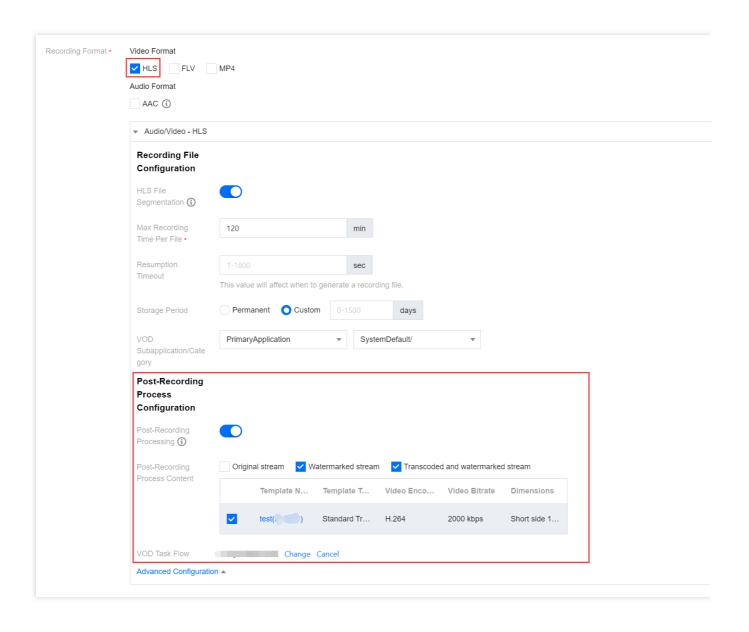


Audio/Video - HLS Format

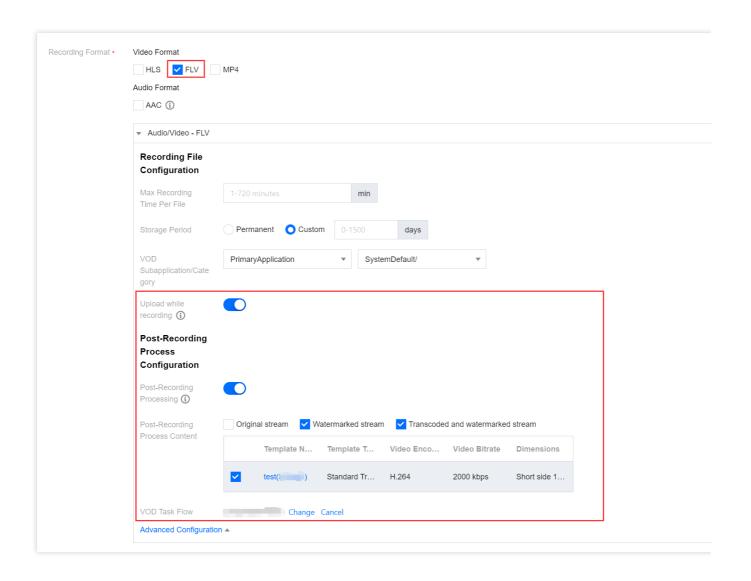
Audio/Video - FLV Format

Audio/Video - MP4 Format

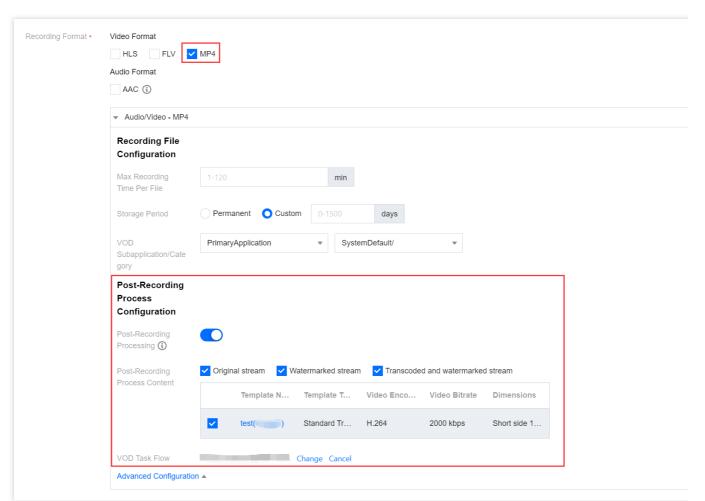
Audio-only - AAC Format





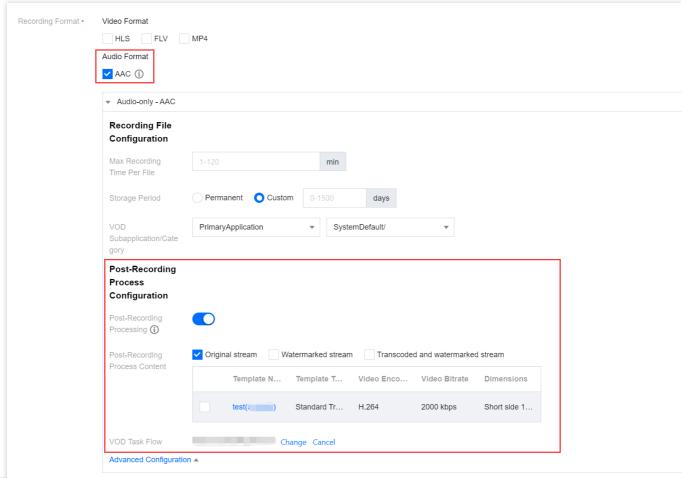






After you select this format, AAC files will be generated when audio-only or quasi-audio/video live streams are pushed.





Advanced Configuration Item	Description
Post-Recording Process Configuration	The post-recording processing feature is disabled by default. You can manually enable this feature based on your business needs. After enabling post-recording processing, no post-recording process content is selected by default. You need to manually select the corresponding process content. When HLS, FLV, MP4, and AAC audio and video formats are enabled with post-recording processing, the on-demand task flow cannot be empty. You can cancel or change the VOD task flow . You can click to select the bound task flow and choose a task flow already created under the VOD application, or click the task flow name on the current VOD task flow selection page to go to the VOD console to add/modify the task flow configuration. After the task flow is successfully bound, the VOD task flow template will be executed after the recording file is generated, incurring corresponding video on demand fees.
Upload while recording	The upload while recording feature is disabled by default. You can manually enable this feature based on your business needs. Currently, only the FLV format supports the upload while recording feature. Once enabled, it allows immediate upload of files after recording ends, supports a

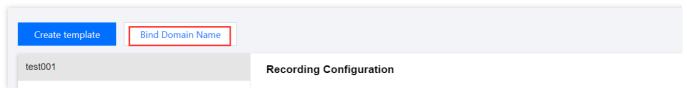


recording file duration of up to 12 hours, and enhances FLV recording's disaster recovery capability. Playback files may experience lag when being dragged for online playback, but this does not affect local playback.

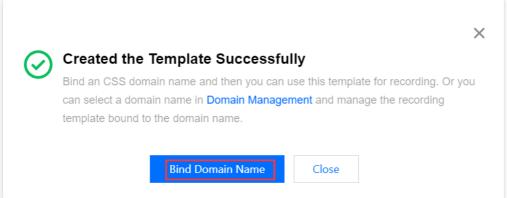
Binding a Domain Name

1. Log in to the CSS console and select **Feature Configuration** > Live Recording on the left sidebar.

Bind a domain to an existing template: Click Bind Domain Name in the top left.

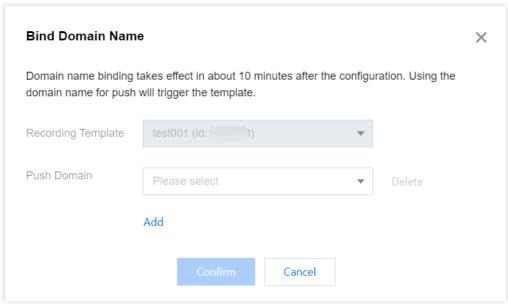


Bind a domain after creating a template: After creating a template, click Bind Domain Name in the dialog box that pops up.



2. In the pop-up window, select a **recording template** and a **push domain** and then click **Confirm**.



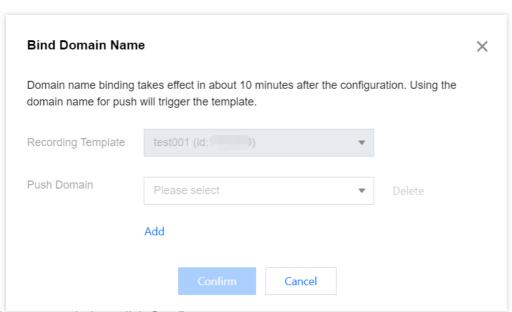


Note:

You can click **Add** to bind multiple push domains to a template.

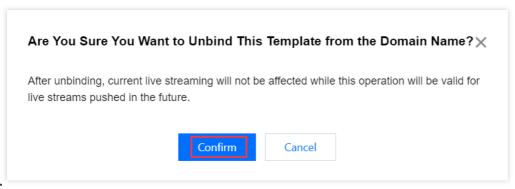
Unbinding a Domain Name

- 1. Log in to the CSS console and select **Feature Configuration** > Live Recording on the left sidebar.
- 2. Select a recording template bound with domain names, find the target domain name, and click Unbind.



3. In the pop-up window, click **Confirm**.





Note:

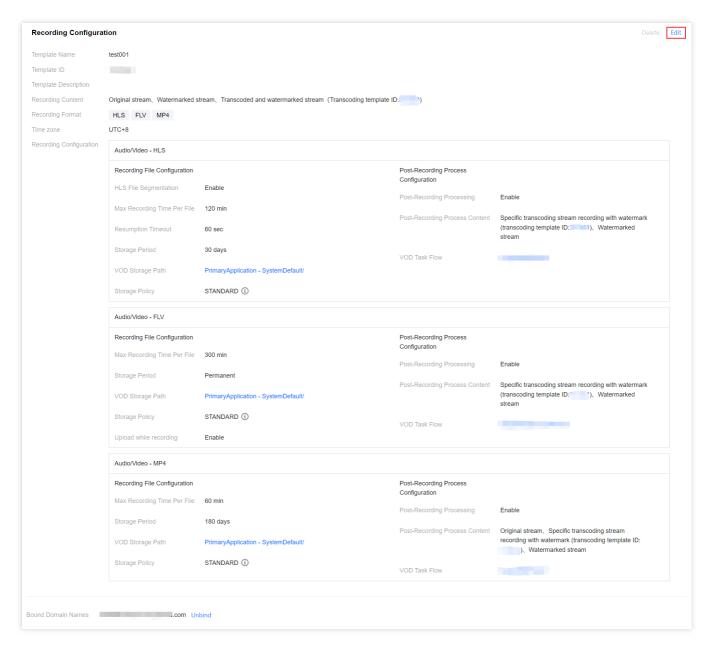
Unbinding a recording template will not affect ongoing live streams.

To cancel recording for ongoing streams, stop the streams and push them again.

Modifying a Template

- 1. Go to **Feature Configuration** > Live Recording.
- 2. Select the target recording template, click **Edit** on the right, modify the settings, and click **Save**.





Deleting a Template

Note:

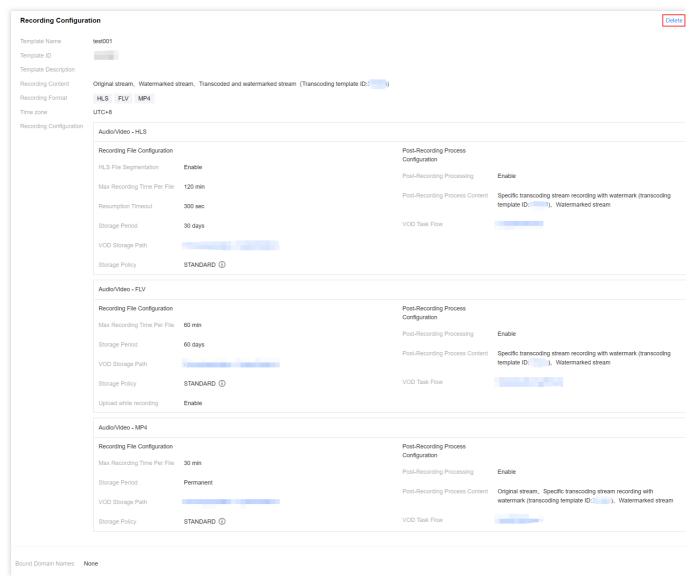
If domain names are bound to a template, you need to unbind them before you can delete the template.

Once a template is deleted, it cannot be restored. Please proceed with caution.

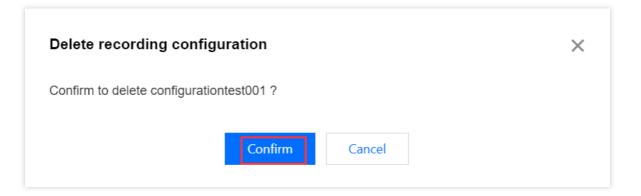
In the console, recording templates are managed at the domain level. To unbind recording rules bound to streams by APIs, call DeleteLiveRecordRule.

- 1. Log in to the CSS console and select **Feature Configuration** > Live Recording on the left sidebar.
- 2. Select the target recording template, and click **Delete** in the upper right.





3. In the pop-up window, click Confirm.



More

For more information about **binding** and **unbinding** a domain name, see Recording Configuration.



FAQs

How are recording files named?

If a recording template is created in the console, the names of recording files (the names returned by the recording callback) are in the following format:

```
{StreamID}*{StartYear}-{StartMonth}-{StartDay}-{StartHour}-{StartMinute}-
{StartSecond}*{EndYear}-{EndMonth}-{EndDay}-{EndHour}-{EndMinute}-{EndSecond}
```

Fields:

Placeholder	Description
{StreamID}	The stream ID.
{StartYear}	The start time - year.
{StartMonth}	The start time - month.
{StartDay}	The start time - day.
{StartHour}	The start time - hours.
{StartMinute}	The start time - minutes.
{StartSecond}	The start time - seconds.
{EndYear}	The end time - year.
{EndMonth}	The end time - month.
{EndDay}	The end time - day.
{EndHour}	The end time - hours.
{EndMinute}	The end time - minutes.
{EndSecond}	The end time - seconds.



Recording to COS

Last updated: 2024-06-25 15:05:52

With CSS, you can record a live stream and save the recording file to VOD or COS. This document shows you how to record to Cloud Object Storage (COS).

Notes

To record to COS, you need to activate COS first. We recommend you buy a storage package in advance to avoid service suspension caused by overdue payments. For details, see COS > Getting Started.

After enabling the recording feature, please make sure that your COS service is in normal status. If COS is not activated or is suspended due to overdue payments, live recording will fail. No recording files will be generated. Nor will fees be incurred.

A recording file is available about five minutes after recording ends. For example, if you start recording a live stream at 12:00 and stop at 12:30, you can get the recorded video at around 12:35.

After creating a recording template, you need to bind it to a push domain. For detailed directions, see "Recording Configuration". The template takes effect 5-10 minutes after binding.

Mixed-stream recording does not support mixing streams inside the Chinese mainland with streams outside. Doing so will cause an error and playback of the recording file will fail.

CSS needs permissions to store recording files in COS. Before you use the record-to-COS feature, make sure you have granted the necessary permission. If recording to COS fails due to insufficient permissions, the video cannot be recovered. For how to grant the permission, see "Authorizing CSS to Store Recording Files in COS".

Due to the default traffic and QPS limits of COS storage buckets, if your estimated concurrent push streams exceed 5000, please Submit a Ticket to adjust the QPS limit to avoid affecting the normal use of your business.

If you do not specify a recording template when initiating a recording task, the recording file will be saved to VOD.

When storing recorded content in COS and the storage folder includes the stream ID, please ensure the legality of the stream ID aligns with the naming conventions of COS folders/files to prevent file saving failures. For details on COS object naming conventions, refer to the Naming Conventions Document.

Prerequisites

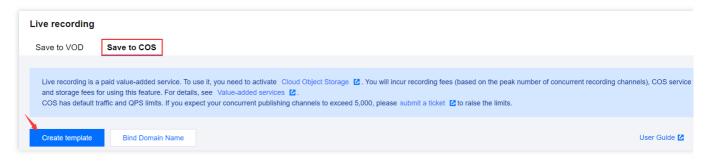
You have activated CSS and added a push domain.

You have activated COS.



Creating a Recording Template

- 1. Log in to the CSS console and select **Feature Configuration** > Live Recording on the left sidebar.
- 2. Select Save to COS.



3. Click **Create template** to set the template information and proceed with the following configurations:
Basic recording configuration: This includes the template name, recording content, recording format, and other configuration items. For details, see Basic Recording Configuration Instructions.
Basic recording format configuration: This includes HLS file segmentation, max recording time per file, resumption timeout, and other configuration items. For details, see Basic Recording Format Configuration Instructions.

(Optional) Advanced recording format configuration: By clicking **Advanced Configuration**, you can access and select additional configurations. For details, see Advanced Recording Format Configuration Instructions.

4. Upon completion, click **Save**.

Basic Recording Configuration Instructions

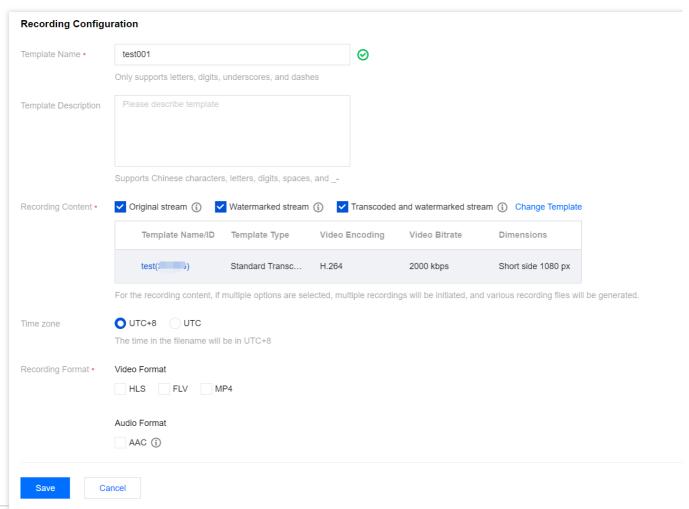
Note:

When recording the original stream via WebRTC streaming, both HLS and MP4 formats can record and play audio normally, but the FLV format will lose audio. It is recommended to select HLS or MP4 format.

When an audio-only transcoding template is selected during specified transcoded stream recording, the HLS/FLV/MP4 recording file will miss the initial 2 seconds of content due to format conversion. Please plan your push and recording schedule accordingly.

Initiating a transcoding task is required for recording transcoded streams, which will incur additional transcoding costs. However, if the same transcoding template is used for playback, charges will not be duplicated.





Basic Configu	ration Item	Description
Template Nar	me	The template name, which can contain letters, digits, underscores (_), and hyphens (-).
Template Des	scription	The template description, which can be customized and can contain Chinese and English characters, digits, spaces, underscores (_), and hyphens (-).
Recording Content	Original stream	The recording video records the original stream by default and retains its original bitrate. Record videos before transcoding, watermarking, and stream mixing. For WebRTC streams, please select other content types, because the audio playback may be not compatible.
	Watermarked stream	Record videos after they are watermarked according to the specified watermark template. If no watermark template is configured, original streams will be recorded.
	Transcoded and watermarked stream	Click Transcoded and watermarked stream . You can select an existing transcoding template or click the name of a template to modify its configuration.



	Choosing this configuration will automatically initiate transcoding based on the transcoding template ID after push, and recording will proceed. If the transcoding template has been mistakenly deleted, the effect will be the same as recording content as watermarked streams.
Time zone	You can select UTC+8 or UTC. When UTC+8 is selected as the timezone, the naming of the recording files will use the UTC+8 time. When UTC is selected as the timezone, the naming of the recording files will use the UTC time.
Recording Format	Videos can be output in formats of HLS, MP4, FLV, and AAC (for audio-only recording).

Basic Recording Format Configuration Instructions

Note:

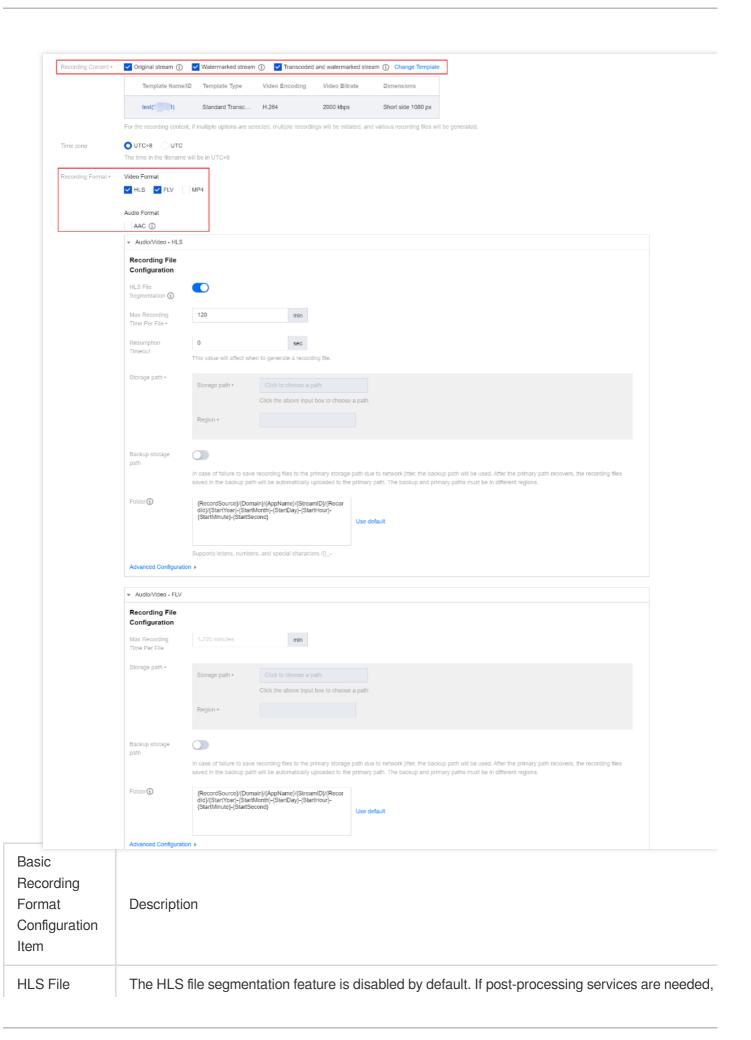
Since the recording file is uploaded as it is recorded, it is impossible to ascertain the end time before uploading, preventing the inclusion of the end time in the file name.

Enabling simultaneous recording and uploading ensures files are uploaded immediately after recording ends. A single recording file supports a duration of up to 12 hours and enhances FLV recording's disaster recovery capability.

Playback files may experience lag when being dragged for online playback, but this does not affect local playback.

1. Select the recording content and formats and complete the following settings:







Segmentation	it is recommended to enable HLS file segmentation and set the duration of individual HLS recording files. If HLS file segmentation is enabled, the duration of individual HLS recording files can be configured, allowing for the definition of the duration of files produced by post-recording processing. If HLS file segmentation is disabled, recording will continue uninterrupted until the live stream ends. If post-recording processing has been configured, it will be initiated after the recording is complete.
Max Recording Time Per File (min)	Audio/Video - HLS format There is no upper limit on the recording duration of a file in HLS format. If the waiting time for continuation of recording is exceeded, a new recording file will be generated to continue recording. When an HLS recording file is saved to COS, the duration of a single TS file is set to 10 seconds by default. When HLS file segmentation is enabled, the duration of a single HLS recording file can range from 1 to 720 minutes. Audio/Video - FLV format The duration of a single file recorded in FLV format is limited to 1 to 720 minutes. Audio/Video - MP4 format The duration of a single file recorded in MP4 format is limited to 1 to 120 minutes. Audio-only - AAC format The duration of a single file recorded in AAC format is limited to 1 to 120 minutes.
Resumption Timeout (sec)	The resumption timeout period directly affects the time it takes to generate a recording file. When the interval of stream interruption does not exceed the set resumption timeout period, a single live stream will generate only one file. However, the recording file will be received after the resumption timeout period has elapsed, and recording costs will be incurred during the resumption timeout period. Please set a reasonable resumption timeout period. Only HLS format supports resuming recording after stream interruptions, with the resumption timeout period being configurable from 1 to 1,800 seconds.
Storage path	You can select a COS bucket from buckets that you have created and completed authorization in Cloud Object Storage . The region is the region of the mentioned bucket, which cannot be modified.
Backup storage path	The backup storage path feature is disabled by default. You can manually enable this feature according to your business needs. When network jitter prevents the recording file from being stored in the primary storage path, the system will automatically store it in the backup storage path to prevent file loss. Once the primary storage path is restored, the recording file in the backup storage path will be automatically synchronized to the primary storage path. The primary and secondary regions cannot be the same.
Folder	The default storage folder is {RecordSource}/{Domain}/{AppName}/{StreamID}/{RecordId}/{StartYear}-



```
{StartMonth}-{StartDay}-{StartHour}-{StartMinute}-{StartSecond}.

{RecordSource} indicates the content type. If the original stream is recorded, this is "origin".

If a transcoded stream is recorded, this is the transcoding template ID.

{StartYear} indicates the starting year.

{StartMonth} indicates the starting month.

{StartDay} indicates the starting day.

{StartMinute} indicates the starting minute.

{StartSecond} indicates the starting second.

{Domain} indicates the push domain.

{AppName} indicates the push path.

{StreamID} indicates the stream ID.

{RecordId} indicates the recording task ID, which is returned by the CreateRecordTask API.

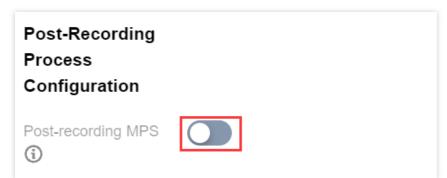
(/) indicates folder levels. (-) is an ordinary character.
```

2. Click Save.

Advanced Recording Format Configuration Instructions

1. Log in to the CSS console and select **Feature Configuration** > **Live recording** > **Save to COS** > Create template > Recording Format > Advanced Configuration.

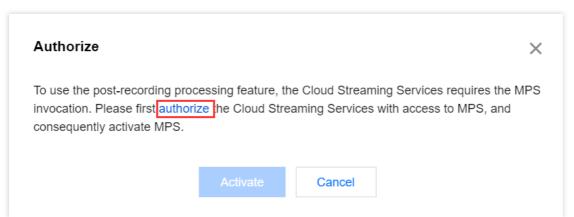
Note:



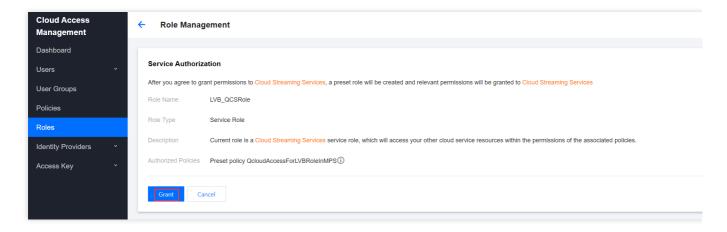
Prerequisite: Since this is the **first time activating the post-recording MPS feature**, the Cloud Streaming Services console needs to call the Media Processing Service (MPS), requiring you to create a service role and **authorize** the current account role to use the MPS product.

2. Click **authorize** to enter the CAM role management page.





3. On the role management page, click **Grant** to complete the identity verification and finalize the MPS authorization, enabling normal use of the MPS.



- 4. After successful authorization, the system will automatically activate the MPS product and display the Save to COS page.
- 5. Choose **Create template > Recording Format > Advanced Configuration**, and proceed with the following configuration:
- 5.1 You can switch between different tabs to view the configuration requirements for Audio/Video HLS format,

Audio/Video - FLV format, Audio/Video - MP4 format, and Audio-only - AAC format.

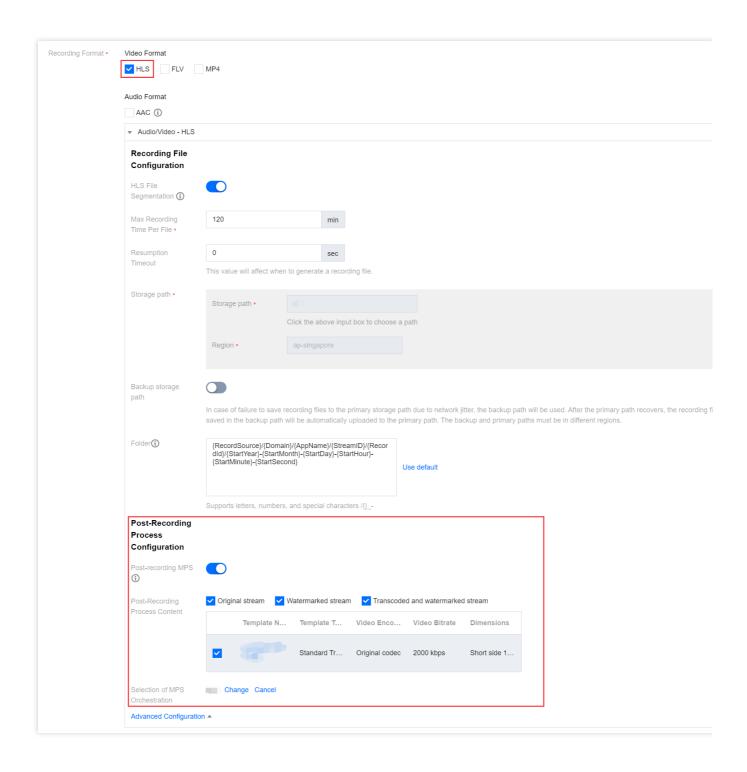
Audio/Video - HLS Format

Audio/Video - FLV Format

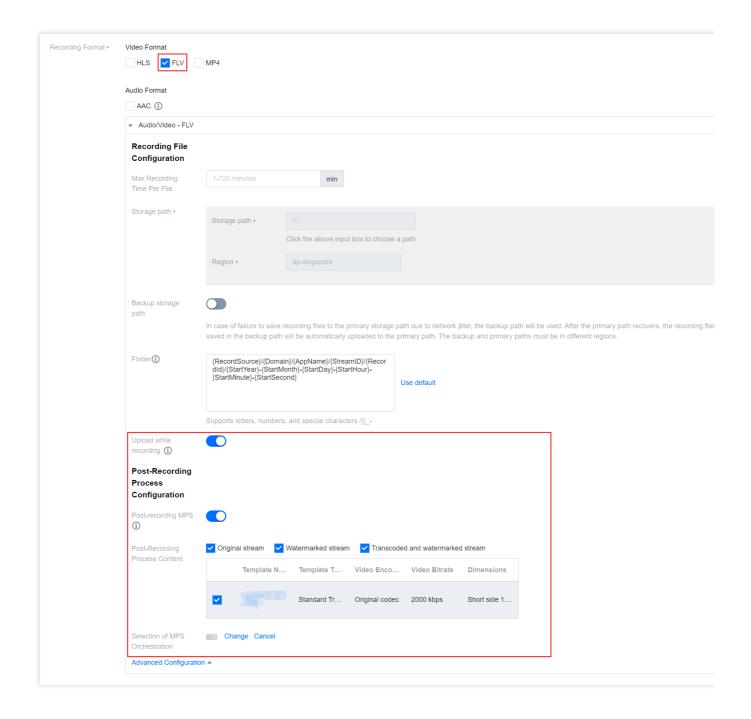
Audio/Video - MP4 Format

Audio-only - AAC Format

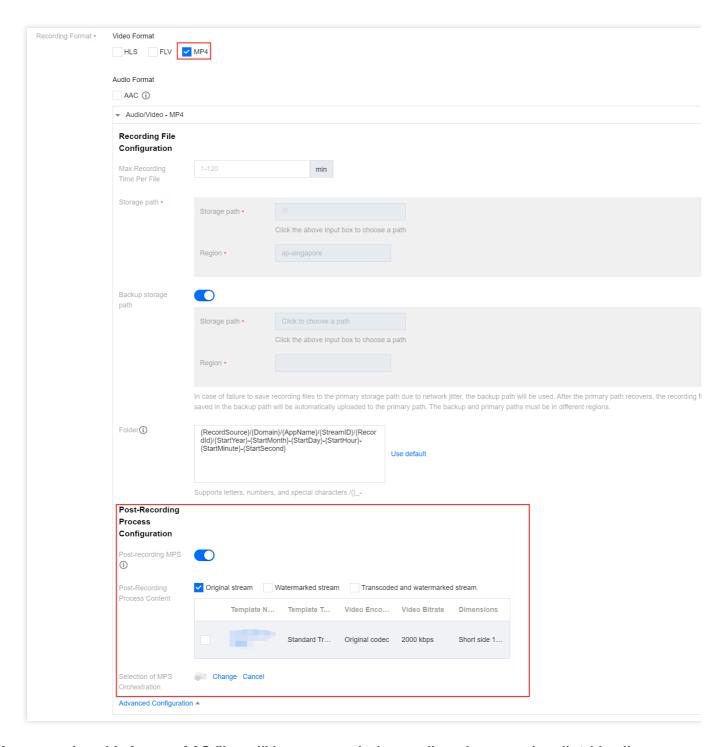






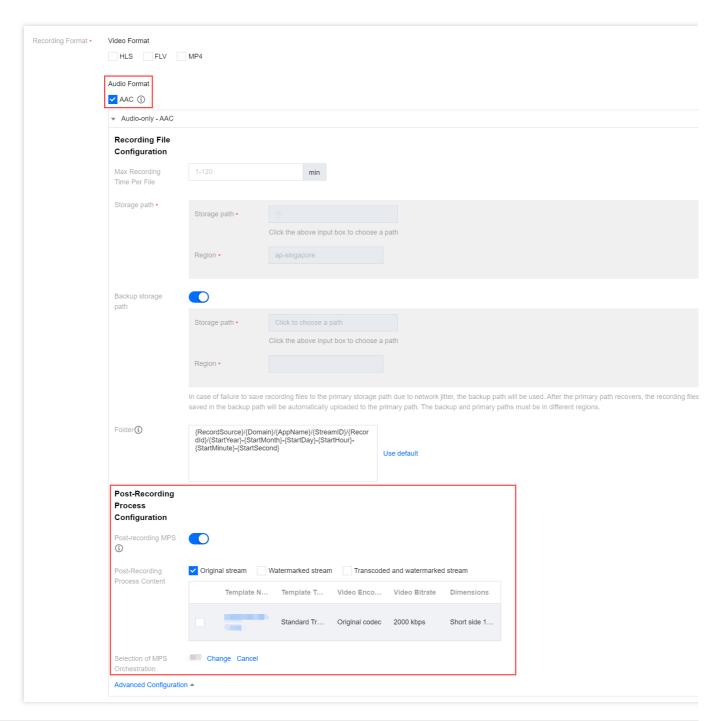






After you select this format, AAC files will be generated when audio-only or quasi-audio/video live streams are pushed.





Advanced Configuration Item	Description
Post-Recording Process Configuration	The post-recording MPS feature is disabled by default. You can manually enable this feature based on your business needs. After enabling the post-recording MPS, no post-recording process content is selected by default. You need to manually select the corresponding process content. When HLS, FLV, MP4, and AAC audio and video formats are enabled with post-recording processing, MPS orchestration cannot be empty.



After enabling the post-recording MPS, you can use the MPS orchestration to transcode, repackage, and perform a series of other post-processing services on the original recording files. The storage setting for the processed files is determined by the MPS orchestration task settings, while the original recording files are still retained.

You can cancel or change the **MPS orchestration**. You can **click to select the bound MPS orchestration** and choose an orchestration already created under the MPS orchestration application, or click the orchestration name on the current MPS orchestration selection page to go to the MPS console to add/modify the orchestration configuration.

After the orchestration is successfully bound, the MPS template will be executed after the recording file is generated, incurring corresponding Media Processing fees.

Upload while recording

The upload while recording feature is disabled by default. You can manually enable this feature based on your business needs.

Currently, only the FLV format supports the upload while recording feature. Once enabled, it allows immediate upload of files after recording ends, supports a recording file duration of up to 12 hours, and enhances FLV recording's disaster recovery capability. Playback files may experience lag when being dragged for online playback, but this does not affect local playback.

Binding a Domain Name

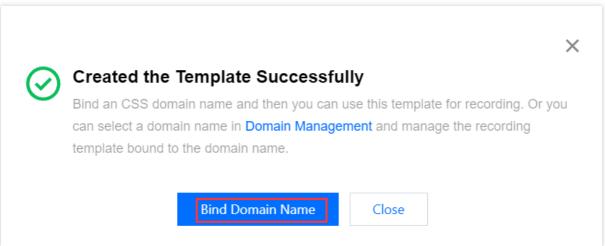
1. Log in to the CSS console, select **Feature Configuration** > **Live Recording** on the left sidebar, and click **Save to COS.**

Bind a domain to an existing template: Click Bind Domain Name in the top left.

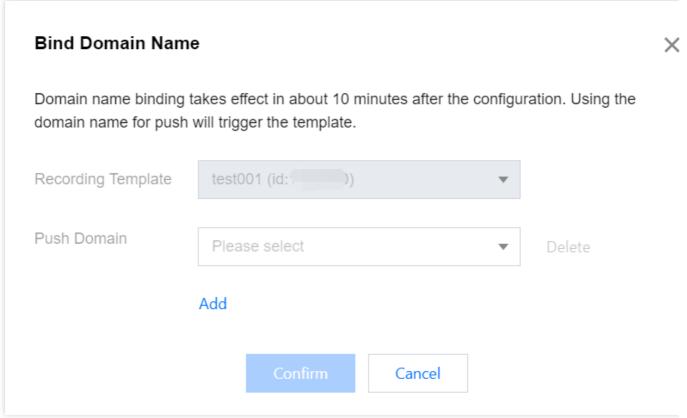


Bind a domain after creating a template: After creating a template, click **Bind Domain Name** in the dialog box that pops up.





2. In the pop-up window, select a **Recording template** and a **Push domain** and then click **Confirm**.



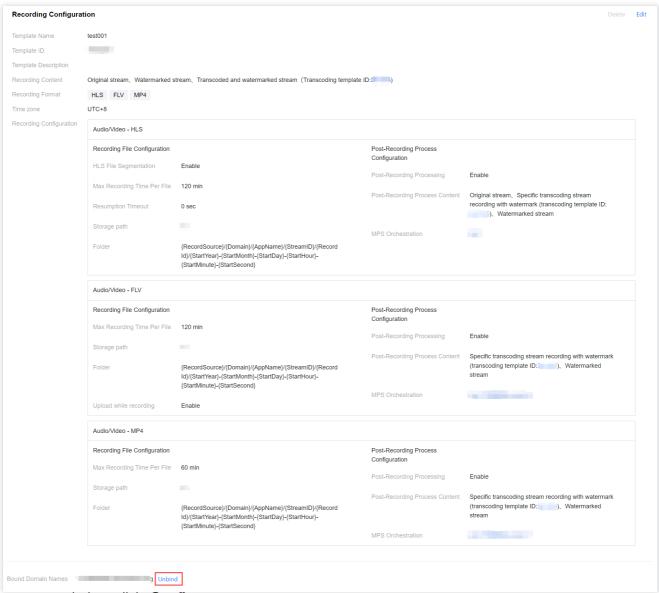
Note:

You can click **Add** to bind multiple push domains to a template.

Unbinding a Domain Name

- 1. Log in to the CSS console, select **Feature Configuration** > **Live Recording** on the left sidebar, and click **Save to COS**.
- 2. Select a recording template bound with domain names, find the target domain name, and click **Unbind**.





3. In the pop-up window, click Confirm.

Are You Sure You Want to Unbind This Template from the Domain Name?×

After unbinding, current live streaming will not be affected while this operation will be valid for live streams pushed in the future.



Note:

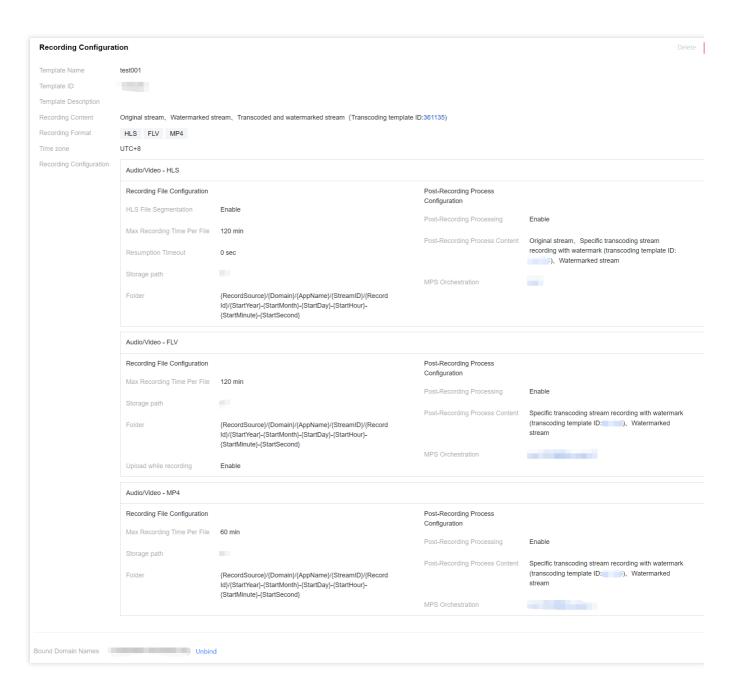
Unbinding the recording template will not affect ongoing live streams.

To cancel recording for ongoing streams, stop the streams and push them again.



Modifying a Template

- 1. Go to Feature Configuration > Live Recording and select Save to COS.
- 2. Select the target recording template and click **Edit** on the right to modify the template information.
- 3. Click Save.



Deleting a Template

Note:

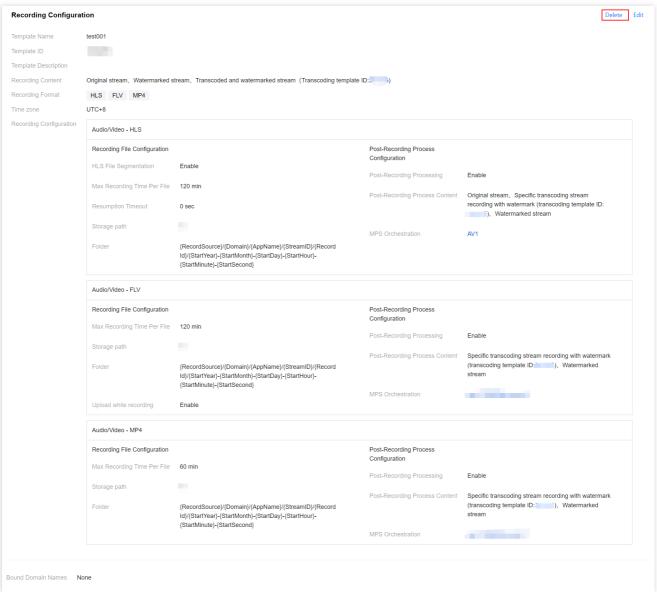
If the template has been associated, you need to first unbind it before you can delete it.

Once a template is deleted, it cannot be restored. Please proceed with caution.



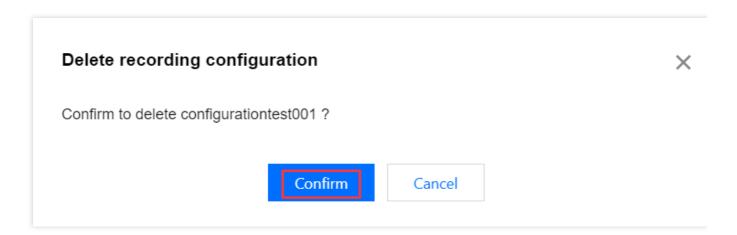
The management of recording templates in the console is at the domain name level, and currently, it is impossible to cancel the rules created by the associated interface. If you have associated a specific stream through the recording management interface, you will need to call Delete Recording Rule to unbind it.

- 1. Log in to the CSS console, select **Feature Configuration** >Live Recording on the left sidebar, and click **Save** to COS.
- 2. Select the target recording template, and click **Delete** in the upper right.



3. In the pop-up window, click **Confirm**.





More

You can also **unbind** and **bind** domains and recording templates on the **Domain Management** page. For details, see Recording Configuration.



Time Shifting Time Shifting

Last updated: 2024-07-16 09:36:23

Time shifting is powered by the recording capability of CSS. It allows users to rewind and play earlier parts of a live stream. This is commonly used to play back highlights of live streamed sports events.

Notes

After creating a time shifting template, you need to bind it to a push domain. The configuration takes effect 5-10 minutes after binding.

When enabling the new live time-shifting feature, billing will be based on the Time-shift Data Write Volume. Using the new live time-shifting feature will also generate Live Streaming Traffic Bandwidth Fees and Live Transcoding Fees. To timeshift a transcoded live stream, you need to configure a transcoding task for the stream in advance. This will incur transcoding fees. Please make sure the transcoding template used is not deleted.

When writing time-shift transcoded stream data, transcoding will be initiated first, generating Live Transcoding Fees. Please make sure that the selected transcoding template has not been accidentally deleted, otherwise, the accidentally deleted time-shift transcoded stream will not be playable. No transcoding fees will be generated when playing the time-shift transcoded stream.

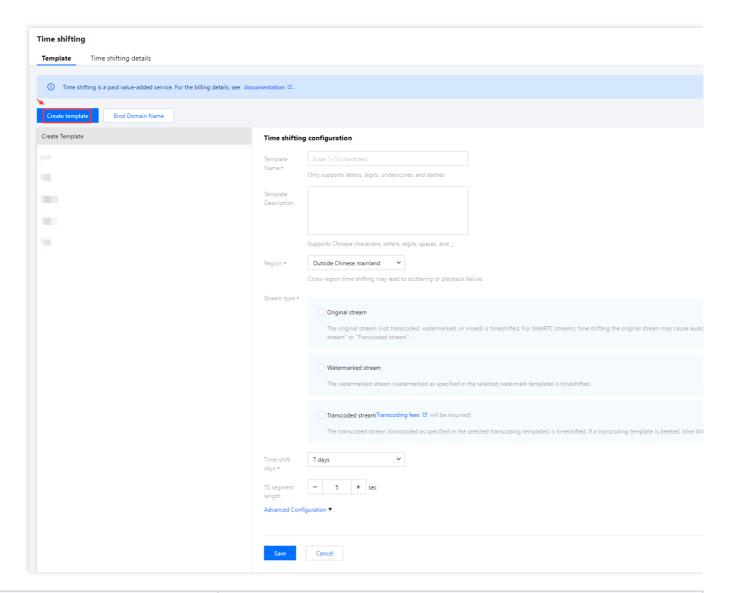
Prerequisites

You have activated CSS and added a push domain name.

Creating a Time Shifting Template

- 1. Log in to the CSS console and select **Feature Configuration** > Time Shifting on the left sidebar.
- 2. Click Create template to set the template information and configure the following settings:





Item		Description
Template Name		The time shifting template name, which can be 1-10 characters long and can contain Chinese characters, letters, numbers, and
Template Description		The introduction and description of the live broadcast time shift template can be customized (only Chinese, English, numbers, spaces, _, - are supported).
Region		By default, outside Chinese mainland, Hong Kong, Macao, and Taiwan regions are supported, with the option to select Chinese mainland. Please bind the correct time-shift playback acceleration region, as cross-regional time-shift playback may result in lagging or inability to pull the stream.
Stream type	Original stream	If you choose this configuration, the time-shift content will not have transcoding, watermark, or mixed-stream effects. For time-shift content with WebRTC push, the audio may not be compatible with some players. It is recommended to choose "Watermarked Stream" or "Transcoded Stream".



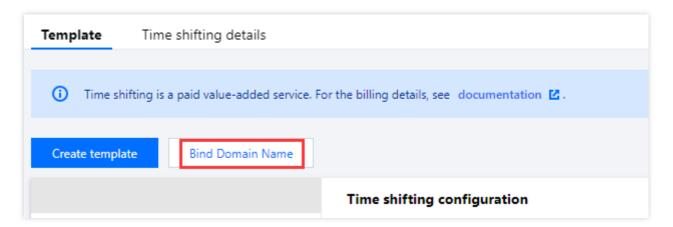
	Watermarked stream	The watermarked stream (watermarked as specified in the selected watermark template) is timeshifted.
	Transcoded stream	When selecting this configuration, the time-shift video content will be the content after transcoding according to the transcoding template ID. If the transcoding template is deleted, the time-shift playback content will become invalid. Transcoded streams will generate Transcoding Fees.
Time-shift days	5	The default is 7 days, with options to choose 1 day, 3 days, 15 days, and 30 days.
TS segment length		The default length is five seconds. You can set it to a value between 3 and 10.

3. After completing the input, click **Save** to confirm.

Binding a Domain Name

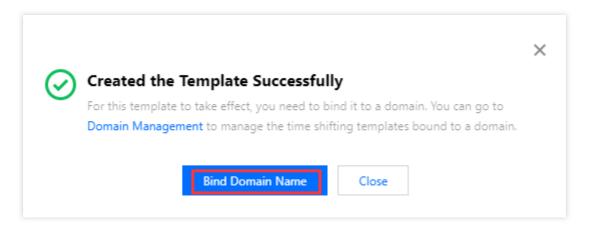
1. Log in to the CSS console, and select **Feature Configuration** > Time Shifting on the left sidebar.

Bind a domain to an existing template: Click Bind Domain Name in the top left.

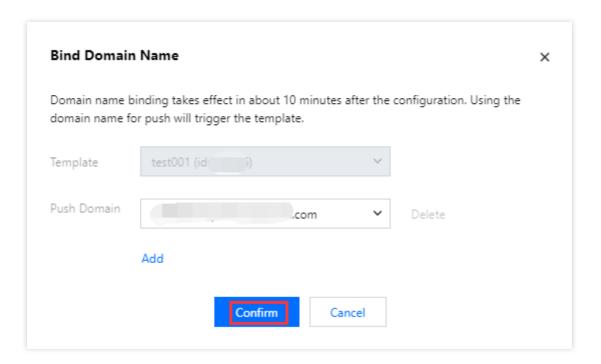


Bind a domain after creating a template: After creating a template, click **Bind Domain Name** in the dialog box that pops up.





2. In the pop-up window, select a time shifting template and a push domain and then click Confirm.



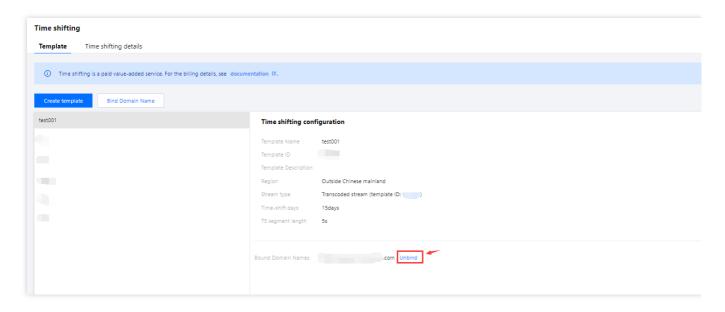
Note:

You can click **Add** to bind multiple push domains to a template.

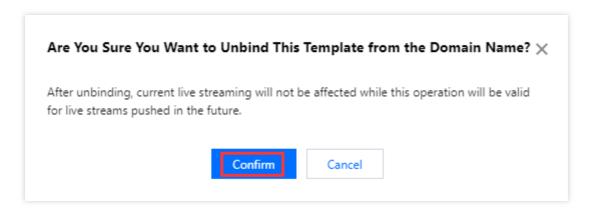
Unbinding a Domain Name

- 1. Log in to the CSS console, and select **Feature Configuration** > Time Shifting on the left sidebar.
- 2. Select a time shifting template bound with domain names, find the target domain name, and click **Unbind**.





3. In the pop-up window, click Confirm.



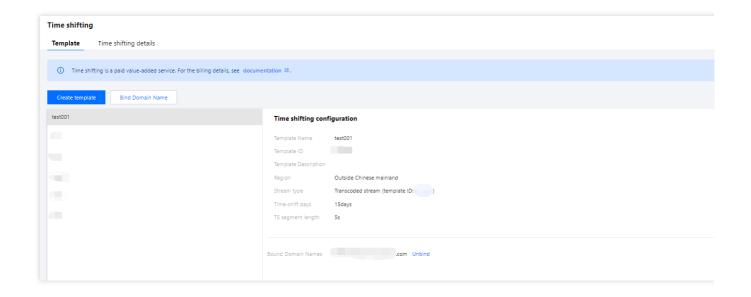
Note:

Unbinding a time shifting template will not affect ongoing live streams.

Modifying a Template

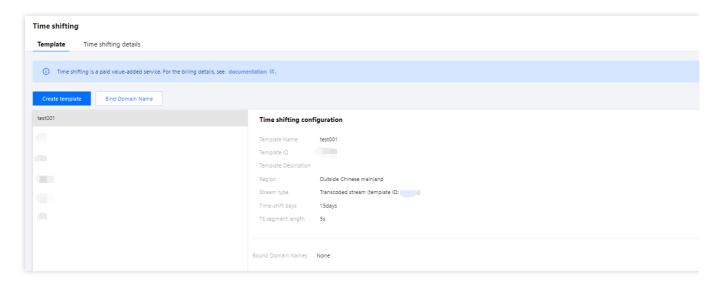
- 1. Go to **Feature Configuration** > Time Shifting.
- 2. Select the target time shifting template, click **Edit** on the right, modify the settings, and click **Save**.





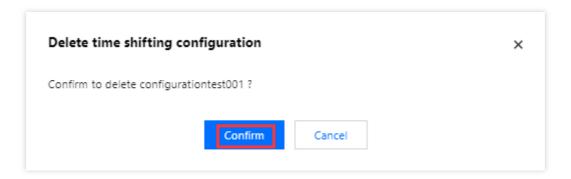
Deleting a Template

- 1. Log in to the CSS console, and select **Feature Configuration** > Time Shifting on the left sidebar.
- 2. Select the target time shifting template, and click **Delete** in the upper right.



3. In the pop-up window, click **Confirm**.





Note:

If domain names are bound to a template, you need to unbind them before you can delete the template.

In the console, time shifting templates are managed at the domain level. You cannot unbind time shifting rules bound to streams by APIs.

More

You can also **unbind** and **bind** domains and time shifting templates on the **Domain Management** page. For details, see Time Shifting Configuration.



Viewing Time Shifting Details

Last updated: 2024-07-16 09:36:23

Tencent Cloud Live Broadcast supports time-shift management through index information, including functions such as viewing time-shift details, configuring time-shift playback, and live broadcast editing.

Prerequisites

You have logged in to the CSS console.

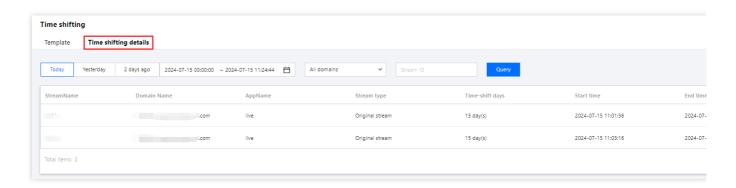
You have created a time shifting template, bound it to a push domain, and successfully pushed a stream.

To use the live video editing and solidification capability, please make sure that you have activated the Tencent Cloud MPS. The solidified content will be stored in the COS service, and activating the MPS service will automatically activate the COS service.

Index Information Operation Guide

Directions

- 1. Click **Feature Configuration** > **Time Shifting** on the left sidebar and select the **Time shifting details** tab.
- 2. Select a domain or enter a stream ID, specify the time period (cannot be longer than 24 hours), and click Query.
- 3. Click **Details** to enter the details page.



- 4. View the push URL and stream type in the **Basic Info** area.
- 5. You can move the mouse over the timeline in the **Index Details** page to view the position and time. By clicking on the timeline, you can mark the time.
- 6. Click the timeline to preview the video at a specific time point and mark that point.





Note:

To preview time-shifted content, the domain used for playback must have an HTTPS certificate. If your playback domain does not have an HTTPS certificate yet, add one in **Domain Management**> Certificate Management. Using the time shifting feature will incur playback traffic/bandwidth fees.

7. Time Shifting and Live Clipping can be configured as follows:

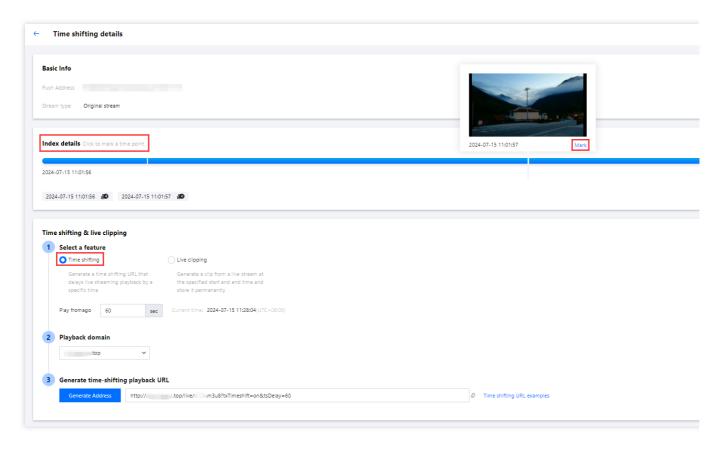
Item		Description
O last a feet or	Time shifting	Generate a time shifting URL that delays live streaming playback by a specific time
Select a feature	Live clipping	Generate a clip from a live stream at the specified start and end time and store it permanently
Playback domain		Select a playback domain you added to CSS.
Generate time-shifting playback URL		Click Generate Address to generate a time-shifting playback URL and copy it.
Navigate to the MPSfor fixed time- shifting content		The encapsulation format can be selected as either MP4 type or HLS type.

Time shifting

Live clipping

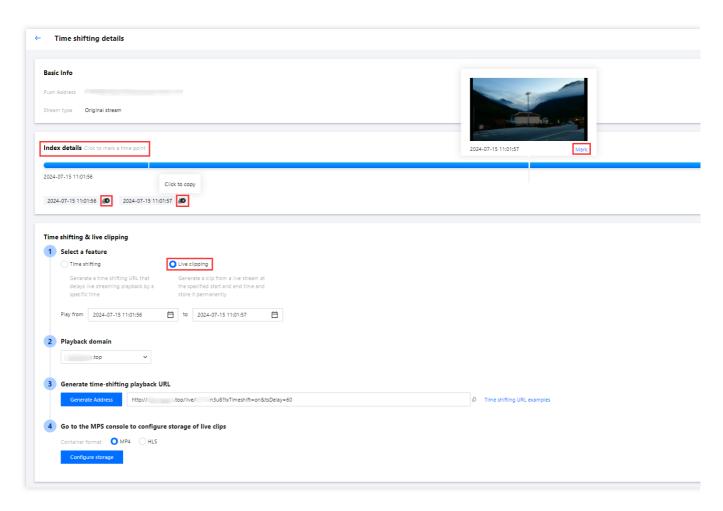
Generate a time shifting URL that delays live streaming playback by a specific time





Generate a clip from a live stream at the specified start and end time and store it permanently





8. Select the function mode as **Live Clipping**. When you have chosen to navigate to the MPS for fixed time-shifting content, click **Configure storage** to enter **MPS** > **Tasks** > VOD. For more details, please refer to the Live Streaming Highlights Clipping document > Create Clip Persistence Task.



Live Screencapture

Last updated: 2024-06-25 15:28:19

Cloud Streaming Services (CSS) provides a screenshot feature, supporting the use of screenshot templates configured through the console. After the template is associated with the push domain name, it captures the live streaming screen during the push process and stores the live screenshot data in Tencent Cloud Object Storage (COS). If the push domain name is already associated with a callback configuration, Tencent Cloud will send a request to the customer's server during the live streaming when a callback event is triggered, and the customer's server is responsible for responding to the request. After verification, the customer can obtain a JSON packet containing the screenshot callback information.

This document describes how to create, bind, unbind, modify, and delete screenshot templates through the console. There are two ways to create a screenshot template:

To create a template via the CSS console, for specific operation steps, see Creating a Screenshot Template. Call the CreateLiveSnapshotTemplate API to create a template. For information on the parameters and request sample, see CreateLiveSnapshotTemplate.

Must-Knows

The screenshot feature can be used independently, but the porn detection feature can only be enabled after the screenshot feature is enabled and cannot be used independently. Live stream porn detection has been fully upgraded to live stream moderation, which no longer relies on the live screenshot capability. For a better product experience, it is recommended to use the live stream moderation feature. For details, see Live Stream Moderation.

The screencapture and porn detection features are priced at 0.0176 USD and 0.2294 USD per 1,000 screenshots respectively. For details, see Intelligent Porn Detection.

The screenshots and porn detection results are stored in your COS bucket, which will incur COS storage fees. For more information, see COS Pricing.

Screencapturing will fail for audio-only streams, in which case no screencapturing costs will be incurred.

If you want to store the data in a COS bucket of **another account**, you need to first grant CSS the permission to write to that COS bucket. For more information, see Authorizing CSS to Store Screenshots in a COS Bucket.

If your COS bucket allows public read access and has politically sensitive, pornographic, or other inappropriate content, to avoid the bucket being blocked, please delete the content first.

After creating a template, you need to bind it to a push domain. For more information, see Screencapture and Porn Detection Configuration. The configuration takes effect in about 5-10 minutes.

The screenshot template management in the console is at the domain name level and currently, it is not possible to cancel the rules created via API. For screenshot rules bound to specific streams by an API, you need to call DeleteLiveSnapshotRule to unbind them.



Binding, unbinding, or modifying a template affects only new live streams but not ongoing ones. To apply new rules to ongoing streams, you need to stop them and push them again.

Prerequisites

You have activated CSS and added a push domain.

You have created a COS bucket. For detailed directions, see Creating Bucket.

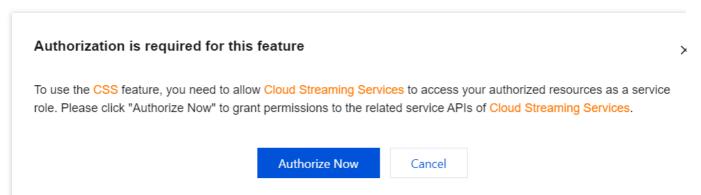
Creating a Screenshot Template

1. Log in to the CSS console, and choose **Feature Configuration** > Live Screencapture.

Note:

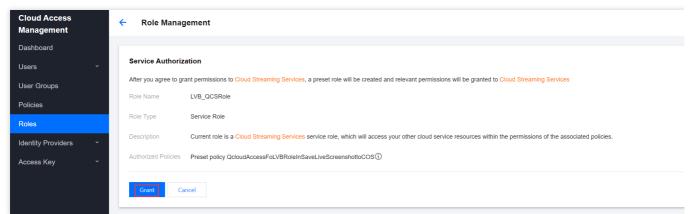
Because the CSS screenshot service needs to store screenshots in COS buckets, when creating a screenshot template for **the first time**, you need to create a service role and authorize CSS to have read and write permissions for COS.

- 2. Click Create template.
- 3. The console will pop up a window to request resource authorization. Click **Authorize Now** to enter the Role Management page.

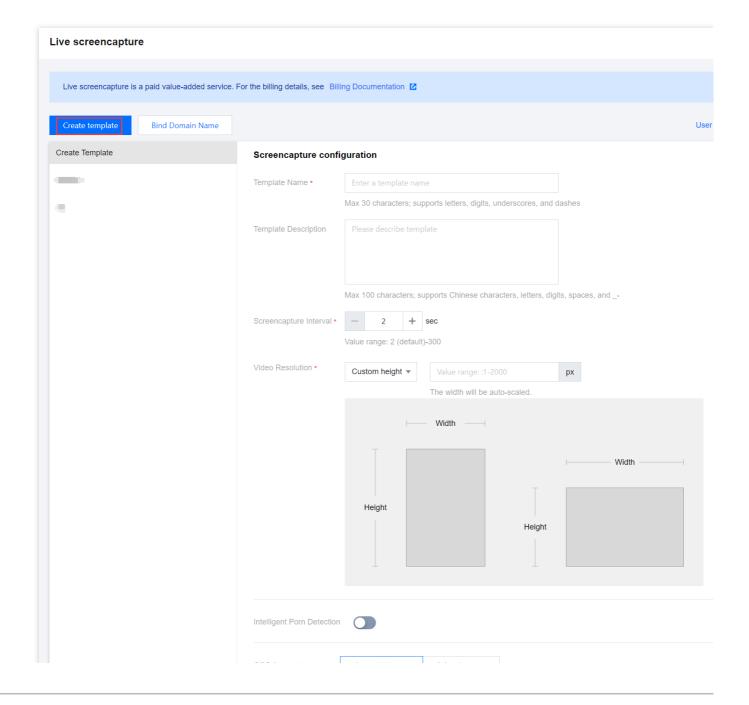


4. On the Role Management page, click **Grant**. After identity verification is completed, you can complete the COS resource authorization and use the live screenshot service normally. Upon successful authorization, you will be redirected to the page for creating screenshot templates.

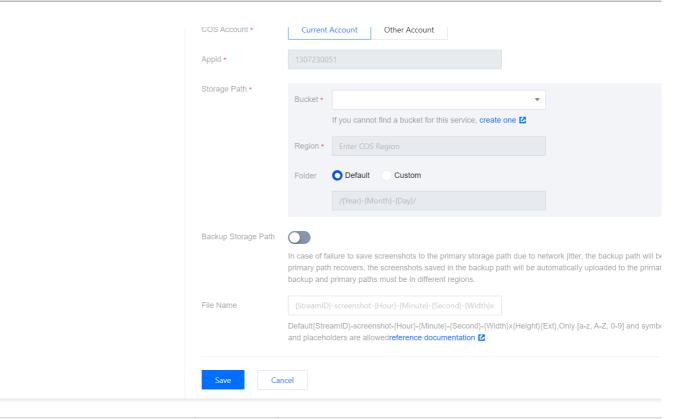




5. Click **Create template** to go to the screenshot template creation page and proceed with the following configuration:







Configuration Item	Required	Description
Template Name	Yes	The name of the screencapture and porn detection template, which can contain up to 30 Chinese characters, letters, numbers, underscores (_), and hyphens (-).
Template Description	No	Description of the screenshot template, which can contain up to 100 Chinese characters, letters, digits, spaces, underscores (_), and hyphens (-).
Screencapture Interval	Yes	The screencapture interval, which is 2 seconds by default. Value range: 2-300 seconds.
Video Resolution	Yes	By default, the original resolution is maintained, but you have the option to set the screenshot height. The input height range is from 1 px to 2,000 px, and the other side will automatically scale in proportion to the resolution by default.
Intelligent Porn Detection	No	The intelligent porn detection feature is disabled by default and can be enabled manually. After enabling intelligent porn detection, you must configure a callback to receive the results.
COS Account	Yes	Current Account or Other Account.
Appld	Yes	This is required only if you select Other Account . You can view the APPID of an account on the Account



			Information page of the console. To save data to a COS bucket of another account, you need to first grant CSS read and write access to that bucket. For details, see Authorizing CSS to Store Screenshots in a COS Bucket.
	Bucket	Yes	You can select a COS bucket in Bucket, which you have already created and authorized in COS .
Storage Path	Region	Yes	The region corresponds to the regional information of the aforementioned bucket and cannot be modified.
Storage Faur	Folder	No	Click the box to choose a COS folder. The default is: {Year}-{Month}-{Day}/. Note: COS folder names can only contain [a-z, A-Z, 0-9] and the symbols -, !, _, ., * as well as placeholders.
Backup Storage Path		No	The backup storage path feature is disabled by default. You can manually enable this feature based on your business needs. When network jitter prevents the screenshot from being stored in the primary storage path, the system will automatically store the file to the backup storage path to prevent file loss. Once the primary storage path is restored, screenshots under the backup storage path will be automatically synchronized to the primary storage path. Primary and backup storage paths should be in different regions.
File Name		No	The format of screenshot filenames. You can customize your own format. The default is {StreamID}- screenshot-{Hour}-{Minute}-{Second}- {Width}x{Height}{Ext}: {AppName}: The push app name. {PushDomain}: The push domain. {StreamID}: The stream ID. {Year}: The screenshot time (year). {Month}: The screenshot time (month). {Day}: The screenshot time (day). {Hour}: The screenshot time (hour). {Minute}: The screenshot time (minute). {Second}: screenshot time (second) {Width}: The width of the screenshot. {Height}: The height of the screenshot. {Ext}: The extension (.jpg). Note: The filename can contain only letters, digits, placeholders, and symbols (-, !, _, ., *).



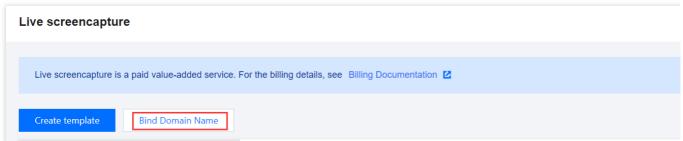
Example: If the filename format is {Year}-{Month}-{Day}- {Hour}-{Ext} , a screenshot captured at 14:00:00 on January 1, 2020 would be named 2020010114.jpg in COS.

6. Click **Save** to save the current template.

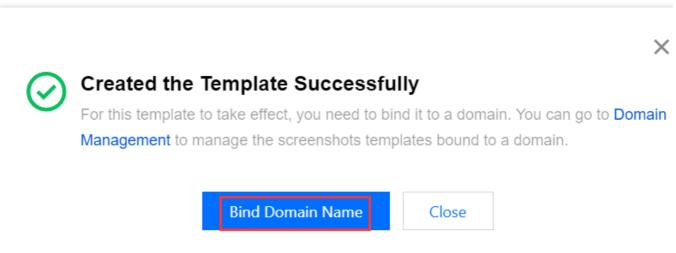
Binding a Domain Name

- 1. Log in to the CSS console, and choose **Feature Configuration** > Live Screencapture.
- 2. Bind a domain name in either of two ways:

Bind a domain to an existing template: Click Bind Domain Name in the top left.

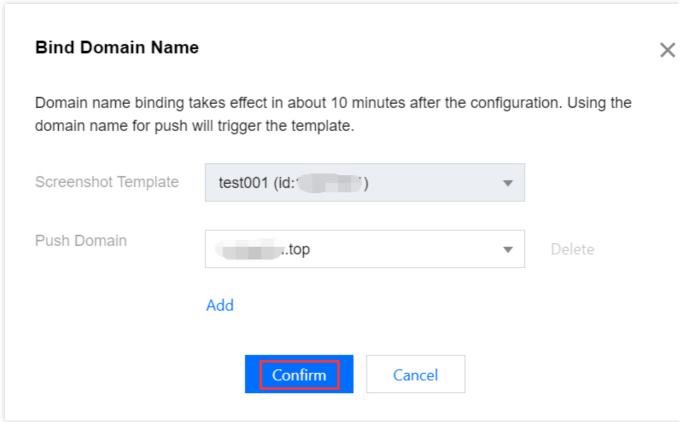


Bind a domain name after successfully creating a screenshot template: After successfully Creating a Screenshot Template, click Bind Domain Name in the reminder box.



3. In the domain binding window, select the **screenshot template** and **push domain name** you need to bind, and then click **Confirm**.





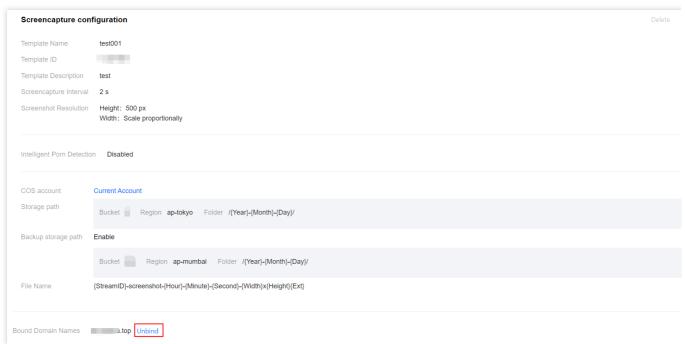
Note:

You can click **Add** to bind multiple push domains to a template.

Unbinding a Domain Name

- 1. Log in to the CSS console, and choose **Feature Configuration** > Live Screencapture.
- 2. Select the target screencapture and porn detection template, find the domain you want to unbind, and click **Unbind**.





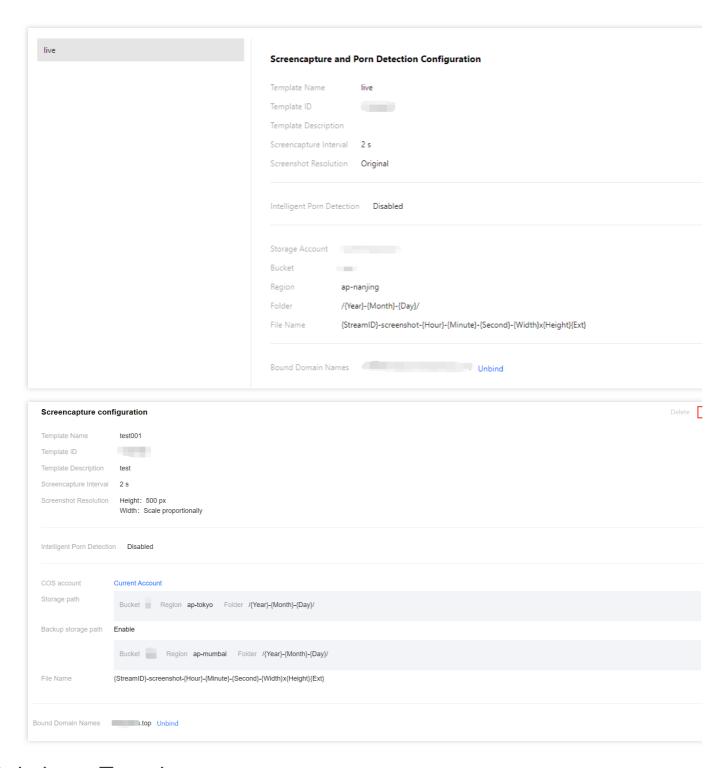
3. In the pop-up window, click Confirm.

Are You Sure You Want to Unbind This Template from the Domain Name? X After unbinding, current live streaming will not be affected while this operation will be valid for live streams pushed in the future. Confirm Cancel

Modifying a Template

- 1. Log in to the CSS console, and choose **Feature Configuration** > Live Screencapture.
- 2. Select a screencapture and porn detection template, click **Edit** on the right, and modify its information.
- 3. Click Save.





Deleting a Template

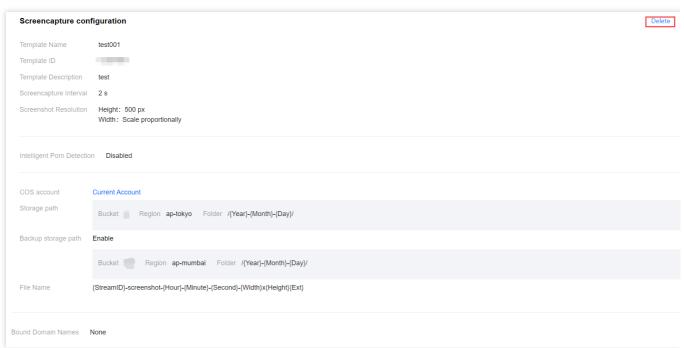
Note:

If a template has been bound to domains, you need to unbind them before you can delete the template.

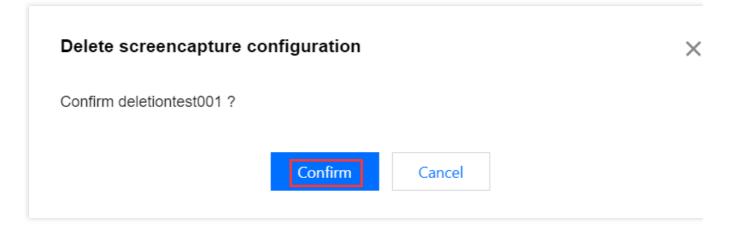
Note that once a template is deleted, it cannot be recovered. Proceed with caution.

- 1. Log in to the CSS console, and choose **Feature Configuration** > Live Screencapture.
- 2. Select the screenshot template you have successfully created and click **Delete** above.





3. Confirm that you want to delete the current screenshot template, and click **Confirm** to delete it.



More

For specific operations and related instructions on **binding and unbinding screenshot templates at the domain name level**, refer to Screenshot Configuration.



Live Stream Moderation Live Stream Moderation

Last updated: 2024-07-16 09:36:23

CSS offers a live stream moderation feature, supporting the configuration of moderation templates through the console. Once the streaming domain is associated with the template, this service will obtain live screenshots and the audio during streaming, storing any non-compliant screenshots or audio data in Tencent Cloud COS. If the streaming domain is linked to the callback configuration, Tencent Cloud will send a request to the customer's server once a callback event is triggered during the live stream. Customer's server is responsible for handling the request. After verification, a JSON packet containing the moderation callback information can be obtained. This document provides instructions on how to create, bind, unbind, modify, and delete moderation configuration templates via the console.

Notes

Live stream moderation is a charged feature. When enabled, the IA function is charged at 0.2294 USD per thousand images, while the AAS function is charged at 0.0021 USD per minute. For more information, please refer to Live Stream Moderation.

Screenshots or the audio flagged during live stream moderation and stored in your Tencent Cloud COS will generate storage costs in COS. For pricing details, please refer to COS Product Pricing.

If the access permission of the COS Bucket is set to public read, and the Bucket contains inappropriate contents related to pornography, illegal activities, or any other prohibited contents, it is recommended to go to the corresponding COS Bucket and delete the relevant images. This action can avoid COS Bucket being blocked, as the block may affect the use of it.

After creating the template, it can be associated with the streaming domain name. Refer to the Live Stream Moderation Configuration document for details. The association of the template is usually effective within 5-10 minutes.

Binding, modifying, or unbinding a template only affects the updated live streams and not ongoing ones. To apply new rules to ongoing live streams, you need to stop them and push them again.

For image recognition to be linked with a custom dictionary, the Image TAS strategy needs to be initiated, without which the linkage will not be effective. The image TAS by default, will perform OCR recognition and moderation on text in the screenshots from live screen. The default policy of Image TAS operates beyond the control of image recognition strategy and will audit all the non-compliant contents.

Prerequisites for Use



You have activated the Tencent CSS service and added a Pushing Domain Name.

You have created a COS bucket. For more details, please refer to Creating a Bucket.

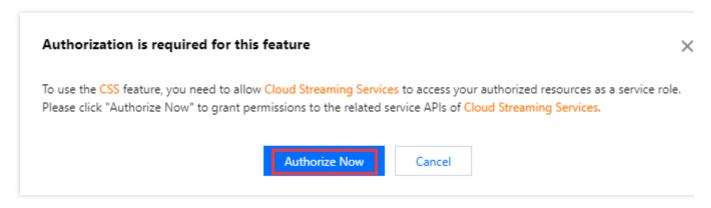
Creating Live Stream Moderation Templates

1. Log in to the CSS console and choose **Feature Configuration** > **Content moderation** from the left navigation bar

Note:

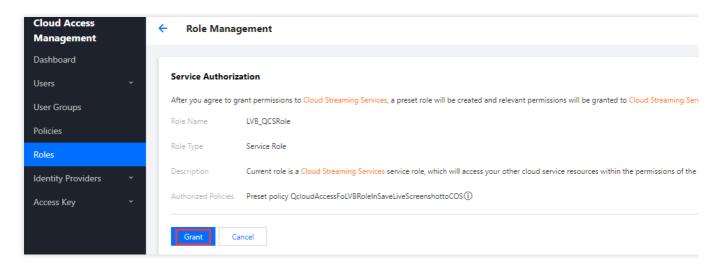
Since the CSS moderation service requires to store screenshots or audio data in the COS bucket, the **initial** creation of a moderation template necessitates the development of a service role, and authorizes CSS to have read and write access on COS. Access the CAM and click to authorize.

- 2. Click Create template.
- 3. A pop-up window will be generated to apply for resource authorization in the console. Please click **Authorize Now** in the pop-up window to go to the **Role Management** page.



4. On the **Role Management** page, click **Grant**. After authentication, you can authorize COS resources and proceed to use the Live Stream Moderation service normally.



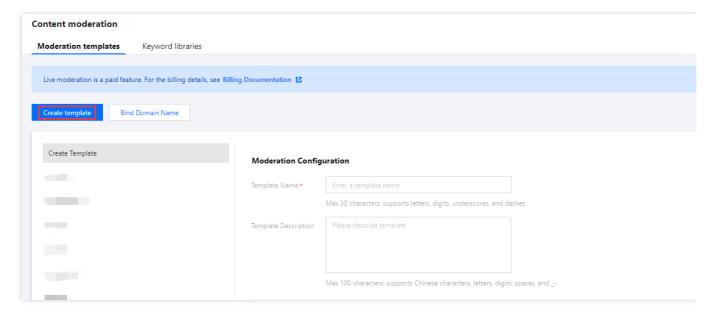


5. After authorization, you will be redirected to the Create template page, where you can fill in the configuration items.

Steps

Step 1: Configuring Moderation

Click Create template to configure moderation:



Configuration Item	Description
Template Name	The template name can include up to 30 Chinese characters, letters, digits, underscores (_), and hyphens (-).
Template	The template description can include up to 100 Chinese characters, letters, digits,



Description spaces, underscores (_), and hyphens (-).

Step 2: Configuring Screencapture/Segment Policy

In Screencapture/Segment policy, you can configure the auditing content based on your business requirements.

Configuration Item	Required Item	Description
Auditing Content Configuring	Yes	Complete Audit Live Screen Auditing Only Screencapture interval. It refers to a time lapse of the auditing screencaputre in every two images during the live screen auditing process. The shorter the screencapture interval, the finer the auditing performs. Correspondingly, the auditing costs will increase. Screencapture interval. The value of it can range between 2-300 seconds. The default value is 2 seconds. AAS Only The audio auditing feature only supports Chinese. Audio segment duration. It refers to the length of each audio segment during the live stream AAS process. The length of the audio segments only affects the duration of the audio content returned by the moderation, not the billing process. Audio segment duration. The value of it can range between 15-60 seconds. The default value is 15 seconds.



Step 3: Configuring Recognition Policy

1. On recognition policy configuration page, you can configure policies for both **Image Recognition** and **Audio Recognition** based on your distinct business scenario requirements.



2. The **Image Recognition** and **Audio Recognition** features under the recognition policy configuration can be expanded separately to select the dimensions you need for your recognition moderation.

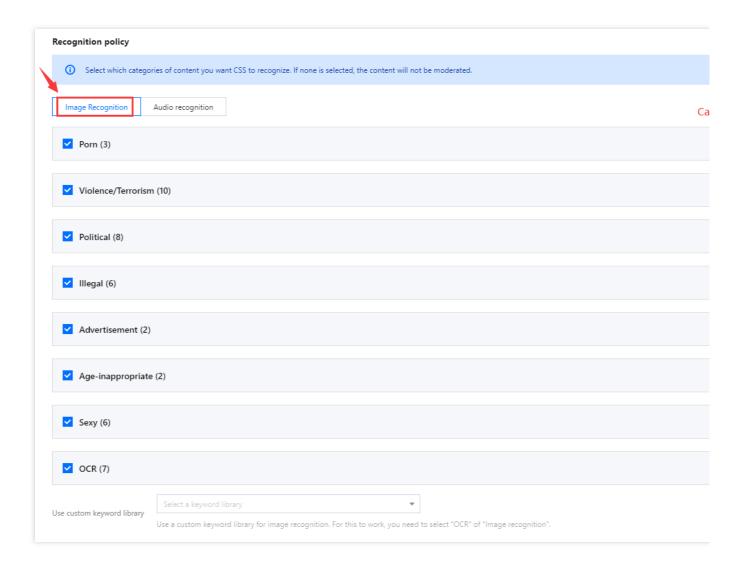
Note:

By selecting the corresponding category, the system will recognize and hit the content accordingly. Not selecting any category implies that no content is required to be recognized or hit.

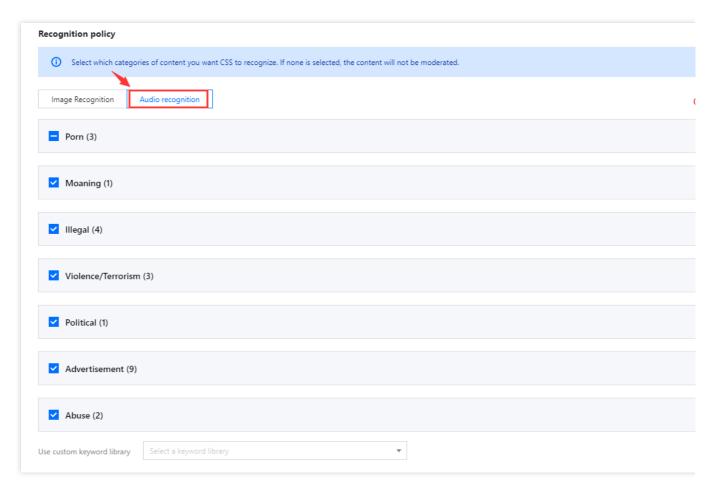
To bind a custom dictionary to the image recognition feature, turn the Image Recognition policy **ON** under Image Recognition Configuration. The binding will not take effect if the policy remains turned off.

Image Recognition Configuration

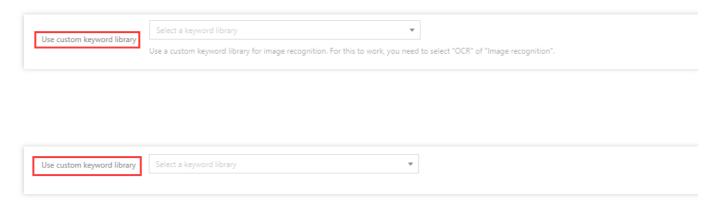
Audio Recognition Configuration







3. In the drop-down list for associating an image recognition or audio recognition with a **Use custom keyword library**, you have the option to select a custom dictionary that has already been configured.

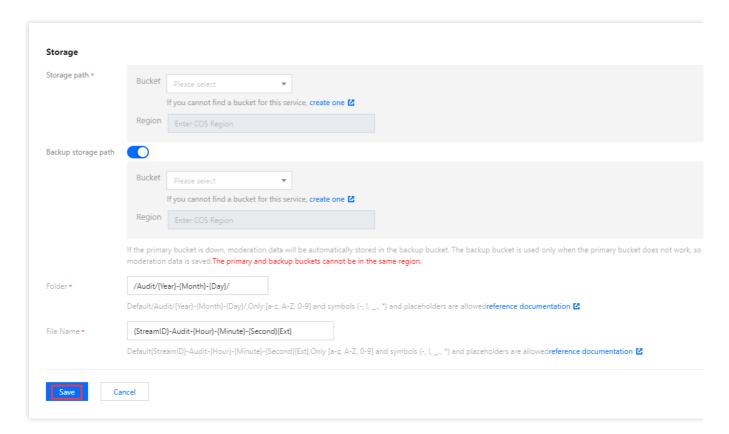


Note:

In accordance with your business requirements, if a custom dictionary used for content recognition is needed, you may configure it in advance. For more information, please refer to the custom dictionary.

4. After completing the configuration items in **Storage**, click **Save** to preserve the current template.





Configuration Item	Required Item	Description
Storage path	Yes	Choose a COS bucket that you have created and authorized in COS. Region refers to the geographic information of the above Bucket, which is unalterable.
Backup storage path	No	You can enable the backup storage path. If the primary Bucket experiences issues causing content moderation to fail to store normally, the moderation return content will automatically be stored under the backup Bucket to prevent file loss. The backup Bucket is only enabled during a business anomaly, and only one copy of the audit content will be stored. The primary Region and backup Region cannot be identical.
Folder	Yes	Click the input box to select a COS folder. The default is /Audit/{Year}- {Month}-{Day}/ . Note: COS folder names only allow [a-z, A-Z, 0- 9] characters and the symbols -,!, _,., * along with placeholders.
File Name	Yes	The file name format can be customized through parameter assembly. Default is: {StreamID}-Audit-{Hour}-{Minute}-{Second}{Ext}, wherein: {StreamID}: Stream ID {Audit}: Audit {Hour}: Audit time (Hour) {Minute}: Audit time (Minute) {Second}: Audit time (Second)

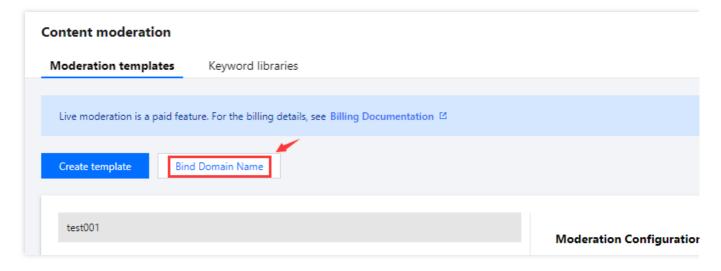


{Ext}: Extension (.jpg) Note: It only accepts [a-z, A-Z, 0-9], symbols -, !, -, *, and placeholders. For example, if you enter the file format as ${Hour}-{Minute}-{Second}-{Ext}$, then a snapshot of the live stream was taken automatically at 14:00:00, and stored in COS with the filename as 140000.jpg.

Binding Domain Names

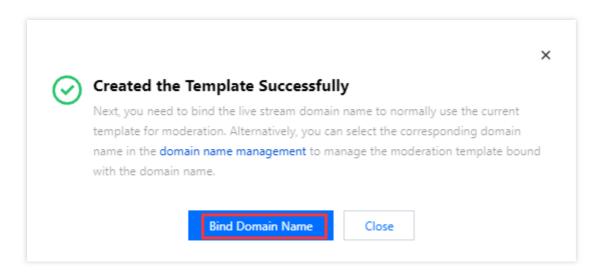
- 1. Log in to the CSS console and choose **Feature Configuration** > **Content moderation** from the left navigation bar.
- 2. You can access the domain-binding window via the following methods:

Direct Domain Association: Click on Bind Domain Name at the top left.

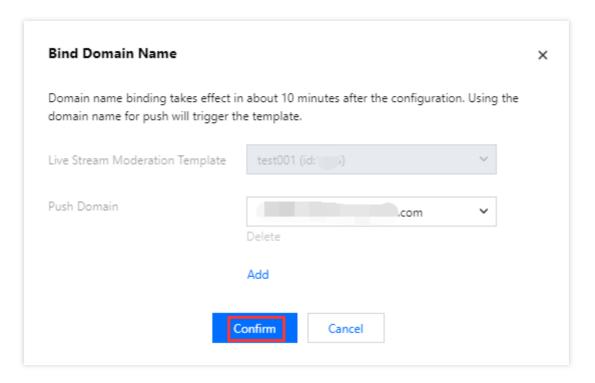


Binding domain names after the successful creation of a new moderation template: after successfully creating a moderation template, click **Bind Domain Name** in the notification pop-up.





3. In the Bind Domain Name window, select the desired **Live Stream Moderation template** and **Push Domain**, then click on Confirm to successfully bind them.



Note:

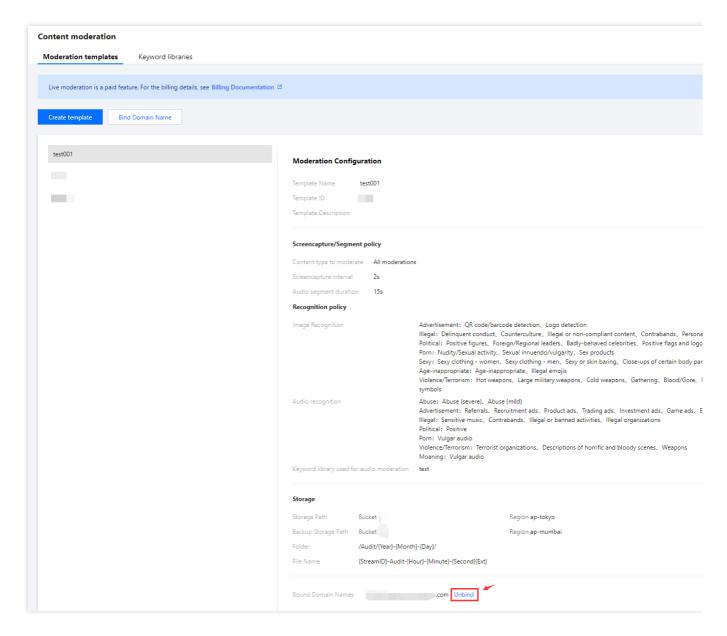
You can click **Add** to associate multiple push domains with the current template.

Unbinding

1. Log in to the CSS console and choose **Feature Configuration** > **Content moderation** from the left navigation bar.

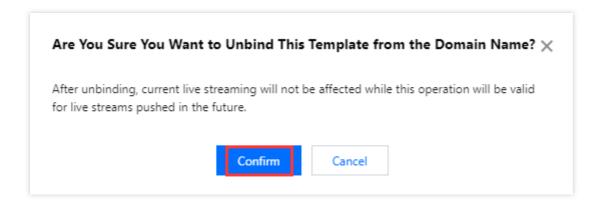


2. Select the live stream moderation template of the bound domain that you want to unbind, then click **Unbind**.



3. Confirm it if you wish to unbind the current linked domain, and click **Confirm** to proceed with unbinding.

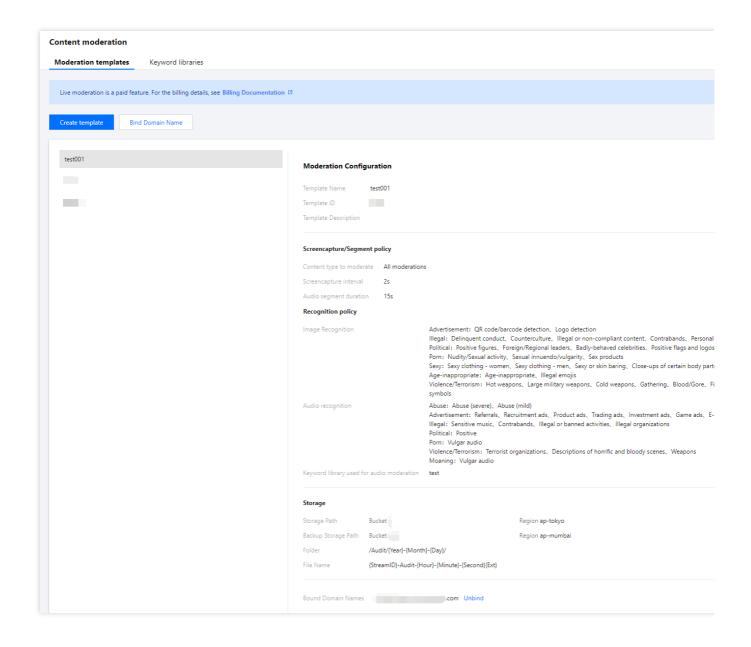




Modifying a Template

- 1. From the left navigation bar, choose **Feature Configuration** > **Content moderation**.
- 2. Select the successfully created moderation template, click **Edit** on the right to go to modify the template information.





Deleting a Template

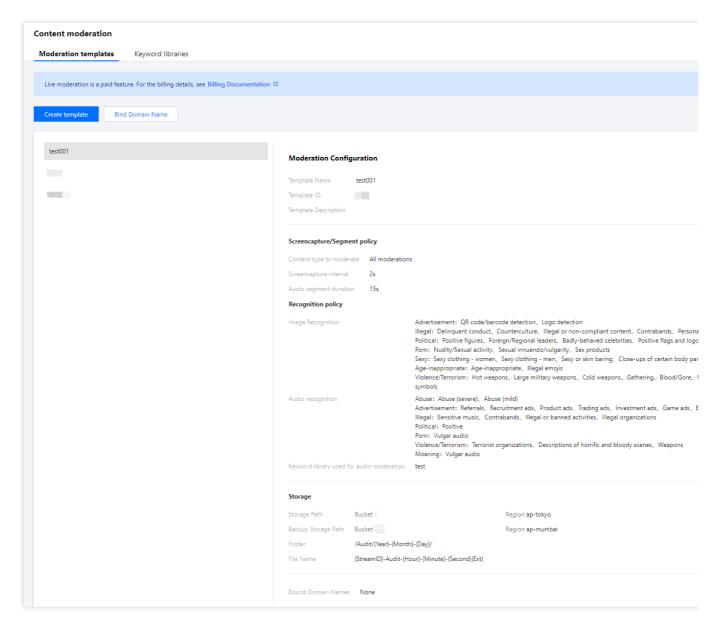
Note:

If the template has been associated, you must first Unbinding it before performing a deletion process.

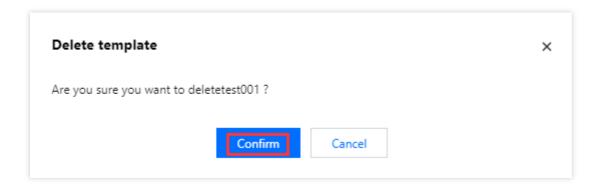
Note that a deleted template cannot be recovered. Proceed with caution.

- 1. From the left navigation bar, choose **Feature Configuration** > **Content moderation**.
- 2. Select the successfully created moderation template, click **Delete** in the upper part.





3. Confirm it if you wish to delete the current moderation template, click **Confirm** to delete successfully.





Related Operations

Forspecific instructions and additional information on binding and unbinding moderation templates at the domain level, please refer to Live Streaming Review Configuration.



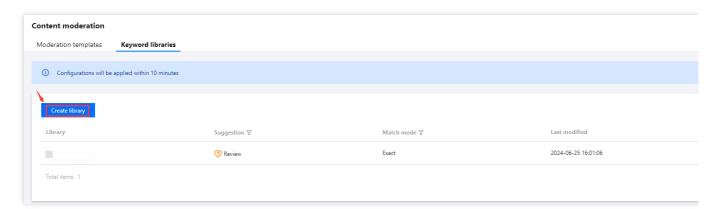
Custom Dictionary

Last updated: 2024-07-11 17:45:00

Live screen auditing and AAS can bind to custom dictionaries to personalize the recognition of specific entries and set them to be either green-lit or hit as violations. Once set-up is successful, dictionary contents become effective within 10 minutes.

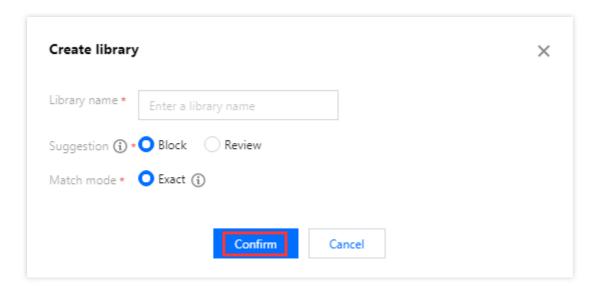
Creating a New Dictionary

- 1. Log in to the CSS console, navigate to Feature Configuration > Content moderation > **Keyword libraries**.
- 2. Click **Create library**. In the pop-up window, fill in the configuration items based on your actual business requirements.



Configuration Item	Required Item	Description
Library name	Yes	Library Name. It only contains up to 32 characters, in a combination of Chinese characters, letters, digits, and underscores.
Suggestion	Yes	You can select Block or Review . Block: The information is confirmed to be blocked. Review: The information might be undesirable and requires manual recognition.
Match mode	Yes	Exact matching only supports Chinese. Exact Matching. It performs a one-to-one match with the input text, directly hitting the output when the input text is identical with the output one.





Note:

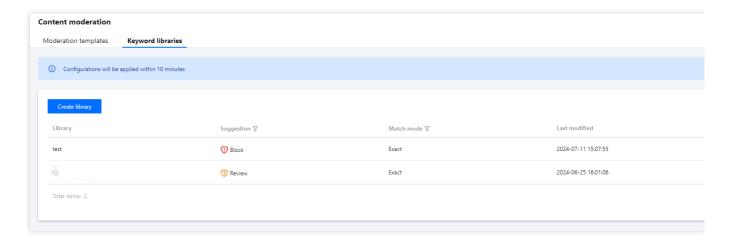
Choosing the appropriate handling suggestions will result in varying levels of hitting, corresponding to the Suggestion field in the return values of the interface.

3. Click **Confirm** to save the current template.

Modifying Dictionary

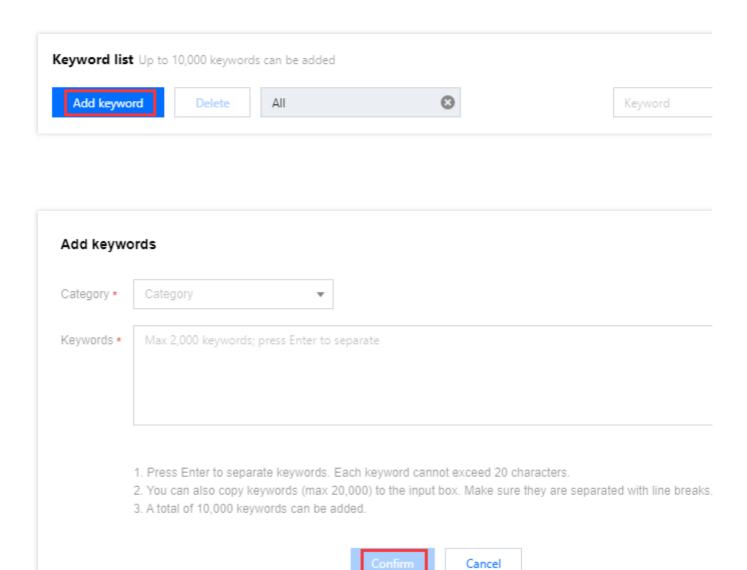
Steps

1. On the custom dictionary page, select the dictionary that needs to be operated, click **Edit** on the right, then modify the dictionary configuration information according to business requirements in the pop-up window on the right.



2. Click **Add keyword**, then add samples in the pop-up window and incorporate sensitive words according to business requirements.





2.1 You can select **Category**. Enter **keyword**, and separate multiple keywords by pressing enter. Submit no more than 2.000 at a time.

Note:

Only supports the recognition of sensitive words in Chinese.

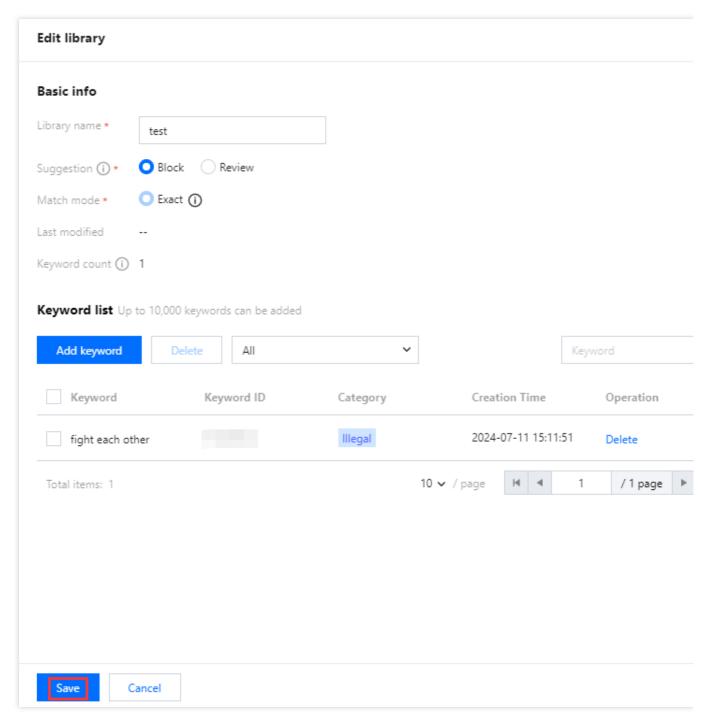
Keywords are confirmed by newline. Each keyword length is within 20 Chinese characters.

Batch import is supported via the copy-paste method, with a single-time maximum of 2,000 keywords, separated by line feed character.

The maximum number of sensitive words that can be added is 10,000.

3. Click **Save** in the lower-right corner to save the current template, thereby completing the modification of the custom dictionary.



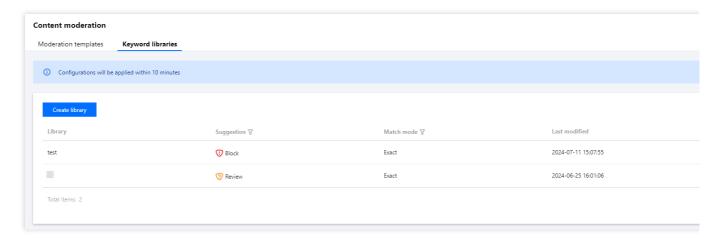


4. Once the custom dictionary has been configured, you can select **Associate** image recognition or audio recognition during the creation of the moderation template within the recognition policy configuration.

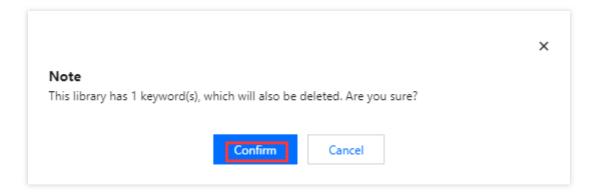
Deleting a Dictionary

1. On the custom dictionary page, locate and select the desired dictionary, then click **Delete** on the right to remove the dictionary.





2. After deletion, an **Information Confirmation Prompt** dialog box will appear. Click **Confirm** to delete the custom dictionary.





Adaptive Bitrate

Last updated: 2024-02-02 09:15:11

With the adaptive bitrate feature, the playback bitrate of a live stream can change smoothly based on network conditions. This ensures a smooth playback experience under changing network conditions.

Notes

After creating a template, you can bind it with a playback domain name. The binding takes effect in 5-10 minutes.

A playback domain can be bound with **multiple adaptive bitrate templates**, and an adaptive bitrate template can be bound to **multiple playback domains**.

Each adaptive bitrate template can have up to 15 streams.

For the adaptive bitrate feature to work, the player needs to support adaptive bitrate.

The GOP for the streams of an adaptive bitrate template must be identical.

The codec for the streams of an adaptive bitrate template must be the same.

Adaptive bitrate playback addresses only support HLS and WebRTC playback protocols. For the address concatenation rules, please refer to the Address Generator.

Creating an Adaptive Bitrate Template

- 1. Log in to the CSS console and select Feature Configuration > Adaptive Bitrate on the left sidebar.
- 2. Click **Create template** and complete the following settings:

Basic information: The template name and description. For details, see Basic Information.

Stream information: See Stream Information.

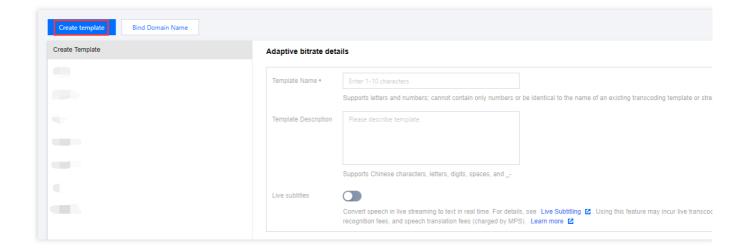
- 3. Click Add stream to add a new stream to the template. You can add up to 15 streams for a template.
- 4. Click Save.

Basic Information

Basic Information	Required	Description
Template name	Yes	Please enter 1 to 10 characters. The adaptive bitrate template name. It only supports letters and alphanumeric combinations and does not support pure digits. The template name must not duplicate existing transcoding template names, adaptive bitrate template names, or sub-stream names.
Template	No	The adaptive bitrate template description. It can only contain Chinese



description		characters, letters, digits, spaces, underscores (_), and hyphens (-).
Live subtitles	No	The subtitle feature is deactivated by default, but can be manually activated. To activate this feature, it is necessary to bind a subtitle template. Choose a subtitle template to bind based on your business requirements. Preview and observe the effects of the subtitle template. You can adjust the subtitle template according to business needs at any time.



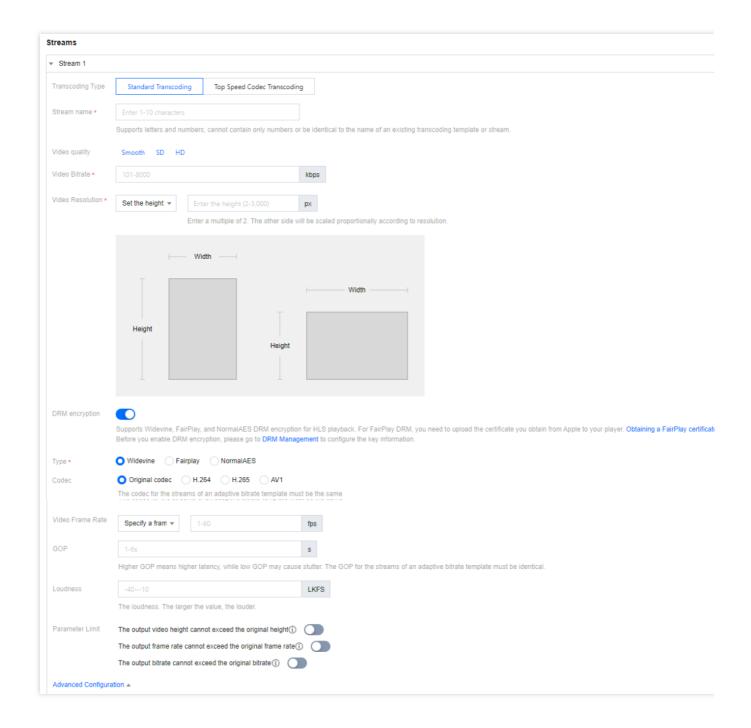
Stream Information

Stream Information	Required	Description
Transcoding type	Yes	The optional transcoding types, include standard transcoding and TSC transcoding.
Stream name	Yes	Please enter 1 to 10 characters. Substream Template Name supports 1-10 characters, only allowing letters and alphanumeric combinations, and does not support pure digits. The substream name cannot be duplicated with existing transcoding template names, adaptive bitrate template names, and substream names.
Video quality	No	You can choose Smooth , SD , or HD . After you select a value, the system will automatically enter the recommended video bitrate and height, which can be modified.
Video bitrate (Kbps)	Yes	The output video bitrate. Value range: 101-8000. If you enter a value not larger than 1,000, it must be a multiple of 100. If you enter a value larger than 1,000, it must be a multiple of 500.



Video resolution (px)	Yes	By default, you set the height of the output video. You can also set the short side length . The value must be in the range of 2-3000 and must be multiple of two. The other side will be scaled proportionally.
DRM encryption	Yes	Disabled by default and can be enabled manually. To enable DRM encryption, you need to first obtain the key information in DRM Management. DRM schemes including Widevine, FairPlay, and NormalAES are supported for HLS playback. For FairPlay encryption, you need to upload the certificate you obtain from Apple to your player. Encryption Types: Default Widevine, Optional Fairplay and NormalAES.
Codec	No	The original codec is selected by default. You can change it to H.264, H.265, or AV1. The codec for all the streams in the same adaptive bitrate template must be the same.
Video frame rate (fps)	No	You can choose to keep the original frame rate or set a video frame rate. By default, the original frame rate is maintained. The video frame rate setting value range: 1 fps - 60 fps.
GOP(seconds)	No	The GOP is not specified by default. Value range: 1-6. The higher the GOP, the higher the latency. A smaller GOP may potentially lead to stuttering. The GOP for all the streams in the same adaptive bitrate template must be the same.
Loudness	No	Through this feature, the volume of the video can be adjusted. The larger the value, the greater the volume. The range for setting the volume loudness is from -40 to -10 LKFS. Currently, the simultaneous configuration of loudness and subtitle features is not supported.
Parameter limit	No	Parameter limits are disabled by default. After a limit is enabled, if you enter a value higher than the original, the original will be used. This can avoid video quality issues caused by using high video quality settings to transcode videos of low quality.



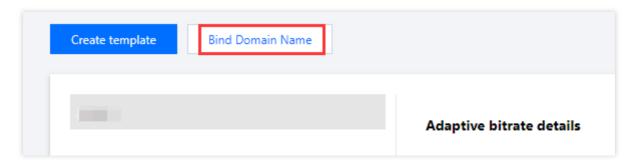


Binding a Domain Name

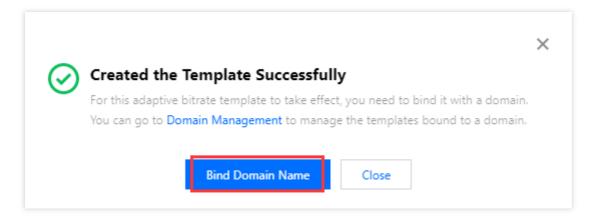
- 1. Log in to the CSS console. Select Feature Configuration > Adaptive Bitrate on the left sidebar.
- 2. Bind a domain name in either of two ways:

Bind a domain to an existing template: Click Bind Domain Name in the top left.

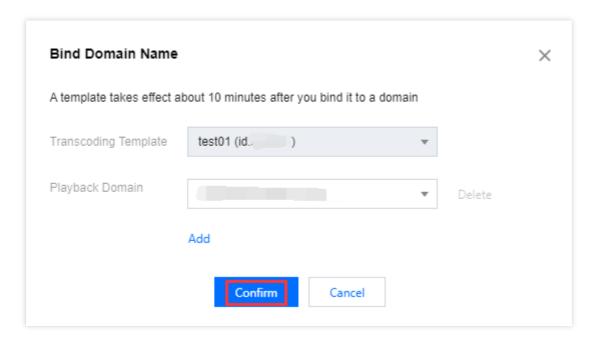




Bind a domain after creating a template: After creating an adaptive bitrate template, click Bind Domain Name in the pop-up window.



3. Select an adaptive bitrate template and a playback domain and then click Confirm.



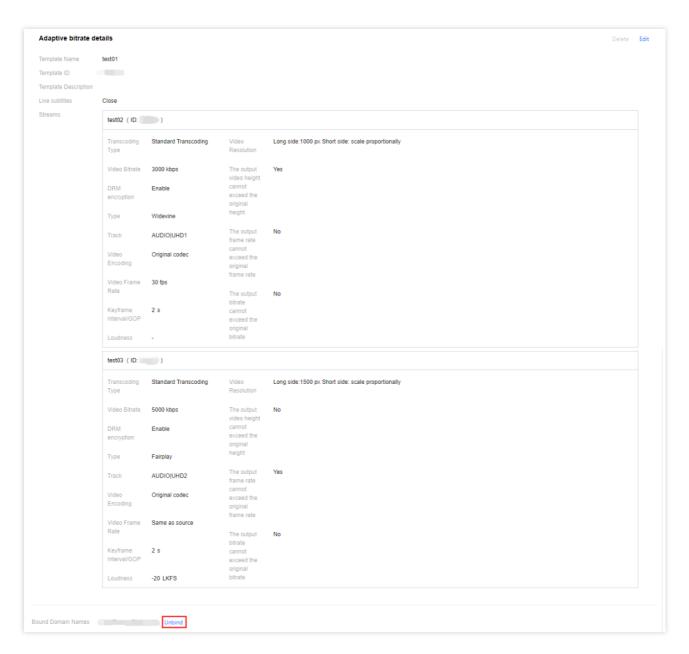
Note

You can click **Add** to bind a template to multiple playback domains.



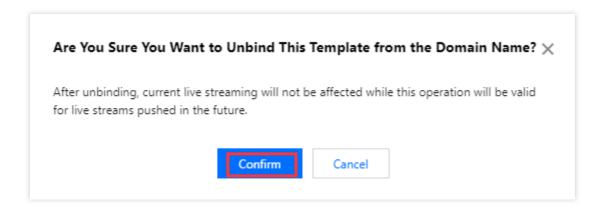
Unbinding a Domain Name

- 1. Log in to the CSS console. Select **Feature Configuration > Adaptive Bitrate** on the left sidebar.
- 2. Select the target template and click **Unbind**.



3. In the pop-up window, click Confirm.

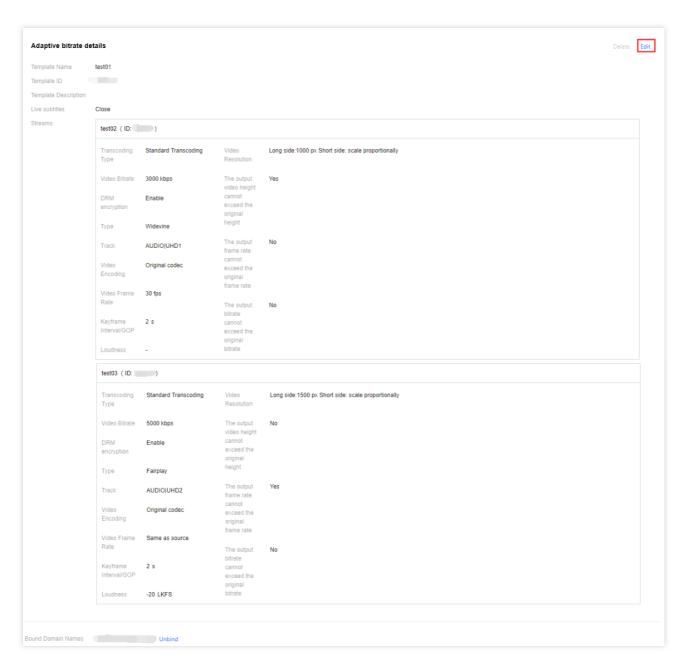




Modifying a Template

- 1. Log in to the CSS console. Select **Feature Configuration > Adaptive Bitrate** on the left sidebar.
- 2. Select the target template and click **Edit** on the right to modify it.





3. After modification, click Save.

Deleting a Template

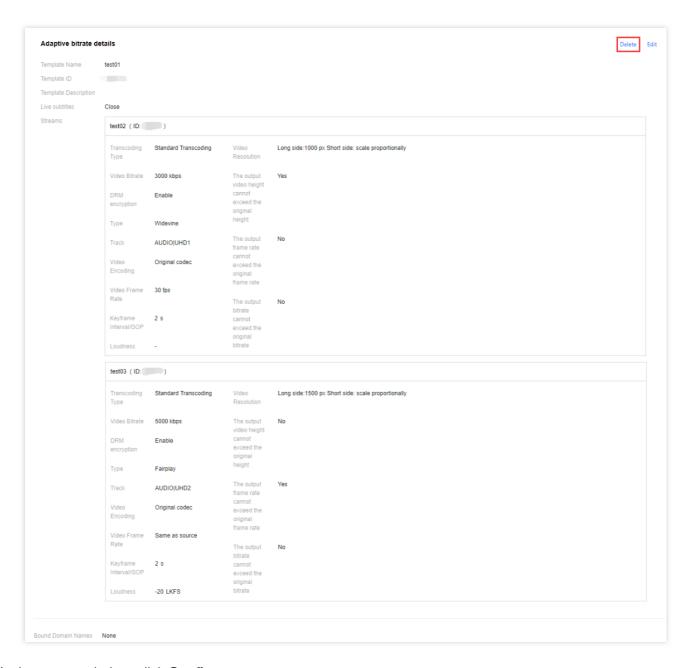
Note

If a template has been bound to domains, you need to unbind them before you can delete the template.

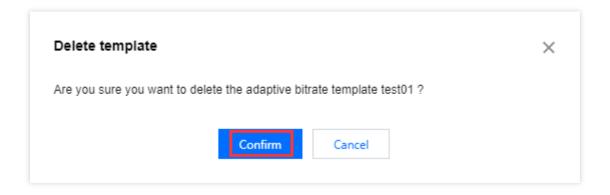
Once the template is deleted, it cannot be recovered. Please proceed with caution.

- 1. Log in to the CSS console. Select Feature Configuration > Adaptive Bitrate on the left sidebar.
- 2. Select the target template (make sure it's not bound to a domain), and click **Delete**.





3. In the pop-up window, click Confirm.





Standby Streams

Last updated: 2024-06-19 16:58:48

This document shows you how to create, bind, unbind, modify, and delete a standby stream template. A standby stream shows a video or image that becomes active automatically when your live stream is interrupted, helping you improve viewing experience. Once the original stream is recovered, CSS will switch back.

Notes

After creating a template, you need to bind it to a push domain. The configuration takes effect 5-10 minutes after binding.

Binding, unbinding, or modifying a template affects only new live streams and not ongoing ones. To make the change apply to ongoing live streams, you need to stop them and push them again.

You can create up to **50** standby stream templates.

The standby stream feature cannot differentiate between normal stream interruption and abnormal stream interruption. When the stream is interrupted, the standby stream service is triggered by the system.

Prerequisites

You have activated CSS and added a push domain.

Creating a Standby Stream Template

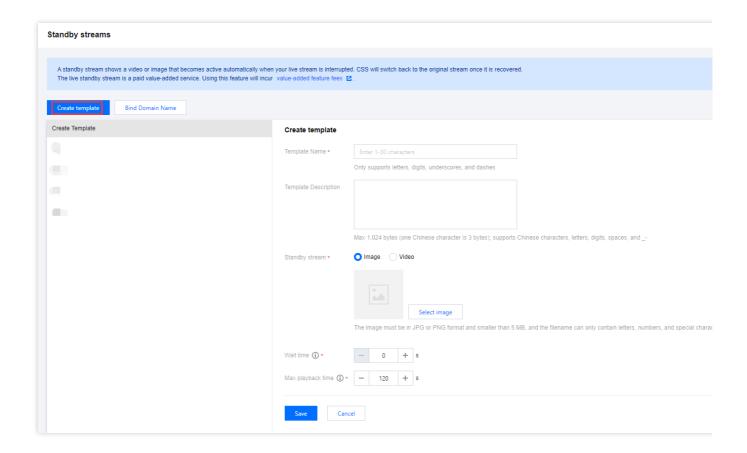
- 1. Log in to the CSS console. Select **Feature Configuration > Standby Streams** on the left sidebar.
- 2. Click Create template.
- 3. Enter a template name, which can be up to 30 characters long and can contain Chinese characters, letters, numbers, underscores (_), and hyphens (-).
- 4. Fill in the template description, which only supports Chinese, English, numbers, spaces, underscores, and hyphens, not exceeding 1024 bytes (Note: Chinese characters are counted as 3 bytes each).
- 5. Select the stream type, which can be image or video.

You can choose to upload images in JPG or PNG format, with a file size less than 5MB. The uploaded image file names only support: English, numbers, and the symbols - ! _ . *

You can enter a video URL, which supports FLV and MP4 format audio and video files. The required audio encoding format is AAC.



- 6. Set the stream interruption waiting time (the waiting duration after the stream interruption before playing the standby content) to a value between 0 and 6 seconds.
- 7. Set the maximum standby content duration, with a default value of 120 seconds. This is the maximum playback duration for the standby content. If the standby content is shorter than this duration, it will be looped. The value cannot be greater than 1,000,000.
- 8. Click Save.

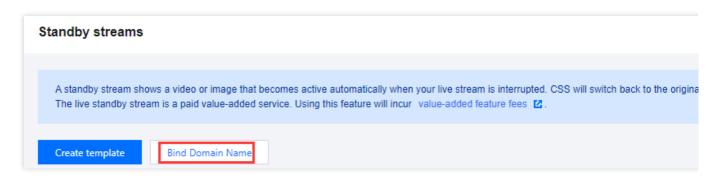


Binding a Domain Name

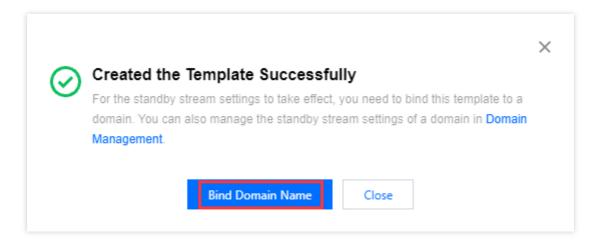
- 1. Log in to the CSS console and select **Feature Configuration** > Standby Streams on the left sidebar.
- 2. You can bind a domain to a template in one of two ways:

Bind a domain to an existing template: Click Bind Domain Name in the top left.



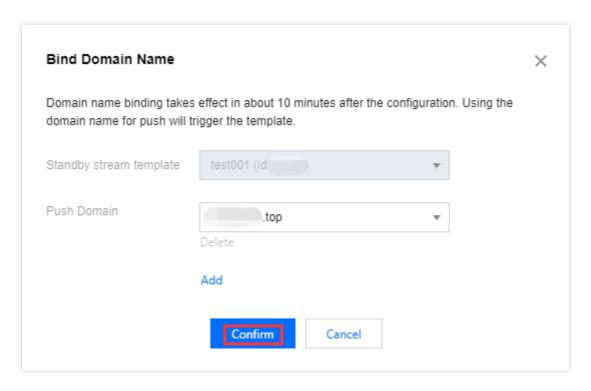


Bind a domain after creating a template: After creating a standby stream template, click **Bind Domain Name** in the dialog box that pops up.



3. In the pop-up window, select a **standby stream template** and a **push domain** and then click **Confirm**.



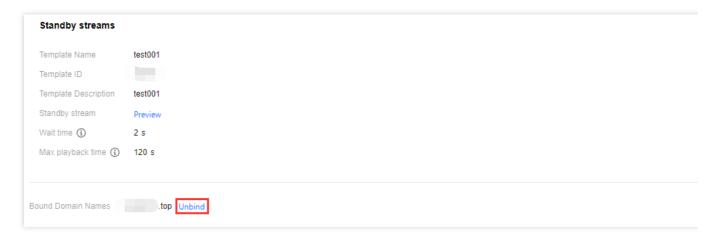


Note:

You can click **Add** to bind multiple push domains to a template.

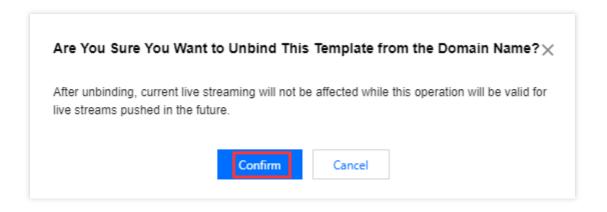
Unbinding a Domain Name

- 1. Log in to the CSS console and select **Feature Configuration** > Standby Streams on the left sidebar.
- 2. Select the target template and click **Unbind**.



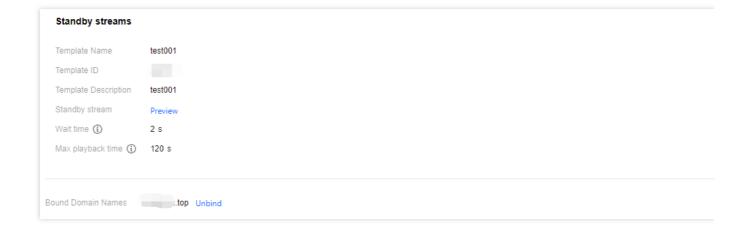
3. In the pop-up window, click Confirm.





Modifying a Template

- 1. Go to **Feature Configuration** > Standby Streams.
- 2. Select the target template and click **Edit** on the right to modify the template information.
- 3. After modification, click Save.



Deleting a Template

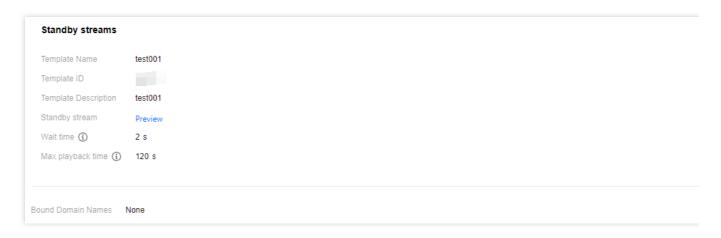
Note:

If the template is already associated, you need to Unbind Template before you can perform the delete operation.

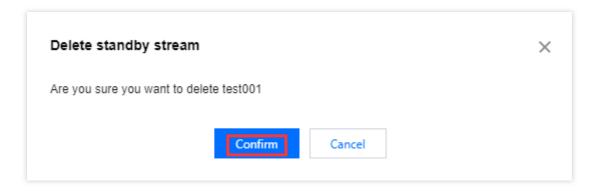
Once a template is deleted, it cannot be recovered. Please proceed with caution.

- 1. Go to Feature Configuration > Standby Streams.
- 2. Select the template you want to delete and click **Delete** in the top right.





3. In the pop-up window, click Confirm.



More

You can also **unbind** and **bind** domains and standby stream templates on the **Domain Management** page. For details, see Standby Stream Configuration.



Live Stream Callback

Last updated: 2023-03-23 10:01:21

CSS supports callbacks. To use this feature, you need to create a callback template in the console, configure an address to receive callbacks for an event, and then bind the template with your push domain name. If the event triggers a callback during live streaming, Tencent Cloud will send a request to your server, which is responsible for responding to the request. After successful verification, the server will obtain a JSON packet of the callback through the address configured.

This document describes how to create, modify and delete a callback template in the console.

You can create a callback template in the following ways:

- Create a template in the CSS console. For details, see Creating a Callback Template.
- Create a template with APIs. For the parameters and request sample, see CreateLiveCallbackTemplate.

Must-knows

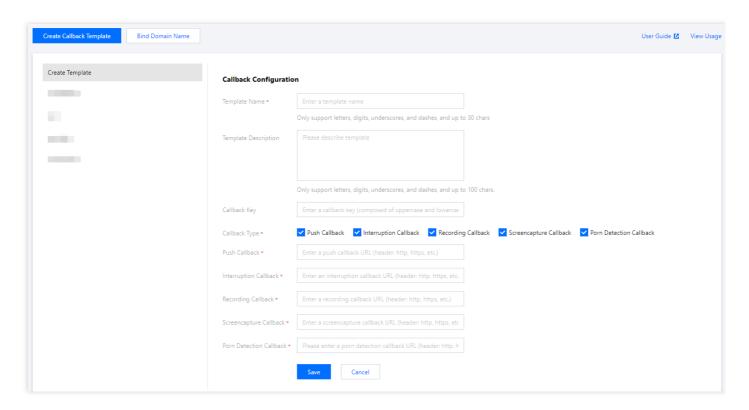
- After creating a template, you need to bind it with a push domain name. The binding takes effect in about 5-10 minutes.
- Make sure the HTTP or HTTPS server you use to receive callbacks are able to receive requests and respond normally.
- In the console, you can only bind and unbind callback templates at the domain level. For callback rules bound to specific streams by APIs, you need to call DeleteLiveCallbackRule to unbind them.
- For information on callback protocols, see How to Receive Event Notification.
- For information about the parameters in a callback, see the following documents:
- Stream pushing
- Stream interruption
- Recording
- Screencapturing
- Porn detection
- Relay
- Push errors

Creating a Callback Template

- 1. Log in to the CSS console.
- 2. Select Event Center > Live Stream Callback in the left sidebar.



3. Click **Create Template**, fill in the information, select the types of callbacks you want to receive, enter the callback URLs, and click **Save**.



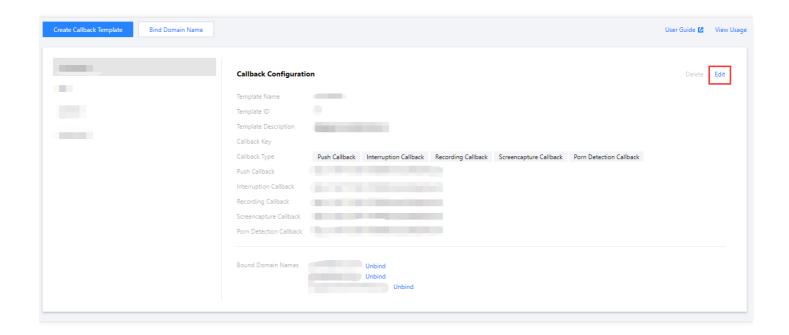
Item	Description
Template Name	The callback template name, which can contain up to 30 Chinese characters, letters, numbers, underscores (_), and hyphens (-).
Template Description	The description of the callback template, which can contain up to 100 Chinese characters, letters, numbers, underscores (_), and hyphens (-).
Callback Key	A custom callback key. It can contain up to 32 letters and numbers. For details, see Common callback parameters.
Push Callback	Enter an HTTP or HTTPS address to receive push callbacks.
Interruption Callback	Enter an HTTP or HTTPS address to receive push interruption callbacks.
Recording Callback	Enter an HTTP or HTTPS address to receive recording callbacks.
Screencapture Callback	Enter an HTTP or HTTPS address to receive screencapture callbacks.
Porn Detection Callback	Enter an HTTP or HTTPS address to receive porn detection callbacks.



Item	Description
Error callbacks	Enter an HTTP or HTTPS address to receive push error callbacks.

Modifying a Callback Template

- 1. Select Event Center > Live Stream Callback.
- 2. Select the target callback template and click **Edit** to modify its information.
- 3. After modification, click Save.

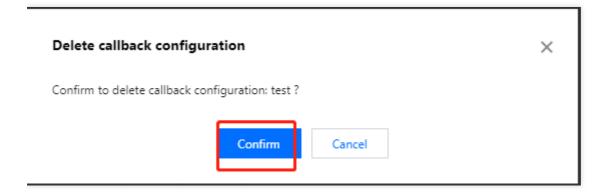


Deleting a Callback Template

If a template is bound to a domain name, you need to unbind it before you can delete it. For detailed directions, see Unbinding Callback Template.

- 1. Select Event Center > Live Stream Callback.
- 2. Find the target callback template, and click **Delete**.
- 3. In the pop-up window, click Confirm.







DRM

Configuring DRM Encryption

Last updated: 2023-10-07 14:50:00

CSS offers DRM encryption capabilities based on Widevine, FariPlay, and NormalAES to help you protect your content and prevent piracy and hotlinking. This document shows you how to configure DRM encryption in the CSS console.

Must-Knows

Tencent Cloud only encrypts your content. DRM licenses are offered by third party licensing services SDMC and DRMtoday, which charge a licensing fee. To learn more details, please contact the companies.

Prerequisites

You have activated CSS and added a playback domain name.

You have created an account at SDMC DRM or DRMtoday and configured an access key.

Console Settings

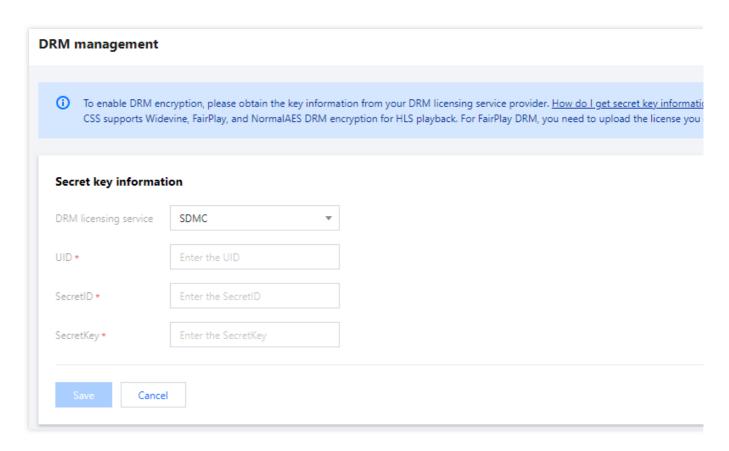
Configuring DRM key information

- 1. Log in to the CSS console and select **Feature Configuration** > DRM management on the left sidebar.
- 2. Click Edit, select a licensing provider (SDMC or DRMtoday), and fill in the key information.

If your licensing service provider is **SDMC**:

Enter your SDMC UID, Secret ID, and Secret key (you need to obtain the information from SDMC).

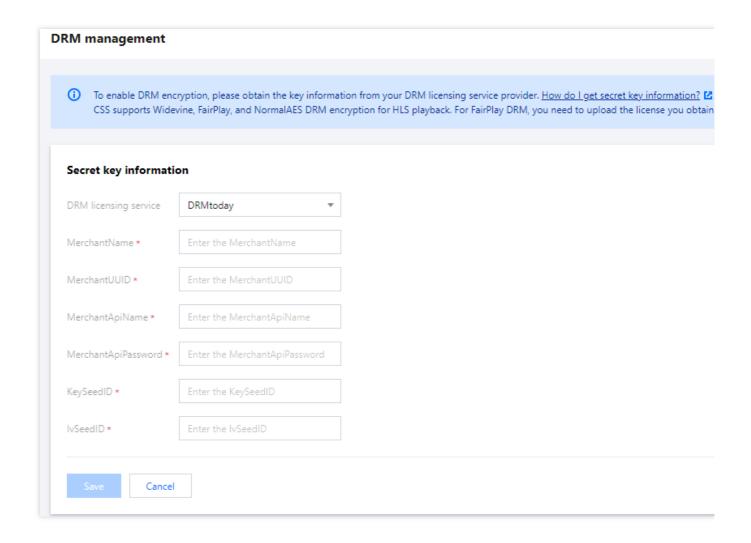




If your licensing service provider is **DRMtoday**:

MerchantAPIPassword , KeySeedID , and IVSeedID (you need to obtain the information from DRMtoday).

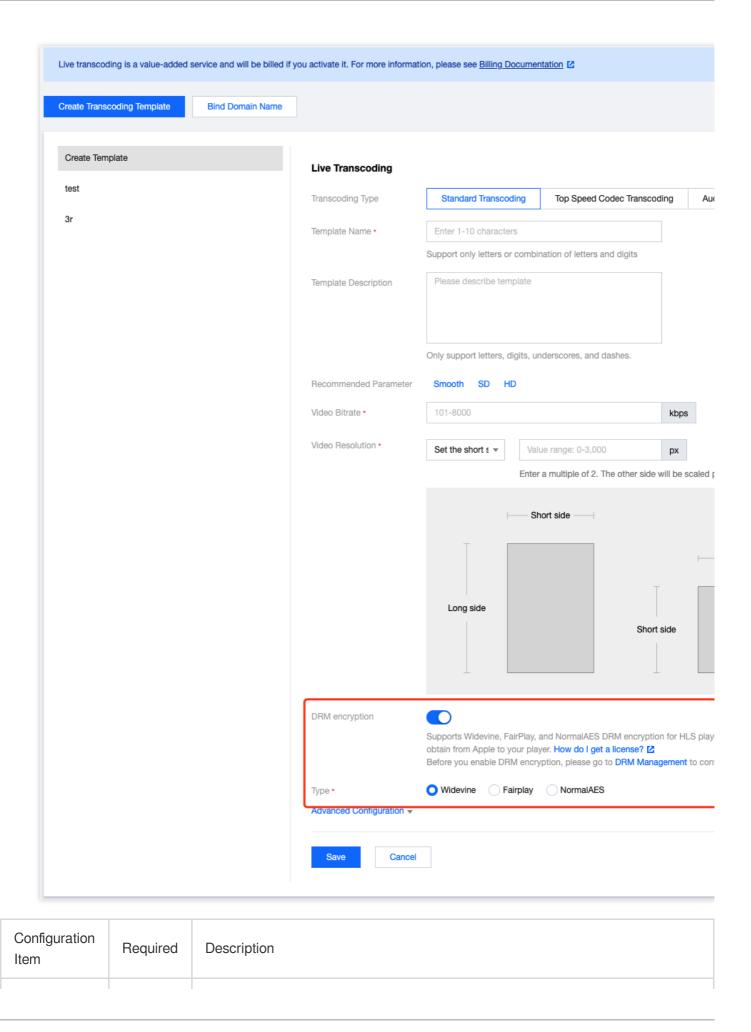




Creating a transcoding template and binding a domain

- 1. Select **Feature Configuration** > Live Transcoding on the left sidebar.
- 2. Click Create Transcoding Template and toggle DRM encryption on.

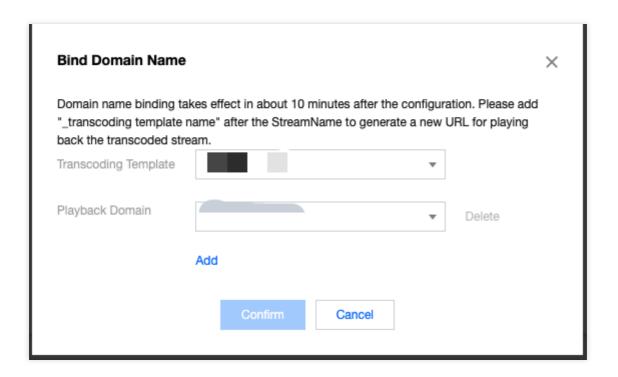






DRM encryption	No	Whether to enable DRM encryption. It's disabled by default. Before enabling this feature, you need to configure DRM key information in "DRM management".
Туре	Yes	Widevine, FairPlay, or NomalAES. For FairPlay encryption, you need to upload the certificate you obtain from Apple to your player. For details, see Obtaining a FairPlay certificate.

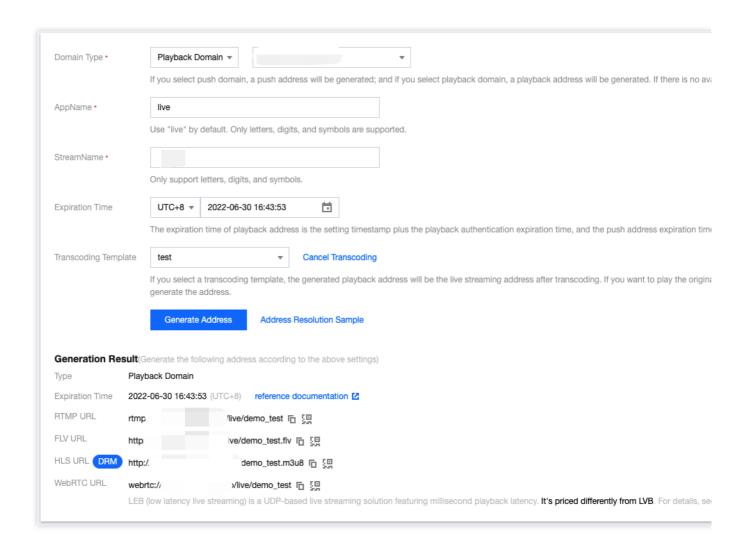
3. Click **Bind Domain Name** to bind the template to your playback domain.



Obtaining the DRM-encrypted playback URL

Only HLS playback supports DRM encryption. Use the Address Generator to generate playback URLs (select the template you created). The HLS URL generated is DRM-encrypted.





Configuring your player

For the DRM encryption feature to work, your player must meet the following requirements:

It must have been equipped by SDMC with the ability to obtain and decrypt license information from video data.

Use FairPlay encryption for iOS players and Widevine or NormalAES for Android players.

On iOS, you need to apply for a certificate and upload it to the SDMC console.

Note

You need to create an account first before you can visit the SDMC console. For detailed directions on how to create an SDMC account, see Obtaining the UID and Key Information. If you encounter any problems, please submit a ticket. We will help you navigate the process.



Obtaining a FairPlay Certificate

Last updated: 2023-11-20 16:32:40

To encrypt your content with FairPlay, you need to obtain an FPS deployment package from Apple and upload the following files to SDMC's server.

```
Private key file (.der or .cer)

Private key file (.pem)

Private key password file (.txt)

Application secret key (ASK) ( .txt)
```

Directions

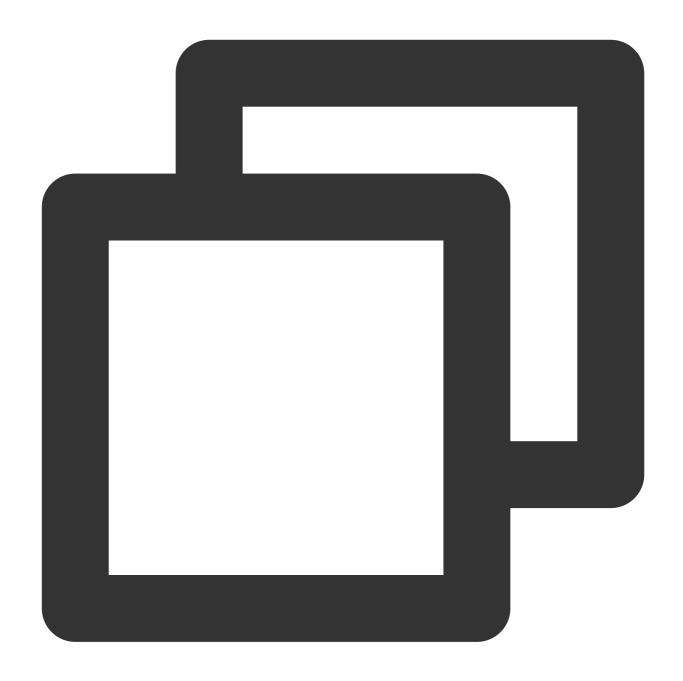
Step 1. Create an Apple developer account and request an FPS package

- 1. Create an Apple developer account.
- 2. At the bottom of the FairPlay Streaming page, click **Request FPS Deployment Package**, and log in with your Apple developer account.
- 3. Fill out the form and submit it. After your request is approved, Apple will send you a package containing the FPS certificate generation guide.

Note

When asked if you have implemented and tested Key Security Module (KSM), you can paste the answer below:





I am using a 3rd party DRM company and the company has already built and tested KSM

Step 2. Create a private key and a certificate signing request (CSR)

Create a private key file (privatekey.pem) and a CSR file (certreq.csr) as instructed in the FPS certificate generation guide. The following describes the OpenSSL method in the guide.

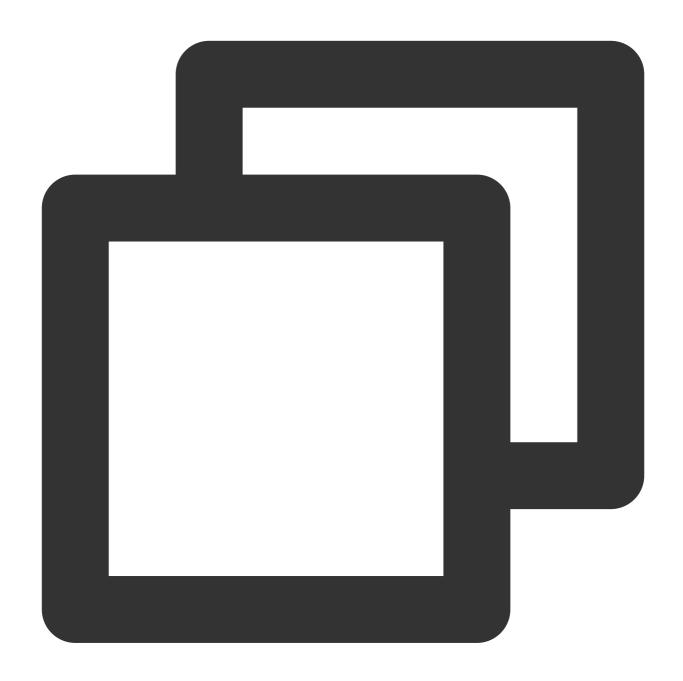
Note

Make sure OpenSSL is installed on the computer or server environment where this process is performed.

1. Create a private key file (privatekey.pem):



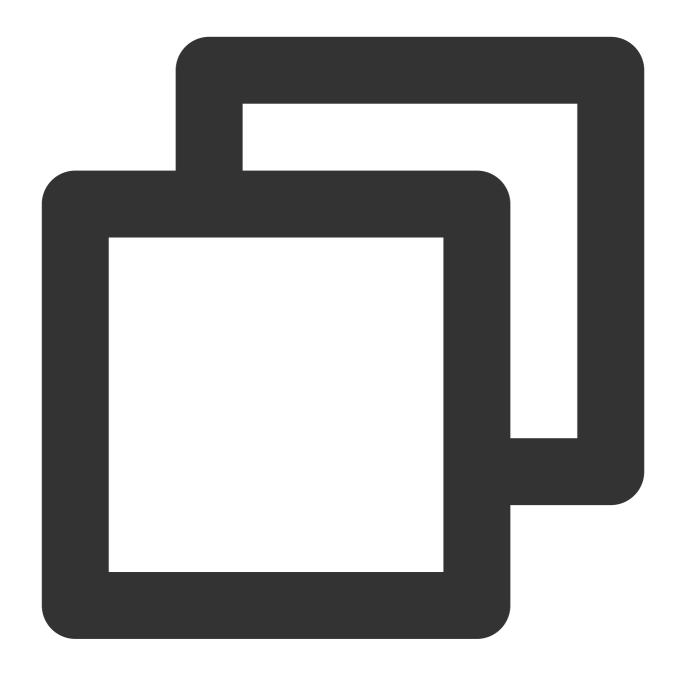
1.1 Run the command below to create a private key file:



```
openssl genrsa -aes256 -out privatekey.pem 1024
```

- 1.2 Set a password (not longer than 32 characters) for the private key. Note it for later use.
- 2. Create a CSR file:
- 2.1 Run the command below (you can modify -subj):





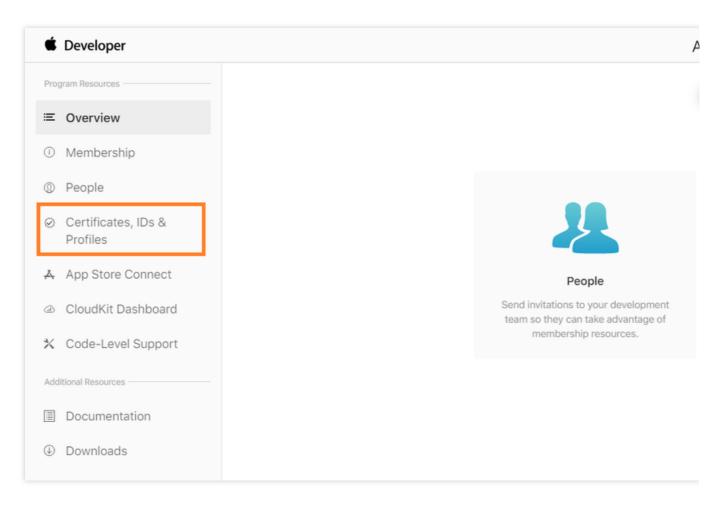
openssl req -new -sha1 -key privatekey.pem -out certreq.csr -subj "/CN=SubjectName/

2.2 Enter the private key password configured in the previous step.

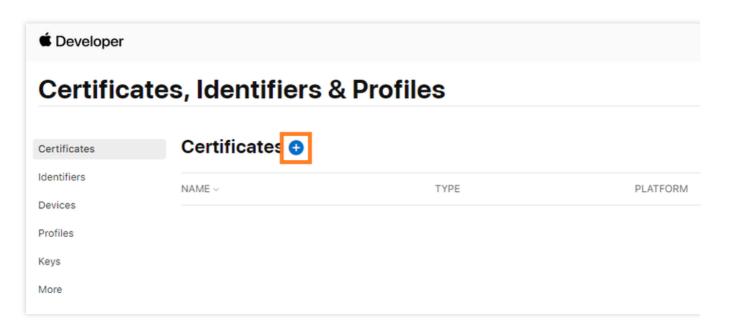
Step 3. Generate the FPS certificate

1. Log in to Apple Developer and click Certificates, IDs & Profiles.





2. Click + to enter the Create a New Certificate page.



3. Select FairPlay Streaming Certificate and click Continue.



< All Certificates

Create a New Certificate

Sign and send updates for websites.

WatchKit Services Certificate

Establish connectivity between your notification server, the Apple Push Notification service sandbox, and production environment to update ClockKit complication data. When utilizing HTTP/2, the same certificate can be used to deliver app notifications, update ClockKit complication data, and alert background VoIP apps of incoming activity. A separate certificate is required for each app you distribute.

VolP Services Certificate

Establish connectivity between your notification server, the Apple Push Notification service sandbox, and production environment to alert background VoIP apps of incoming activity. A separate certificate is required for each app you distribute.

Apple Pay Payment Processing Certificate

Decrypt app transaction data sent by Apple to a merchant/developer.

Apple Pay Merchant Identity Certificate
 A client TLS certificate that is used to authenticate you to Apple Pay Payment Processing Servers
 You need to accept the agreement 'Apple Pay Platform Web Merchant Terms and Conditions'. Review Agreement >



FairPlay Streaming Certificate

Enable the secure delivery of high value content to devices via the HTTP Live Streaming protocol.

Legacy

Safari

Legacy Safari Extensions (.safariextz files) built with Safari Extension Builder and distributed through the Safari Extensions Gallery or your website, have been deprecated with Safari 12.

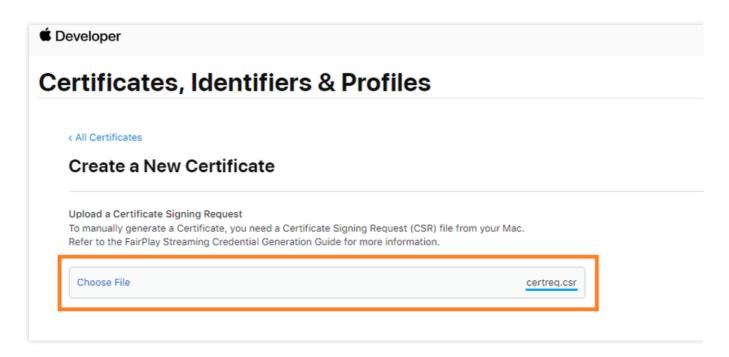
Intermediate Certificates

To use your certificates, you must have the intermediate signing certificate in your system keychain. This is automatically installed by Xcc intermediate signing certificate click the link below:

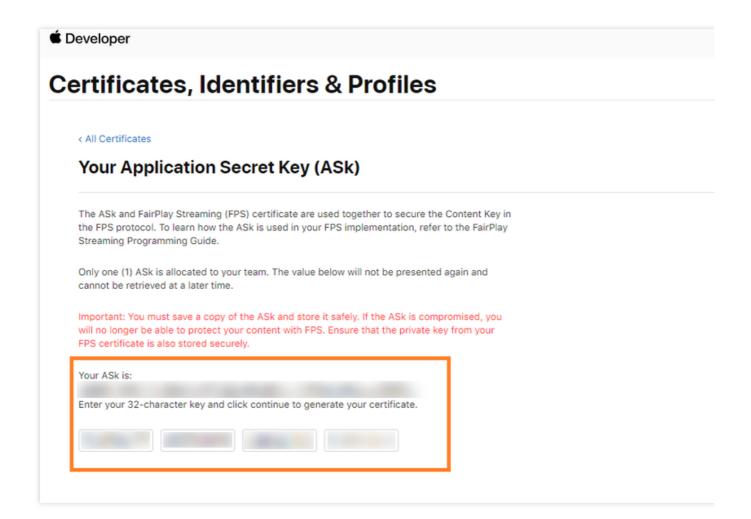
Worldwide Developer Relations Certificate Authority >

4. Click Choose File, select the certreq.csr file created, and click Continue.



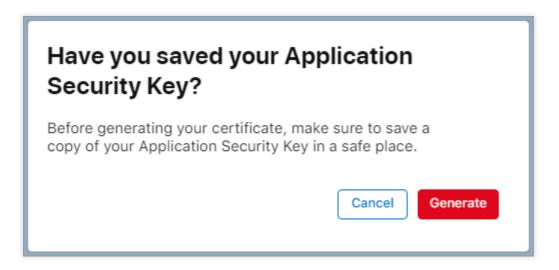


5. Copy and save the ASK, paste it in the input field below, and click **Continue**.

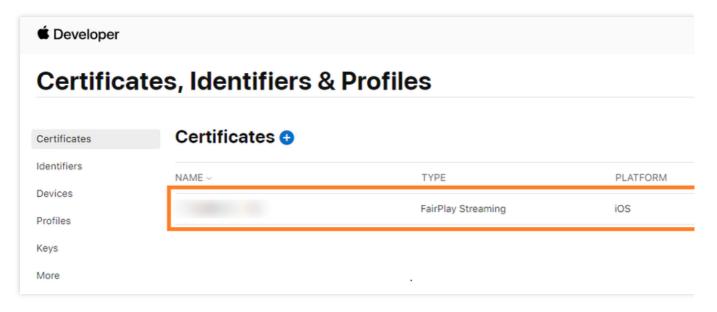


6. A window will pop up to confirm that you have saved the ASK. Click Generate.



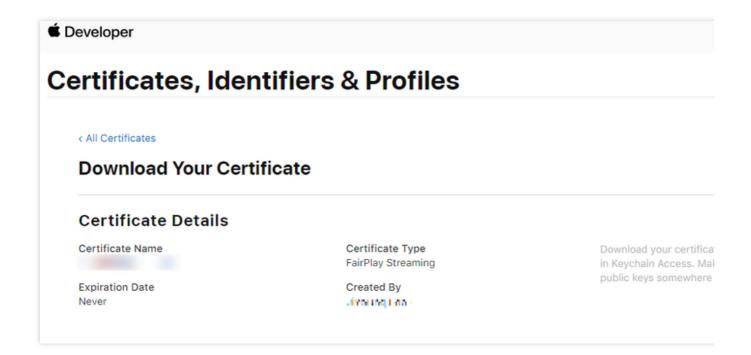


7. After the above steps are completed, the FPS certificate generated will appear in the certificate list.



8. Click **Download** to download the FPS certificate (fairplay.cer).

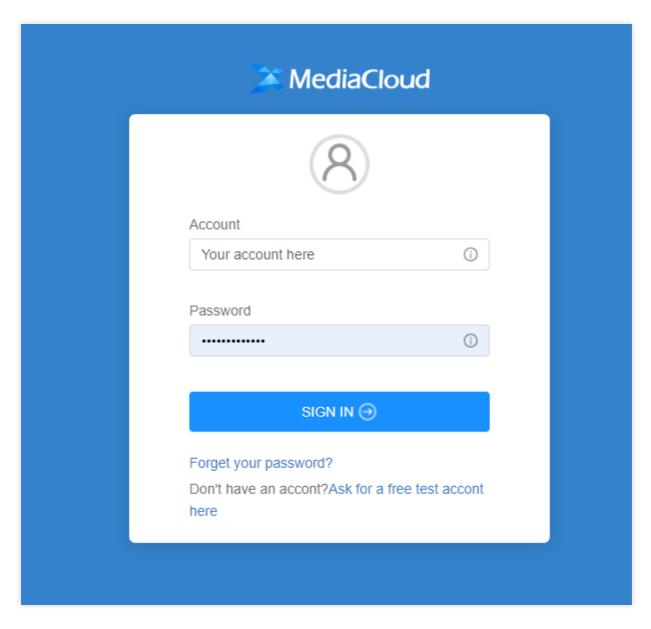




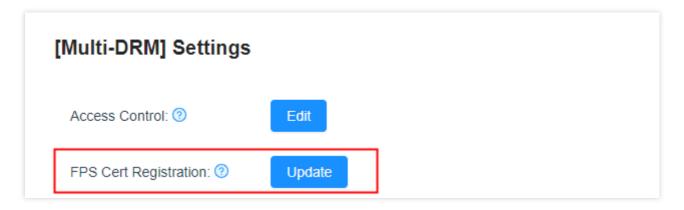
Step 4. Upload the certificate to SDMC's platform

1. Log in to SDMC's DRM console and find DRM settings in the menu.



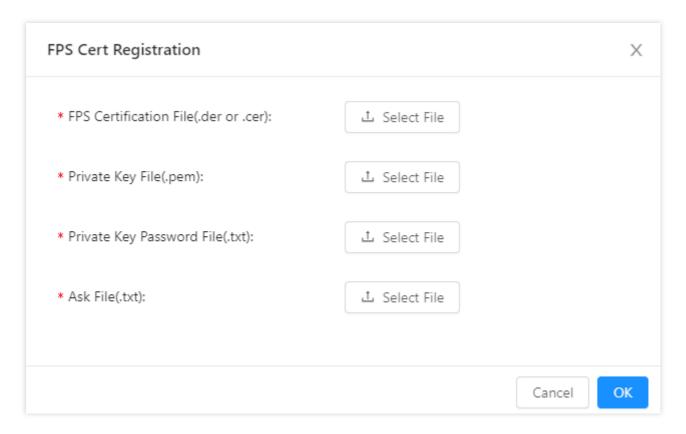


2. On the DRM settings page, find FPS Cert Registration, and click Update.



3. Upload the FPS certificate, private key file, private key password file, and ASK file, and click **OK**.





Note

If you have any questions, please submit a ticket.



Obtaining the UID and Key Information

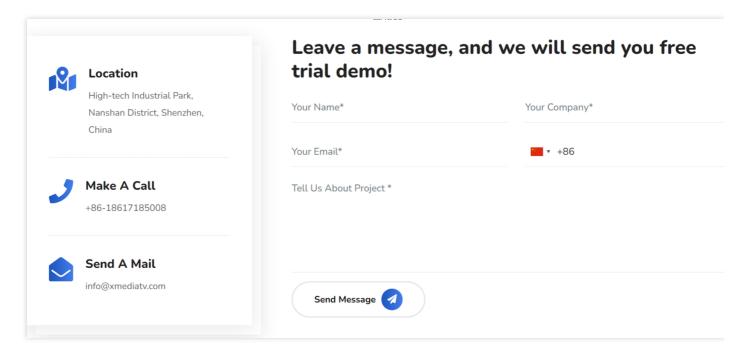
Last updated: 2023-02-27 15:47:12

The licensing services of DRM encryption in CSS are provided by the third-party vendors SDMC and DRMtoday. To use DRM encryption, you need to provide CSS with your SDMC or DRMtoday user key. This document shows you how to obtain an SDMC or DRMtoday user key.

SDMC

Directions

1. Visit SDMC's DRM service registration page.

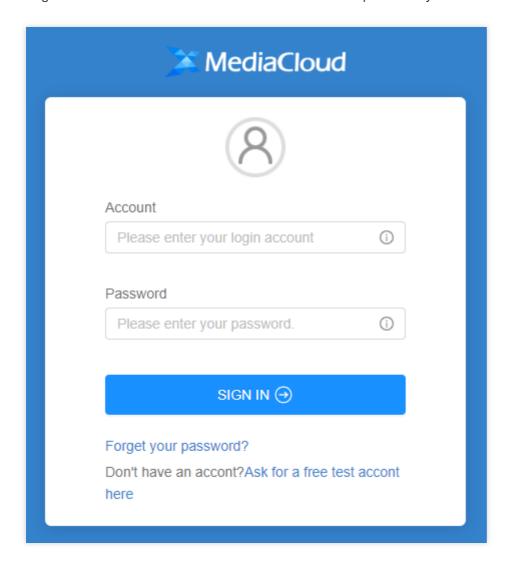


2. Enter your information and click **Send Message**. You will receive an acknowledgement email from SDMC in a few hours, and the company's salespeople will contact you to confirm your information.



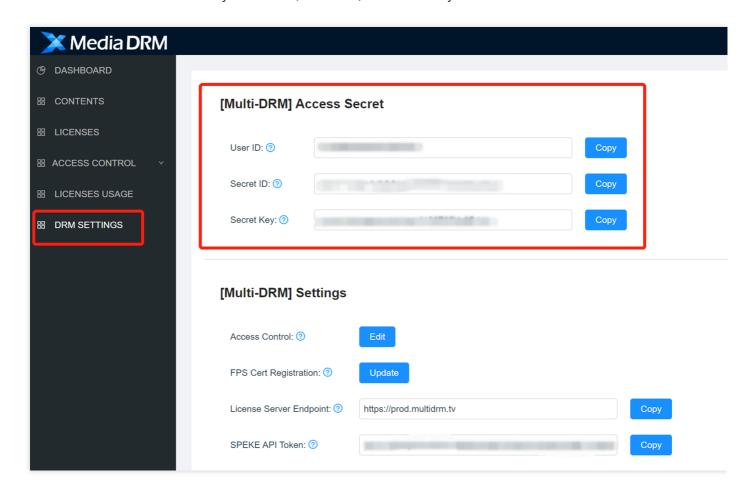


- 3. SDMC will review your application and email you the address of its DRM console and your initial password.
- 4. Log in to the SDMC DRM console with the account and password you received.

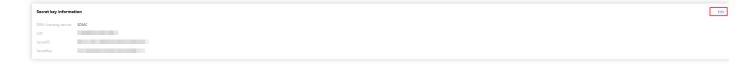




5. Click **DRM SETTINGS** to view your user ID, secret ID, and secret key.



6. Go to DRM management of the CSS console and enter the information obtained.

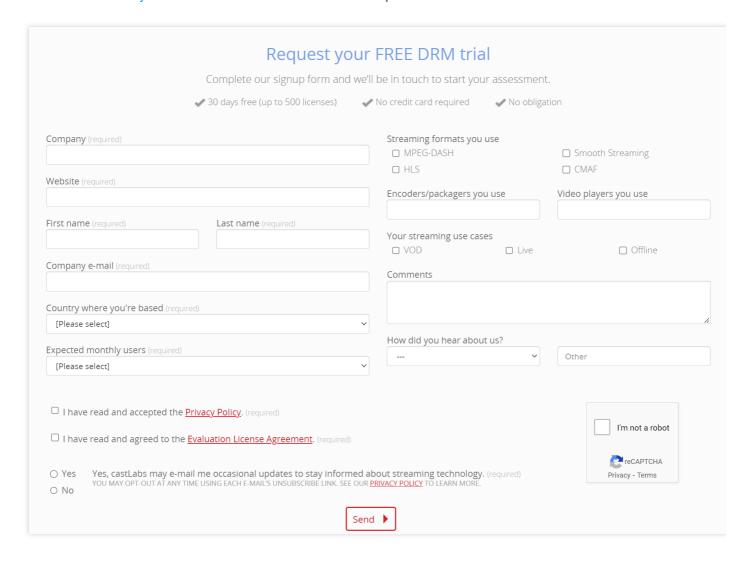


DRMtoday

Directions



1. Visit the DRMtoday website and fill in the information as required.





2. Click **Send**. Normally, you will receive a system email from DRMtoday within a few hours.

DRMtoday: Free trial request confirmation
Hello
Thanks for your interest in a free trial of castLabs' DRMtoday service!
You'll receive an email shortly with account details to get started on your 30 day assessment period. Our team validates trial requests, so it may take a business day for your account information to arrive.
If you have any questions please don't hesitate to contact us at: sales@castlab s.com
Below is a summary of the information you've submitted: First name: Last name: E-mail: Company: Website:
Country where you are based: Expected monthly user-base:
Streaming formats:
Streaming use cases.
Marketing communication opt-in: How you heard about us:
Read and accepted the Privacy Policy:
Read and agreed to the Evaluation License Agreement:



3. Shortly after that, DRMtoday will send you another email containing your account details.

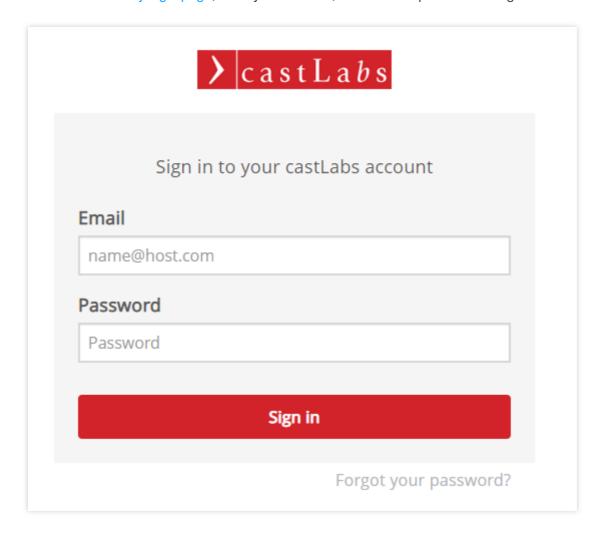
You've been invited to the DRMtoday staging by Tencent. Here you can access our DRMtoday service to manage your content licensing activity. Just sign in using this temporary password. You'll be asked to create an account password, and then you're ready to start downloading! Your sign-in email: Your temporary password: Sign in now » Your temporary password is valid for 7 days. If the time limit has expired before entering the password, please contact helpcenter@castlabs.com to receive a new password. Sign in to your account castlabs.com This is an automated email. If you have any questions, please contact our help center:

helpcenter@castlabs.com

©2013-2022 Tencent Cloud. All rights reserved.



4. Visit the DRMtoday login page, enter your account, and create a password to log in.

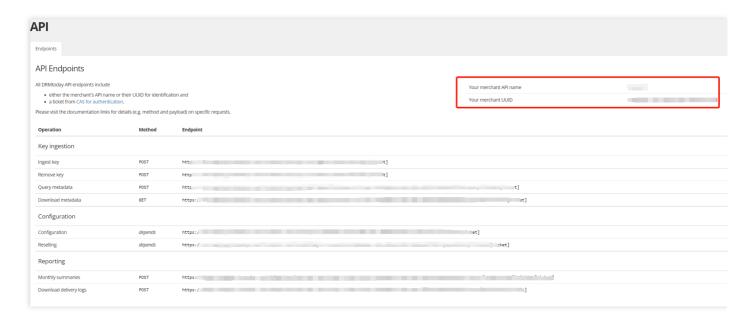


5. You will enter the DRMtoday Dashboard.





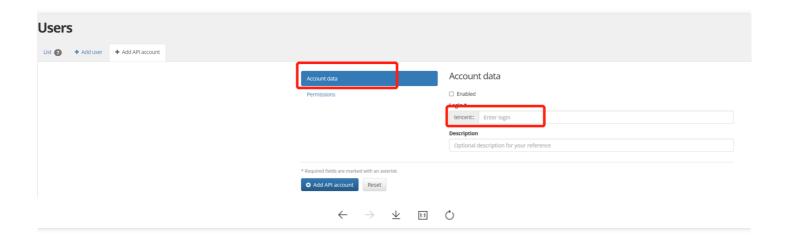
6. Click API. On the page below, note your merchant name and UUID.



7. Go to the **Users** page. Add an API account, grant the permissions, and note the password.

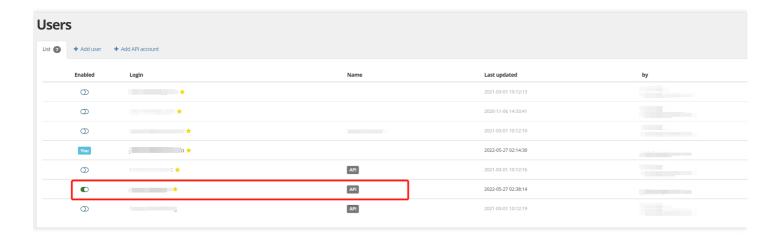
Note:

The password will appear only once. Make sure you note your merchant API name and password.



Enable the API account you created:

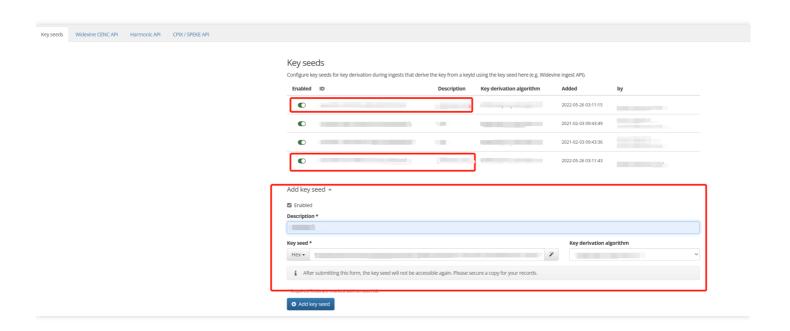




8. Go to **Configuration** > **Ingest Settings**. Add a key seed to generate the key (key seed ID) and IV (IV seed ID).

Note:

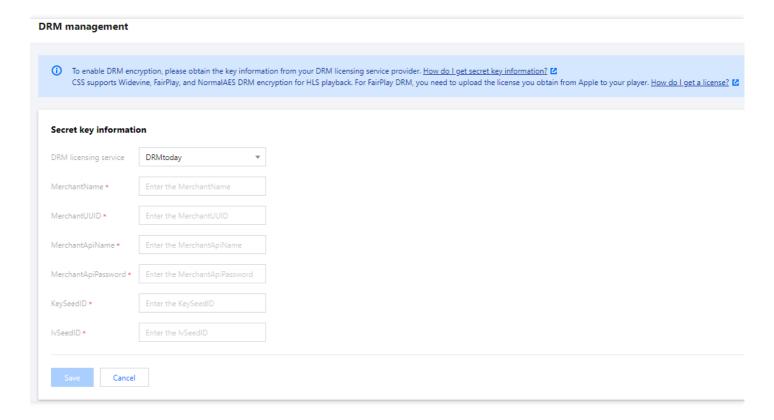
A key generated by a key seed can be viewed multiple times. You can provide it to your DRM encryption provider. For simple encryption with HMAC SHA512, you can use the key seed and key ID to generate an HMAC SHA512 string and use the first 16 characters of the string as the key or IV.



9. After obtaining the merchant name, merchant UUID, merchant API name, merchant API password, and key seed



ID, and IV seed ID, enter the information in **DRM Management** of the CSS console.



Note:

If you encounter any problems while trying to obtain the above information, please submit a ticket. We will help you navigate the process.



Live Subtitling

Last updated: 2024-07-26 14:46:39

The live 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 offers voice translation services for 16 language pairs, including Chinese-English, Chinese-Japanese, and Chinese-Korean. In practical applications, please select the proper type according to your business needs and audience group. This document describes how to create, modify, and delete subtitle templates through the console.

Points of Attention

A template takes effect about 5 to 10 minutes after successfully created.

To use the live subtitling function, after binding a subtitle template to a transcoding template, you should obtain the subtitle stream with the suffix of a playback address corresponding to the name of a transcoding template. Live subtitling function is a **premium service**. Utilizing this function will incur live transcoding fees and ASR fees of MPS. Cross-language translation may generate voice translation fees of MPS. For the specific billing rules, please refer to billing document.

Prerequisites for Use

The CSS service has been activated.

Creating Subtitle Template

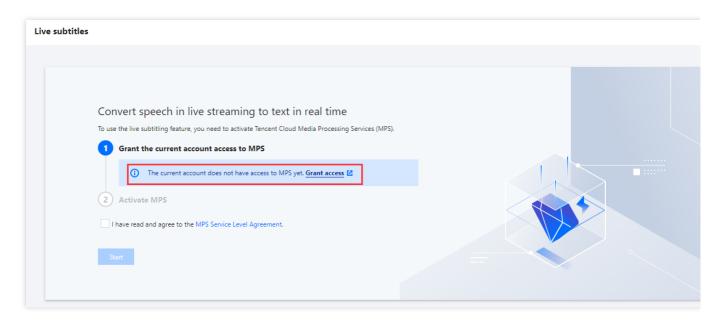
1. Log in to the CSS console. Choose Feature Configuration > Live Subtitles.

Note:

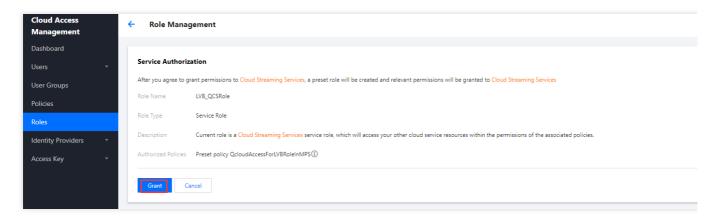
Due to the use of the live subtitling function, creating a service role and authorizing the current account role to use MPS product services are required for the **first** creation of a subtitle template.

2. Click **Grant access** to enter the CAM role management page.

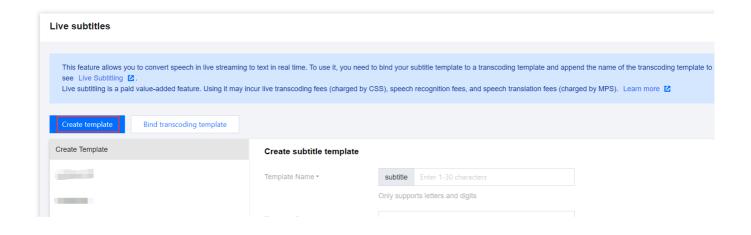




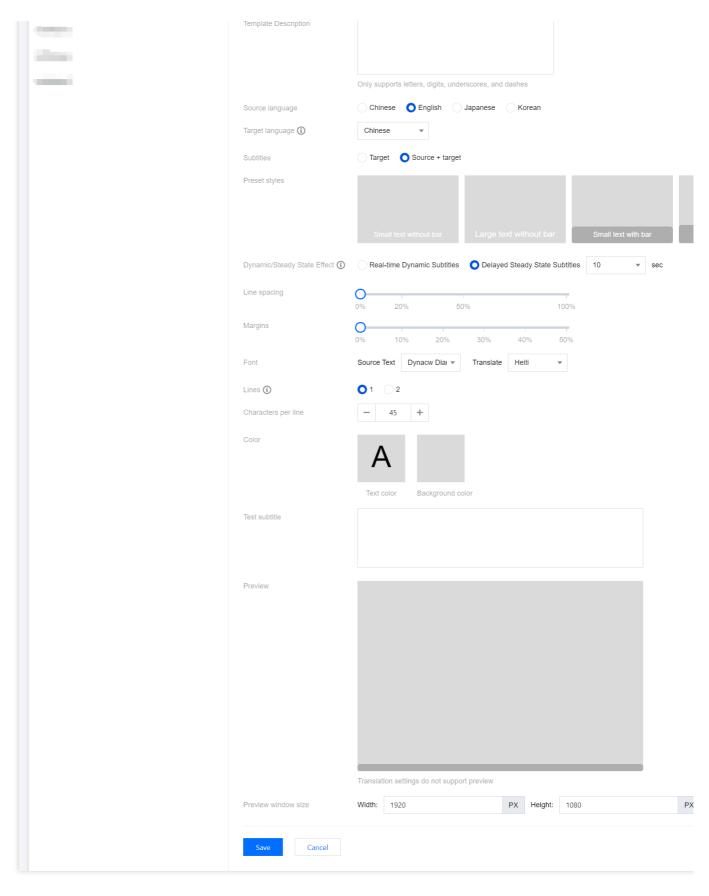
3. On the role management page, click **Grant**. After completing identity authentication to finish the MPS authorization, you can utilize the MPS service normally.



- 4. After successful authorization, select the service agreement and click **Start**. The system will automatically activate the MPS product and open the live subtitling management page.
- 5. Click **Create template** to enter the subtitle template creation page and configure the template as follows:







Note:

The font selection for subtitles will vary depending on the **Source language**, **Target language**, and **Subtitles** you select. Please select the appropriate type according to your actual needs.



Configuration Item	Description
Template Name	The prefix for the template name is fixed to "subtitle". The template name cannot exceed 30 characters and only supports English letters and digits.
Template Description	Subtitle template description. It contains up to 100 characters, only supporting letters, digits, underscores, and dashes.
Source language	The default language is Chinese, and English, Japanese, and Korean are also supported.
Target language	It is set to None by default. Switching to any of the three other options not selected in the source language is supported. For instance, if English is selected as the source language, the available options for the target language include No Selection , Chinese , and Japanese , Korean . Cross-language translation will incur voice translation fees of MPS. ASR fees will be generated without translation. For more details, please see Content II. If you need to translate it into other languages, please submit a ticket to contact us.
Subtitles	Source is suported by default. Target and Source + target are also supported. Through the three options of Source language, Target language, and Subtitles, Supports subtitles in the following sixteen language types: Original Chinese subtitles Chinese translated into English Chinese translated into Japanese Chinese translated into Korean Original English subtitles English translated into Chinese English translated into Japanese English translated into Korean Original Japanese subtitles Japanese translated into Chinese Japanese translated into Chinese Japanese translated into Korean Original Korean subtitles Korean translated into Chinese Korean translated into English Korean translated into English Korean translated into Japanese
Preset styles	The default option is Small text without bar . You may select Small text without bar , Large text without bar , Small text with bar , or Large text with bar to configure the settings. Once selected, the system will automatically set the corresponding subtitle style, which can be manually modified.
Dynamic/Steady State Effect	The default setting is Delayed Steady State Subtitles, which can be switched to Real-time Dynamic Subtitles.



	When choosing the Delayed Steady State Subtitles mode, it's necessary to set the latency, with a default value of 10 seconds. Available latency options include 20 seconds, 30 seconds, and 60 seconds. Note: When selecting Real-time Dynamic Subtitles, the subtitles in the live broadcast will dynamically correct the content word by word according to the spoken content. When selecting Delayed Steady State Subtitles, the system will delay the live broadcast according to the set time, but the experience of watching complete sentence subtitles mode is better.
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%.
Font	The font selection for subtitles will vary depending on the Source language, Target language, and Subtitles you select. Options include Heiti, SimSun, Dynacw Diamond Black, and Helvetica. When the Original Text + Translated Subtitles mode is selected, the default font for both source and target is Heiti. If the subtitles displayed are in English, the "Helvetica" font can be chosen.
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.
Color	The default font color is black. The color can be customized.
	The default background color is black . The customization of level of transparency is supported.
Test subtitle	Entering the subtitle test content is to add new subtitles to videos for previewing the subtitle effects.
Preview	You can preview the subtitle effects configured in the current template. The subtitle effects are only for reference. The content is not translated.
Preview window size	Set the subtitle preview window size: Default values for width and height: 1920px for width and 1080px for height.

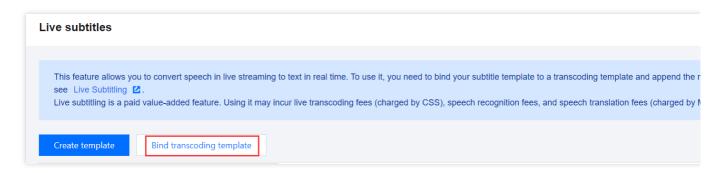


Value range for width and height: 360px - 4096px.

6. Click **Save** to save the current template.

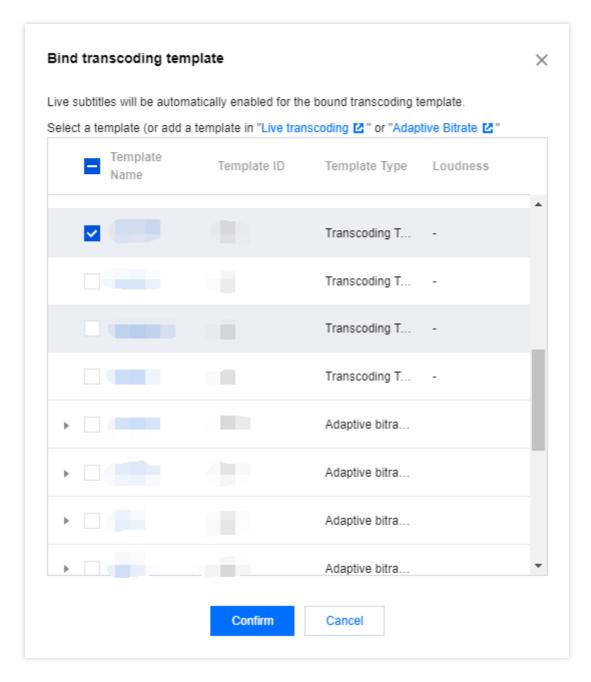
Binding Transcoding Template

- 1. Log in to the CSS console. Choose Feature Configuration > Live Subtitles.
- 2. The system allows subtitle templates to bind transcoding templates or adaptive bitrate templates. Both transcoding templates and adaptive bitrate templates have similar subsequent use procedures. A transcoding template serves as an example for decription below:
- 2.1 Direct association with transcoding templates:
- 2.1.1 Associate a transcoding template after it is successfully created: After the successful creation of a transcoding template, click **Bind transcoding template** in the upper left corner.



2.1.2 Select **Transcoding template** or **Adaptive bitrate template** according to your actual business requirements, then click **Confirm**.





2.2 In order to bind a playback domain to the corresponding transcoding template, the subtitle effects will be output at the same time when the transcoding stream is obtained subsequently (add _ transcoding template name after the corresponding live stream StreamName to generate a transcoding stream address).

Note:

Once the transcoding template is bound, the subtitle function configured in the transcoding template will be synchronously activated.

Unbinding

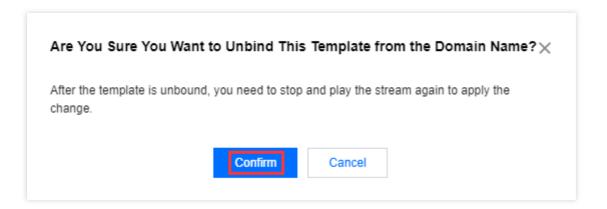
1. Log in to the CSS console. Choose Feature Configuration > Live Subtitles.



2. Select the transcoding template associated with a domain name and click **Unbind**.



3. Confirm whether to unbind the current associated domain. Click Confirm to unbind it.



Modifying a Template

- 1. Log in to the CSS console. Choose Feature Configuration > Live Subtitles.
- 2. Select the successfully created subtitle template and click **Edit** on the right to go to the template information modification page. Click **Save** to finish the modification.





Deleting a Template

Note:

If the template has already been associated, you must first unbind it before you proceed with the deletion process.

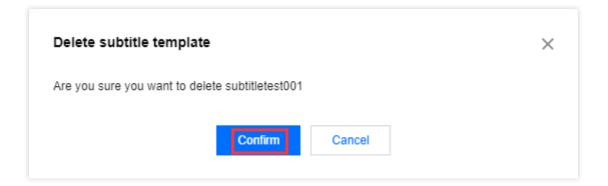
Note that a template cannot be restored after deleted. Be careful when performing operations.

- 1. Log in to the CSS console. Choose Feature Configuration > Live Subtitles.
- 2. Select the successfully created subtitle template and click **Delete** above.



3. Confirm whether to delete the current subtitle template, then click **Confirm** to successfully delete it.



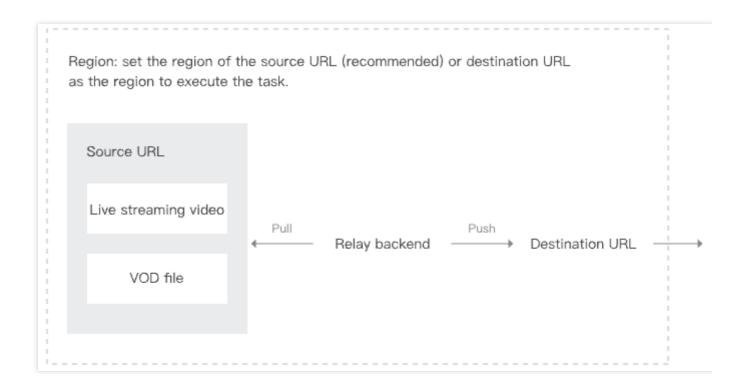




Relay

Last updated: 2024-05-30 17:30:53

If your live streaming source does not have the capability to push streams or if you want to stream on-demand videos, you can use the relay feature to quickly pull content from an existing live streaming source or video and then deliver it to the destination. You don't need to push streams yourself.



Prerequisites

You have activated CSS and logged in to the CSS console.

You have added a push domain name in the console.

Limits

You can create up to **200** relay tasks. If your relay business has a substantial volume and you require a larger task quota, contact us by submitting a service ticket, or seek assistance from our business manager.

The relay feature is charged based on the **duration of relay tasks**. For details, see Relay.

CSS is only responsible for pulling and relaying content. Please make sure that your content is authorized and complies with relevant laws and regulations. In case of copyright infringement or violation of laws or



regulations, CSS will suspend its services for you and reserves the right to seek legal remedies.

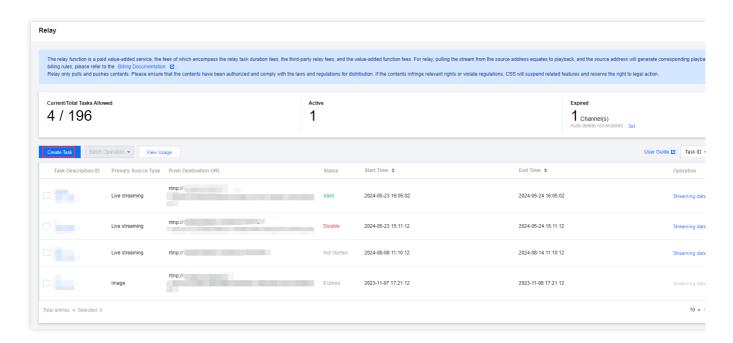
The local relay mode became a paid feature starting from **00:00 on November 23**, **2022**. To learn more, see Extended Features.

For relay, when pulling or pushing global streams, you need to set the task region to outside Chinese mainland. You can use the relay recording function by binding a cloud streaming recording template, which will generate recording costs. The recording templates bound to the relay function only support templates that record the original stream content. To modify the recording template during a relay task, you need to halt the current task for 30 seconds before restarting it, only then can the new recording template take effect.

After the relay is bound to the transcoding template, the stream will first be pushed to CSS for transcoding, and then forwarded to the objective address of the task. The stream ID style of the push stream used for transcoding is "pp_relay task id", example: pp_12345678. Additional upstream push charges may be incurred. For the upstream push billing rules, please refer to Upstream Push Billing Instructions.

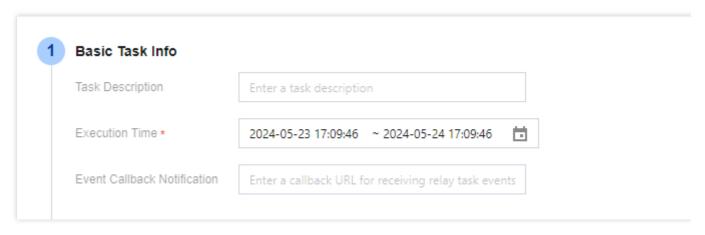
Creating a Task

1. Go to Relay, and click Create Task.



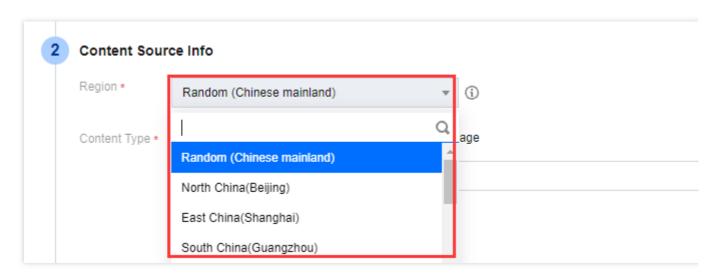
2. Enter the basic information:





Configuration Item	Description
Task Description	Describe the task.
Execution Time	By default, it is from Current Time to Current Time + 24 Hours . The optional range of execution time is any time within one year of the current time, but the duration cannot exceed 7 days. Assuming the current time is 15:18:50 on May 23, 2024, then: The optional time is from 15:18:50 on May 23, 2024 to 15:18:50 on May 24, 2024. The end time cannot exceed 15:18:50 on May 24, 2024.
Event Callback Notification	Enter a callback URL for receiving relay event notifications.

3. Provide the source information.



Region: Random (Chinese mainland), North China region (Beijing), East China (Shanghai), South China (Guangzhou), Southeast Asia (Singapore), Southeast Asia (Bangkok), Northeast Asia (Seoul), South Asia (Mumbai),



Hong Kong.

If you select **Random (Chinese mainland)**, the system will assign a region that is nearby.

4. For Content Type, you can select Live streaming, Custom video path, or Image.

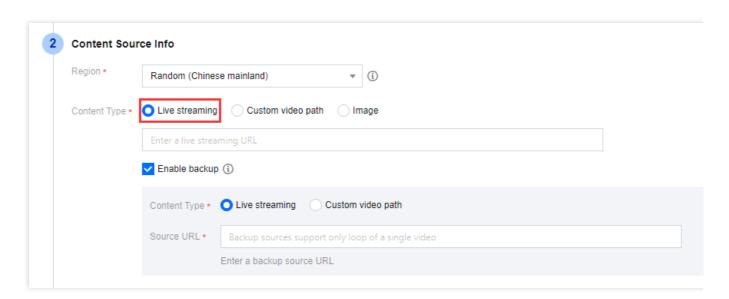
4.1 Live streaming:

Enter a live streaming URL (only one is allowed).

You can select Enable backup.

In the event that the primary input source fails to retrieve content, an automatic switch to the backup input source will be initiated for content acquisition. If the backup input source's content type is live streaming, a manual switch back to the primary input source is required once it is restored. However, if the backup input source's content type is a custom video, the system will automatically revert to the primary input source upon completion of the current custom video playback cycle. The backup input source only supports the continuous loop playback of a single video.

Application scenarios: The backup source function is ideal for long-term live streaming tasks, preventing black screen viewing due to stream interruption, and providing backup sources and padding. For manual real-time switching of live streaming scenarios, it is recommended to use the cloud director station function.



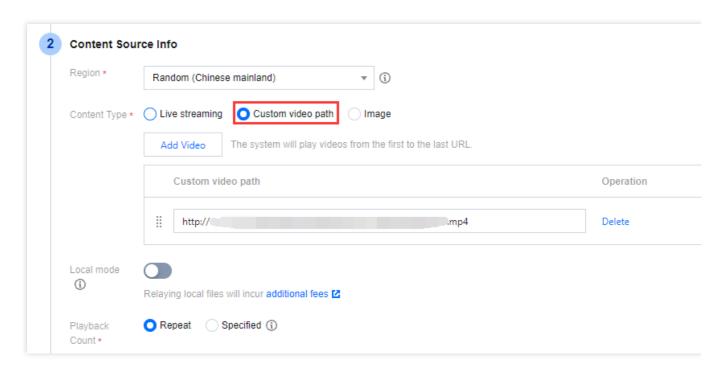
4.2 Custom video path:

You can enter multiple (max 30) source URLs.

Select **Repeat** to repeat the playback indefinitely or **Specified** to specify the number of times (1-100) to play the content.

If you enable local mode, sources in MP4 format will be cached to the local node before they are relayed. This ensures smoother and more reliable playback.



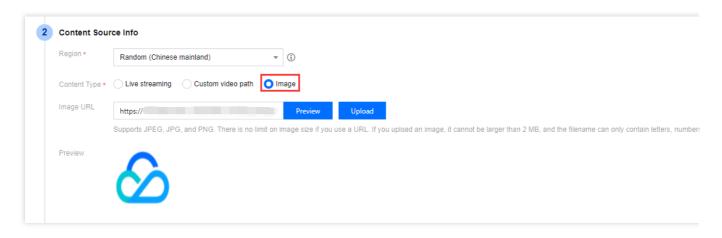


4.3 Image:

Upload an image or enter an image URL. You can click **Preview** to preview the image.

Images in JPEG, JPG, PNG, or BMP format are supported. If you enter an image URL, there is no limit on image size. If you upload an image, it cannot exceed 2 MB.

The file names of images to be uploaded only support letters, digits, and the following characters: -! _ . *



Note:

The system will stop a relay task either when the playback count reaches the specified value or when the task reaches its end time.

In case of task modification:

If you change only the playback count, after the new value is applied, the count will start from 2.

If you change both the source URL and playback count, after the new configuration takes effect (whether immediately or after the current playback ends), the count will start from 1.



If you change the destination URL, the playback count will be reset.

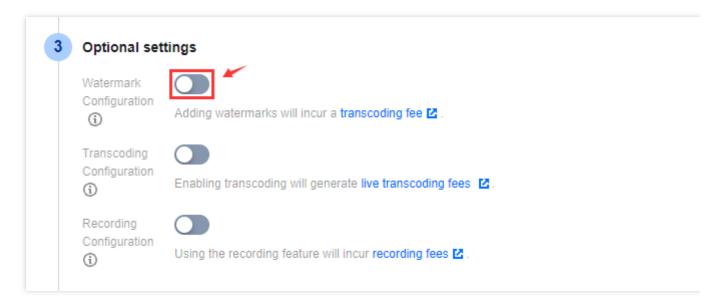
Relaying a locally cached MP4 file will incur additional fees, which are based on the duration of the file relayed.

5. You can select **Watermark Configuration**, **Transcoding Configuration**, and **Recording Configuration**. The configuration methods are as follows:

5.1 Watermark Configuration:

Click

to enable the watermark configuration. The PNG, JPG, and GIF watermark image formats are supported.



Set Watermark Type. You can select Custom watermark URL and Upload image.

For optimal visual effect, the watermark should be a transparent PNG image, with a file size less than 2 MB.

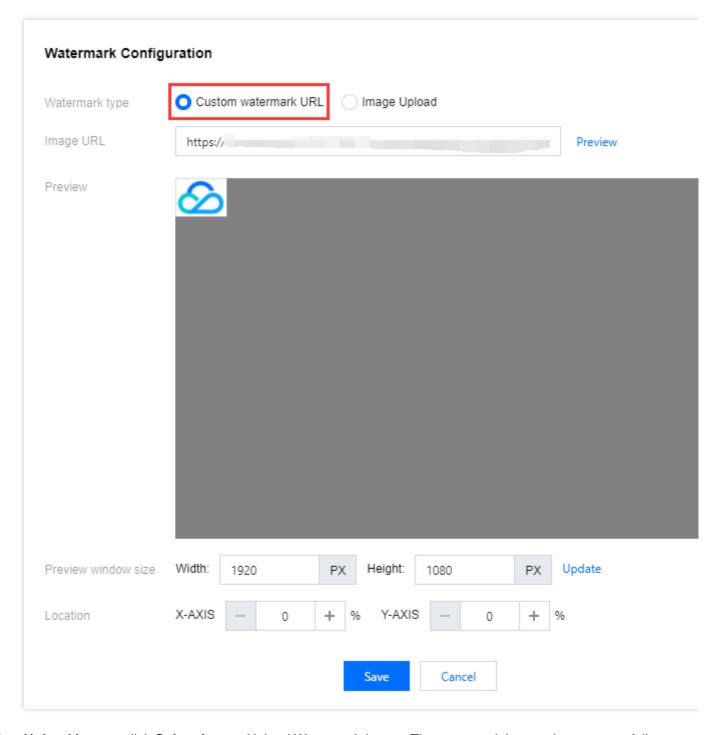
The file names of images to be uploaded only support letters, digits, and the following characters: -! _ . *

Custom watermark URL

Upload image

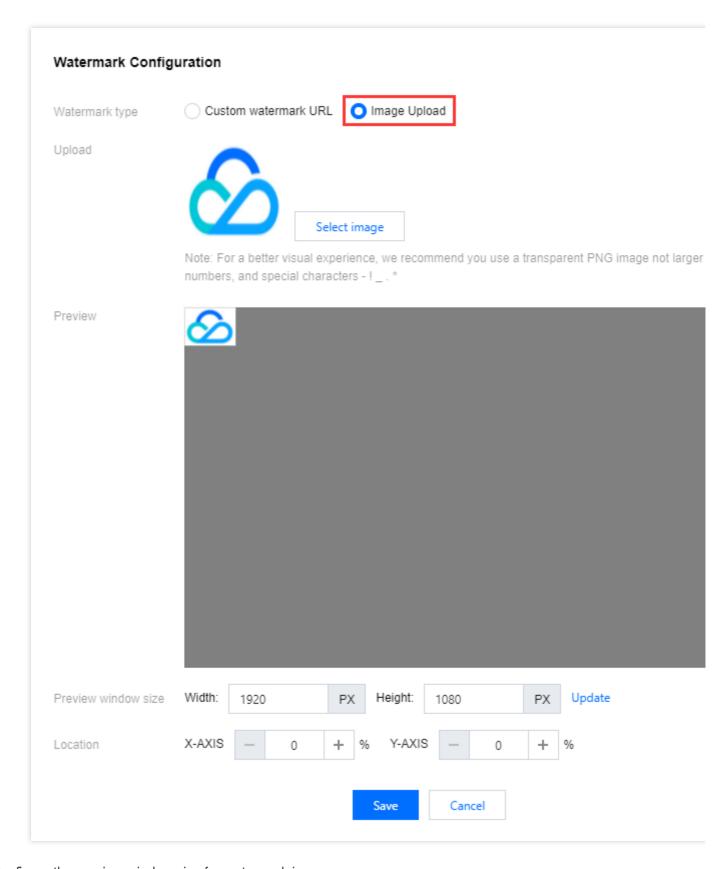
Select **Custom watermark URL**, Enter the URL of the watermark image in the image address input field. By clicking on **Preview**, you can view the watermark in the preview section.





select **Upload image**, click **Select Image** Upload Watermark Image. The watermark image size supports full-window dimension stretching.





Configure the preview window size for watermark images:

Default dimensions: width 1920px, height 1080px.

Dimensional range: 360px to 4096px.

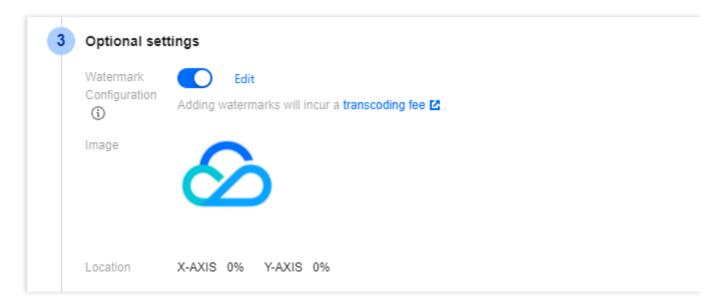


You can click the **Update** button on the right to perform automatic verification and synchronize the update of the watermark preview window.

Set the display position of the watermark image through the following methods.

Drag the image position on the watermark image configuration bar.

Configure the display position in the X-axis and Y-axis directions.



Note:

Enter the source information of the content. When the content type is image, the watermark configuration cannot be enabled.

Enabling the watermark function will generate transcoding costs.

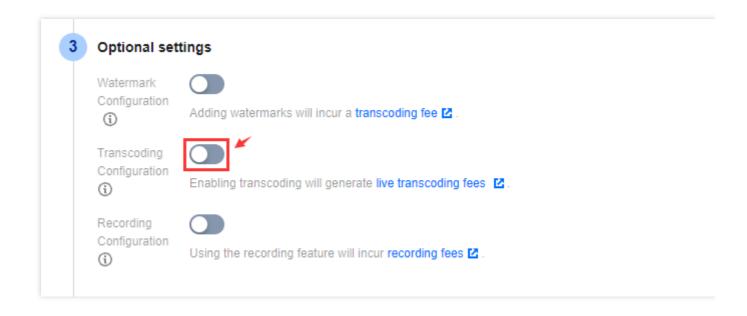
When modifying the watermark, it takes effect immediately for live streaming source tasks, and for on-demand video source tasks, it takes effect starting from the next file. Modifying the watermark can cause playback to stutter. Usage scenario: It is recommended to use when relaying to a third-party origin server that does not have a watermark feature. For example, if you relay to CSS, you can use the live watermarking feature of CSS.

5.2 Transcoding Configuration:

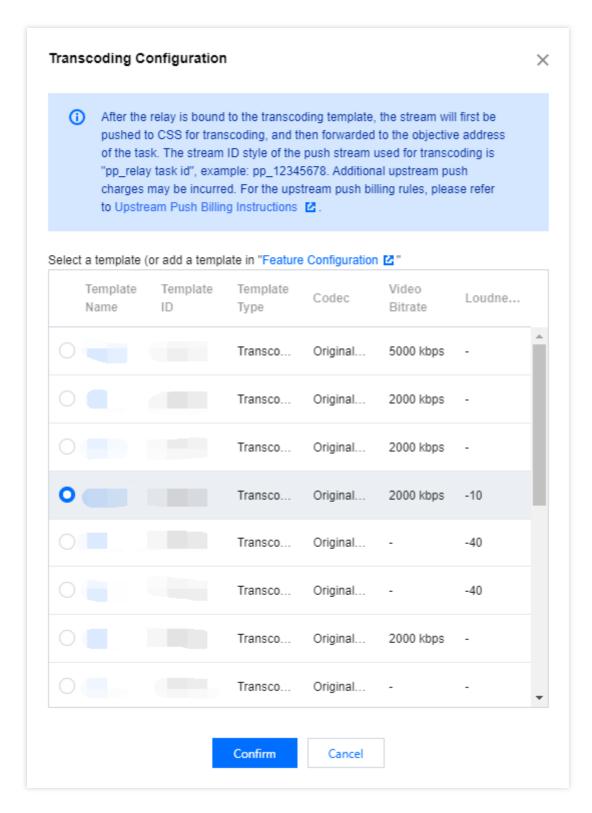
Click

, select to enable the transcoding configuration, select a transcoding template, and click **Confirm**.









Note:

Enabling transcoding will incur live transcoding fees.

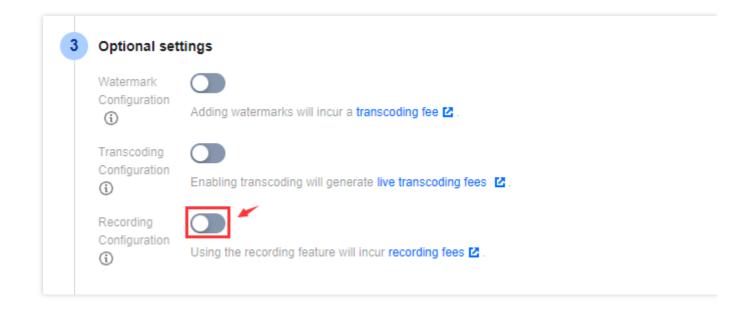
Configuring a transcoding template will transcode the pull stream source before relaying. Turning on, off, or changing the transcoding template will take immediate effect. Modifications to the currently bound transcoding template in the pull task will only take effect after the task is restarted.

5.3 Recording Configuration

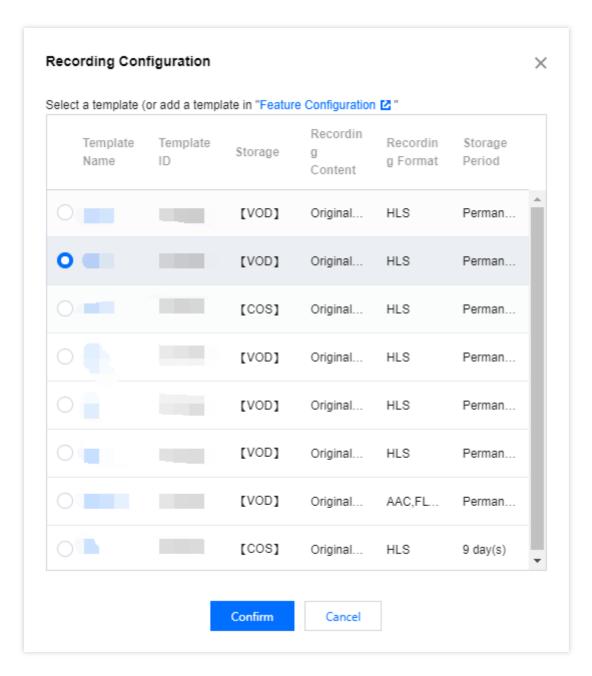


Click

to enable the recording configuration, select a recording configuration template, and click **Confirm_**.

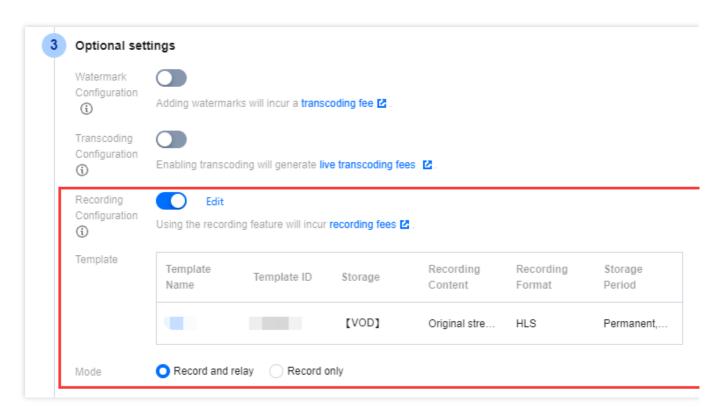






Select a recording mode. You can select **Record and relay** or **Record only**.





Node:

Enabling recording will generate recording fees.

The recording templates bound to the relay function only support templates that record the original stream content.

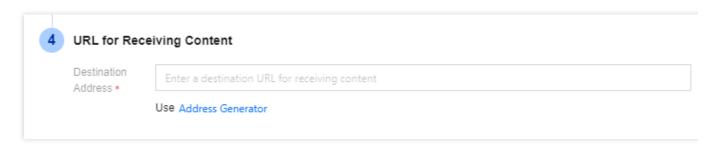
Templates for watermark streams and transcoding streams are not supported.

To modify the recording template during a relay task, you need to halt the current task for 30 seconds before restarting it, only then can the new recording template take effect.

If the recording template has been associated, it must first be unbound before being deleted. For unbinding procedures, refer to the unbinding recording configuration.

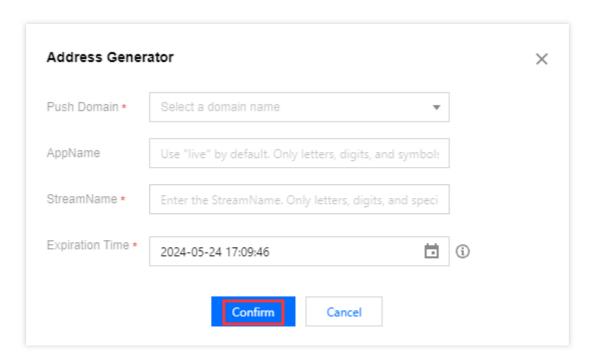
- 6. Enter a destination URL.
- 6.1 Click **Address Generator** to enter the URL generation page.

Click Add to add destination address 2.



6.2 Select an existing push domain, enter the Appname, StreamName, and expiration time, and click **Confirm** to generate a push URL, which will be auto-filled as **Destination Address**.





Note:

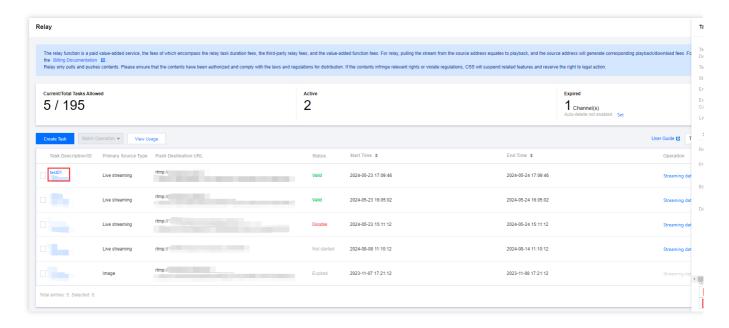
The URL expiration time must be later than the task end time. If you change the destination URL after the task starts, it will stop and restart.

Managing Tasks

Viewing Task Details

In the task list, find your task, and click its description/ID to view task details in the pop-up window.



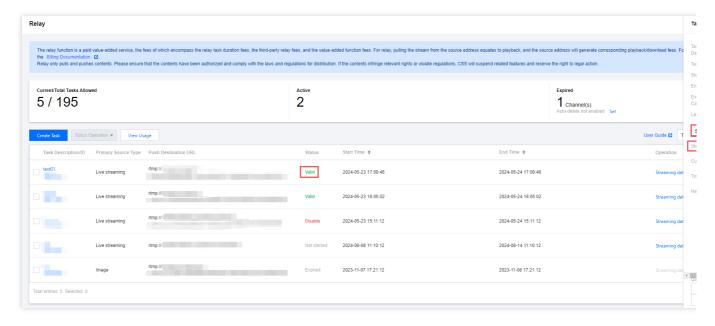


Note:

You can click the buttons at the bottom of the pop-up window to **edit the task**, **switch sources**, **restart the task**, or **disable the task**.

Viewing Task Status

In the task list, find your task, and click its description/ID to view its execution status in the pop-up window.



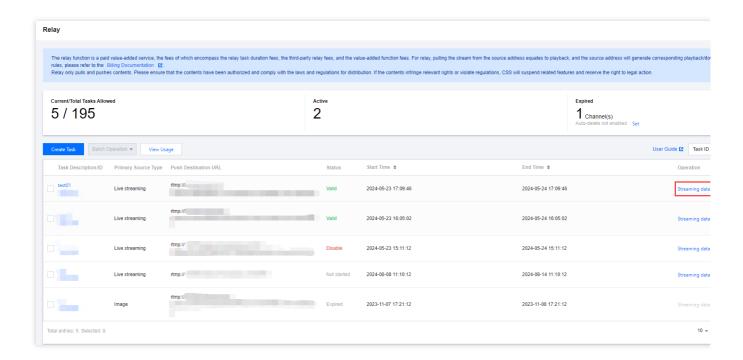
Task Status	Field Value	Description
Not started	Inactive	The task has not started yet.
Valid	Active	The task has started and is executed as expected.



	Inactive	The task has started but is not executed as expected.
Disabled	Inactive	The task is disabled.
Expired	Inactive	The task has expired.

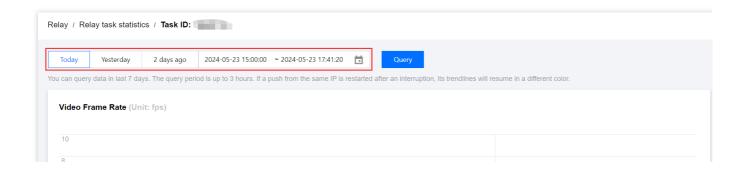
Querying Streaming Data

In the task list, select the successfully created relay task, and click **Streaming data** in the **Operation** column on the right to query the streaming data of the relay task. The event display information includes the event type, content type, time, source IP, target IP, and detailed information.

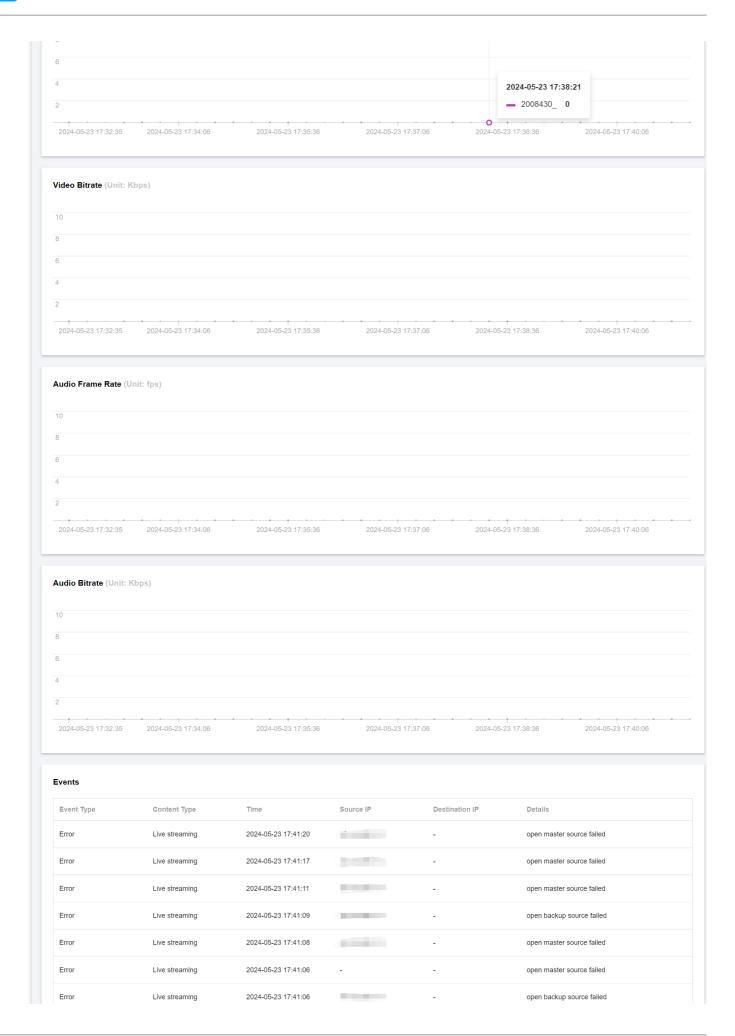


The streaming data query page of a relay task allows you to query the data of a single stream in the past seven days, including the video frame rate, video bit rate, audio frame rate, and audio bit rate.

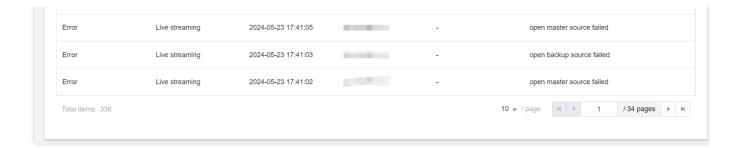
The interval between the start and end time of the query should not exceed 3 hours.





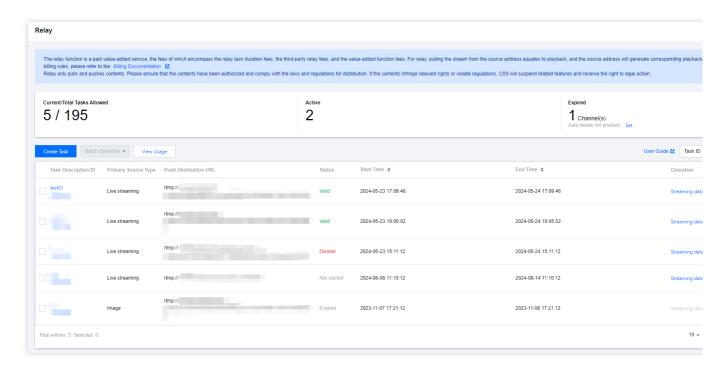






Modifying a Task

1. In the task list, find the task you want to modify, and click Edit.



2. Modify the task information, and then click **Save**.

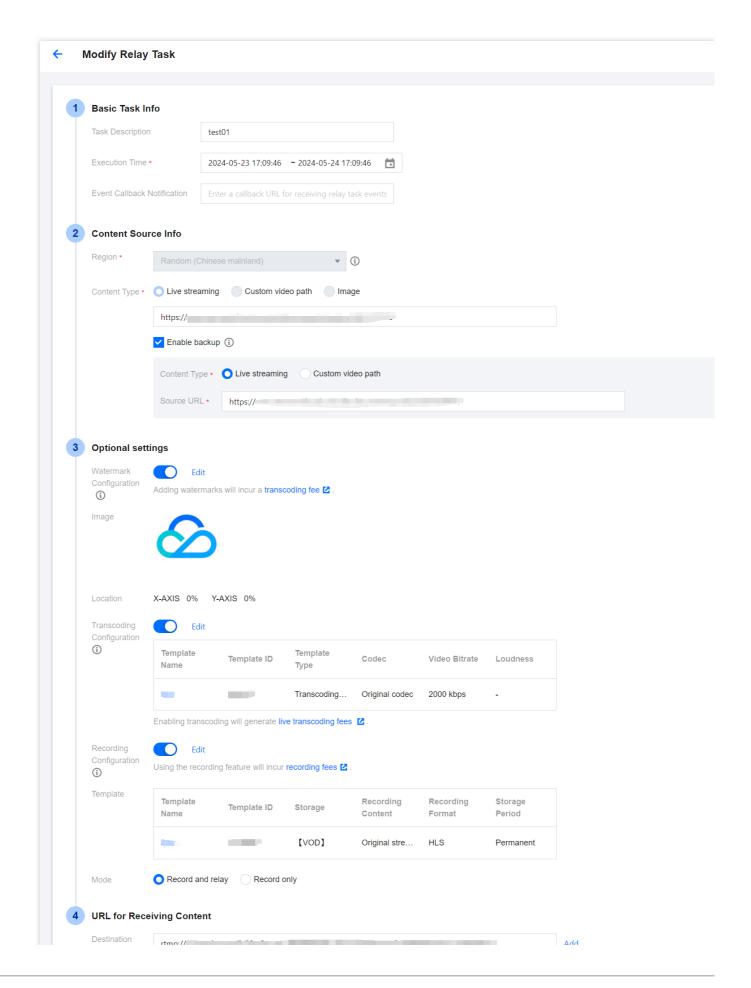
You cannot change the region or content type.

When modifying the task end time, make sure that the destination URL is valid until the task ends. Modifying the destination URL will cause the task to stop and restart.

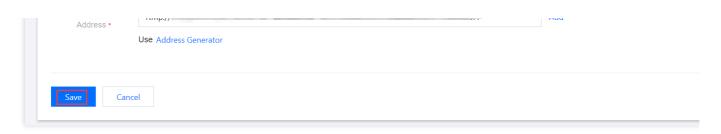
If you change watermark settings for a live streaming source, the modifications will take effect immediately. For an ondemand video source, modifications to watermark settings will take effect starting from the next video. Modifying watermark settings may cause playback to stutter. We recommend you use the watermark feature for relay only if you relay to third-party sites that do not have watermarking capabilities. If you relay to CSS, you can use the live watermarking feature of CSS.

The recording templates bound to the relay function only support templates that record the original stream content. To modify the recording template during a relay task, you need to halt the current task for 30 seconds before restarting it, only then can the new recording template take effect.



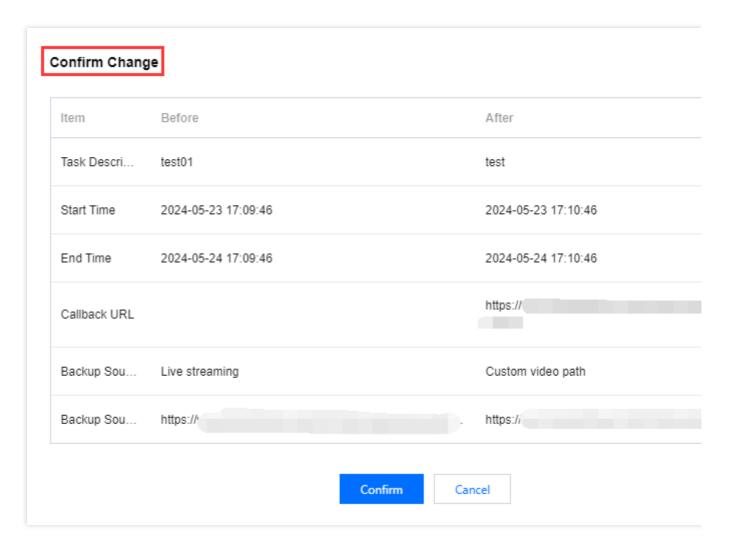






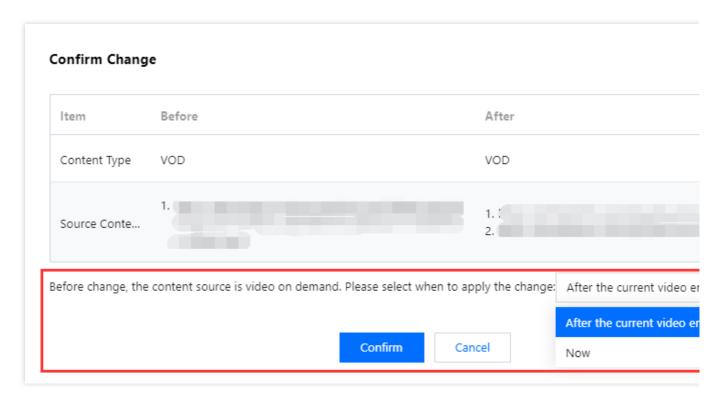
3. In the pop-up window, check the information:

Suppose you modified the **start time, end time, and playback count** of a task. You would see the following information in the pop-up window:

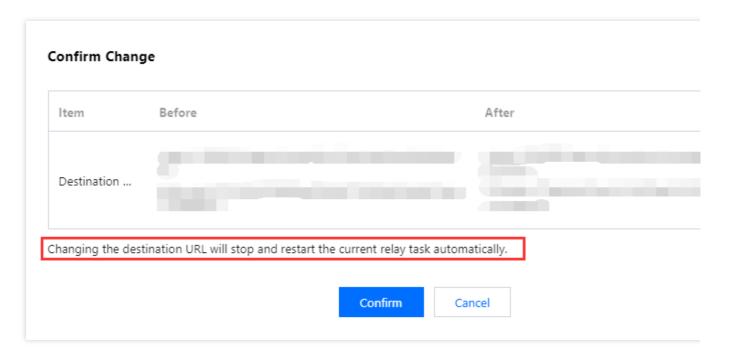


If the source URLs for **Custom video path** are changed, you need to select whether to apply the change **After the current video ends** (default) or **Now**. After the changes take effect, relay will restart from the first source URL.





If **Destination Address** is changed, the system will remind you that after you click **Confirm**, the current relay task will **stop and restart**.

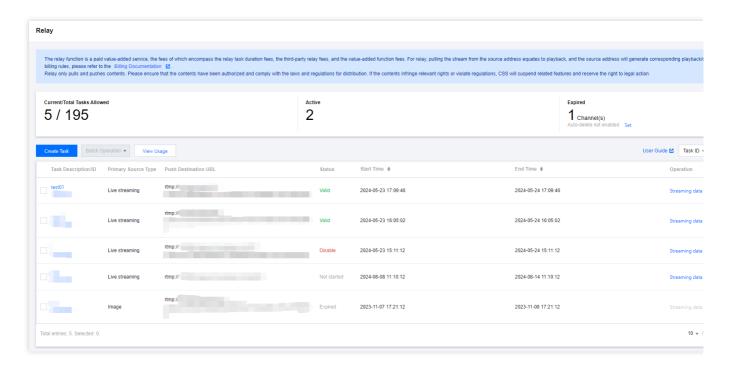


4. After checking, click Confirm.

Copying a Task

1. In the task list, find the relay task you want to copy, and click **Copy**. You will be directed to the task creation page.





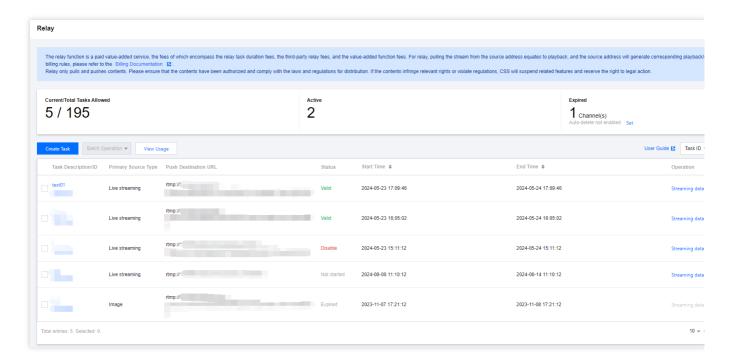
- 2. The information of the copied task will be auto-filled. You can **modify** it as needed.
- 3. Click Save to create a new relay task.

Restarting a Task

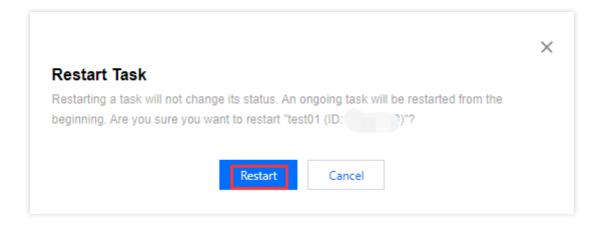
Restarting a task will **not change its status**. An ongoing task will be **restarted from the beginning**. Perform the following to restart a task:

1. In the task list, find the relay task you want to restart, and click Restart.





2. In the pop-up window, click **Restart**.

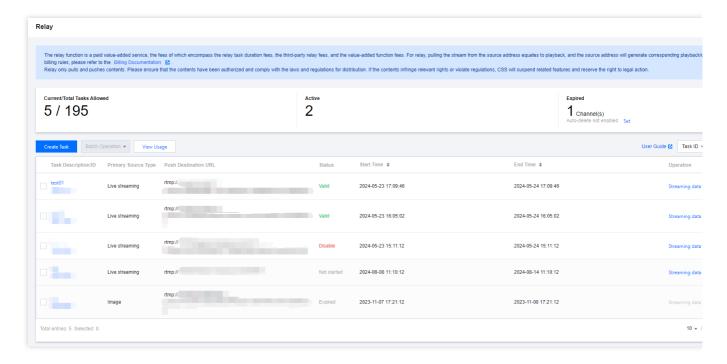


Disabling a Task

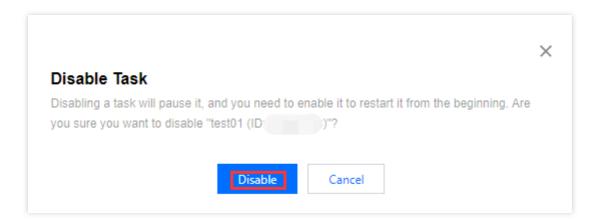
If you disable a task, **the task will stop**. You can click **Enable** to start it again. Perform the following to disable a task:

1. In the task list, find the relay task you want to disable, and click **Disable**.





2. In the pop-up window, click **Disable**.

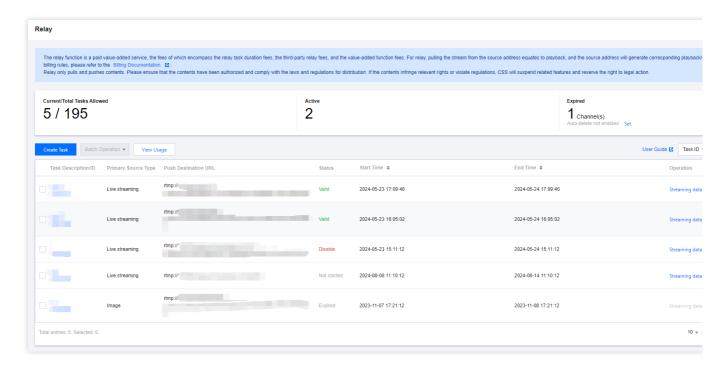


Enabling a Task

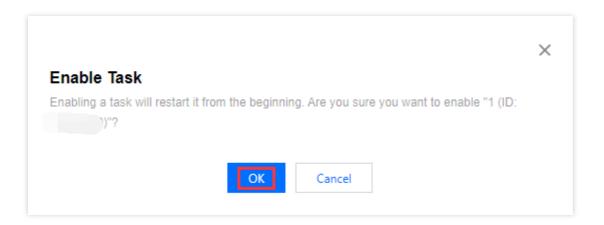
If you enable a task, the task will start from the beginning. Perform the following to enable a task:

1. In the task list, find the relay task you want to enable, and click **Enable**.





2. In the pop-up window, click **OK**.

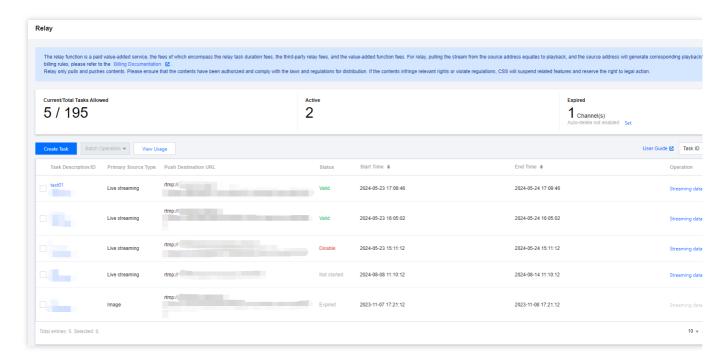


Deleting a Task

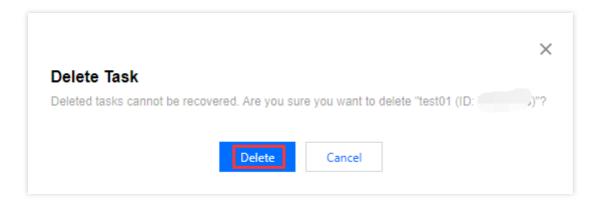
Deleted tasks **cannot be recovered**. Perform the following to delete a task:

1. In the task list, find the relay task you want to delete, and click **Delete**.





2. In the pop-up window, click **Delete**.

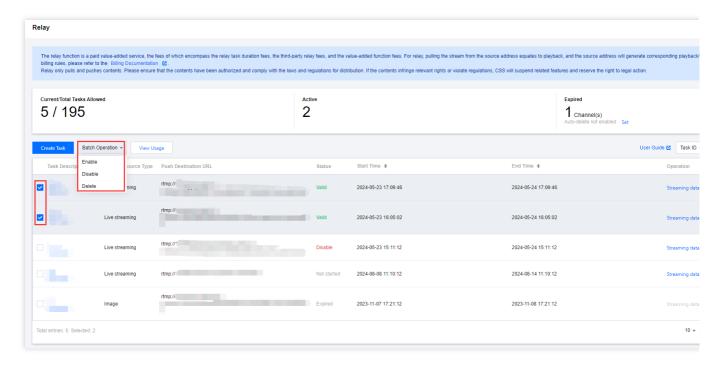


Batch Operations

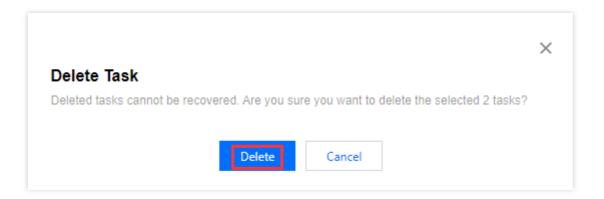
You can delete, disable, and enable up to 10 relay tasks at a time.

- 1. In the task list, select the relay tasks you want to delete, disable, or enable.
- 2. Click Batch Operation, and select Enable, Disable or Delete.





3. In the pop-up window, click **Enable**, **Disable** or **Delete**.

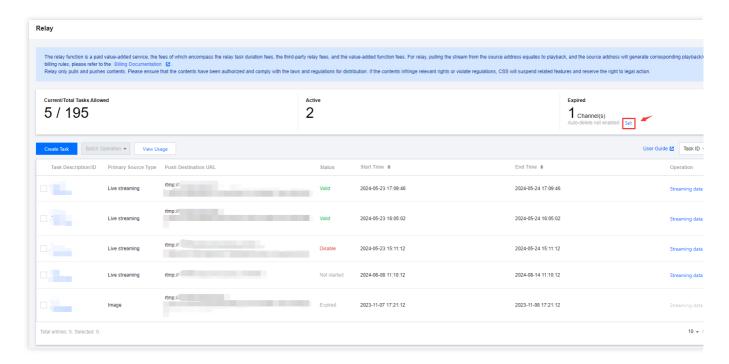


Auto-Deleting Expired Tasks

A task expires after its end time. If you have too many relay tasks, you may fail to create new ones. To avoid this, you can enable auto-delete for the system to delete expired tasks automatically at the specified time. Deleted tasks cannot be recovered.

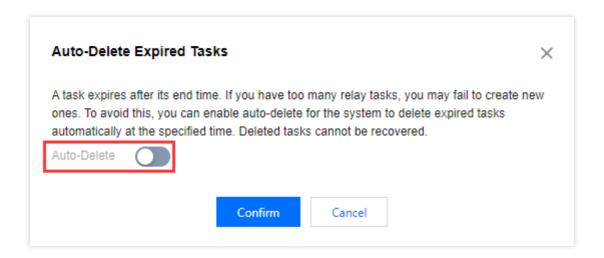
1. Go to Relay, and click **Set** in the **Expired** area.





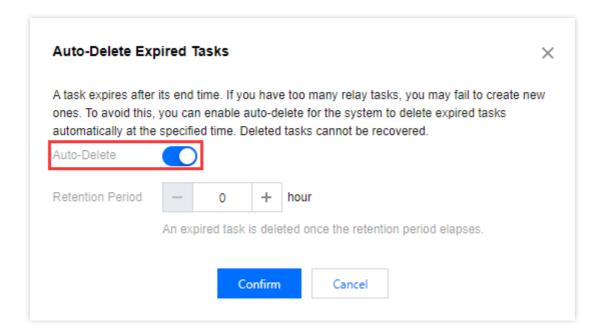
2. Click

to enable auto-delete.



3. Specify a period (1-24 hours) to retain expired tasks before they are deleted.







Laboratory ROI Intelligent Recognition

Last updated: 2024-07-09 17:32:02

ROI (region of interest) recognition can identify the positions of important visual elements in a video in real time, such as faces, game characters, or steaming hosts, and send this information along with the video to the playback device. Using the ROI information, the player can do things like blur the background in a scene and prevent on-screen comments from covering important elements of the video. This document explains how to create, modify, and delete ROI recognition templates in the console.

Notes

A template takes effect about 5-10 minutes after it is created.

To use the ROI recognition feature, you need to add the parameter roirecognition = ROI configuration name to your streaming URL. This lets the player access and process ROI data from the live stream, which can enable features like background blur and preventing on-screen comments from covering important parts of the video. For detailed instructions, see ROI Intelligent Recognition Feature Practice. Example streaming URL:

rtmp://domain/AppName/StreamName?roirecognition=ROI Configuration Name

The ROI recognition feature is a **paid value-added service**. Using this feature incurs live transcoding fees and Media Processing Service (MPS) intelligent content recognition fees. For specific billing rules, refer to the billing documentation.

Prerequisites

You have activated Tencent Cloud Streaming Services.

Creating an ROI Configuration Template

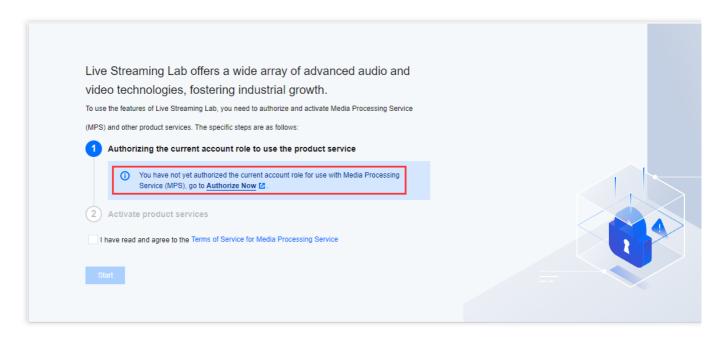
1. Log in to the CSS Console and select **Laboratory** > ROI Intelligent Recognition.

Note:

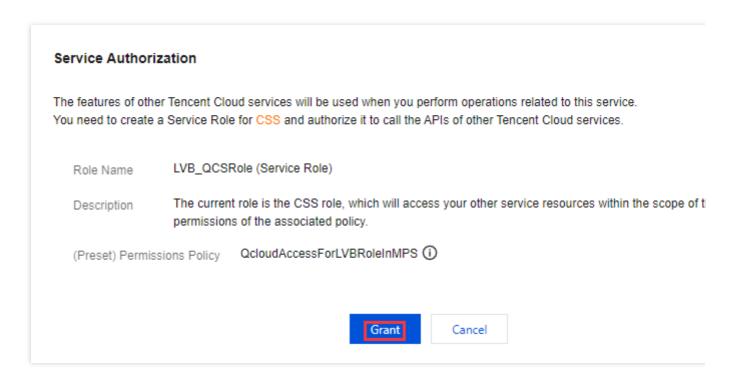
To use the ROI intelligent recognition feature in the Live Streaming Lab, **the first time** you create a template, you will also need to create a service role and authorize the current account to use MPS. Click **Authorize Now** to enter the CAM for authorization.

2. Click **Authorize Now** to enter the CAM role management page.



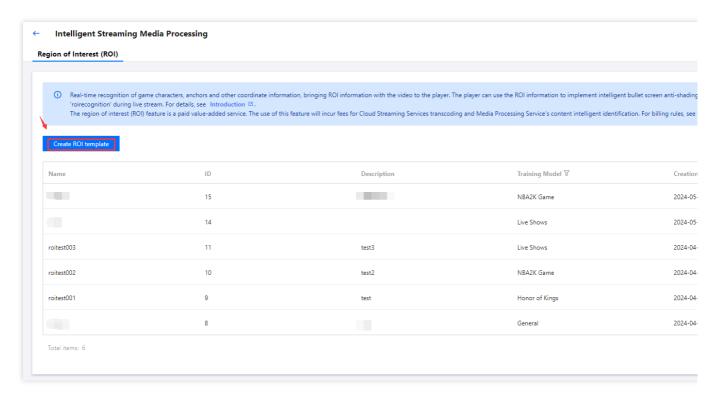


3. On the role management page, click **Grant** to complete the identity verification and finalize the Media Processing Service authorization, enabling normal use of the Media Processing Service.



- 4. After successful authorization, check the service agreement and click **Start**, and the system will automatically activate the MPS product and open the Intelligent Streaming Media Processing management page.
- 5. Enter the Intelligent Streaming Media Processing management page, and click Create ROI template.





6. Enter the ROI configuration page and proceed with the following configuration:



Name *	roi	Enter 1-10 characters	
	Suppo	Supports only combinations of letters and numbers.	
Description			
		00 characters; supports Chinese characters, letters, digits,	
	space	s, and	
Training Model	General Honor of Kings NBA2K Game		
	○ Liv	ve Shows	
	The sy videos differe improv	ve Shows ystem recognizes coordinates of faces and game characters in s. The accuracy of video classification is greatly influenced by ent training models. Choosing the right scene's training model can we the accuracy of ROI Intelligent Identification. If you have other nition requirements, please Submit a Ticket.	
	The sy videos differe improv	ystem recognizes coordinates of faces and game characters in s. The accuracy of video classification is greatly influenced by ent training models. Choosing the right scene's training model can be the accuracy of ROI Intelligent Identification. If you have other	
	The sy videos differe improv	ystem recognizes coordinates of faces and game characters in s. The accuracy of video classification is greatly influenced by ent training models. Choosing the right scene's training model can be the accuracy of ROI Intelligent Identification. If you have other	
	The sy videos differe improv	ystem recognizes coordinates of faces and game characters in s. The accuracy of video classification is greatly influenced by ent training models. Choosing the right scene's training model can be the accuracy of ROI Intelligent Identification. If you have other	

Configuration Item	Description
Name	The default prefix "roi" is added to the template name. The template name can be 1-10 characters long (only combinations of letters and digits are supported).
Description	Supports only Chinese, English, digits, spaces, underscores (_), hyphens (-) and can be up to 100 characters long.
Training Model	Default is General . Supported training models include: Honor of Kings, NBA2K Game, and



Live Shows.

General: Capable of recognizing common areas of human eye focus in different environments.

Honor of Kings: Capable of recognizing hero roles and zones in different environments within the Honor of Kings game.

NBA2K Game: Capable of recognizing players, basketballs, scoreboards, and other zones in different environments within the NBA2K game.

Live Shows: Capable of recognizing the host's face.

Note:

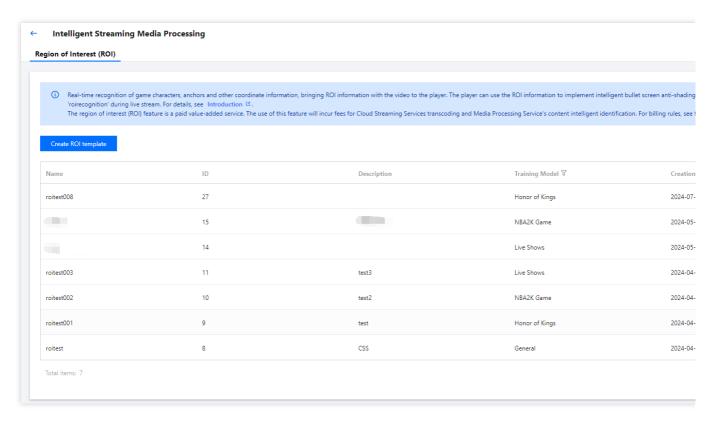
The system can identify elements such as faces and game characters within the video. Selecting an appropriate training model for the scenario can greatly improve the accuracy of ROI intelligent recognition. If the models provided do not meet the needs of your specific scenario, you can submit a ticket to request a model.

7. After filling in the configuration items, click **Confirm** to complete.

Modifying a Template

- 1. Log in to the CSS Console and select **Laboratory** > ROI Intelligent Recognition.
- 2. Select your successfully created ROI configuration template, and click **Edit** on the right to modify the template information.



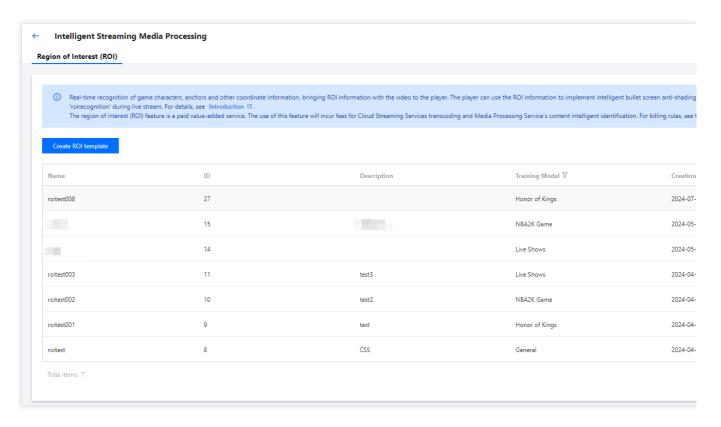


3. Click Confirm to complete.

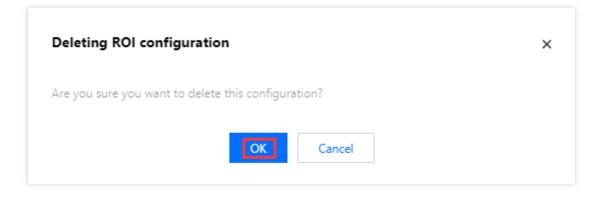
Deleting a Template

- 1. Log in to the CSS Console and select **Laboratory** > ROI Intelligent Recognition.
- 2. Select your successfully created ROI configuration template, and click **Delete** to the right.





3. Click **OK** to confirm that you want to delete the template.





Billing Usage Statistics

Last updated: 2024-06-25 15:36:07

Billing usage statistics

The Tencent Cloud console provides a billing usage statistics query feature for Live Video Broadcasting (LVB) and Live Event Broadcasting (LEB). If you want to know about the current upstream traffic/bandwidth, playback traffic/bandwidth, push channels, live transcoding, live recording, time shifting, live screencapture, enhancement, content moderation, relay task duration, third-party relay, real-time log, and other service usage, you can view the relevant data in **Statistics** > Billing Usage Statistics in the CSS console. You can view data related to CSS service usage in the last month.

Upstream Traffic/Bandwidth

Playback Traffic/Bandwidth

Push Channels

Live transcoding

Live recording

Time shifting

Live screencapture

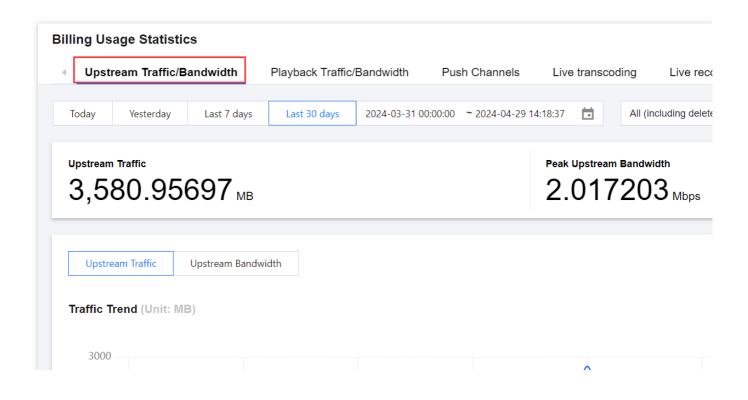
Enhancement

Content moderation

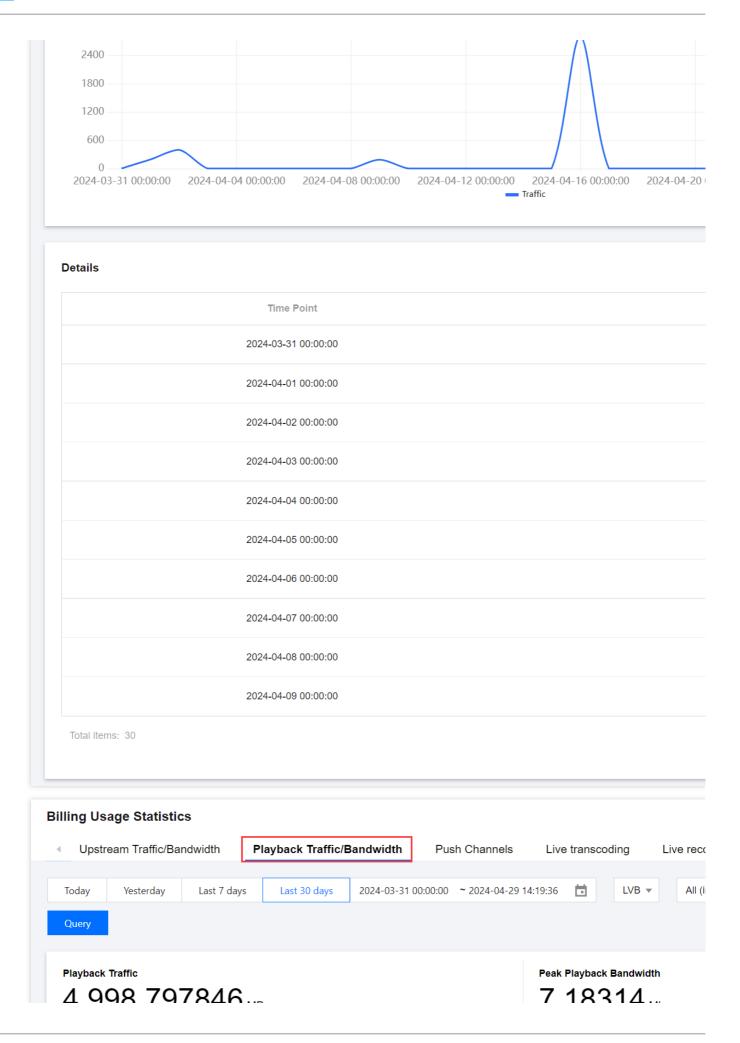
Relay task duration

Third-party relay

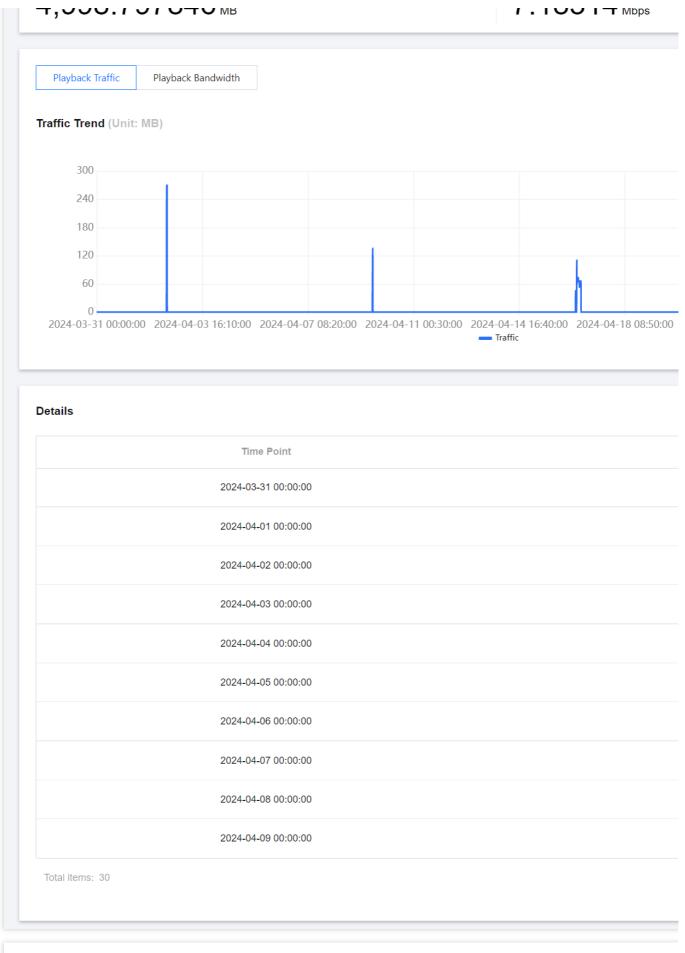
Real-time Log





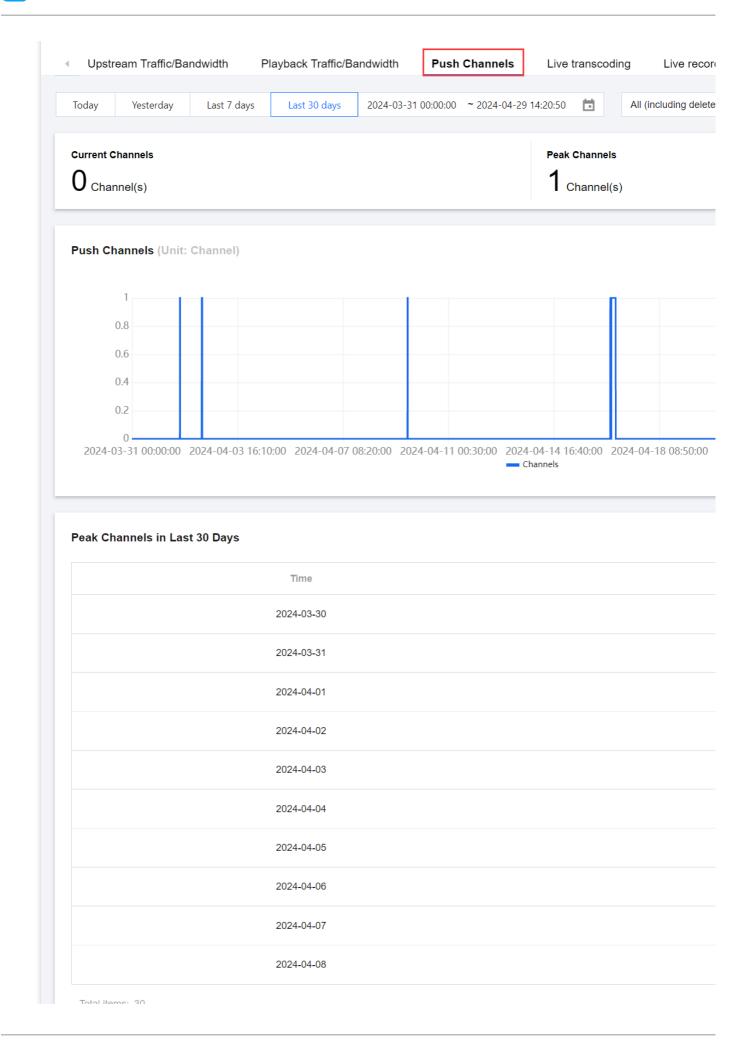






Billing Usage Statistics

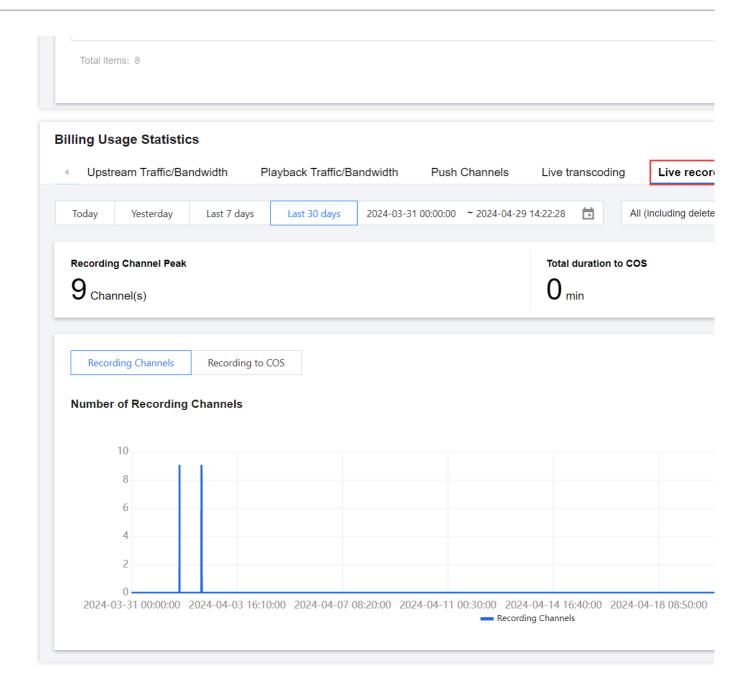




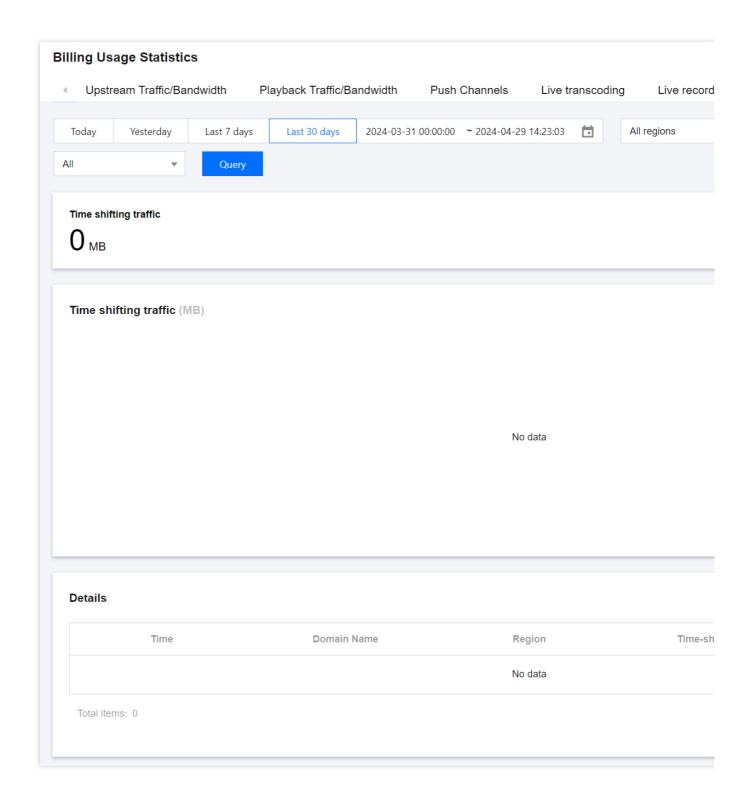


าบเลา แซากร. อบ **Billing Usage Statistics** Upstream Traffic/Bandwidth Playback Traffic/Bandwidth **Push Channels** Live transcoding Live recor Last 7 days Last 30 days 2024-03-31 00:00:00 ~ 2024-04-29 14:21:45 莒 All (including delete Today Yesterday **Total Transcoding Duration** 105 min Transcoding Minutes (2024-03-31 00:00:00 - 2024-04-29 14:21:45) 80 60 40 20 2024-03-31 01:00:00 2024-04-03 18:00:00 2024-04-07 11:00:00 2024-04-11 04:00:00 2024-04-14 21:00:00 2024-04-18 14:00:00 Transcoding Duration liveprocessor AAC 480P liveprocessor H264 720P liveprocessor H264 108 **Monthly Usage Transcoding Start** Transcoding End Transcoding StreamName Codec Regior Duration (min) Time Time 2024-04-09 14:37:00 2024-04-09 14:37:00 1 liveprocessor_AAC Chinese mai 2024-04-09 14:30:00 2024-04-09 14:41:00 12 liveprocessor_H264 Chinese ma 2024-04-09 14:19:00 2024-04-09 14:22:00 3 liveprocessor_H264 Chinese mai 2024-04-02 10:23:00 2024-04-02 10:54:00 31 liveprocessor_AAC Chinese mai 2024-04-02 10:23:00 2024-04-02 10:54:00 31 liveprocessor_H264 Chinese mai 2024-04-01 16:12:00 2024-04-01 16:14:00 3 liveprocessor_AAC Chinese mai 2024-04-01 16:10:00 2024-04-01 16:21:00 Chinese mai 12 liveprocessor H264 2024-04-01 16:10:00 2024-04-01 16:21:00 12 liveprocessor_AAC Chinese mai

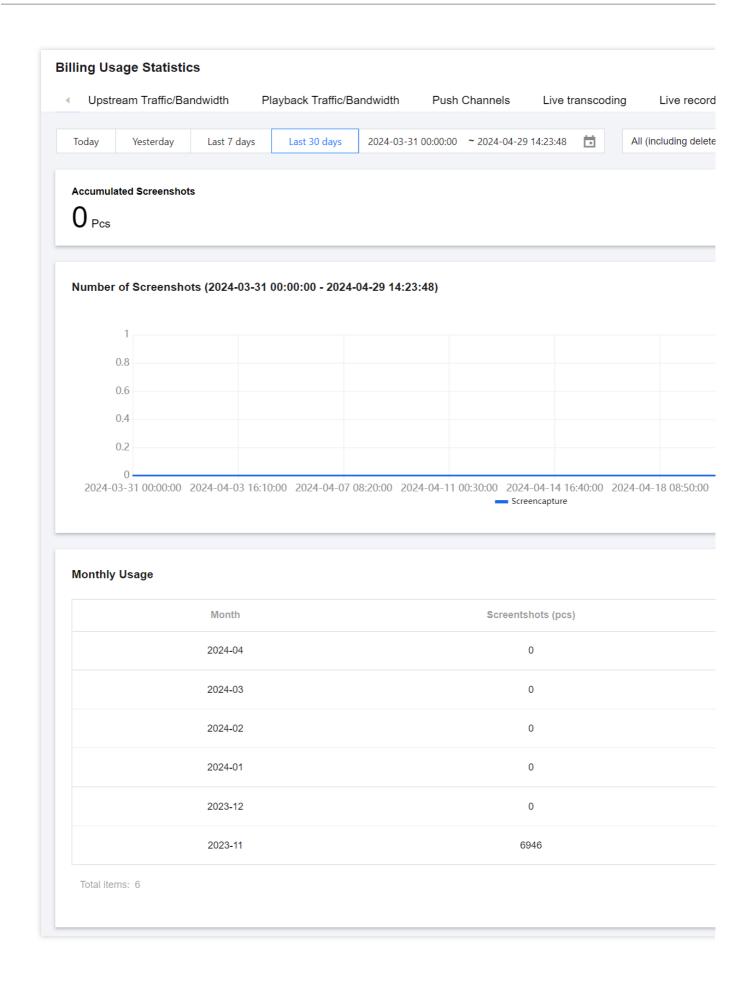




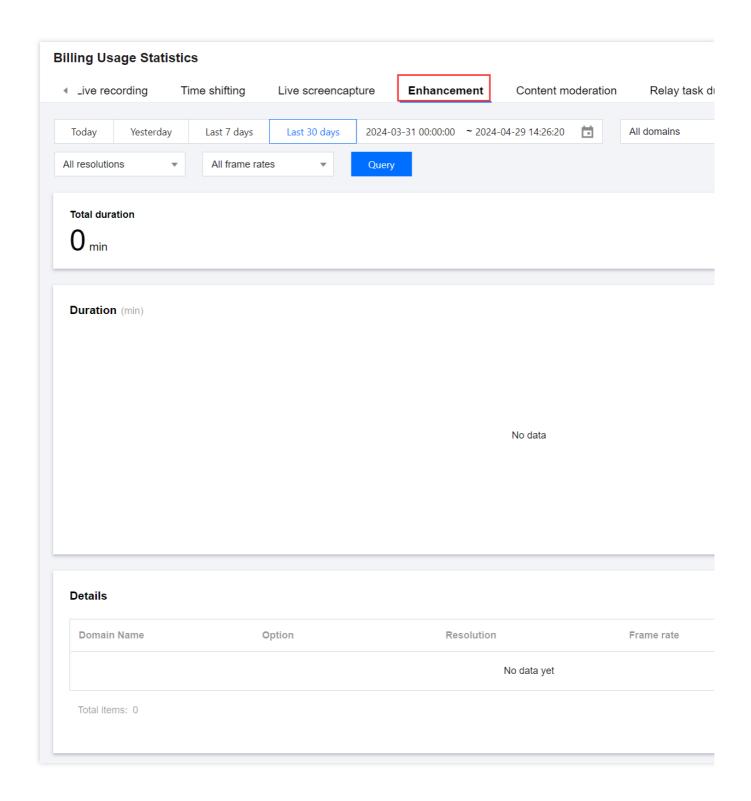




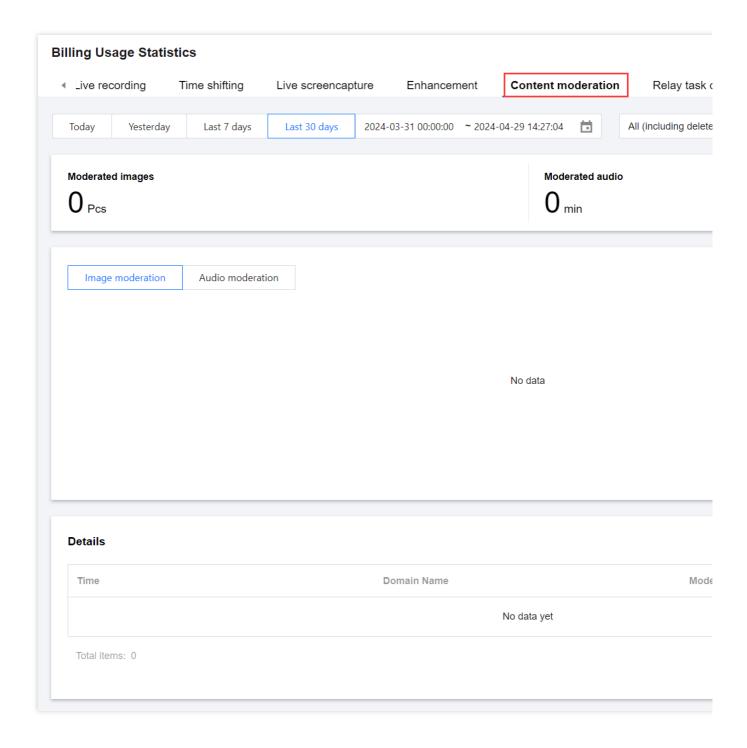




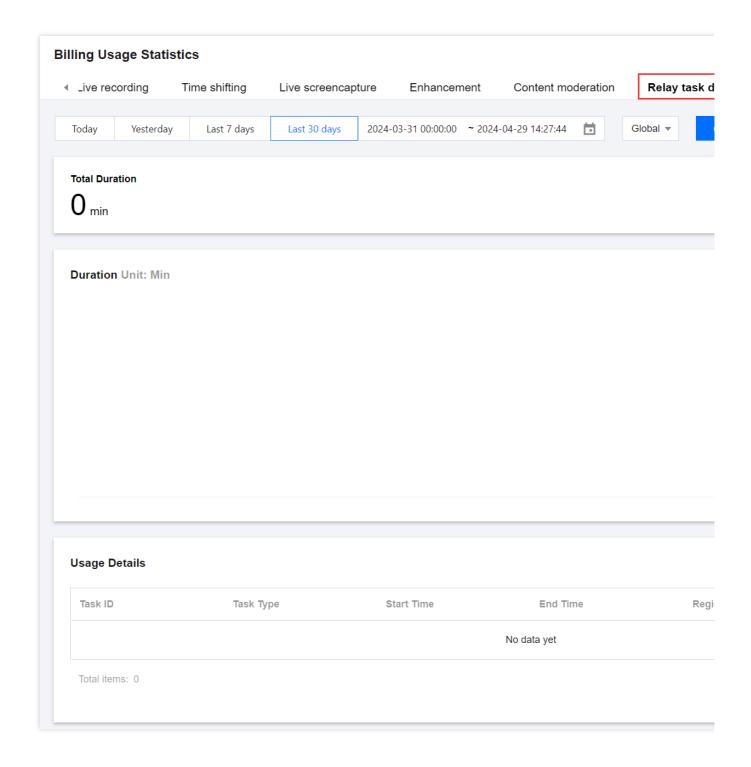




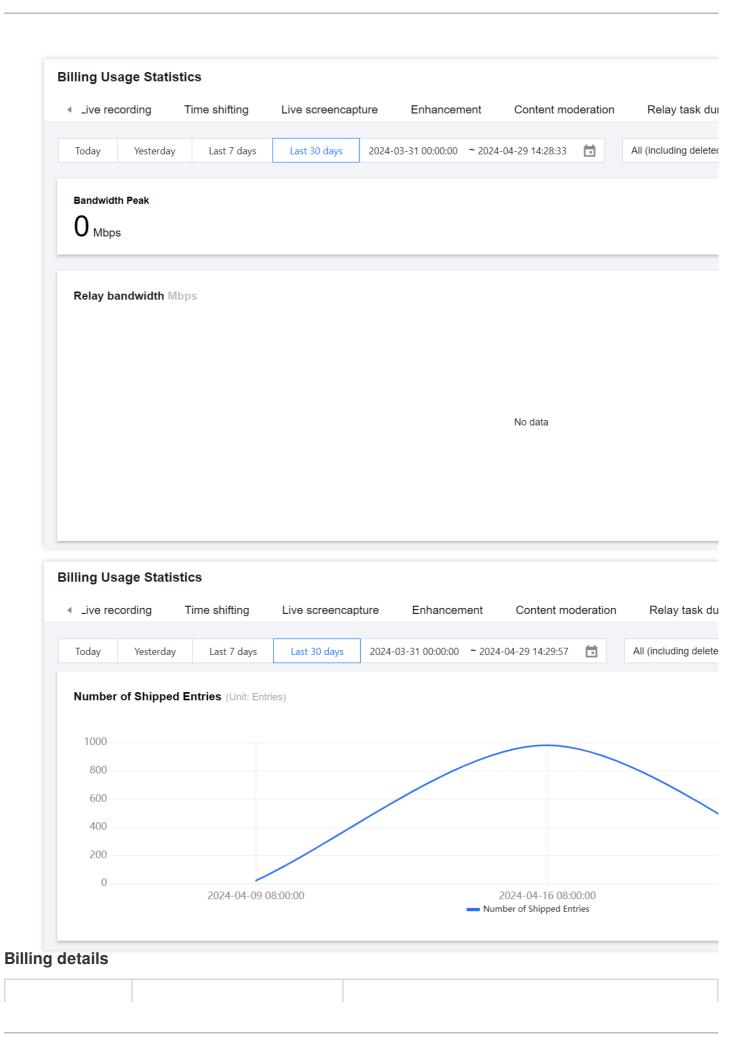














Billable Service	Statistical Item	Description
	Upstream traffic	Upstream traffic consumed for push during the selected time range
Upstream	Peak upstream bandwidth	Peak bandwidth used for push during the selected time range
traffic/bandwidth	Upstream traffic/bandwidth line chart	Upstream traffic/bandwidth usage on a 5-minute basis
	Details	Hourly upstream traffic/bandwidth consumption over the last 30 days
	Playback traffic	Downstream traffic consumed for playback during the selected time range
Playback	Peak playback bandwidth	Peak bandwidth used for playback during the selected time range
traffic/bandwidth	Playback traffic/bandwidth line chart	Downstream traffic/bandwidth usage on a 5-minute basis. You can choose to view the usage of LVB or LEB.
	Details	Hourly playback traffic/bandwidth consumption over the last 30 days
	Current channels	Current number of push channels
Duch channels	Peak channels	Maximum number of push channels
Push channels	Push channel line chart	Number of push channels on a 5-minute basis
	Peak channels in last 30 days	Highest number of channels per day in the last 30 days
	Total transcoding duration	Total transcoding duration during the selected time range
Live transcoding	Transcoding duration line chart	Transcoding durations on a 5-minute basis
	Monthly usage	Transcoding detail information of stream dimension in the last 30 days
Live recording	Recording channel peak	Highest number of concurrent recording channels during the selected time range
	Total duration to COS	The total duration of recording shipping to COS during the query period
	Recording channel peak/Total	Highest number of concurrent recording channels on a 5-



	duration to COS line chart	minute basis/Cumulative data on the duration of recording shipping to COS
	Time shifting traffic	Time shifting write volume during the query period
Time shifting	Time shifting traffic line chart	Cumulative data of time shifting write volume on a 5-minute basis
	Details	Time shifting write volume by domain name and time shifting day
	Accumulated screenshots	Total number of screenshots taken during the selected time range
Live screencapture	Screenshot number line chart	Number of screenshots on a 5-minute basis
	Monthly usage	Total number of screenshots each month in the last six months
	Total duration	Total enhancement duration during the query period
Enhancement	Duration line chart	Enhancement duration data on a 5-minute basis
	Details	Live streaming enhancement consumption data in the last 30 days
	Moderated images	Total number of images generated by image moderation during the query period
Content moderation	Moderated audio	Total duration generated by audio moderation during the query period
moderation	Image moderation/Audio moderation line chart	Cumulative data of image moderation/audio moderation on a 5-minute basis
	Details	Content moderation records in the last 30 days
	Total duration	Total duration of relay tasks during the selected time range
Relay task duration	Duration line chart	Cumulative task duration data on a 5-minute basis
	Usage details	Detailed information such as task start time and end time by task dimension
Third-party relay	Bandwidth peak	Peak bandwidth of the relay service during the query period
	Relay bandwidth line chart	Peak bandwidth of the relay service on a 5-minute basis



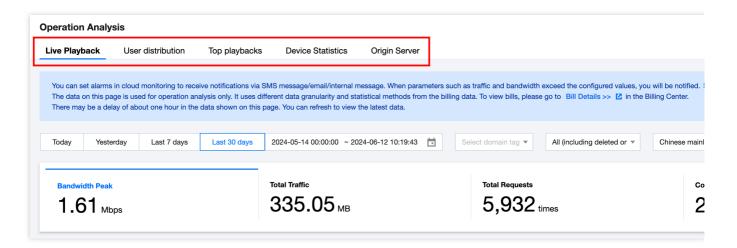
Real-time log	Number of shipped entries	Total number of shipped entries for push logs/playback logs during the query period



Monitoring Operation Analysis

Last updated: 2024-06-19 15:09:47

The CSS console provides the **Operation Analysis** page where you can view data related to **Live Playback**, **User distribution**, **Top playbacks**, **Device Statistics**, and **Origin Server**.



Note:

For the Live Playback and User distribution tabs, data is based on the user's location IP.

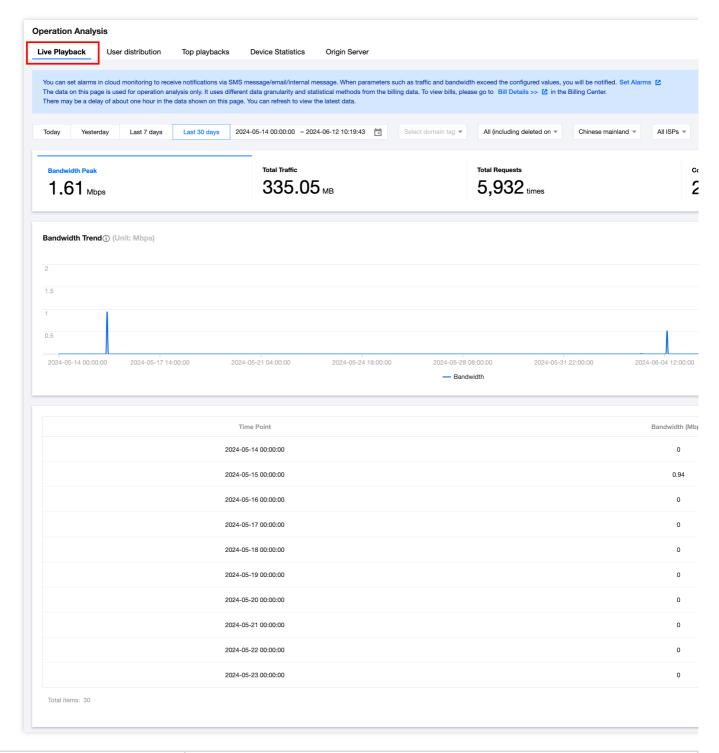
The Origin Server tab does not support querying data before February 18, 2022.

Data for outside the Chinese mainland is aggregated instead of ISP-specific.

Live Playback

Under the **Live Playback** tab, you can view data on bandwidth peak, total traffic, total requests, and concurrent connection peak. It supports querying data at the domain name granularity and allows you to select regions and ISPs. You can query data for the last three months, and the maximum time span for each query is one month.





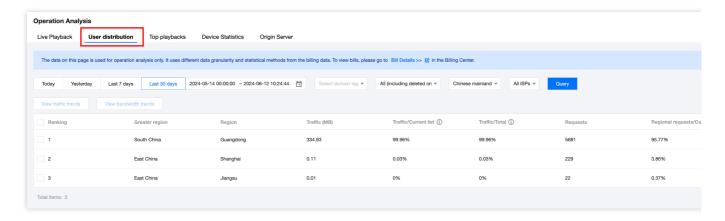
Statistical Item	Description
Bandwidth Peak	Peak bandwidth data generated by downstream playback of live streaming.
Total Traffic	Total traffic data generated by downstream playback of live streaming.
Total Requests	Total number of requests between the player and CSS platform during live streaming.
Concurrent Connection	Peak concurrent connection data between players and the CSS platform during



Peak live streaming.

User Distribution

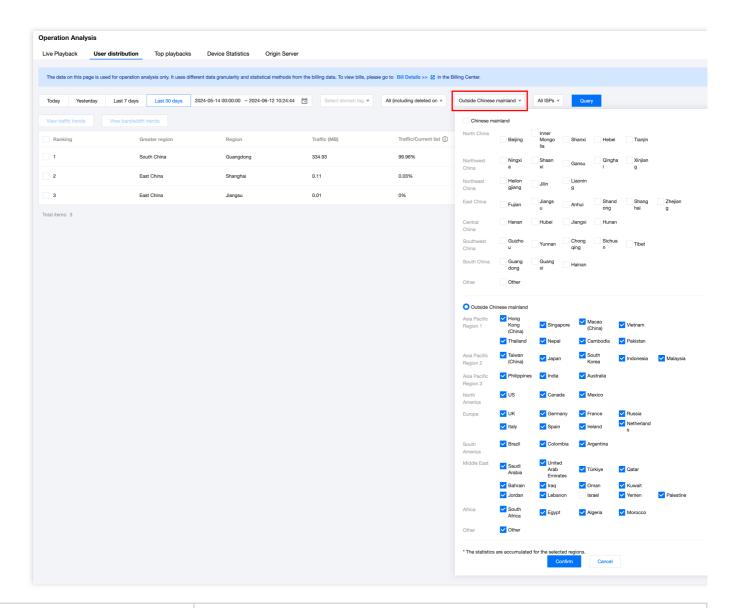
Under the **User distribution** tab, you can view the geographic location, traffic, and request data of live streaming users. It supports querying data at the domain name granularity and allows you to select regions and ISPs. You can query data for the last three months, and the maximum time span for each query is one month. The data is classified by **Greater region** and **Region** and sorted by the ratio of traffic in this region to the total traffic of all regions in the list.



When querying data in the Chinese mainland, the **Greater region** includes North China, Northwest China, Northeast China, East China, Central China, Southwest China, South China, and Other. The **Region** are specific province under each **Greater region**.

When querying data outside of the Chinese mainland, the **Greater region** includes Asia Pacific Region 1, Asia Pacific Region 2, Asia Pacific Region 3, North America, Europe, South America, Middle East, Africa, and Other. The **Region** is specific country or region under each **Greater region**.



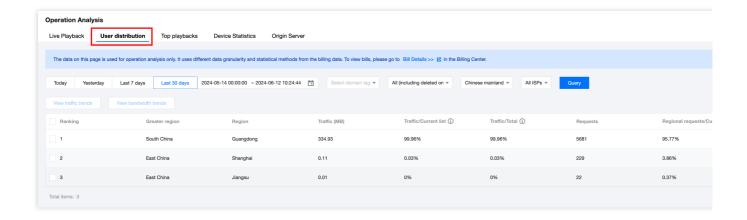


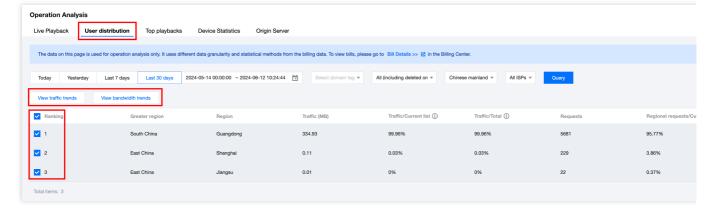
Statistical Item	Description
Traffic (MB)	Total traffic of each region.
Traffic/Current list	Ratio of traffic in this region to the total traffic of all regions in the list.
Traffic/Total	Ratio of traffic in this region to all other regions within or outside Chinese mainland. For example, when the user query data within Chinese mainland, this statistical item indicates the ratio of traffic in this region to the total traffic of the Chinese mainland.
Requests	Total number of requests for each region.
Regional requests/Current list	Ratio of requests in this region to the total requests of all regions in the list.
Regional requests/Total	Ratio of requests in this region to all other regions within or outside the Chinese mainland. For example, when the user query data within Chinese mainland, this



statistical item indicates the ratio of requests in this region to the total requests of the Chinese mainland.

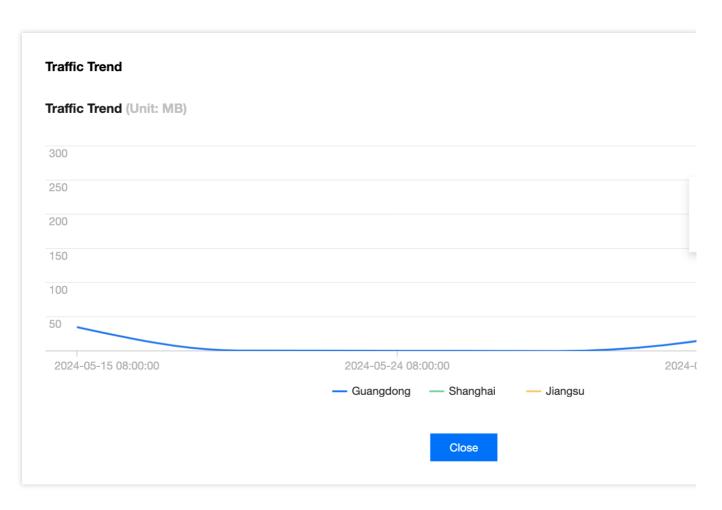
To view the traffic and bandwidth trends for one or more regions, you can select the desired regions and click on **Traffic Trend** and **Bandwidth Trend**.



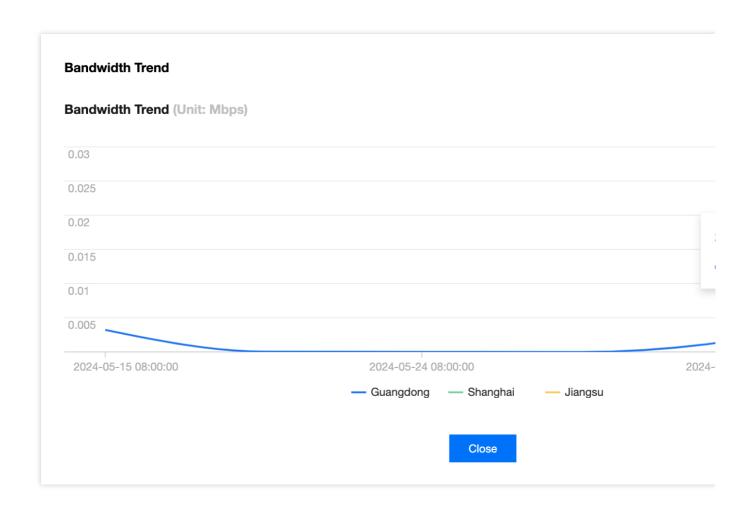


Taking the example of selecting multiple regions simultaneously, the displayed traffic trend chart is as follows:





Taking the example of selecting multiple regions simultaneously, the displayed bandwidth trend chart is as follows:



Top Playbacks

The Playback Ranking feature offers display and query capabilities for **TOP 100 streams**, **TOP 100 client IPs**, **TOP 100 URL**, and **TOP 100 Referer**, assisting you in understanding the popularity of live streams and the distribution of viewers. Additionally, this feature supports the query of various data indicators such as ranking, traffic, traffic ratio, frequency, and frequency ratio. It also supports data queries at the domain level (playback) and allows for the selection of regions and the query of data from the most recent three months.

Key Features

Top 100 streams: This feature allows you to query and view the top 100 live streams with the highest viewership, including the ranking, traffic, and traffic proportion.

Top 100 client IPs: This feature allows you to query and view the top 100 client IP addresses that watch the most live broadcasts, helping you understand the audience distribution.

TOP 100 URL: You can inquire and display the top 100 URLs (request paths) ranked by frequency, including information such as ranking, domain, URL, frequency, and frequency ratio. This facilitates your understanding of the audience's access to different URLs.

TOP 100 Referer: You can inquire and display the top 100 Referers (request sources) ranked by frequency, including information such as ranking, domain, Referer, and frequency ratio. This facilitates your understanding of the

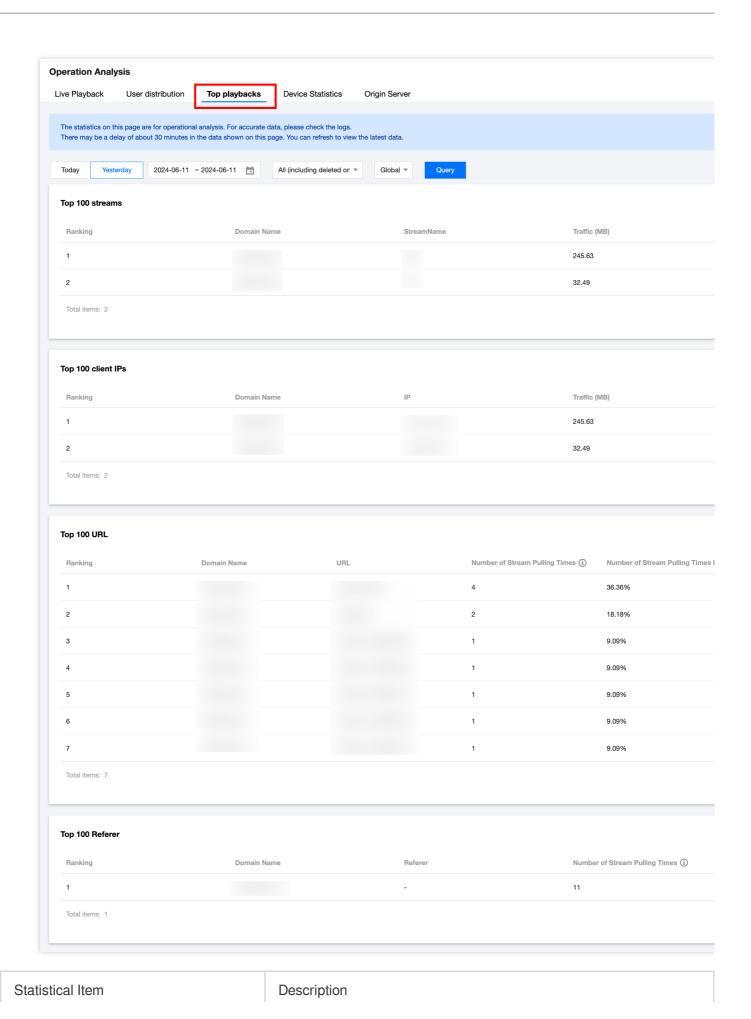


audience's access situation from different Referers.

Note:

The top-ranking data of streams, IP, URL, and Referer on the current page is only used for operation analysis, and the specific result of the data analysis is subject to the actual log data.





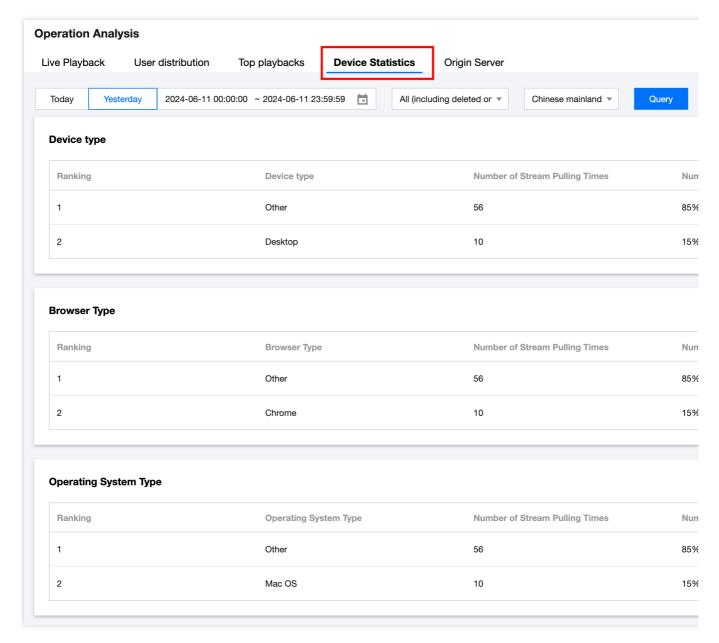


Top 100 streams: Traffic/Current list TOP 100 Streams - Proportional Traffic Distribution	Ratio of the traffic of this stream to the total traffic of all streams in the list.
Top 100 client IPs: Traffic/Current list	Ratio of the traffic of this IP address to the total traffic of all IP addresses in the list.
Top 100 URL - Frequency Ratio	Ratio of the traffic of this stream to the total traffic of all streams in the list.
Top 100 Referer - Frequency Ratio	Ratio of the traffic of this stream to the total traffic of all streams in the list.

Device Statistics

The Device Statistics feature provides queries and displays for device type, browser type, and operating system type. It supports data queries (playback) at the domain name granularity level and allows the selection of regions. It supports queries for data from the past 3 months.



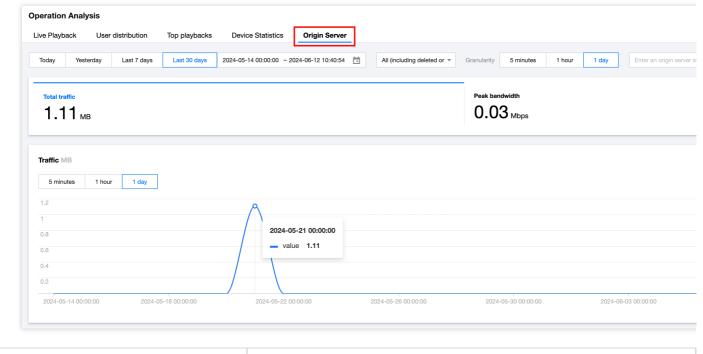


Statistics Item	Description	
Device Type	Device types include: Tablet, Mobile, Desktop, TV, and Other.	
Browser Type	Browser types include: Empty, Chrome, Safari, Opera, QQBrowser, LBBrowser, MaxthonBrowser, SouGouBrowser, BIDUBrowser, TaoBrowser, UBrowser, IE, Microsoft Edge, Bot, and Other.	
Operating System Type	Operating system types include: Empty, Android, IOS, Mac OS, Windows, Linux, Chromium OS, NetBSD, Bot, and Other.	

Origin Server



The **Origin Server** tab provides the traffic and peak bandwidth from origin server. It supports querying data at the domain name granularity and allows you to select regions and ISPs. You can query data for the last three months, and the maximum time span for each query is one month.



Statistical Item	Description
Total traffic	Traffic data from the origin server.
Peak bandwidth	Peak bandwidth data from the origin server.



Stream Data Query

Last updated: 2022-05-20 10:42:04

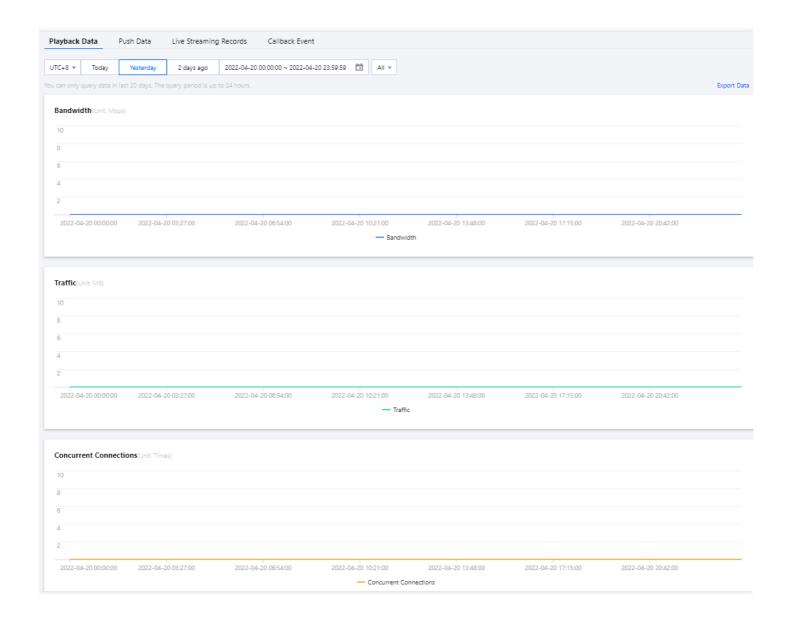
Log in to the CSS console, select Stream Data Query on the left sidebar, and enter a stream name to view its playback data, push data, live streaming records, and callback events.

Enter StreamName (stream ID) to query Playback Data Push Data Live Streaming Records Callback Event UTC+8 ▼ Today Yesterday 2 days ago 2022-04-18 00:00:00 ~ 2022-04-18 16:32:44 You can only query data in last 20 days. The query period is up to 24 hours.

Playback data

Under the **Playback Data** tab, you can view data on bandwidth, traffic, and concurrent connections from the last 20 days. The maximum query period is 24 hours.



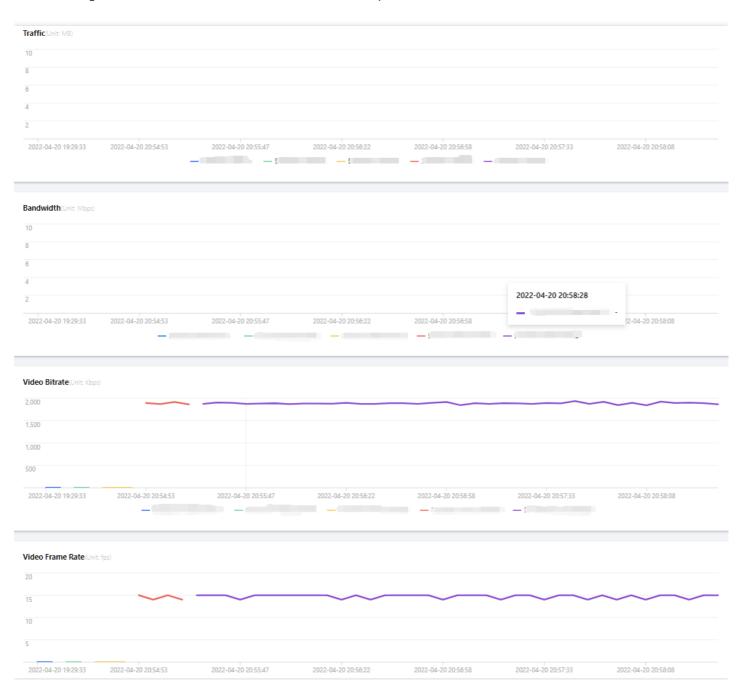


Push Data

Under the **Push Data** tab, you can view the upstream frame rate and bitrate data of a stream from the last three days. The maximum query period is three hours.



After entering a stream name, select **Push Data** to view the push data.

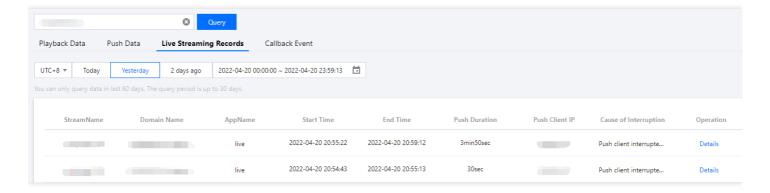


Live streaming records

Under the **Live Streaming Records** tab, you can view live streaming information including the name of a stream, its push domain name, live streaming application name, start time, end time, push duration, and push client ID from the

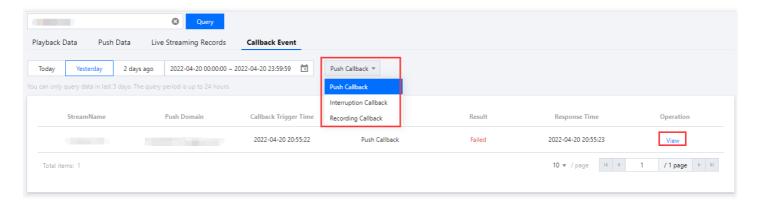


last 60 days. You can also click **Details** to view push data. The maximum query period is 30 days.



Callback event

Under the **Callback Event** tab, you can view the stream name, push domain, callback trigger time, response time, and the result of a push, interruption, or recording callback in the last five days. You can also click **View** to view the content of a callback. The maximum query period is 24 hours.





Errors

Last updated: 2024-05-17 14:47:15

Tencent Cloud Streaming Services (CSS) supports the errors feature, allowing you to quickly check errors that occur during the live streaming process. Moreover, you can understand the status of these streams by viewing the primary and backup stream events.

Prerequisites

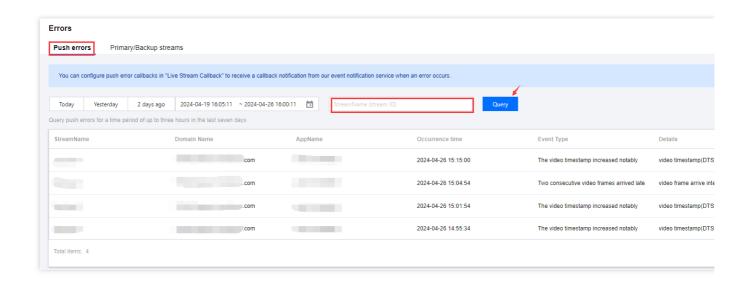
You have logged in to the CSS Console.

Note

You can configure the push errors event callback in the Live Callback settings. When an event occurs within the live streaming service, the message will be notified through a unified callback of the event message.

Push Errors Query

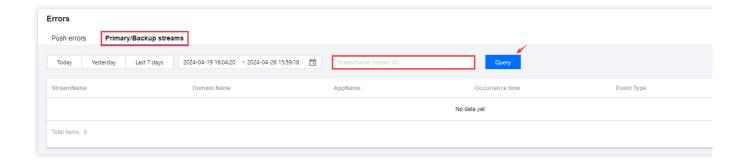
- 1. Select **Monitoring** > Errors on the left sidebar.
- 2. On the errors page, querying by stream ID is supported. You can query the push errors in the last 7 days, and the data within the query period is less than 3 hours.





Primary/Backup Streams Query

- 1. Select **Monitoring** > Errors from the left sidebar to enter the Primary/Backup Streams page.
- 2. On the Primary/Backup Streams page, querying by stream ID is supported. You can query the primary/backup streams in the past 7 days, and the data within the query period is less than 3 hours.



Error Types

Below is a list of errors that may occur during live streaming.

Number	Error Type		
1	The video timestamp moved backwards		
2	The audio timestamp moved backwards		
3	The video timestamp increased notably		
4	The audio timestamp increased notably		
5	Chunk size too big		
6	Two consecutive video frames arrived late		
7	Two consecutive audio frames arrived late		
8	The video codec changed		
9	The audio codec changed		



10	No codec header before a video frame arrived
11	No codec header before an audio frame arrived



Stream Interruption Records

Last updated: 2024-06-19 17:01:34

You can view records of live push interruptions and their causes in the CSS console.

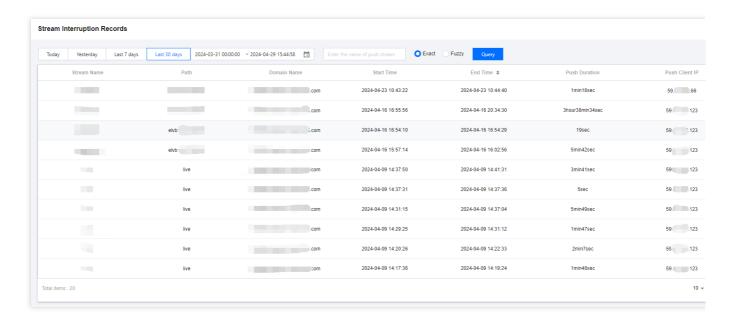
Prerequisites

You have logged in to the CSS console.

There is a live stream whose push was interrupted under your account.

Directions

- 1. In the console, select **Monitoring** > Stream Interruption Records on the left sidebar.
- 2. Our platform supports querying stream interruption records for the past 30 days through the use of stream names, offering both exact and fuzzy search capabilities. Users can access detailed information including the stream name, path, domain name, start time, end time, push duration, push client IP, and cause of interruption.



On the **Stream Interruption Records** page:

Path is the value of AppName in the push URL.

Stream Name is the value of StreamName in the push URL.



Causes of Stream Interruption

The table below lists the possible causes of stream interruption and their error codes:

errcode	sub_errcode	errmsg
0	0	Unknown reason.
1	0	The push client stopped the stream.
2	0	The push client stopped the stream.
3	0	The push client stopped the stream.
4	0	The push client stopped the stream.
5	0	CSS system internal error.
6	0	RTMP content error.
7	0	Exceeded the maximum size allowed for a single RTMP frame.
8	0	The system stopped the stream because no data was generated for a long time.
9	0	CSS system internal error.
10	0	The proxy layer received an interruption command.
11	0	CSS system internal error.
12	0	Network error for the push client.
13	0	Network error for the push client.
14	0	Network error for the push client.
15	0	Network error for the push client.
16	0	Network error for the push client.
17	0	Network error for the push client.
18	100	CSS system internal error.
18	101	CSS system internal error.
18	102	CSS system internal error.
18	103	CSS system internal error.



18	104	CSS system internal error.
18	200	Failed to get the user information for the push URL.
18	201	Your CSS services have been suspended.
18	202	Your CSS services have been suspended due to overdue payments. Please top up your account balance.
18	203	Your CSS services have been suspended.
18	300	Push using an IP address is not allowed.
18	301	Unable to identify the push domain name.
18	302	Invalid push domain name.
18	303	The push domain name is disabled.
18	304	The push application is disabled.
18	305	The stream is disabled.
18	306	Channel mode is used, but there isn't a push channel.
18	307	Channel mode is used, but the current push channel is disabled.
18	308	The push name contains unallowed characters.
18	309	The push application name contains unallowed characters.
18	400	The push client's IP address is on the blocklist.
18	401	The push client's IP address is not on the allowlist.
18	500	The expiration time parameter is missing from the push URL.
18	501	The push URL has expired.
18	502	The authentication parameter is missing from the push URL.
18	503	Authentication failed.
18	600	Reached the maximum number of streams that can be pushed.
18	601	Reached the maximum number of streams that can be pushed using this stream name.
18	602	The priority of this stream is lower than another stream.



19	0	Third-party authentication failed.
20	0	The system stopped the stream because no data was generated for a long time.
21	100	The stream was stopped at your request.
21	101	The stream was disabled at your request.
21	102	A new push URL replaced the current one.
21	103	A new push URL replaced the current one that has no data.
22	0	Unknown reason.
23	0	RTMP content error.
24	0	CSS system internal error.
25	0	Unknown reason.
26	0	Unknown reason.
27	0	Unknown reason.
28	0	Unknown reason.
29	0	Unknown reason.
30	0	Unknown reason.
31	0	Unknown reason.
32	0	Unknown reason.
33	0	RTMP AMF error.
34	0	Unknown reason.
35	0	The push client stopped the stream.
36	0	Unknown reason.
37	0	SRS stopped the stream because it was not played.
38	0	CSS system internal error.
39	0	Exceeded the maximum frame size allowed for push.



Log Service Real-Time Log Analysis

Last updated: 2024-07-22 16:36:54

Real-time log analysis enables quick retrieval, analysis, and storage of log data through the real-time collection and delivery of CSS access logs to Tencent Cloud Log Service (CLS). This enables you to mine log data for data-driven operations and management, allowing for the rapid and accurate development of operational strategies.

Note:

Real-time log analysis now fully supports shipping logs to Cloud Log Service. This document will guide you on how to use the real-time log feature.

Notes

Log data is collected in real-time, with log search and reporting data stabilizing after three minutes.

Currently, reporting analysis is only available for playback logs. If you have other log management needs, visit Cloud Log Service.

After enabling the log delivery feature, ensure that your CLS service is in normal operation, as the suspension of CLS will prevent the delivery of logs.

The bandwidth or traffic data recorded in logs is the application layer (HTTP protocol) return data. Due to mechanisms like TCP header consumption and failed retransmissions, it is smaller than the bandwidth or traffic consumption calculated at the TCP layer.

Operation Instructions

Creating a log topic

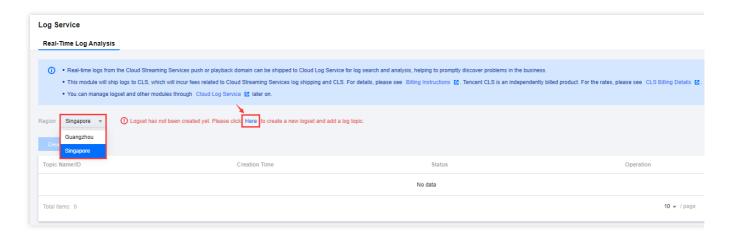
- 1. Go to the CSS console and select **Monitoring** > **Cloud Log Service** > Real-time log analysis to enter the real-time log analysis page.
- 2. If this is your first time using this feature, you need to use your CSS service role to grant authorization. After authorization, you need to agree to the service agreement and click **Start**. The system will automatically activate the CLS product and open the real-time log analysis management page.
- 3. Choose a region and click the link on the page to create a new logset.

Note:

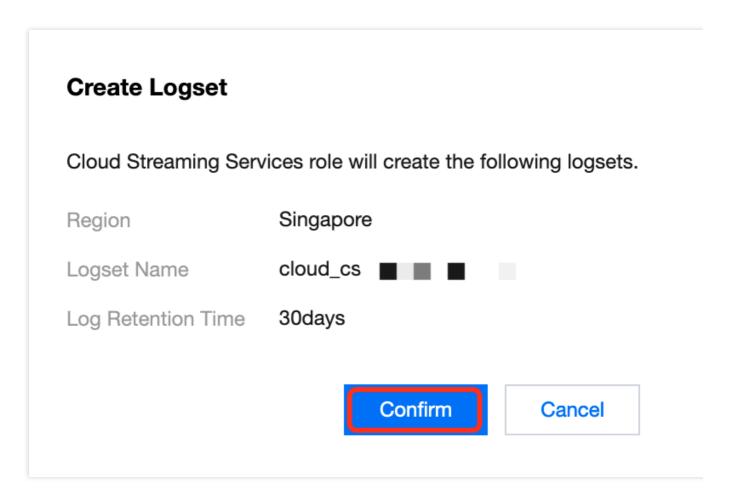
The region includes Guangzhou and Singapore. Log topics created under the logset in the Guangzhou region can only deliver logs within the Chinese mainland. In contrast, log topics created under the logset in the Singapore region can



only deliver logs globally, including to Hong Kong (China), Macao (China), and Taiwan (China).

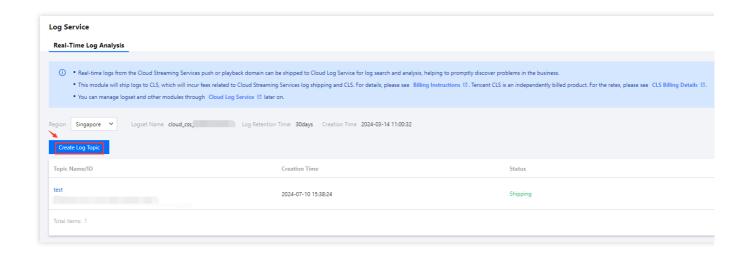


4. Click **Confirm** to create a new logset.

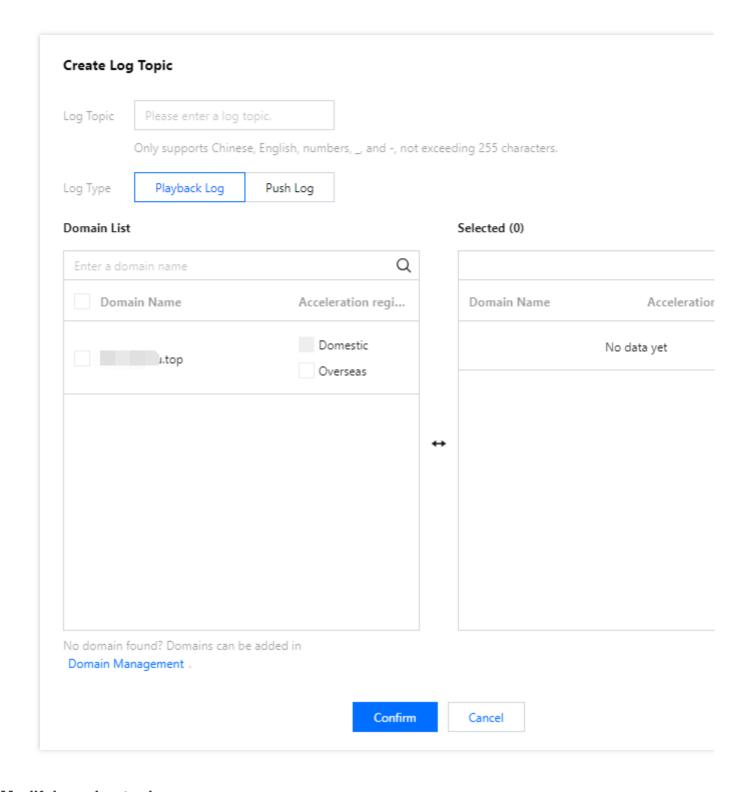


5. After successfully creating a logset, click **Create Log Topic** to enter the log topic creation page. The newly created log topic will by default be in the process of delivering logs to CLS.





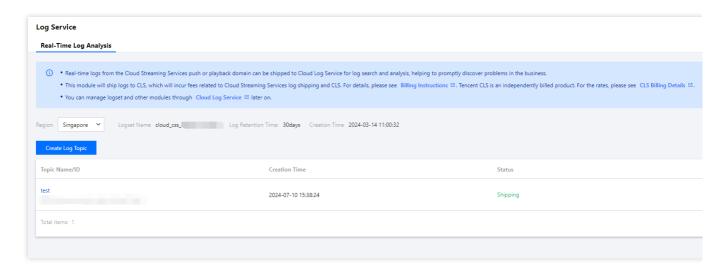




Modifying a log topic

1. Enter the log topic list in real-time log analysis and click **Manage** in the operation column of the log topic you need to modify.



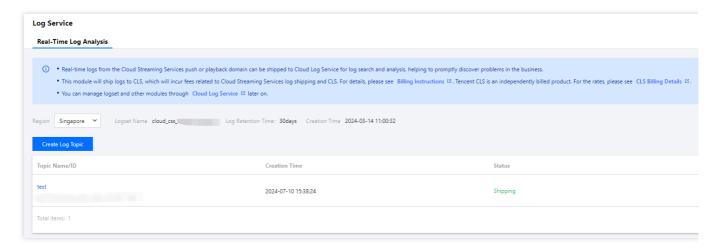


2. Enter the log topic editing page to modify the log topic information.

Analyzing a log report

Only log topics of the log type provide report analysis. There are four types of data on the page: **Basic Data Analysis**, **Resource Distribution Analysis**, **Exception Diagnosis Analysis**, and **User Analysis**.

1. Enter the log topic list in **Real-time Log Analysis** and click **Report** on the right side of the log topic you want to view.



2. Enter the log report page to view report data; you can separately view **Basic Data**, **Resource Distribution**, **Exception Diagnosis**, and **User Analysis**.

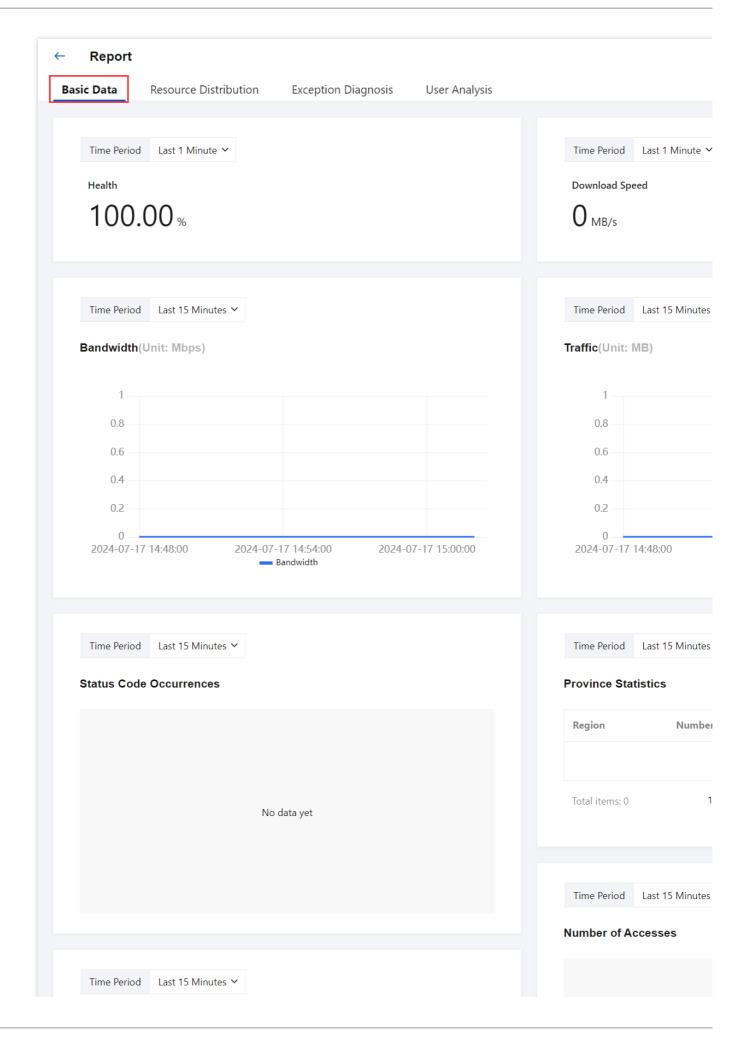
Basic Data

Resource Distribution

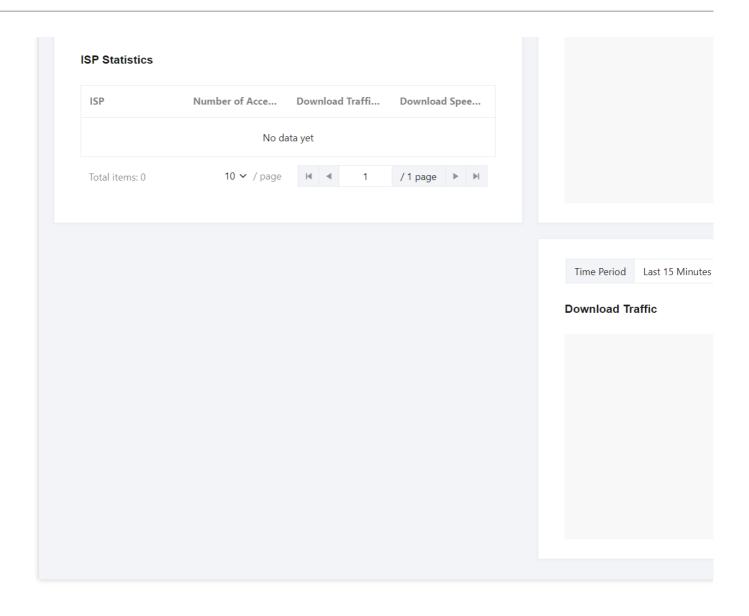
Exception Diagnosis

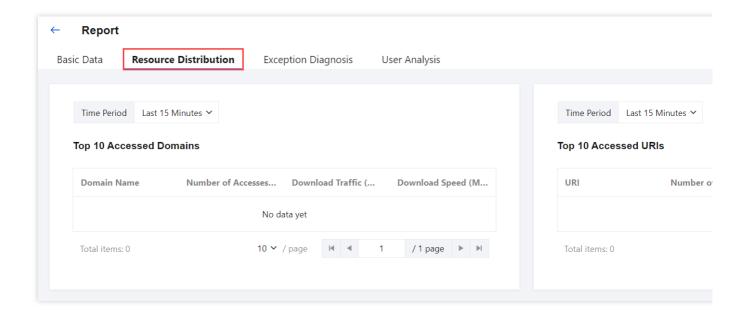
User Analysis



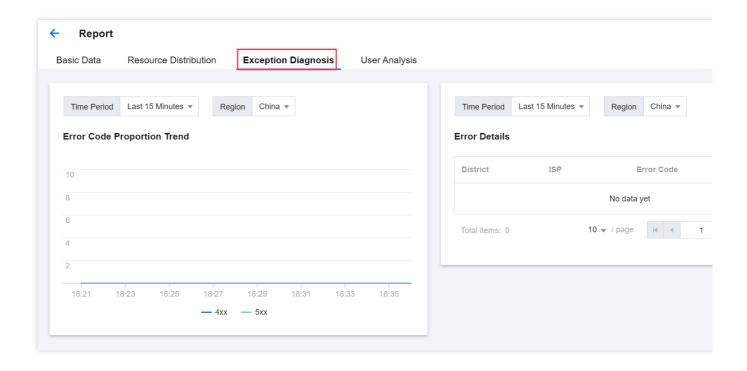




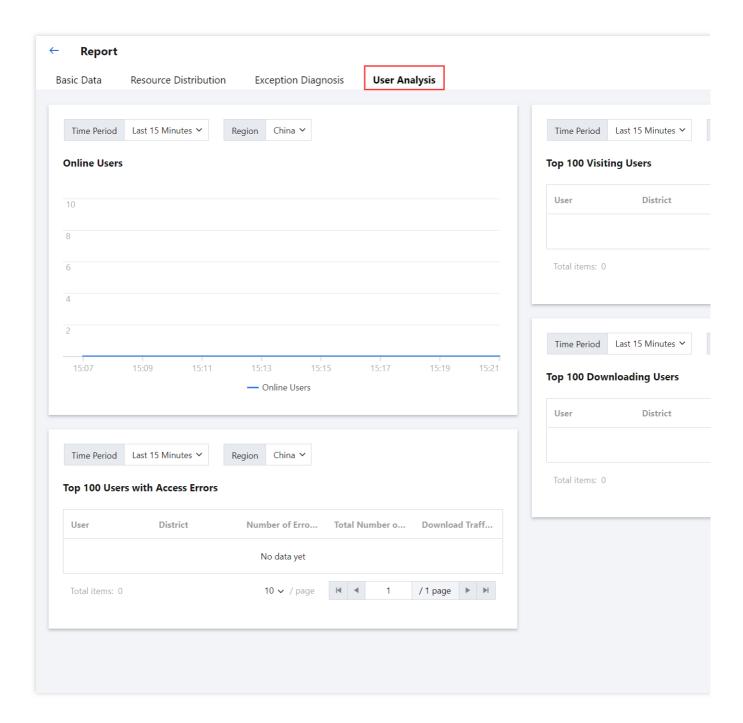










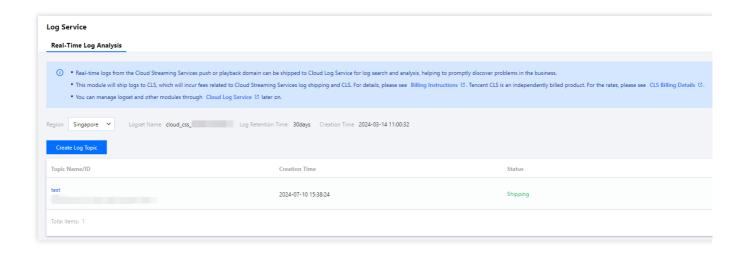


Log Search

Log search supports multiple types of retrieval and analysis methods, as well as various forms of chart analysis. For detailed information, see Log Search and Analysis.

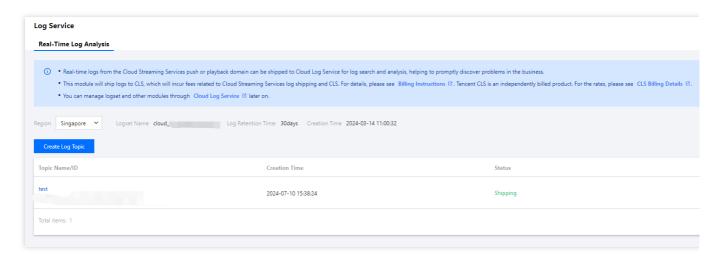
Log search is performed based on log topics. Select the log topic you need to search for and click Search to enter the log search page.





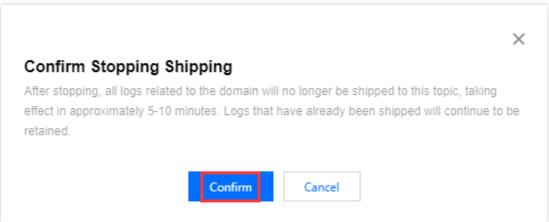
Stop shipping a log topic to CLS

1. Enter the log topic list in Real-time Log Analysis and click **Stop** on the right of the log topic you wish to stop shipping.



2. In the pop-up window, click Confirm to stop shipping. The status of the corresponding log topic will change to "stop shipping", and logs will no longer be shipped to CLS.





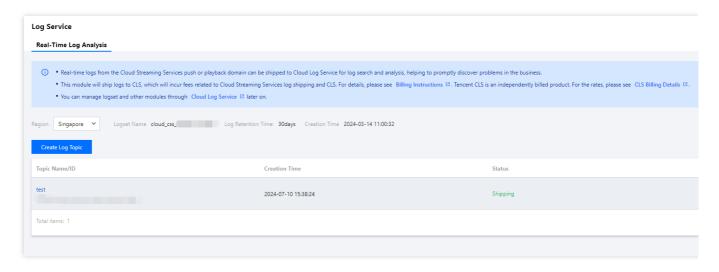
Deleting a log topic

Note:

Once a log topic is deleted, it cannot be recovered. Please proceed with caution.

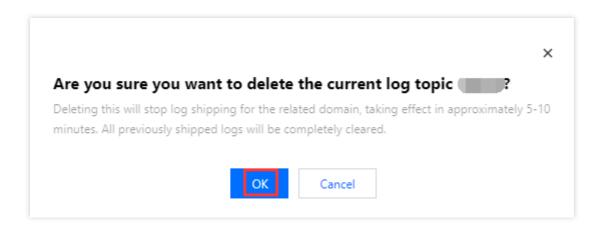
If you delete a log topic, you will stop pushing log data of the related domain, the corresponding log topic in CLS will also be deleted, and all shipped logs will be cleared. Meanwhile, you will no longer be able to use the report associated with that topic.

1. Enter the log topic list in **Real-time Log Analysis** and click **Delete** on the right side of the log topic you wish to remove.



2. In the pop-up window, confirm whether to delete the log topic and click **OK** to proceed.





Log Fields

Push logs

Order	Log Field	Description
1	time	Request time
2	client_ip	Client IP
3	host	Accessed domain name
4	url	URL
5	size	Stream push byte size
6	country_id	Country ID
7	prov	Province
8	isp	ISP
9	streamname	Stream ID
10	node_ip	Node IP
11	server_region	Server region
12	server_country	Server country

Playback logs

|--|



1	type	Playback type: Ivb represents Live Video Broadcasting and leb represents Live Event Broadcasting
2	time	Request time
3	client_ip	Client IP
4	host	Accessed domain name
5	url	URL
6	size	Byte size of this access request
7	country_id	Country ID
8	prov	Province
9	isp	ISP
10	http_code	HTTP status code
11	referer	Referer information
12	process_time	Processing duration (in milliseconds)
13	ua	User-Agent information
14	range	Range parameter
15	method	HTTP Method
16	streamname	Stream ID
17	hit	Cache hit/miss
18	node_ip	Node IP (This field may be empty for the IP addresses of certain CDN cluster nodes cannot be obtained.)
19	server_region	Server region
20	server_country	Server country
21	connect_fd	Connection port number
22	lost_rate	The packet loss rate, only valid for type=leb
23	rtt	Round-trip time, only valid for type=leb

Note:



The special status codes in the log are as follows:

- 0: Connection established.
- 4: Request timed out, authentication timed out, or response timed out.
- 5: Origin server disconnected or stream terminated.
- 6: Client disconnected.

Definitions

Logset

A logset classifies log topics and metric topics and can contain multiple log topics and metric topics. A logset itself does not store any log data, it only facilitates user management of topics. CSS logsets have the following basic attribute information:

Region: The region to which a logset belongs.

Note:

Guangzhou and Singapore regions are currently supported.

Logset Name: The name of a logset.

Retention period: The default retention period for data in the log set is 30 days.

Creation time: Logset creation time.

Log Topic

A log topic is a basic unit for log data collection, storage, retrieval, and analysis on the CLS platform. The vast amounts of logs collected are managed by log topic, including the configuration of the collection rules and storage time, log search and analysis, and log download, consumption, and delivery.

Log topic features include:

Collect logs to log topics.

Store and manage logs based on log topics.

Search and analyze logs by log topics.

Ship logs to other platforms based on log topics.

Download and consume logs from log topics.

Note:

The information above is excerpted from the CLS product documentation. For more details, see Log Topic and Logset and refer to the CLS documentation for accurate information.



Toolkit Web Push

Last updated: 2024-07-22 16:36:54

CSS allows you to push streams over the web. You can generate a push URL quickly and push streams from the camera or screen or push a local file to test CSS features.

Prerequisites

You have logged in to the CSS console.

You have added a push domain name.

Your device has a camera installed and your browser allows Flash to access the camera.

Single stream

- 1. Log in to the CSS console and select Web Push. Click on Single stream.
- 2. Select the capturing source, which can be camera, screen, or local file.

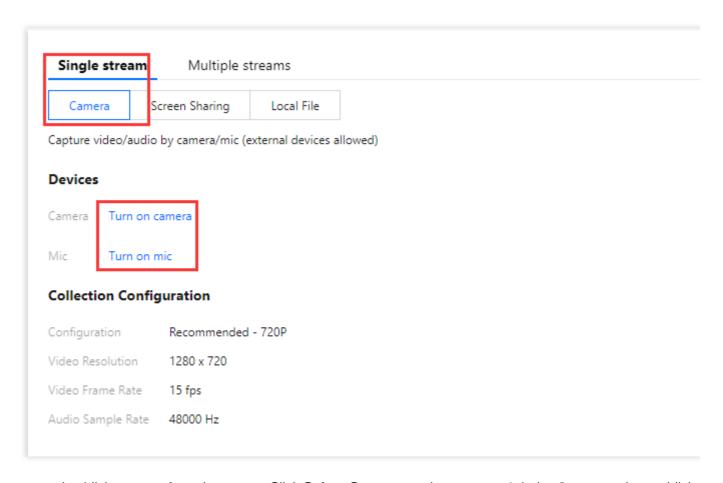
Camera

Screen Sharing

Local File

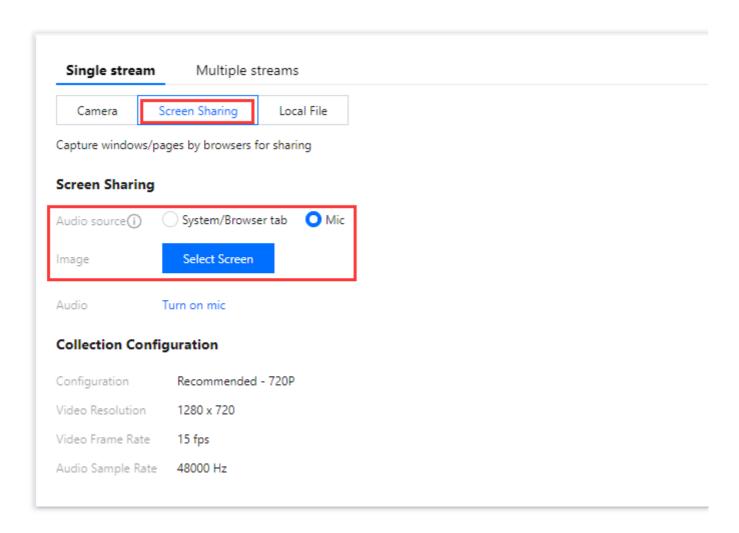
Capture and publish audio/video from the camera/mic (which can be a peripheral device). Click **Turn On** for **Camera/Mic**. You need to grant your browser access to the camera/mic if it is the first time you perform this action.





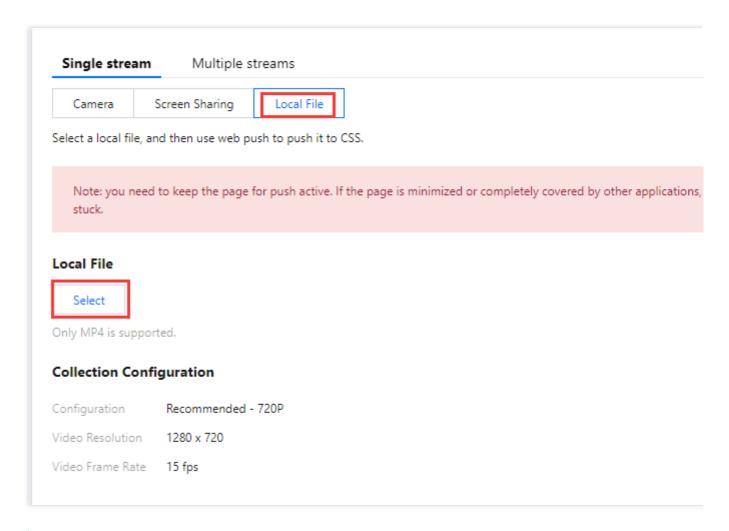
Capture and publish streams from the screen. Click **Select Screen** to select a screen/window/browser tab to publish.





Publish a local file using the web push tool to CSS. Click **Select** to select a file to publish. Currently, you can publish only files in MP4 format.



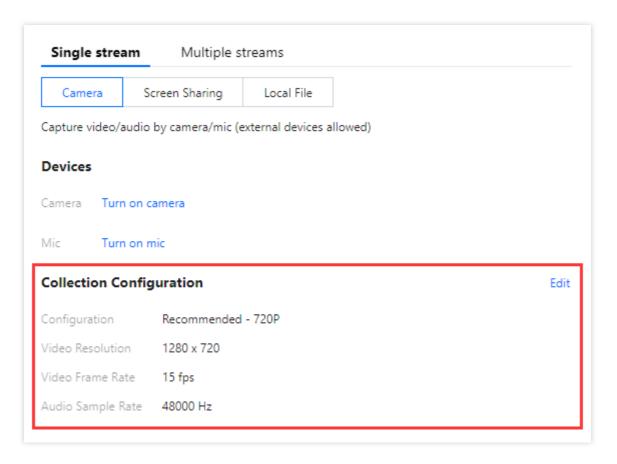


Note:

You cannot change the capturing source after enabling camera preview or selecting screen content to share. To switch the source, disable camera preview or cancel screen sharing first.

3. Configure capturing data. The defaults are recommended settings, which vary with resolution. You can click Edit and select Custom to customize capturing data. For camera and screen sharing, the settings include resolution, video frame rate, and audio sample rate, while for local files, only the former two are applicable.

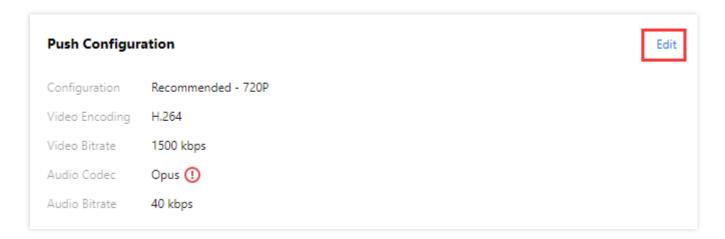




4. **Configure push data**. The defaults are recommended settings (the recommended video bitrate varies with resolution, and the audio bitrate is fixed). You can click **Edit** and select **Custom** to customize video and audio bitrates.

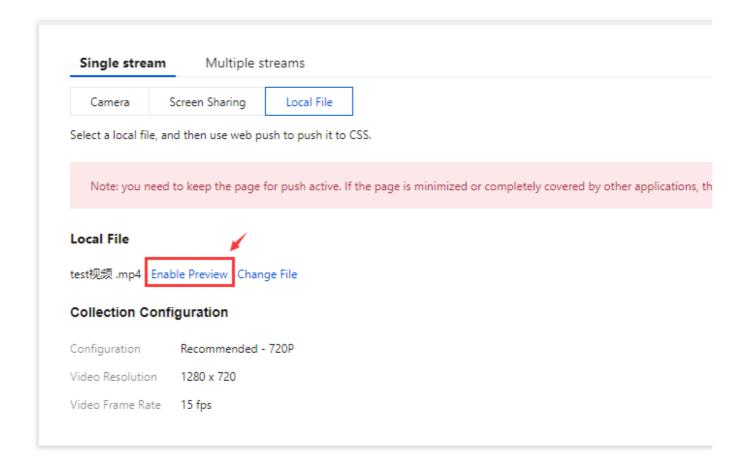
Note:

WebRTC push uses the Opus audio codec, and you are advised to play the streams pushed using LEB WebRTC URLs. If you use a standard live streaming protocol (RTMP, FLV, or HLS), the system will automatically convert the streams to AAC, which will incur transcoding fees. For details, see the billing document.

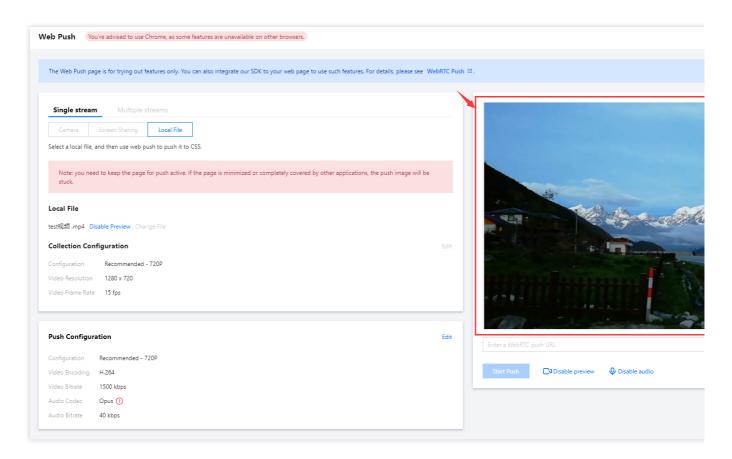


5. **Preview streams**. After completing the above steps, you can enable preview to preview the stream on the right.









6. Enter a WebRTC push URL or click **Generate** and complete the following configuration:





Enter a WebRTC push URL

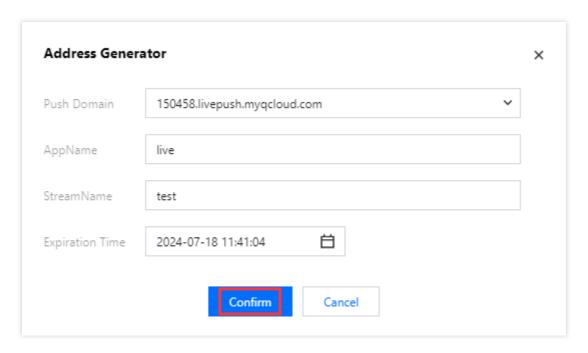
Start Push

Disable preview



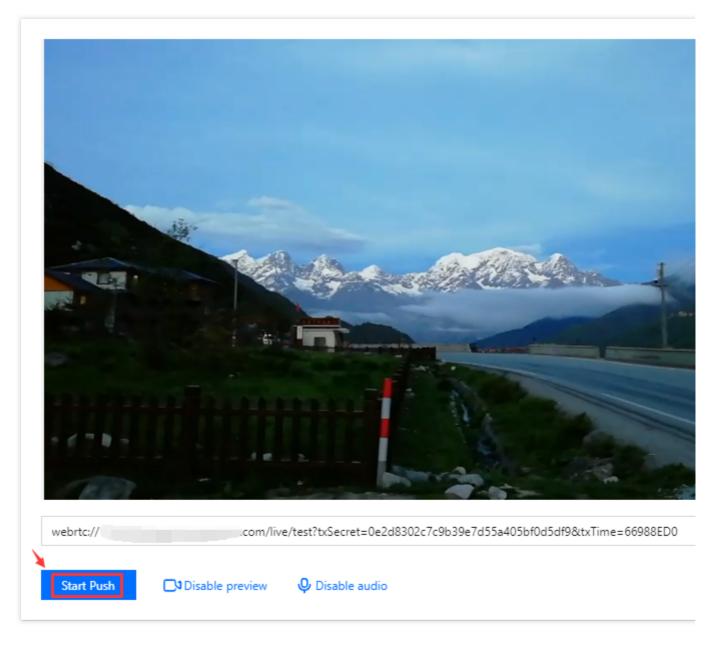
- 6.1 Select your push domain.
- 6.2 Enter a unique AppName for an application to distinguish it from other applications under the same domain name. AppName is live by default.
- 6.3 Enter a custom StreamName, such as test.
- 6.4 Select an expiration time, such as 2024-07-18 11:41:04.
- 6.5 Click Confirm, and a push URL is auto-generated.





7. Click **Start Push** to start streaming.





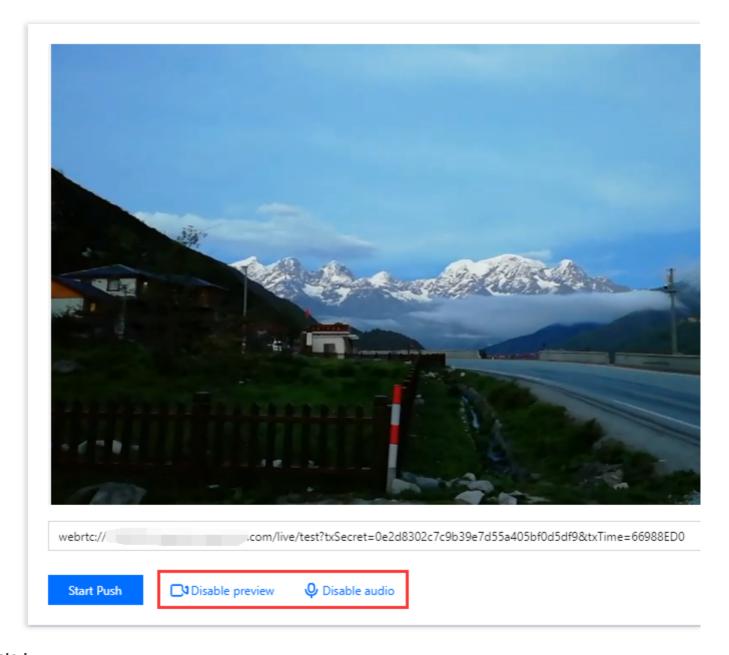
7.1 To enable/disable video or audio, click



O Disable audio

. After you disable video/audio, data capturing will continue and push will still succeed, but the stream cannot be previewed and will have no video or audio.



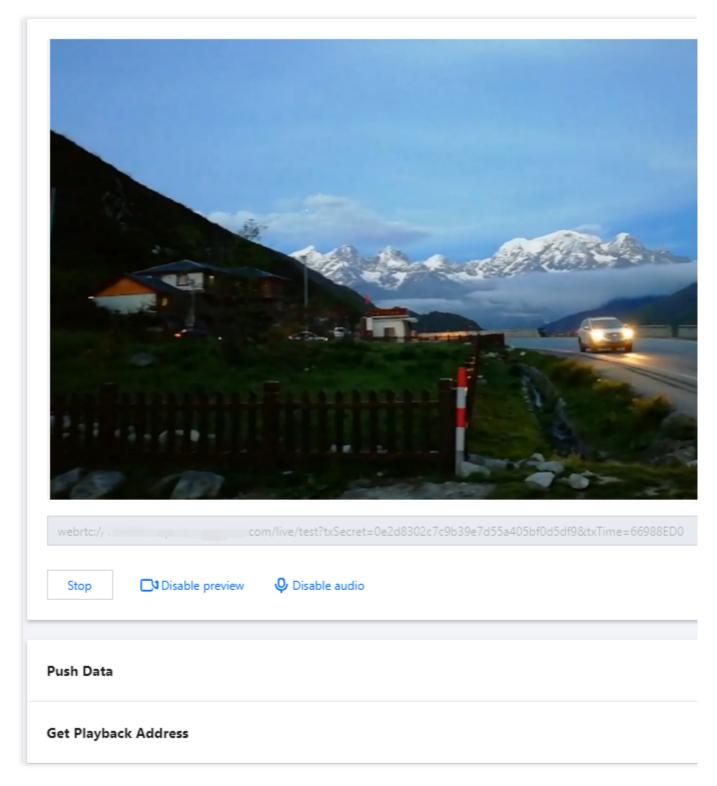


Note:

You cannot enable or disable preview after push succeeds, and you may incur bandwidth/traffic costs or the costs of other value-added services for pushing streams.

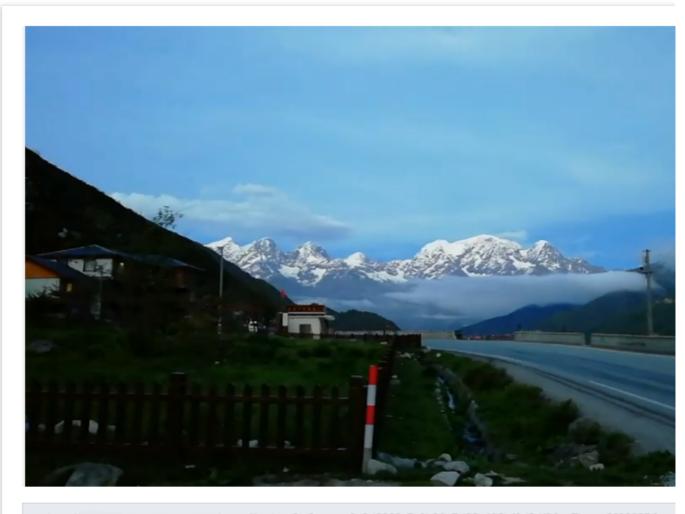
8. After push succeeds, click **View** below the preview to view streaming statistics. You cannot obtain statistics or playback URLs for push URLs not under your account. Please use a push domain under your account to generate push URLs or relay streams to your account.





9. If you have added a playback domain in **Domain Management**, you can **select the domain** to generate a playback URL. If you need to generate a playback address with transcoding or adaptive transcoding configuration, you must first bind the playback domain to a transcoding template or adaptive transcoding template to generate a transcoded stream or adaptive transcoded stream.





webrtc://......i.com/live/test?txSecret=0e2d8302c7c9b39e7d55a405bf0d5df9&txTime=66988ED0

Stop

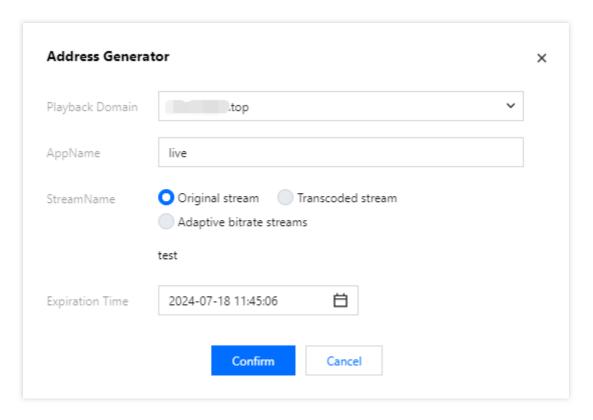
Disable preview

O Disable audio

Push Data

Get Playback Address





A playback URL is made up of four parts, as shown below:



Supported protocols include RTMP, FLV, HLS, and UDP. You can also click the QR code icon and scan the QR code using the TCToolkit app to obtain the playback URL.



Get Playback Address		
URL Type	Original stream	
Validity Period (i)	2024-07-18 11:45:26 (UTC+08:00)	
RTMP URL	rtmp:// .top/live/test	₽ 85 8
FLV URL	http://top/live/test.flv	₽ 🔡 🕞
HLS URL	http:// .top/live/test.m3u8	₽ 88 (>)
UDP URL (Recommended)	webrtc:// .top/live/test	₽ 55 ⊙

Note:

If HTTPS is enabled for the playback domain selected, the FLV and HLS URLs generated will start with https.

Multiple streams

Enter configuration

- 1. Log in to the CSS console and select Web Push. Click on Multiple streams.
- 2. In the input configuration, click **Add**. Choose the capture method. You can select from three capture methods: camera capture, screen sharing capture, and local file capture. You can also add text configuration for multi-stream mixed live streaming. **Up to 10 input sources can be added**.

Camera

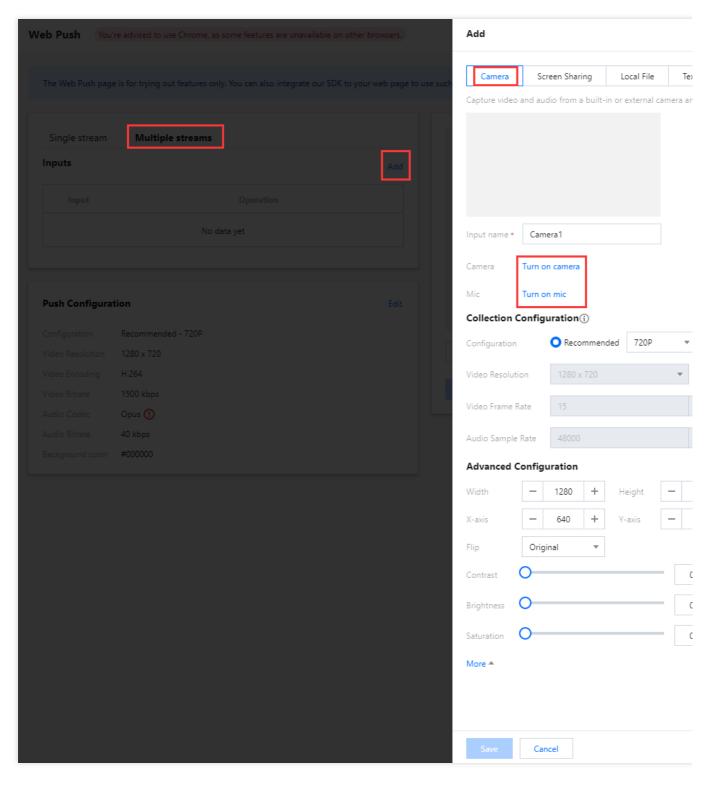
Screen Sharing

Local File

Text

Camera capture is the process of capturing video and audio through a camera/microphone (external devices are supported). Click **Enable Camera**/ **Enable Microphone**, and the first time you enable it, you'll need to grant the browser permission to use the camera and microphone.

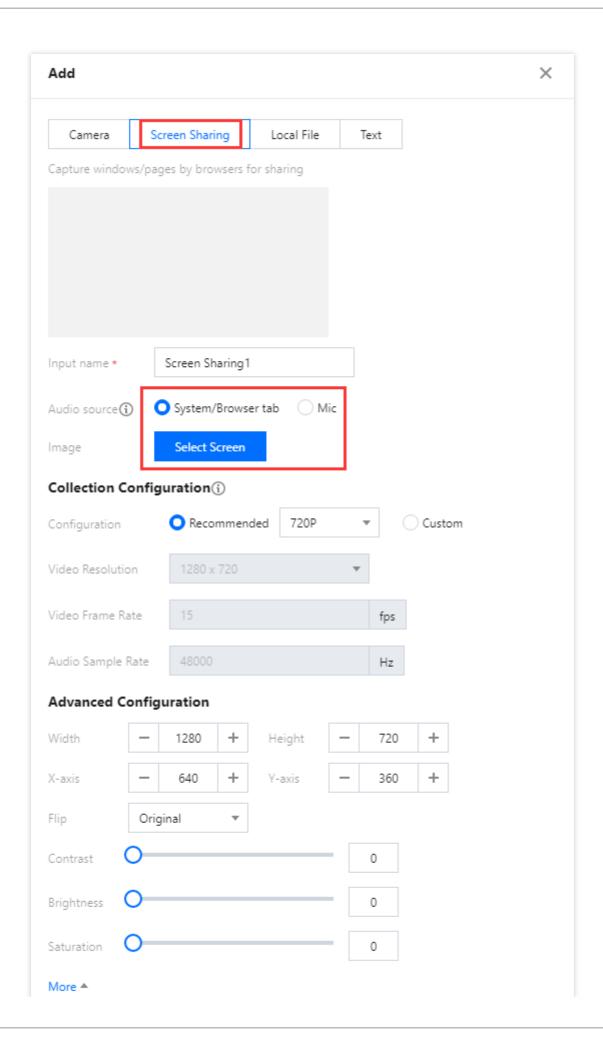




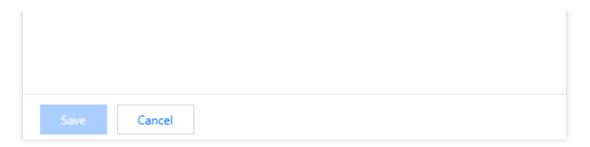
Screen sharing capture is the process of capturing a specific window or interface through the browser for sharing. Click **Select Screen Sharing** and choose the content to share, which can be the entire screen, a specific window, or a browser tab. You need to select the screen to share before you can save it.

Screen sharing capture supports selecting audio sources. Currently, only Chrome 74+ and Edge 79+ support capturing sound. On Windows systems, you can capture the entire system's sound, while on Linux and Mac, you can only capture the sound from a browser tab.

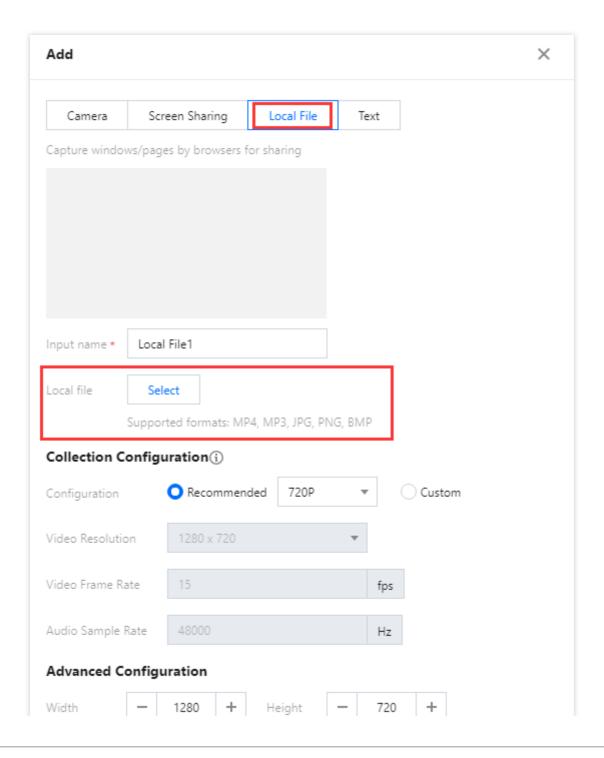




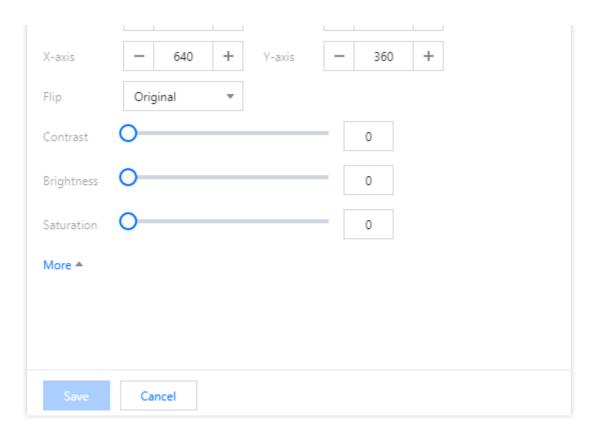




Local file capture is the process of capturing images from a specified local file and then pushing it to the cloud live streaming service using a Web-based push tool. Click **Select Local File** to choose the content to be pushed. Currently, MP4, MP3, JPG, PNG, and BMP file formats are supported. Click **Enable Preview** to save the settings.

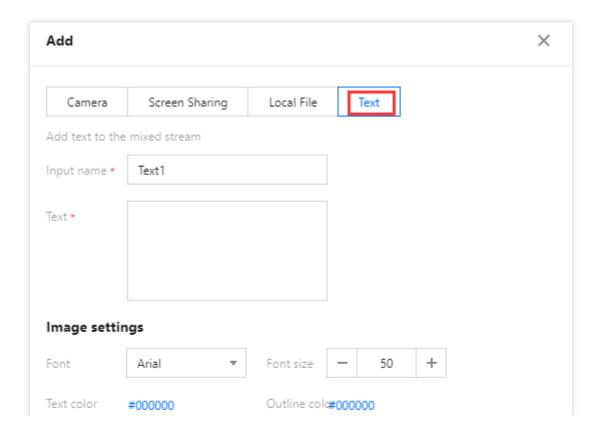




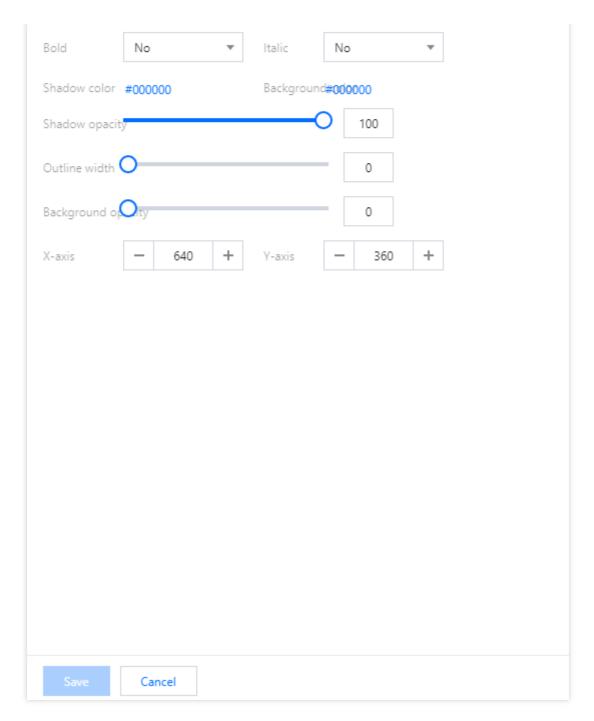


Text configuration allows you to add text to the mixed streaming image and then push it to the cloud live streaming service using a Web-based push tool. Enter text in the text content field.

In the image configuration, you can set the font, color, shadow, transparency, thickness, and text coordinates. The default text coordinates are in the center of the page.







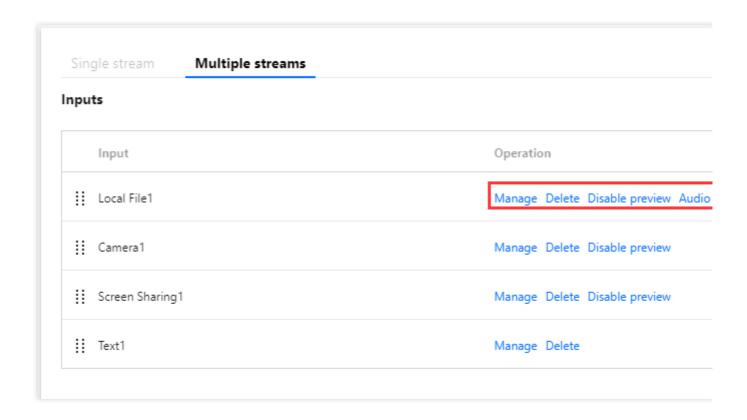
- 3. You can set capture configurations for camera capture, screen sharing capture, and local file capture. The default is the recommended configuration (different resolutions have different recommended configurations). Switching or modifying the configuration is not supported during the capture process. You need to make changes when the preview is closed.
- 4. You can set advanced configurations for camera capture, screen sharing capture, and local file capture. You can adjust the image, coordinates, mirroring, contrast, brightness, and saturation.
- 5. Click **Save**, and the input source will be added to the configuration.

Change setting

1. In the input configuration, you can perform operations on the configured input sources.



- 2. Select the input source you want to modify and click **Configure**. The right-side pop-up window will display the configuration information of this input source, and you can modify the configuration information again. Switching or modifying the configuration is not supported during the capture process. You need to make changes when the preview is closed.
- 3. You can adjust the display order of input sources by dragging the buttons on the left side of the input sources up or down.
- 4. Click **Delete** to remove the input source.
- 5. Click **Disable Preview** to close the preview of the input source, but you can still select the image for editing in the image editing area.
- 6. For input sources with audio, you can adjust the volume. Click "Adjust Volume", drag the volume slider, and click **Confirm** to confirm.



Push configuration

Push configuration: Set the push configuration, with the default being the recommended configuration (different resolutions have different recommended video bitrates, and audio bitrate cannot be modified). You can click **Edit** in the upper right corner to enter custom editing configuration, where you can customize and modify the video and audio bitrates.



Push Configuration

Configuration Recommended - 720P

Video Resolution 1280 x 720

Video Encoding H.264

Video Bitrate 1500 kbps

Audio Codec Opus (1)

Audio Bitrate 40 kbps

Background color #000000

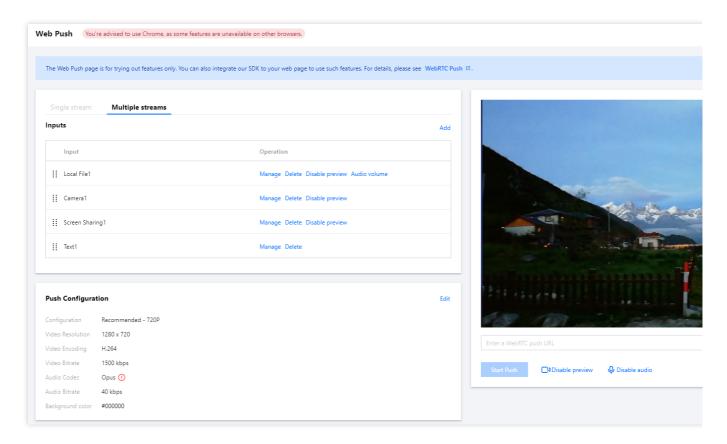
Note:

The audio encoding method for web push is Opus encoding, and it is recommended to use the Live Event Broadcasting (LEB) WebRTC address for playback. If you use the playback address of the standard live streaming (RTMP/FLV/HLS), the system will automatically convert it to AAC encoding for normal playback, which will generate audio transcoding fees. For details, please refer to the Billing Documentation.

Screen editing

- 1. After confirming the input configuration and push configuration, you can see the preview image in the preview box on the right, and you can edit the image as needed.
- 2. Click **Edit**, select the image in the preview box that needs to be adjusted, and you can drag and resize the image as needed.
- 3. After adjusting, click **Exit Edit**. If you are in the middle of pushing the stream, saving the changes will continue pushing the stream with the new image layout.





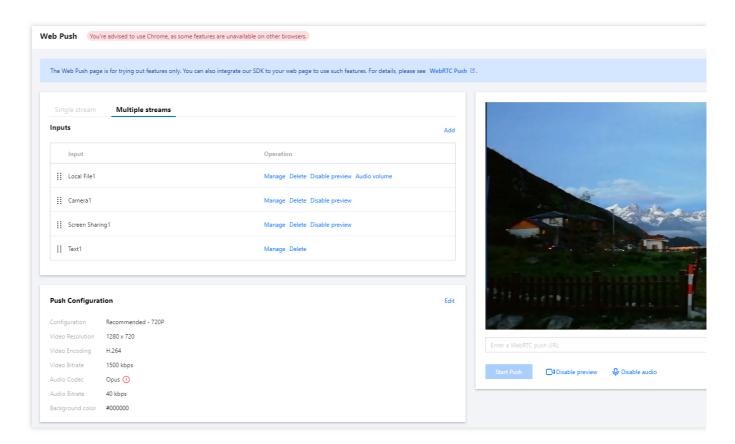
Note:

When you enter the image editing mode, you can adjust the image layout in the preview box. Exiting the image editing mode allows you to view the preview image of the push stream in the preview box. Editing the page does not affect the real-time push stream, and the configuration will be saved only when you exit the editing mode.

Push address

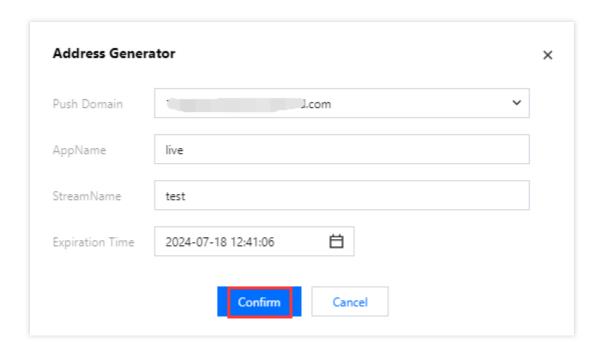
1. Enter the WebRTC push address in the preview box below or click **Generate**, and configure the following information in the pop-up window:





- 1.1 Select your push domain.
- 1.2 Enter a unique AppName for an application to distinguish it from other applications under the same domain name. AppName is live by default.
- 1.3 Enter a custom StreamName, such as test.
- 1.4 Select an expiration time, such as 2024-07-18 12:41:06.
- 1.5 Click Confirm, and a push URL is auto-generated.

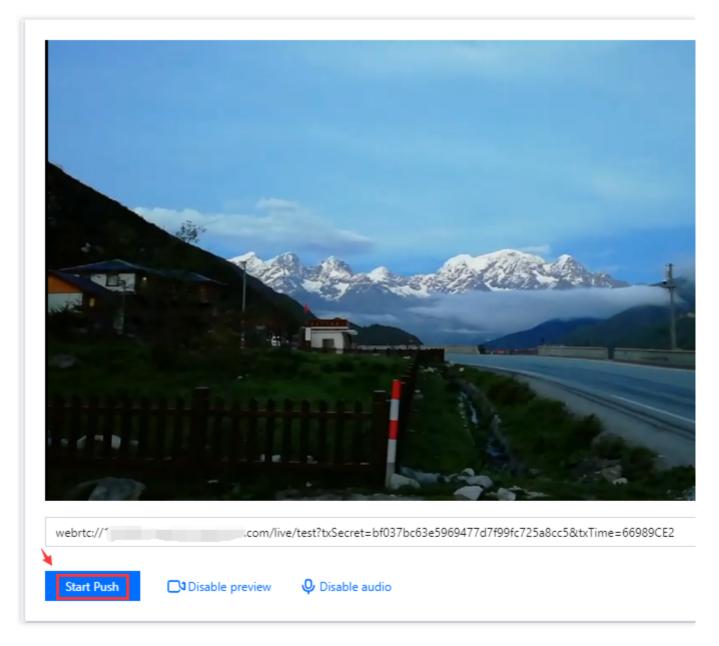




Start streaming

1. To enable/disable video or audio.





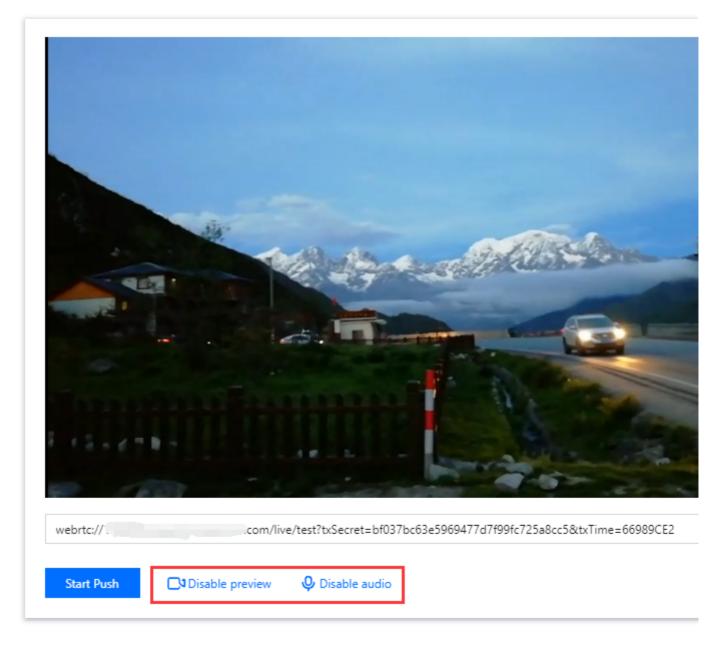
1.1 click

Disable preview or

O Disable audio

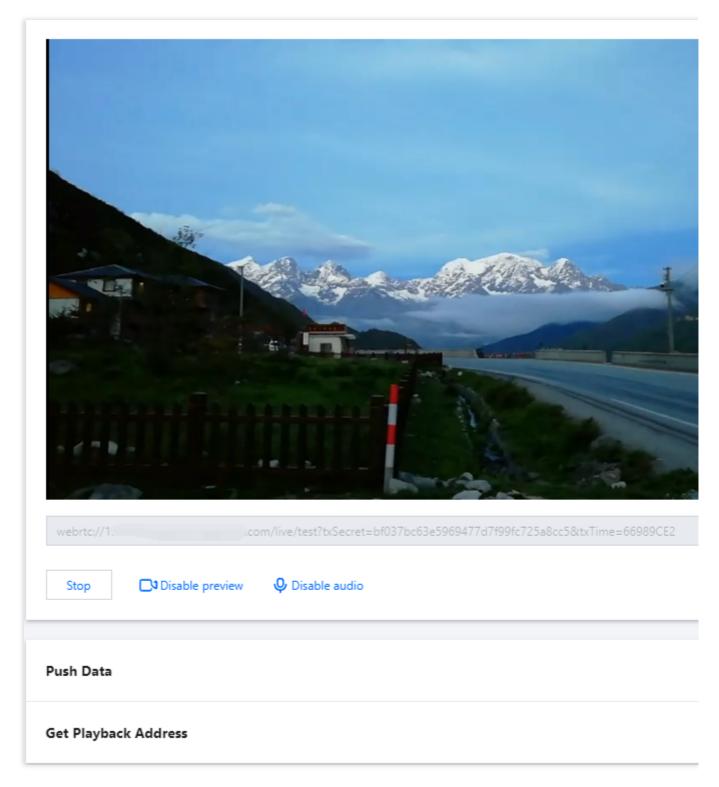
. After you disable video/audio, data capturing will continue and push will still succeed, but the stream cannot be previewed and will have no video or audio.





1.2 After push succeeds, click **View** below the preview to view streaming statistics. You cannot obtain statistics or playback URLs for push URLs not under your account. Please use a push domain under your account to generate push URLs or relay streams to your account.





1.3 If you have added a playback domain in **Domain Management**, you can **select the domain** to generate a playback URL. If you need to generate a playback address with transcoding or adaptive transcoding configuration, you must first bind the playback domain to a transcoding template or adaptive transcoding template to generate a transcoded stream or adaptive transcoded stream.





webrtc://

.com/live/test?txSecret=bf037bc63e5969477d7f99fc725a8cc5&txTime=66989CE2

Stop

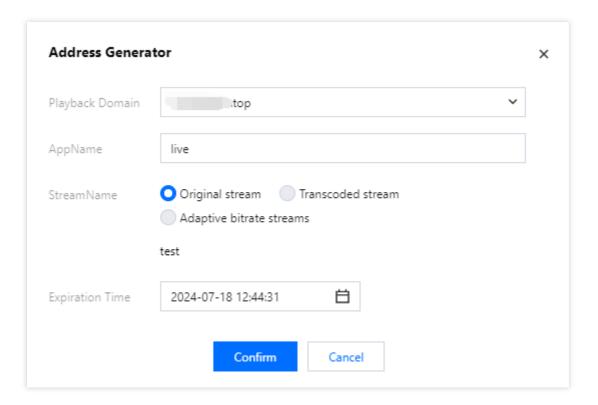
Disable preview

O Disable audio

Push Data

Get Playback Address



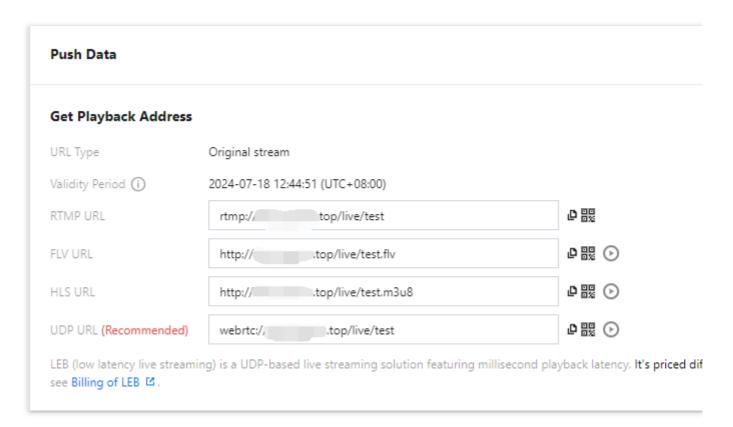


A playback URL is made up of four parts, as shown below:



Supported protocols include RTMP, FLV, HLS, and UDP. You can also click the QR code icon and scan the QR code using the TCToolkit app to obtain the playback URL.





Note:

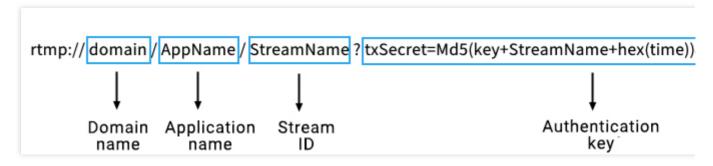
If HTTPS is enabled for the playback domain selected, the FLV and HLS URLs generated will start with https.



Address Generator

Last updated: 2024-01-23 16:29:08

The CSS console provides an address generator which you can use to quickly generate push/playback URLs. The main parts of a live streaming URL include a domain name (domain), an application name (AppName), a stream name (StreamName) and an authentication key (Key).



After URLs are generated, you can **select and copy** the one you need or copy it by **clicking the copy icon**. You can also get the URL by **scanning the QR code**.

Support and Limits

If you need to generate multiple live streaming URLs, we recommend that you splice them as instructed in Splicing Live Streaming URLs.

CSS provides a test domain name xxxx.livepush.myqcloud.com. You can use it to test push, but we do not recommend using it for business purposes.

When playing a transcoded stream, the StreamName in the playback address should be suffixed with

"_TranscodingTemplateName" to work. It is recommended not to include "_" in the StreamName. If the string after "_" is the same as the transcoding template name, the part after "_" will be recognized as the transcoding template name, which may cause the stream pulling to fail.

You can get a URL generated by scanning the QR code with TCToolkit.

The recent records of the address generator are stored in the local cache of a browser. Clearing the cache will also remove these records..

Prerequisites

You have logged in to the CSS console, and have added a push/playback domain name.



Parameter Description

Parameter	Description
URL Type	You can choose from the following three address types for configuration: Push Address Playback Address Push and playback URLs
Select Domain Name	You can choose: Push Domain Name Playback Domain Name Select both Push Domain Name and Playback Domain Name
AppName	The application name, which is used to identify a streaming file path. Default value: `live`.Only letters, digits, and symbols are allowed.
StreamName	A custom stream name is a unique identifier for each live stream. It only supports English letters, numbers, and symbols. The length of the StreamName is limited to 255 characters.
Туре	Default encryption type: MD5, alternative option: SHA256
Expiration Time	The actual expiration time of a playback URL is the specified time plus the validity period of the authentication key. The expiration time of a push URL is the specified time.
Transcoding Template	This option is only used when selecting the address type as Playback Address and choosing the domain name as Playback Domain Name. If you choose a Transcoding Template, the generated playback address will be for the transcoded live stream. If you need to play the original live stream, there is no need to select a transcoding template to generate the address. If you choose an Adaptive Bitrate Template, the generated playback address will be for the adaptive bitrate live stream. If you need to play the original live stream, there is no need to select a transcoding template to generate the address.

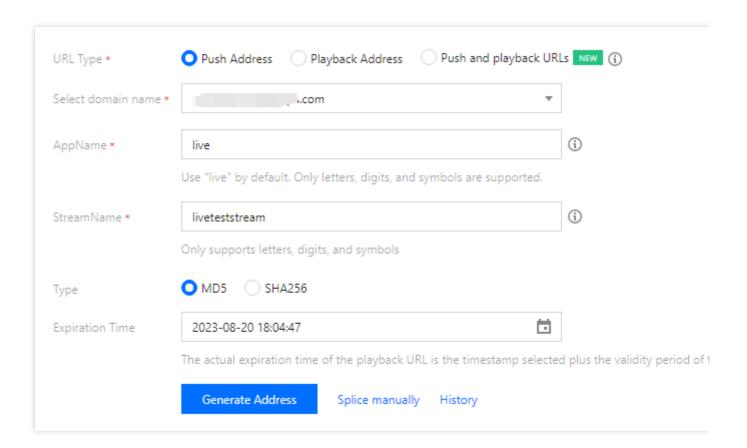
Generating Push URLs

Directions

- 1. Log in to the CSS console and select Address Generator on the left sidebar.
- 2. Select the address type as **Push Address**.
- 3. Select the push domain name that you have added to Domain Management.



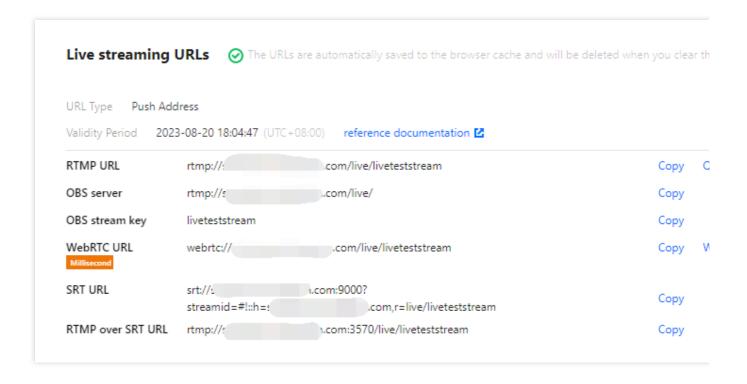
- 4. Enter an **AppName**. It is live by default.
- 5. Enter a **StreamName**, such as liveteststream .
- 6. Select your **Encryption Type**.
- 7. Select the expiration time of the URL, such as 2023-08-20 18:04:47.
- 8. Click Generate Address.



Push URL format

CSS supports RTMP, WebRTC, SRT and RTMP over SRT for push. As a result, the push URLs generated will start with rtmp://, webrtc://, srt:// or rtmp://.



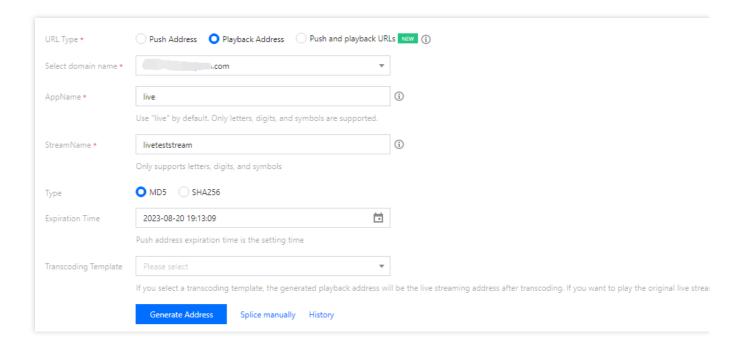


Generating Playback URLs

Directions

- 1. Log in to the CSS console and select Address Generator on the left sidebar.
- 2. Select the address type as **Playback Address** and choose the playback domain name that you have added to Domain Management.
- 3. Enter an **AppName**. It is live by default.
- 4. Enter a StreamName, such as liveteststream .
- 5. Select your **Encryption Type**.
- 6. Select the URL expiration time, such as 2023-08-20 19:13:09.
- 7. Select an existing transcoding template (optional).
- 8. Click Generate Address.



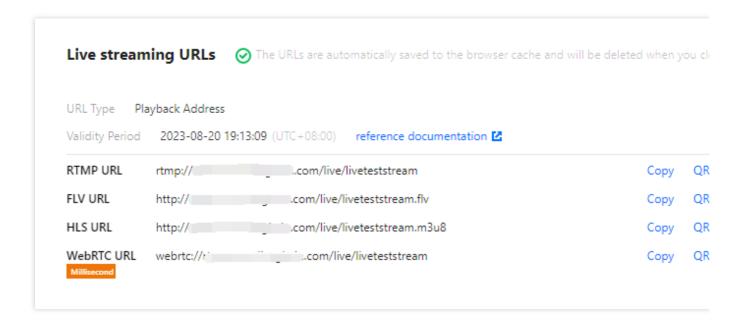


Playback URL format

If a transcoding template is used, the generated playback address will be for the transcoded live stream. The playback supports RTMP, FLV, HLS, and WebRTC protocols. You can generate playback addresses with prefixes such as rtmp://, http://, and webrtc:// using the address generator. Compared to the original live stream, you need to append "_TranscodingTemplateName" after the StreamName.

Caution

UDP playback URLs are for LEB. To learn about the billing of LEB, see Pricing Overview.

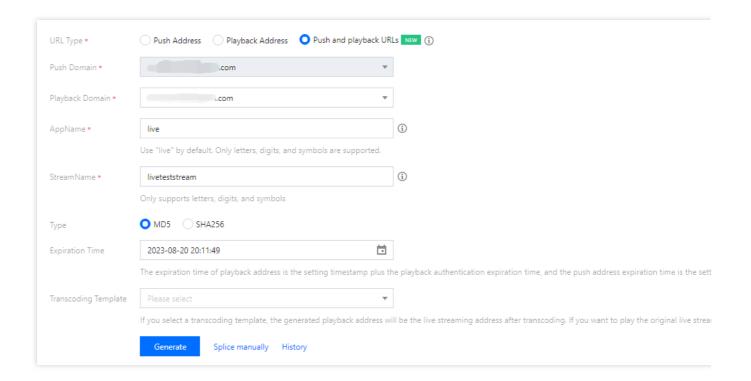




Generate Push and Playback Address Group

Directions

- 1. Log in to the CSS console and select Address Generator on the left sidebar.
- 2. Select the address type as **Push and playback URLs**.
- 3. Select the Push Domain Name and Playback Domain Name that you have added to Domain Management.
- 4. Enter an **AppName**. It is live by default.
- 5. Enter a StreamName, such as liveteststream .
- 6. Select your Encryption Type.
- 7. Select the URL expiration time, such as 2023-08-20 20:11:49.
- 8. Select an existing transcoding template (optional).
- 9. Click Generate Address.



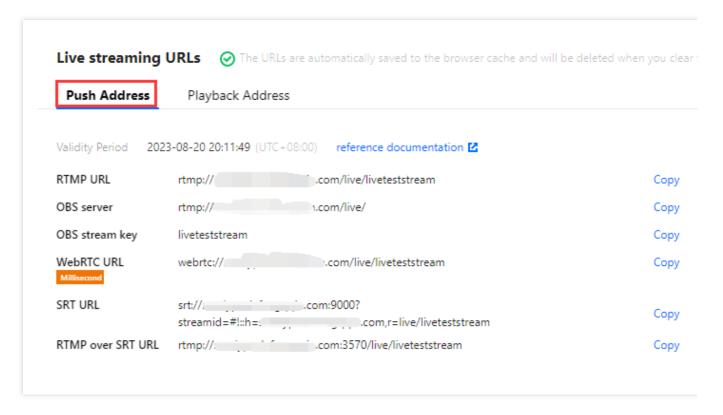
Push and Playback Address Group Explanation

Push Address

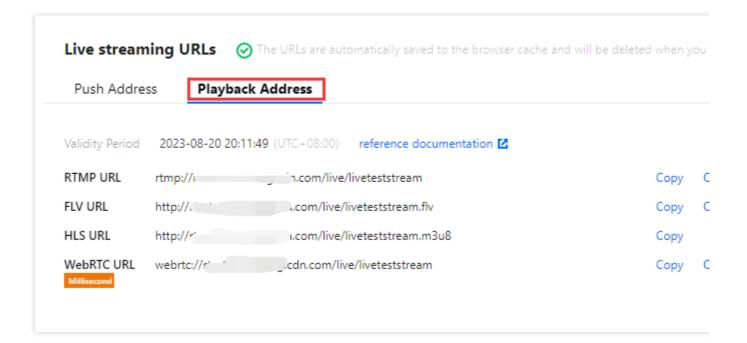
Playback Address

CSS supports RTMP, WebRTC, SRT and RTMP over SRT for push. As a result, the push URLs generated will start with rtmp://, webrtc://, srt:// or rtmp://.





Ilf a transcoding template is used, the generated playback address will be for the transcoded live stream. The playback supports RTMP, FLV, HLS, and WebRTC protocols. You can generate playback addresses with prefixes such as rtmp://, http://, and webrtc:// using the address generator. Compared to the original live stream, you need to append "_TranscodingTemplateName" after the StreamName.



Adaptive bitrate URL format

If you use an Adaptive Bitrate Template, the generated playback address will be for adaptive bitrate playback.

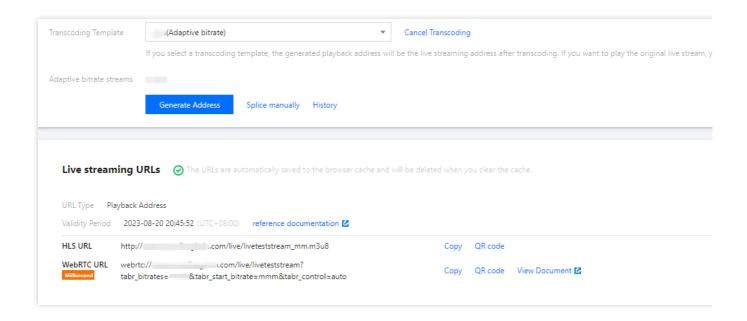


This playback address supports HLS and WebRTC protocols. You can generate playback addresses with prefixes such as http:// and webrtc:// using the address generator.

For adaptive bitrate pull addresses using the HLS protocol, the processing method is the same as that for regular transcoded addresses.

For adaptive bitrate pull addresses using the WebRTC protocol, there is no need to append the transcoding template name after the StreamName. Instead, you need to append

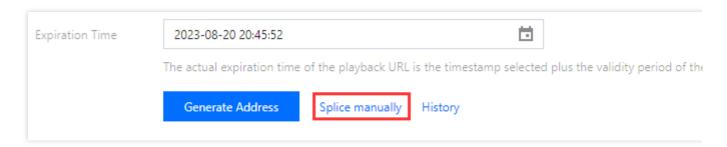
"&tabr_bitrates=AdaptiveBitrateSubTemplateNameList&tabr_start_bitrate=StartingPlayb ackBitrateSubTemplateName&tabr_control=auto" after the original live stream URL . The adaptive bitrate sub-template names in the list should be arranged in descending order of bitrate, separated by commas..



Custom Concatenation Explanation

1. Log in to the CSS console and select Address Generator on the left sidebar. Click **Splice manually** to enter the Custom Concatenation Management page.





2. In the pop-up **Address Resolution Sample** window, the examples are as follows:

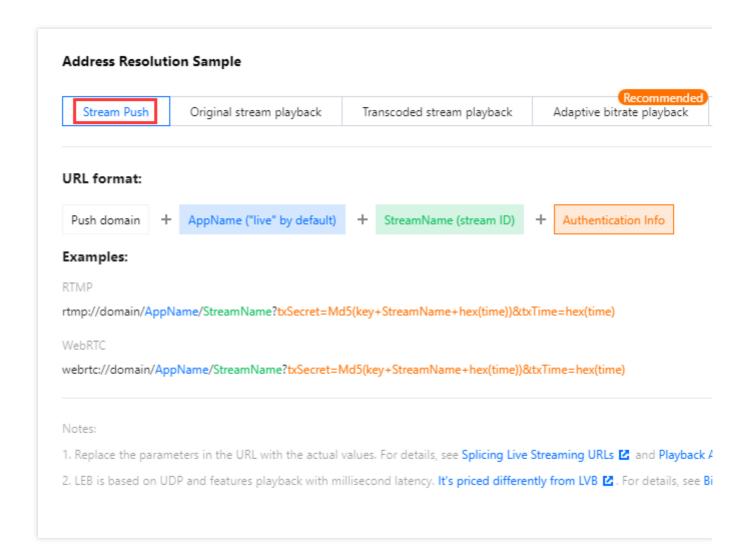
Stream Push

Original stream playback

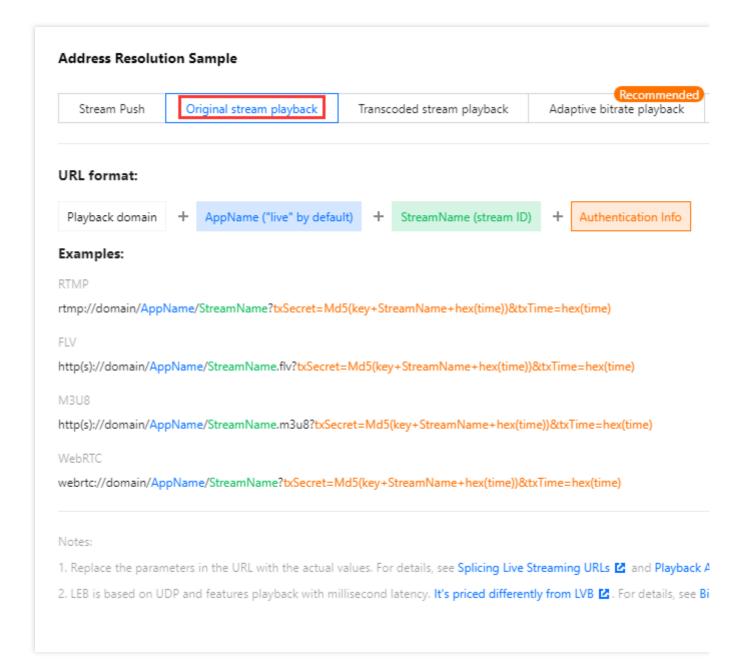
Transcoded stream playback

Adaptive bitrate playback

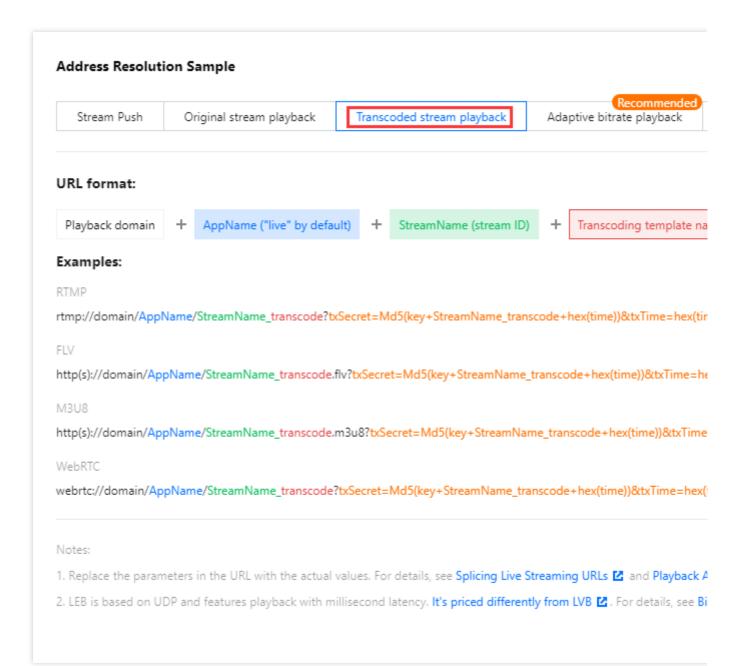
Playback



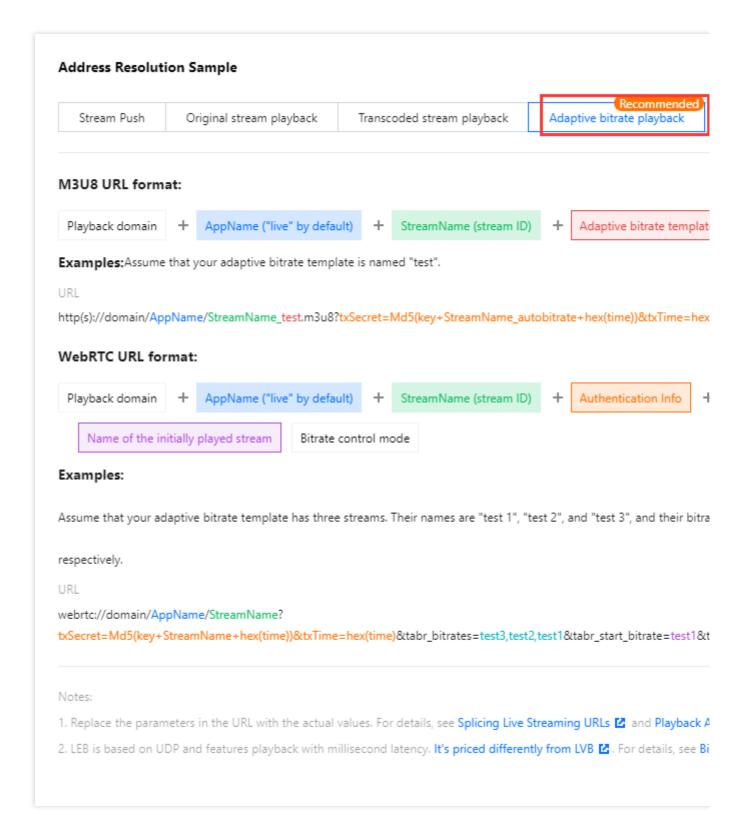




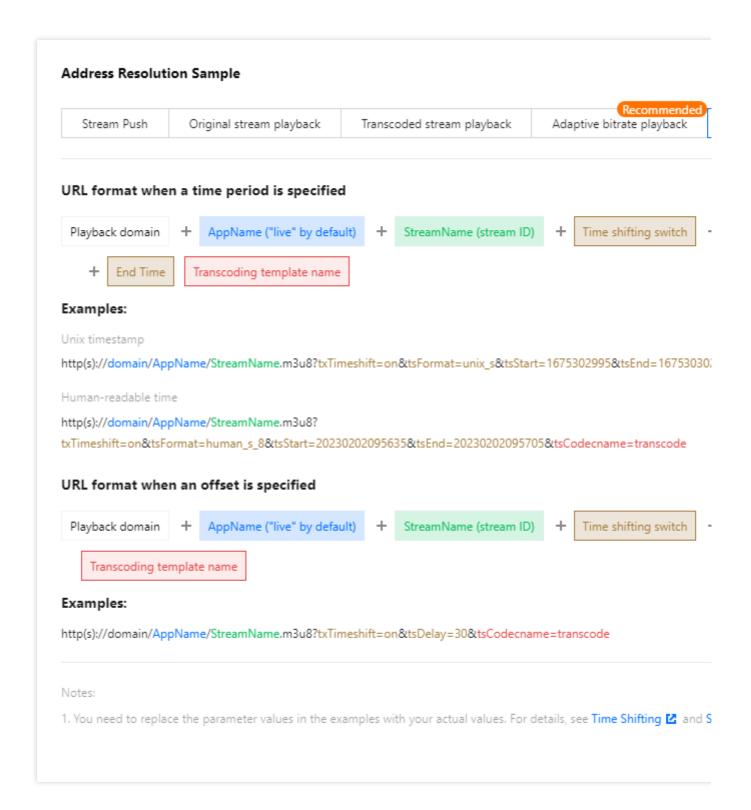












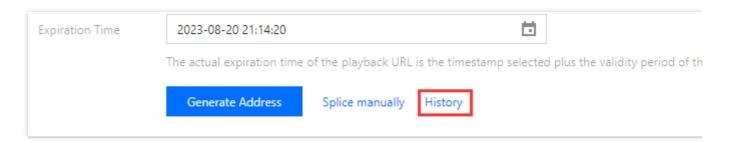
Recent Record Explanation

Based on your business needs, you can view or delete the records of recently generated addresses. These records include push addresses, playback addresses, address groups, and other information.

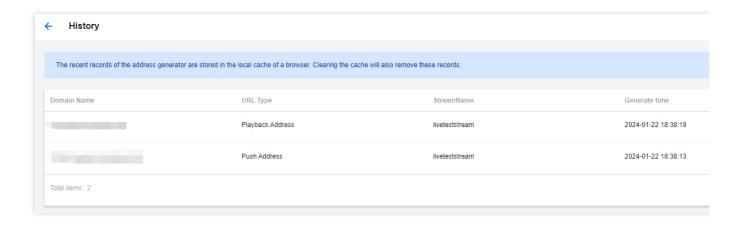


View Records

1. Log in to the CSS console and select Address Generator on the left sidebar. Click **History** to enter the Recent Record Management page.



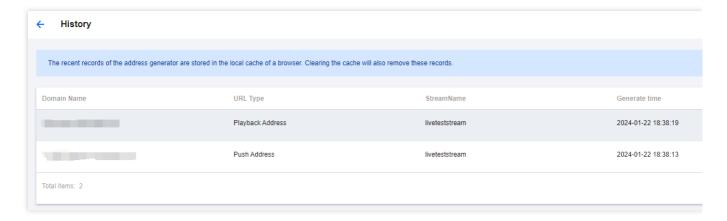
2. Select the live address record information you want to view and click View.



Delete Live Address Record

If you need to delete a live address record, first select the address type you want to delete, and then click **Delete** on the right side of the page. Next, you will be redirected to the delete confirmation window; click **Confirm** again to delete the corresponding live address record.





Caution:

The URLs are automatically saved to the browser cache and will be deleted when you clear the cache





Self-Diagnosis

Last updated: 2023-09-26 10:22:37

CSS offers a self-diagnosis tool for you to quickly detect and troubleshoot push and playback issues related to users, URLs, domain names, streams, and other factors. This feature is in beta testing now. The diagnostic results are for reference only.

Prerequisites

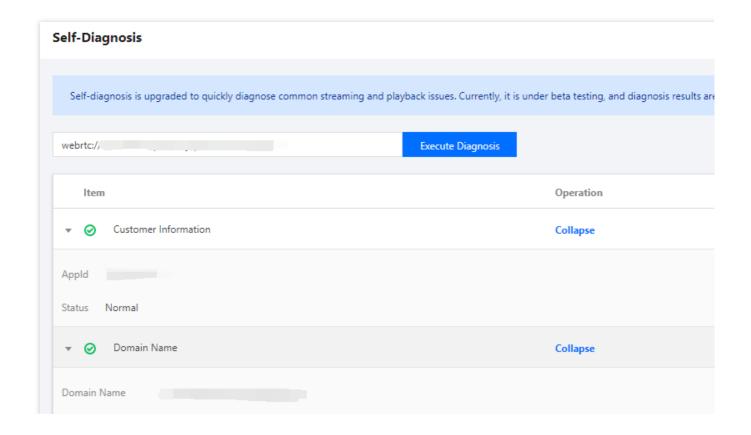
There is a push/playback URL spliced by you or generated by the Address Generator.

The push URL has been used for push.

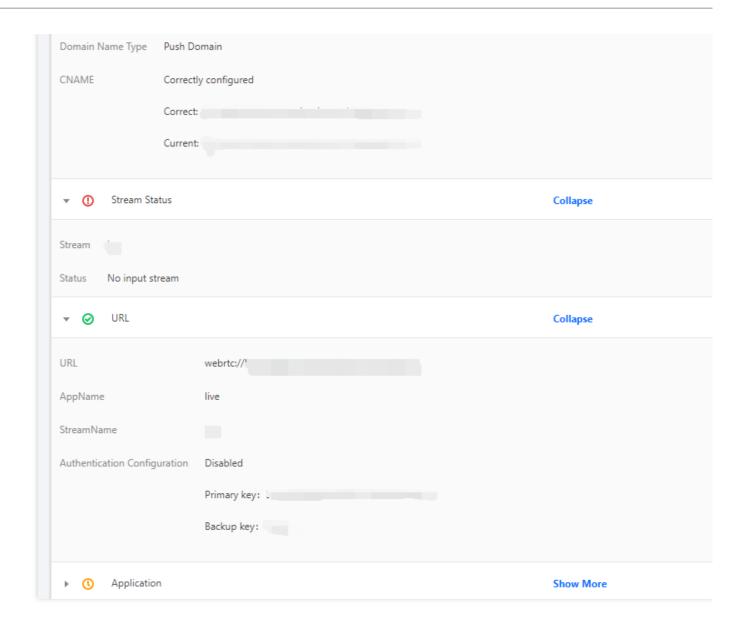
Directions

Follow the steps below to diagnose a push/playback problem in a live stream:

- 1. Log in to the CSS console and select **Self-Diagnosis** on the left sidebar.
- 2. Enter the push or playback URL you want to diagnose.
- 3. Click Execute Diagnosis.







Result

You will see the diagnostic result and suggestion for troubleshooting the problem.

Item	Sub-Item	Description
Customer Information	APPID	Customer's application ID
	Status	Customer's account status
Domain Name	Domain Name	Domain Name
	Domain Name Type	Push/Playback domain
	CNAME	CNAME resolution information



Stream	Stream	Stream ID
Status	Status	Stream status
	URL	Push/Playback URL
	AppName	URL path
	StreamName	Stream name, which is used to calculate `txSecret`
	Authentication Configuration	Whether authentication is enabled
		Primary key
		Backup key
URL		Whether authentication succeeded
		Cause
	Push/Playback authentication	Authentication StreamName
		txSecret: Authentication string generated after push/playback authentication is enabled.
		txTime: Expiration timestamp set for the push/playback URL
		URL actual expiration time
	Bandwidth Cap Configuration	Whether a cap is set for bandwidth
Access		Acceleration Region
Bandwidth	IP Visit	Status
		Current Bandwidth
Application	Client	Push from PC: We recommend you use OBS for push to test the push. Playback on PC: We recommend you use the VLC player to test the playback.
		Push from web: We recommend you use Web Push to test the push.
		Push from mobile apps: Install TCToolkit App and select "RTMP for push" to test the push. Playback on mobile apps: Install TCToolkit App and select "Standard Live Broadcast" to test the playback.



IP Restriction	Check for exceptions caused by the IP allowlist/blocklist or regional restrictions
Stream Data	Analyze real-time monitoring data of the live stream to determine whether the exception is caused by network congestion, jitters, or other reasons. View stream data

Note

If the diagnostic report cannot solve your problem, please submit a ticket or contact Tencent Cloud technical support.



OOTB live

Last updated: 2024-04-24 11:49:03

OOTB live is aready-to-use tool that requires no intricate technical research or personnel investment. With only two simple steps, one can initiate personalized live streaming training or sales sessions. Utilizing this live streaming tool, you can effectively manage private traffic, operate your own brand, introduce and release company products, conduct promotion and training activities, and better track online training and sales results. This document principally outlines the operations for live room management on the enterprise management side, live stream push on the host side, and live viewing on the viewer side.

Prerequisites

You have logged in to the CSS console.

You have added a playback domain name.

Points of Attention

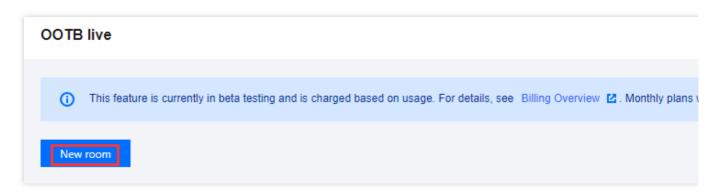
Currently, this feature is in beta testing. Fees are collected based on the actual use of the function. For more details, refer to Pricing Overview. As of January 1,2024, billing will be based on monthly subscription plans.

Live Room Management (Management Side)

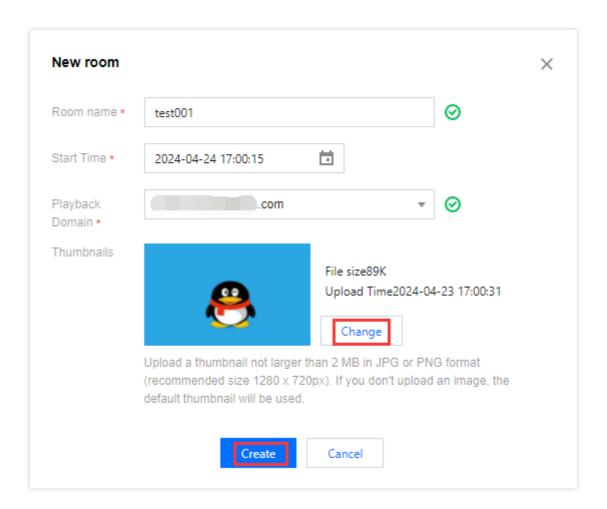
Creating a Live Room

- 1. Log in to the CSS console, go to **CSS Toolkit** > OOTB live.
- 2. Click **New room** to enter the live room creation window.





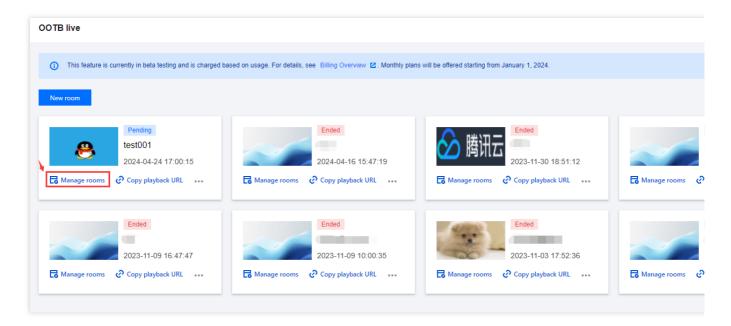
- 3. Specify **Room name**. The name can contain up to 20 characters and supports only Chinese characters, English letters, numbers, underscores (_), and hyphens (-).
- 4. Choose Start Time based on your actual business needs and click OK for confirmation.
- 5. Select Playback Domain that you have already added in the domain name management.
- 6. A default live streaming cover is provided. If you wish to upload your own cover, click on **Change**. We recommend a JPG or PNG image of 2 MB or smaller, with resolution of 1280*720px.
- 7. Click Create.



Live Control



- 1. Log in to the CSS console, go to **CSS Toolkit** > OOTB live.
- 2. Select the created live room and click on **Manage rooms**. From the management side, you can delete created live rooms based on actual business needs, or copy and share links for viewing the live streaming.



3. Enter the live streaming control page and choose the method of starting the live streaming according to your actual business needs. You can select Web, Publish, or Playback:

Web: The host uses the web-based live streaming tools provided by OOTB live. Options for live streaming include using a camera, local files, or screen sharing.

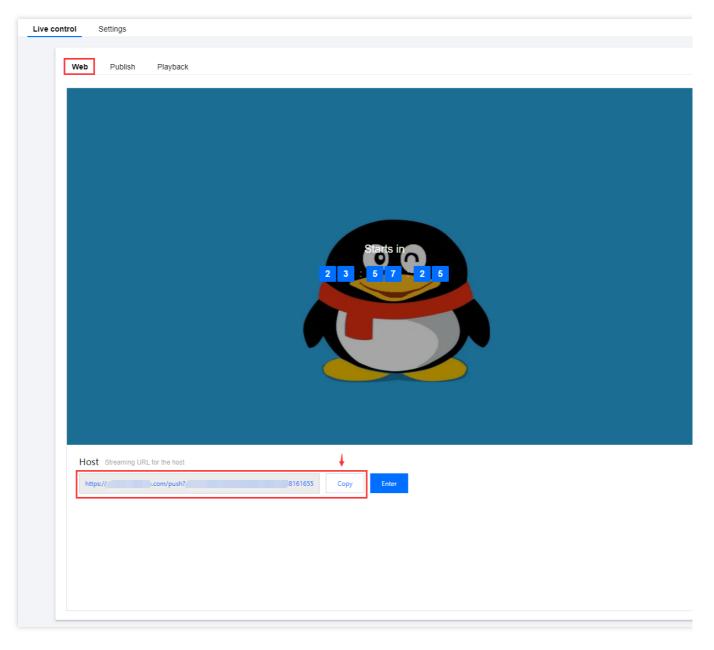
Publish: The host can stream using third-party tools such as OBS. In this case, the push streaming addresses provided by the system are entered into these third-party tools. For more information, refer to Push via OBS. Playback: This method is geared towards scenarios that require effectuating recorded video into live streaming (pseudo-live) or pulling streams from third-party platforms for playback on Tencent Cloud.

Scenario 1: Web

This scenario is mainly focused on real-time processing.

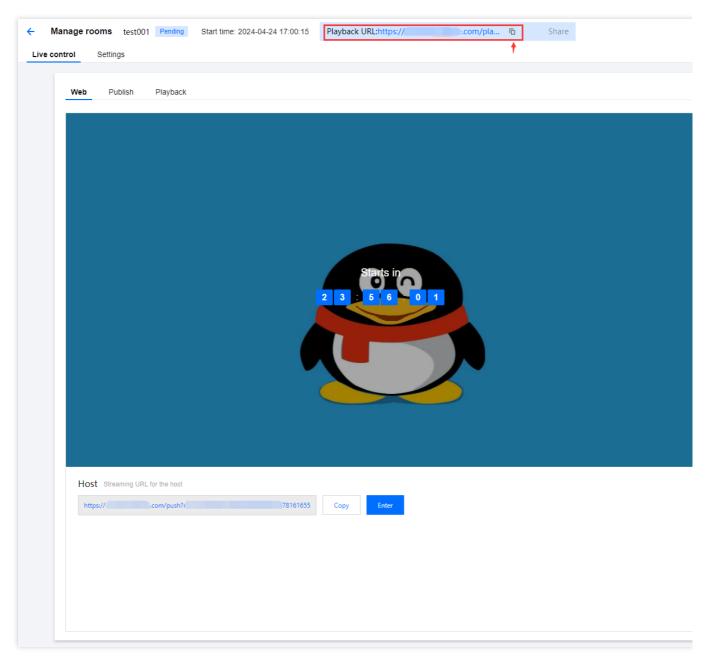
1. When you select **Web**, you can allocate the page address to the host. Click on **Copy** to replicate the address.





2. Copy the **Playback URL** at the top of the page or click on the copy icon to copy the URL, and then distribute the playback URL to your audience.



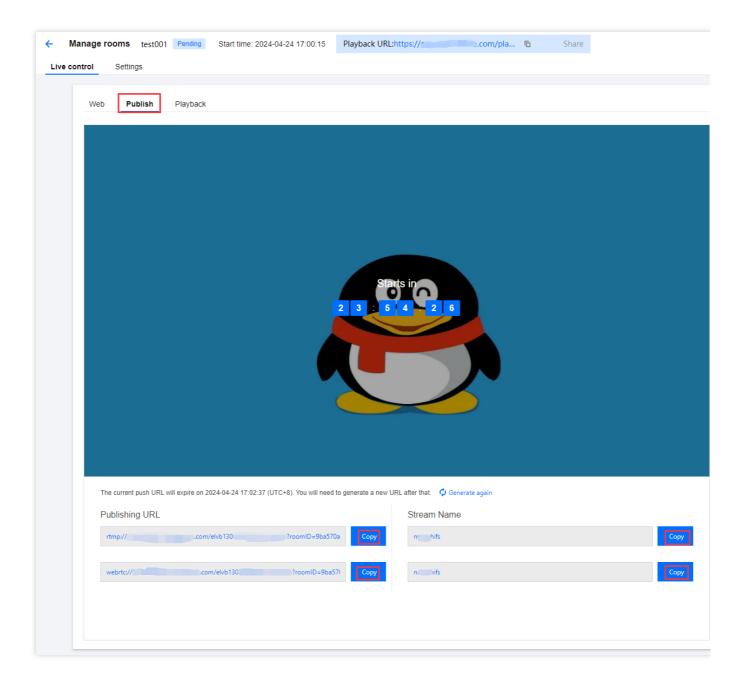


3. To activate the comment feature, please go to **Settings**.

Scenario 2: Publish

- 1. By default, the system generates a publish URL and stream name, which can be copied to third-party publish streaming tools such as OBS for live streaming.
- 2. The copied publish URL and stream name can be pasted into OBS's server and stream code respectively for publishing.

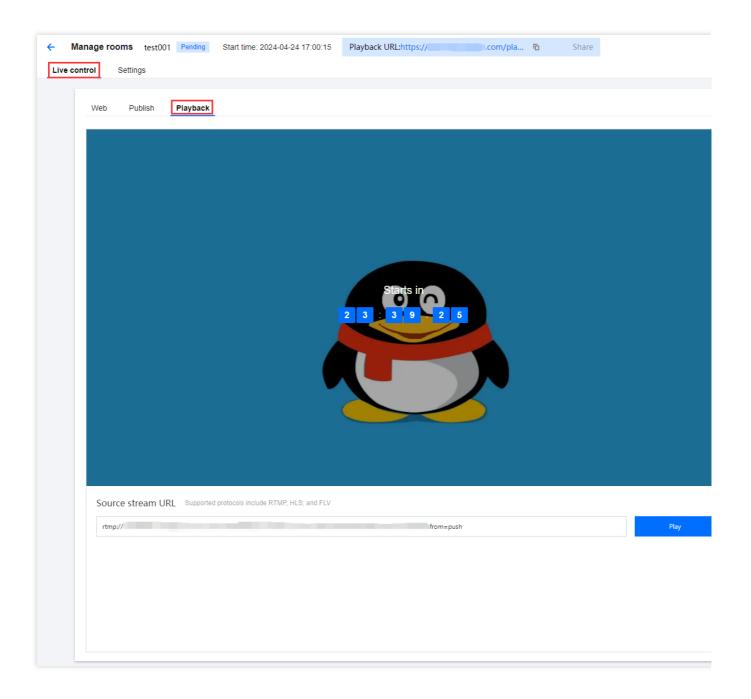




Scenario 3: Playback

- 1. The source stream address supports live streaming playback protocols such as RTMP, HLS, and FLV, among others.
- 2. In the source stream address input box, you can enter the source stream address, which is equivalent to setting the content source to a live source in Pull and Push Streaming. After entering the address, click **Play** on the right to pull the corresponding live stream and push it to Tencent Cloud.





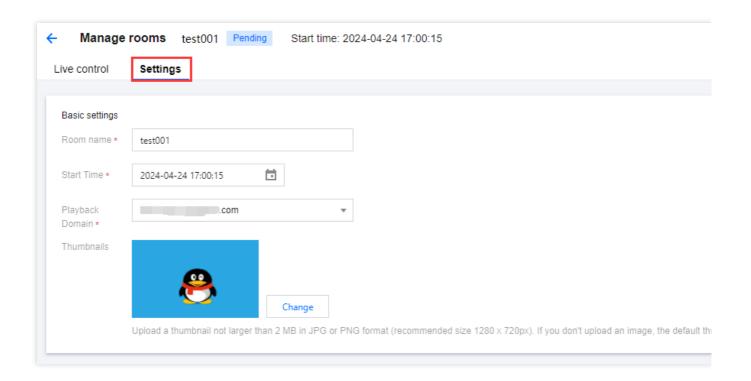
Live Room Configuration

Basic settings

Log in to the CSS console, go to CSS Toolkit > OOTB live > Manage rooms > Settings.

After completing the basic settings, you can adjust and modify the basic settings, including the live room name, start time, playback domain, and live streaming cover.

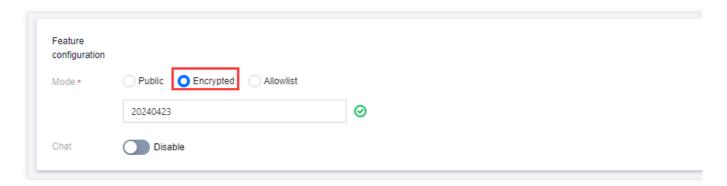




Feature configuration

1. Viewing Methods

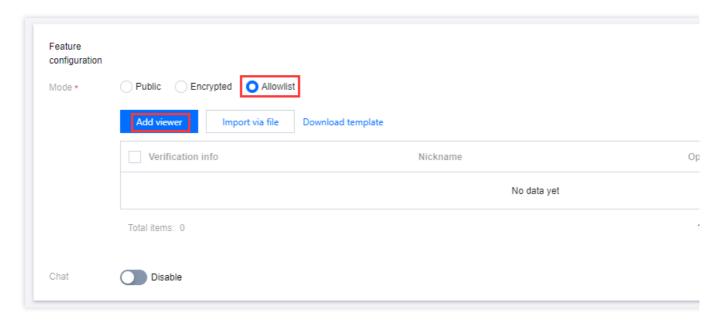
1.1 The default viewing method is **Public**. However, you may opt for **Encrypted** viewing or employ an **Allowlist**. If you opt for encrypted viewing, a password is required for viewing the live stream. This password should be between 8-14 characters in length and must not contain spaces, Chinese characters, or special symbols.



When the viewing method is set to Allowlist.

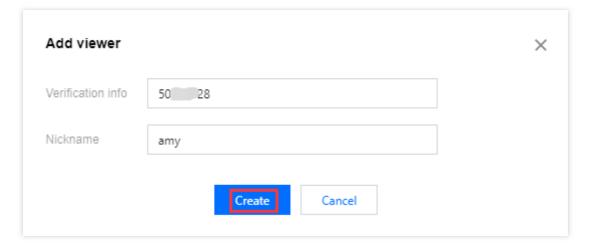
Click on **Add viewer**. In the ensuing pop-up window, you can continuously add new members as required or select and remove existing members.





Verification Info: Please enter the corresponding verification information, such as employee number, mobile number, and so on.

Nickname: Please set a name for the viewer. It could be the viewer's real name or a custom nickname.



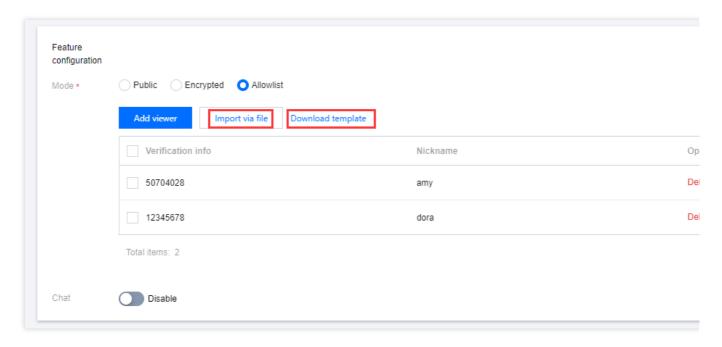
Click Create.

Click **Import via file** to import CSV or Excel files to quickly add users allowed to view the live stream.

Click **Download template** to download the import template. Maintain the list information based on this before importing, otherwise it may lead to import anomalies.

Click **Download template** to download the imported template. Maintain the list information based on this before importing it. Otherwise, exceptions may occur during the import.

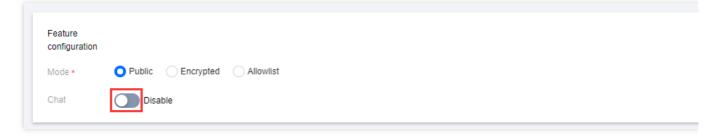




2. Live Stream Interactive Comments

The live stream interactive comments feature is disabled by default. You can click

to enable this feature according to your actual business needs.



Note:

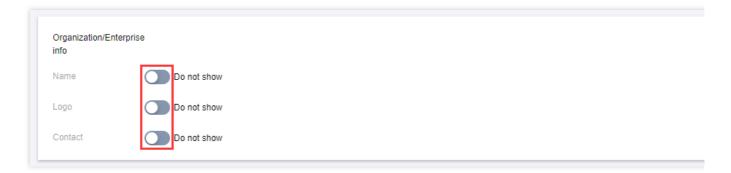
Live streaming room interactive chat, on-screen comments, and other interactive features are provided by Tencent Cloud IM. The default application is in the development version (the application name starts with "elvb_"), which is validfor one month. After expiration, you can go to the IM console to renew or upgrade the version at any time, according to subsequent business needs.

Organization/Enterprise info

The operational configuration information is disabled by default. You can click



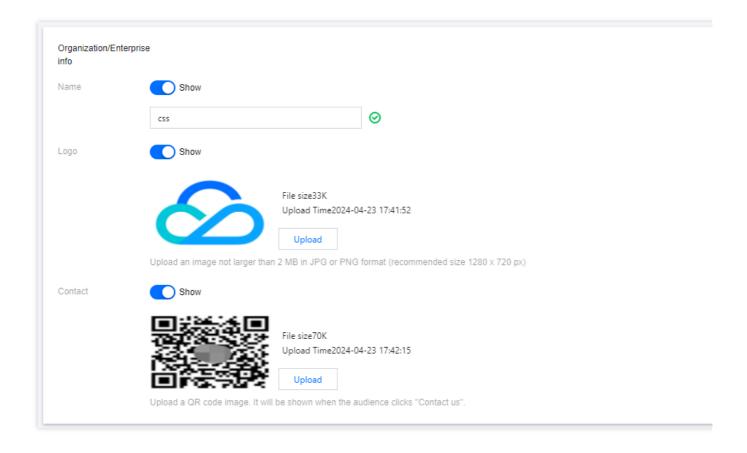
to activate it according to your actual business needs.



Name: Please enter the name of the organization or enterprise, no more than 60 characters.

Logo: Click **Upload** to set an organization or enterprise's logo. We recommend a JPG or PNG image with the resolution of 1280*720px, of 2 M or smaller.

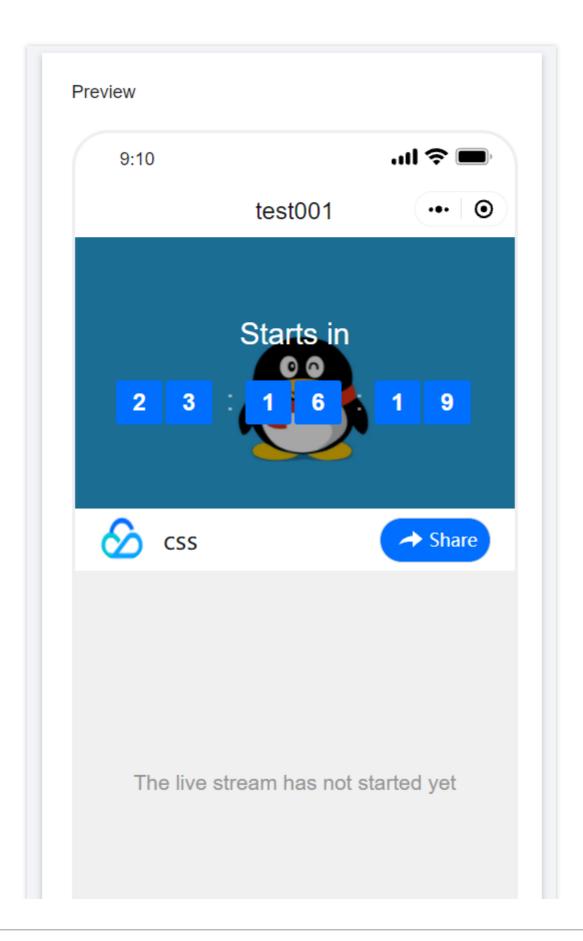
Contact: Click **Upload** to set a QR code for the audience. When an audience clicks **Contact us**, this QR code will pop u p on the interface.



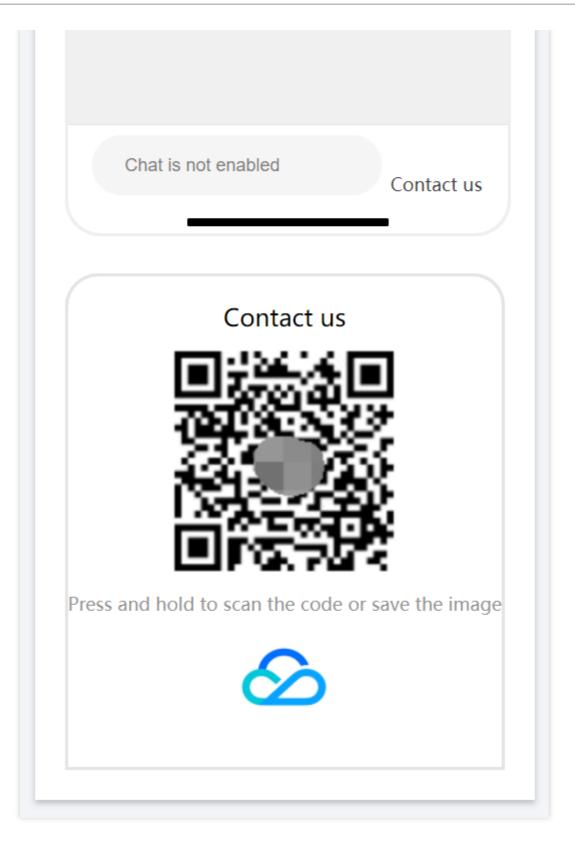
Configuration Preview



1. When modifying relevant live room configurations, you can instantly view the effects **through Configuration** Preview on the right.







2. After confirming the preview, click **Save**, and commence the live streaming as needed.

Note:

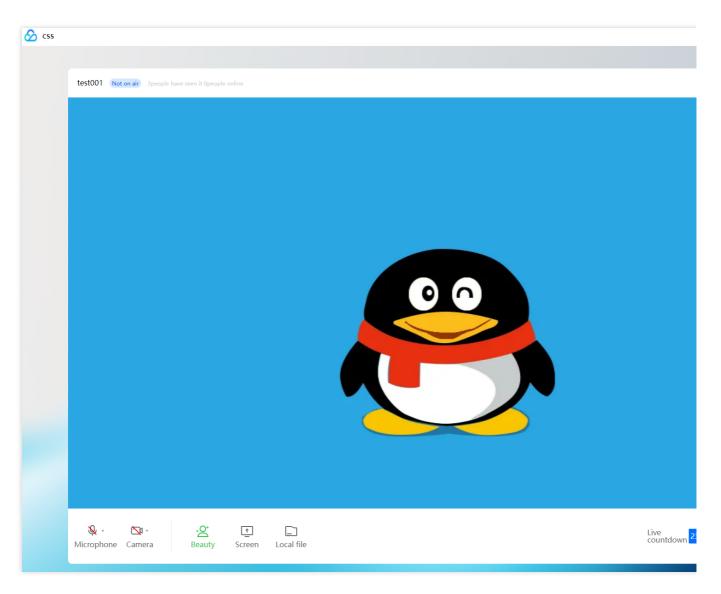
The configuration will take approximately one minute to take effect after it has been completed.

Host Side



When the Host Is Not Live

1. Even if the live streaming start time has not yet arrived, you can start your live stream in advance. Just click on **Go live** at the bottom-right corner.

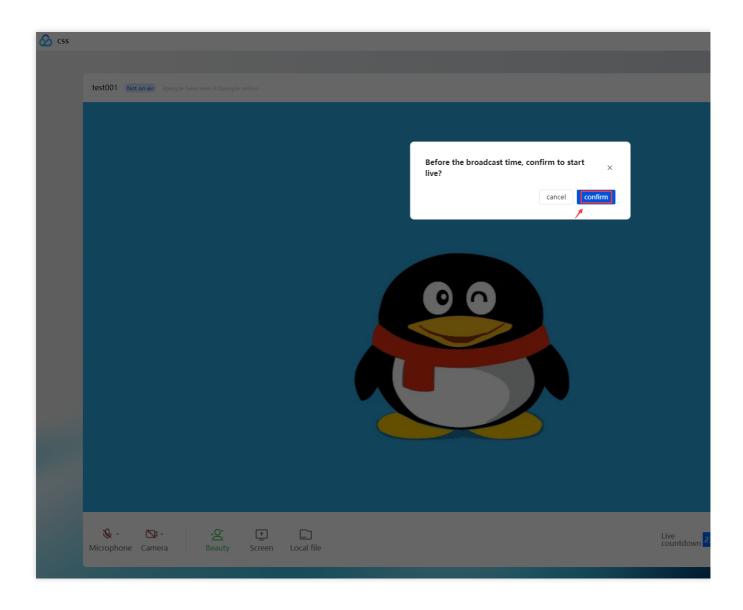


Note:

The live streaming countdown refers to the time difference between the start time of the live stream and the current time.

2. To confirm that you want to start the live stream in advance, click **confirm** in the prompt box and commence the live stream.

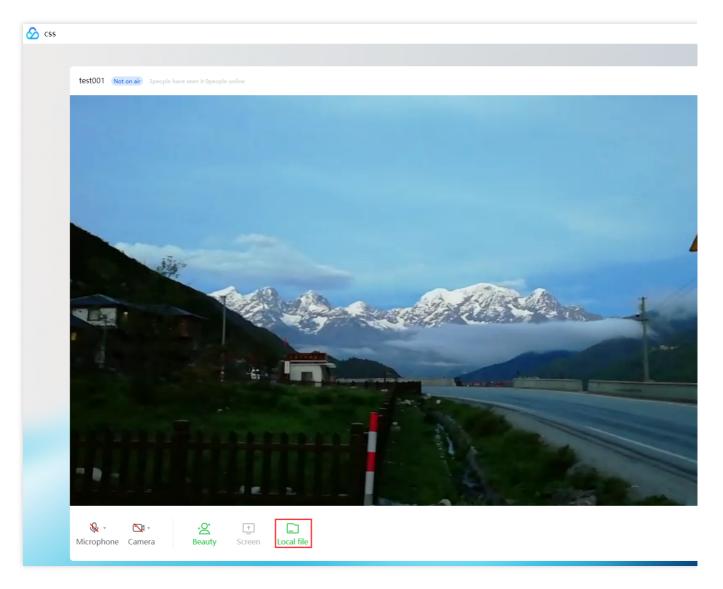




During the Host's Live Stream

- 1. When the web platform is used to conduct a live stream, the WebRTC stream publishing protocol is employed (it is the only protocol supported on the web platform).
- 2. You can conduct live streaming through a camera, screen sharing, local files, and so on. Click the **Go live** button and the system will commence streaming. Here's an example of how to live stream through uploading a video from local files:
- 2.1 On the webpage, select **Local file** and choose the video file you want to upload. After the video is uploaded, click **Go live** to commence the live streaming. It's advised to perform a test in advance to ensure that the live room's settings and video quality meet your requirements.

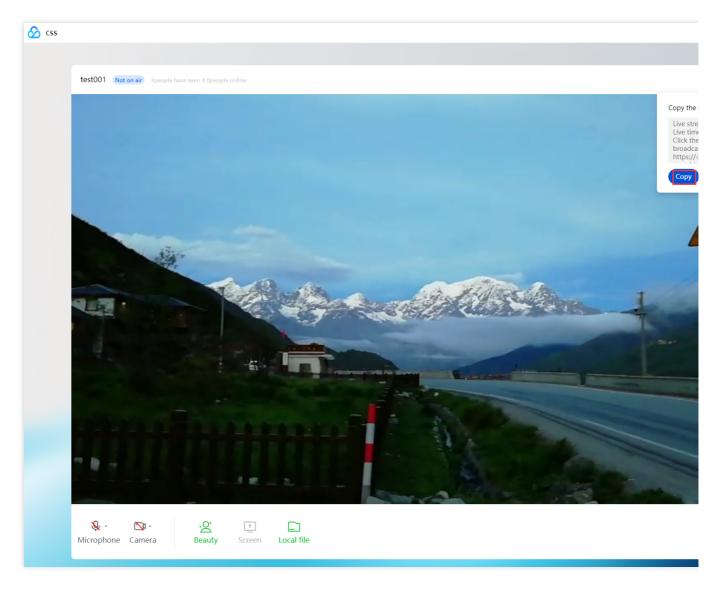




2.2 The host can click the

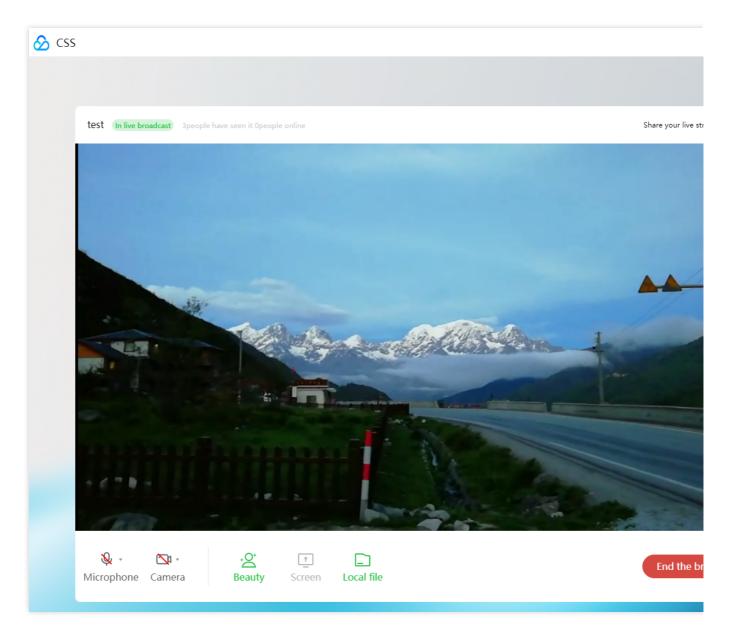
button in the top-right corner, click **Copy** (the live room's name, time, and URL) or **Download code**, and forward it to viewers. The shared link corresponds to the live stream room. The audience can watch the live stream by scanning the QR code shared by the host or visiting the link.





2.3 Once the official live stream concludes, the host can click **End the broadcast** to cease the live streaming.





Note:

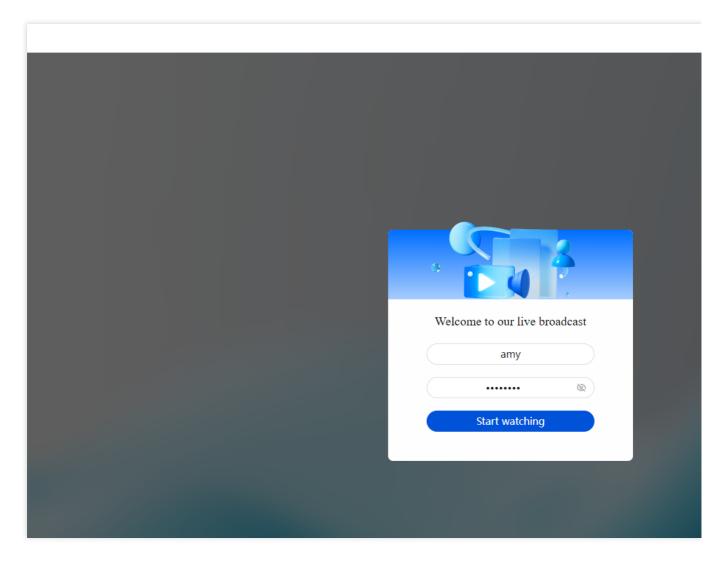
If the live room is deleted during the live streaming, the ongoing live streaming will not be interrupted.

Audience Side

When the Host Is Not Live

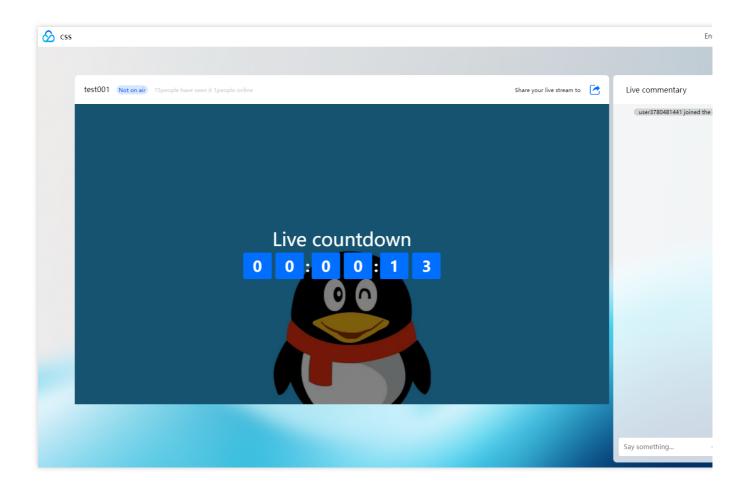
1. After visiting the viewing link shared by the host or management side, the audience can, by default, directly open and watch the live streaming. Should the host implement **Encrypted** or **Allowlist** viewing methods, the audience is required to enter verification information (nickname and password) in the pop-up verification bar. Only after successful verification can they proceed to open the live room.





2. When the host is not live, audience entering the live room can see the countdown timer to the live streaming, for them to know the start time of the live streaming.

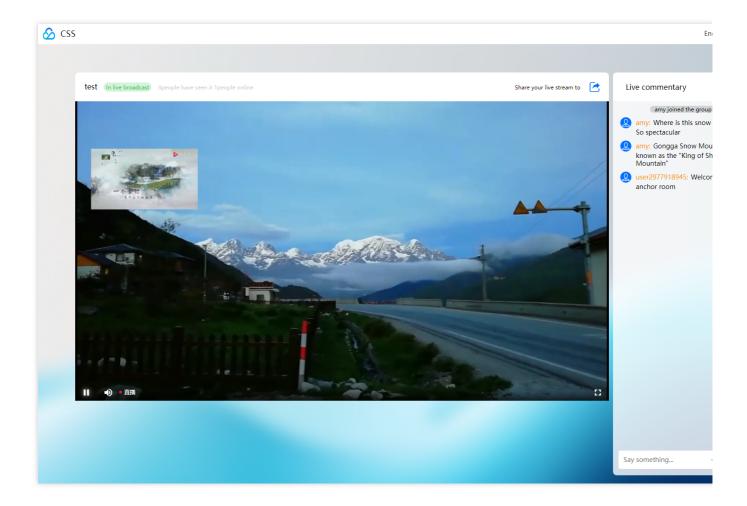




During the Host's Live Stream

After entering the live room, audience can watch the live stream, view and post comments.

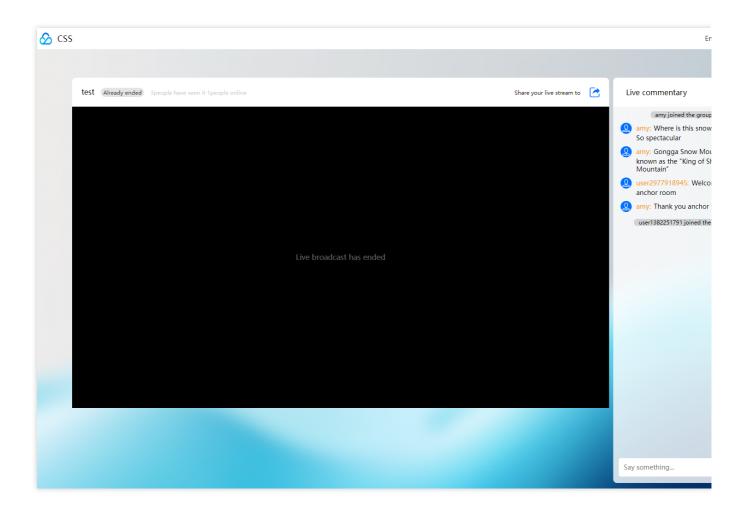




End of Live Stream

The live room can still be opened, and the viewers can continue to view and post comments.







CAM-Based Access Control

Last updated: 2023-10-07 14:53:42

CSS supports permission control via CAM, allowing you to manage access to your CSS domains, settings, and other data. You can create, manage, or terminate users or user groups and grant API access permissions to them to achieve identity management and policy control.

You can use CAM to bind a user or user group to a policy which allows or denies them access to specified resources to complete specified tasks.

Concepts

Root account: A Tencent Cloud account

Sub-user: A user created and fully owned by a root account.

Collaborator: You can add another root account as a collaborator to your account. The added account becomes a sub-account of your account.

User group: Users that perform the same functions and can be bound with a permission policy for centralized access management.

Note

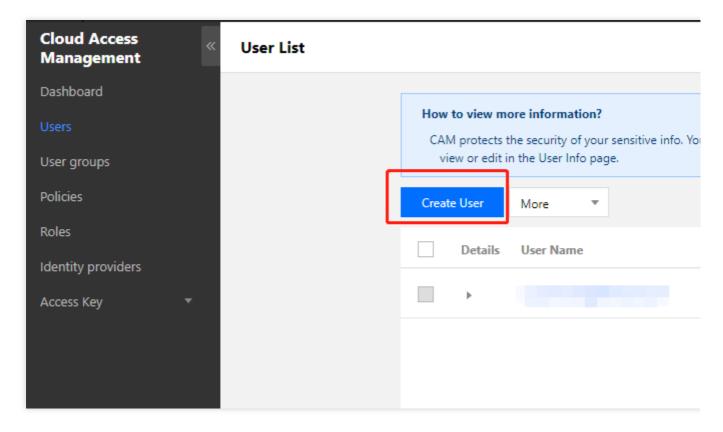
For more information on the concepts and permissions, see User Types.

Directions

Step 1. Create a sub-user or user group

One or more sub-users can be created under each root account and can be associated with specific roles and policies. A sub-user has a unique ID and identity credential that can be used to log in to the Tencent Cloud console. It also has API access. You can log in to the CAM console to create a sub-user.





Note

For detailed directions, see Creating Sub-user and Creating User Group.

Step 2. Add a policy to the sub-user or user group

You can associate policies on the user/user group management page or policy management page. For detailed directions, see Authorization Management.

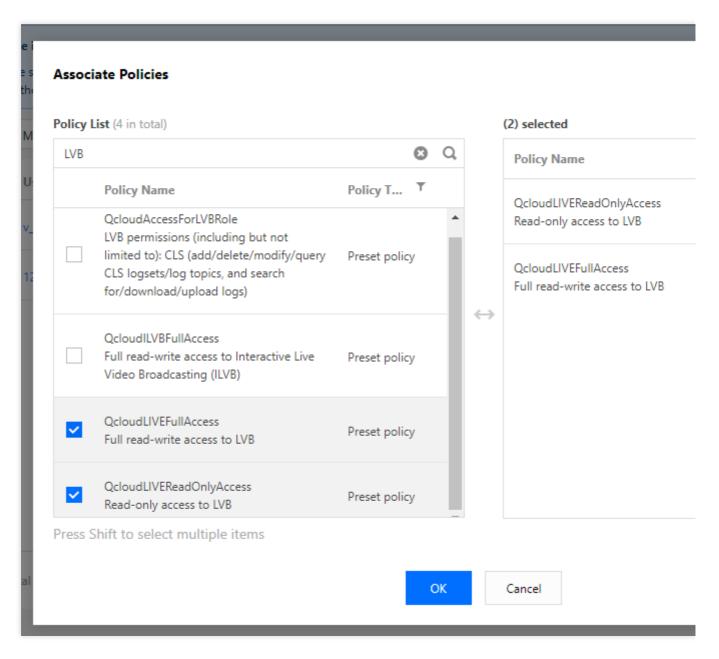
Method 1. Add a policy to a sub-user or user group

Method 2. Associate a policy with a user/user group

Go to the user/user group page and select the user/user group to which you want to add a policy.

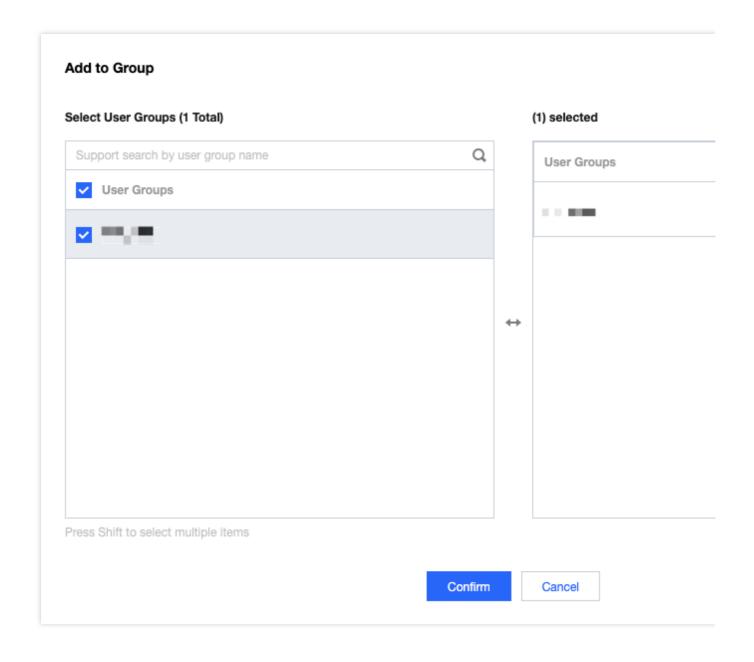
Select **Users** > **User List** or **User Groups** on the left sidebar of the CAM console. Find the user/user group to which you want to add a policy, click **Authorize** on the right, select a CSS policy, and click **OK**.



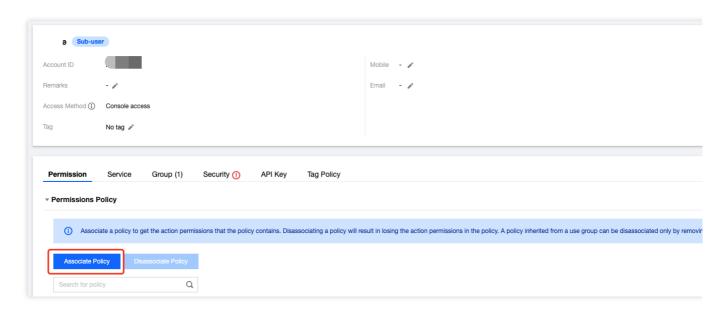


Select **Users** > **User List** or **User Groups** on the left sidebar and click the name of the user/user group to which you want to add a policy. Click **Associate Policy**, select a CSS policy, and click **OK**.



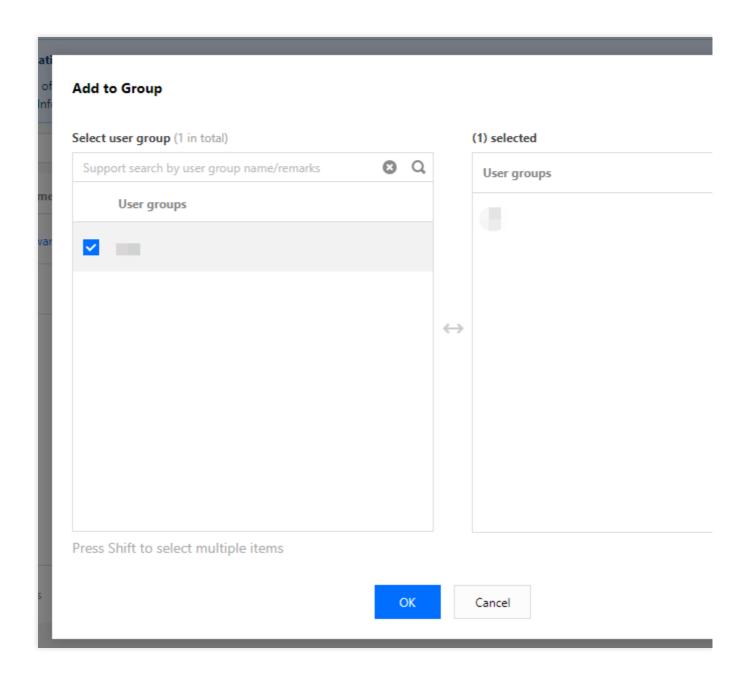






Select **Policies** on the left sidebar of the CAM console, find the policy you want to associate, and click **Associate User/User Group/Role** in the **Operation** column. Select the user/user group you want to associate the policy with, and click **OK**.





Addable policies

Preset policies: You can view all preset policies on the **Policies** page.

CSS preset policies include QcloudLIVEFullAccess (read and write policy) and QcloudLIVEReadOnlyAccess (read-only policy).

For a user to use tags, you need to associate QcloudTAGFullAccess (full read and write access by tag).

For a user to use real-time logs, associate QcloudCamFullAccess (full read/write access to CAM).

To use the screenshot & porn detection feature, associate QcloudAccessFoLVBRoleInSaveLiveScreenshottoCOS with your CSS service role to grant it access to COS.

Custom policy: Go to the **Policies** page, click **Create Custom Policy**, and select **Create by Policy Generator**. For more information, see Custom Policy.

Note



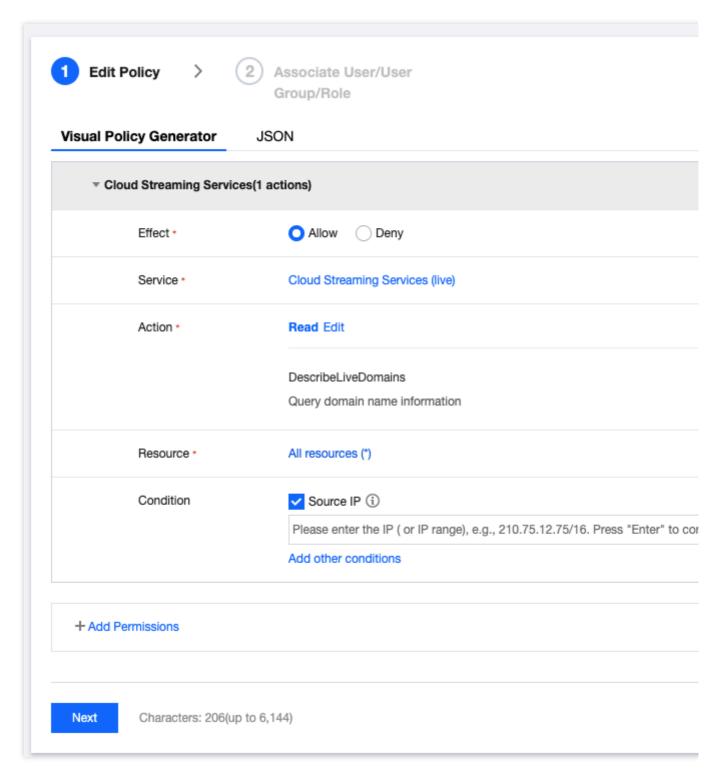
Currently, some APIs of CSS support resource-level authorization.

Example: If you want to allow a sub-user to use the **DescribeLiveDomains** API, follow the steps below to grant the permission.

1.1 Create a domain-level policy that allows access to the API: Go to the **Create by Policy Generator** page and complete the following settings:

Item	Required	Setting
Effect	Yes	Select Allow
Service	Yes	Select Cloud Streaming Services
Action	Yes	Select DescribeLiveDomains
Resource	Yes	Select all resources or specific resources. Tencent Cloud services for which the authorization granularity is operation or service don't support six-segment resource descriptions; for them, select "All resources". For Tencent Cloud services that support resource-level authorization, you can select specific resources. For the resource description method and authorization granularity of Tencent Cloud services, see CAM-Enabled Products.
Condition	No	Set the condition for the authorization to take effect. If you enter IP addresses, the API will be accessible only if a request is from the specified IP range. You can also add other conditions. For more information, see Conditions.



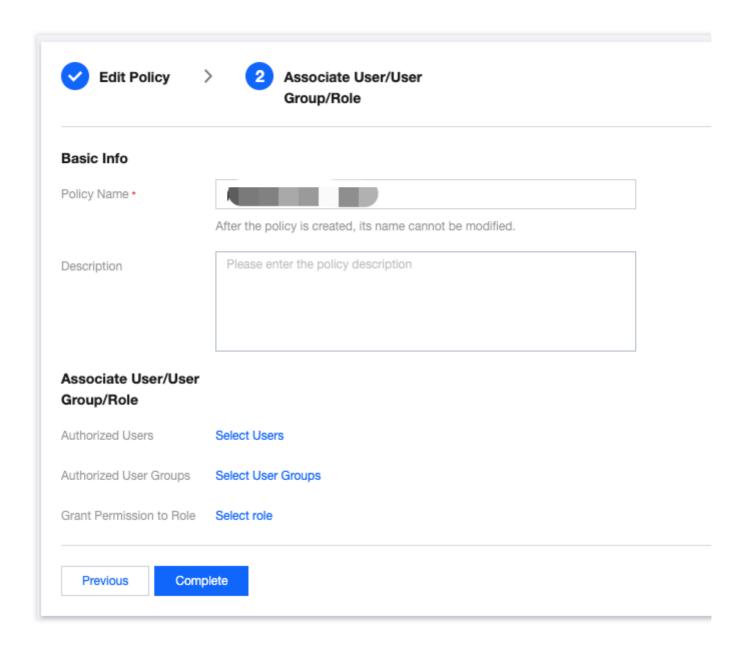


Caution

If you want to authorize multiple services, click **Add Permissions**.

2. Click **Next** to generate the policy. Then, associate it using either of the two methods above.





Step 3. Use a sub-account

You can now use the sub-user's account (the account ID and password) to call the API authorized (such as <code>DescribeLiveDomains</code>) and get the corresponding CSS data (such as all the domains under the current account).