**Live**

# Cloud Live API Reference

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# Contents

# 1 Before You Start

## 1.1 Overview

Huawei Cloud Live helps you smoothly deliver livestreaming content to global audience with low latency.

This document describes how to use application programming interfaces (APIs) to perform operations on Live resources, such as transcoding, managing, and recording live video streams. For details about all supported operations, see **API Overview**.

If you plan to access Live through an API, ensure that you are familiar with Live concepts. For details, see **Service Overview**.

You can configure referer validation and access control lists (ACLs) on the Live console to determine who can and cannot access your content. Only users who meet the configured rules can play videos. For details, see **Access Control**.

## 1.2 API Calling

Live supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see **Calling APIs**.

## 1.3 Endpoints

An endpoint is the request address for calling an API. Endpoints vary depending on regions. For the endpoints of Live, see **Table 1-1**.

**Table 1-1** Live endpoints

| Region Name | Region | Endpoint |
|---|---|---|
| EU-Dublin | eu-west-101 | iam.myhuaweicloud.eu |

# 1.4 Constraints

The Live service sets a limit on the number of API calls to prevent service interruption caused by repeated API calls in a short period of time.

**Table 1-2** API request throttling

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| Domain name management | <ul><li>Creating a domain name</li><li>Querying domain names</li></ul> | 300 times/minute | 3000 times/minute |
| | <ul><li>Deleting a domain name</li><li>Modifying a domain name</li><li>Mapping domain names</li><li>Deleting a domain name mapping</li><li>Configuring the domain name IPv6 switch</li><li>Modifying the HLS configuration of a domain name</li><li>Querying HLS configurations of domain names</li></ul> | 100 times/minute | 1000 times/minute |
| | Querying IP address information | 5 times/second | 5 times/second |
| | <ul><li>Modifying the streaming domain name delay</li><li>Modifying origin pull settings</li></ul> | 30 times/minute | 100 times/minute |

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| | ● Querying the streaming domain name delay<br>● Querying origin pull settings | 30 times/minute | 300 times/minute |
| Transcoding template management | ● Creating a transcoding template<br>● Deleting a transcoding template<br>● Modifying a transcoding template<br>● Querying transcoding templates | 100 times/minute | 1000 times/minute |
| Stream management | ● Disabling a push stream<br>● Modifying the attribute of a disabled stream | 4000 times/minute | 12,000 times/minute |
| | ● Querying disabled streams<br>● Resuming a push stream | 3000 times/minute | 6000 times/minute |
| | Querying ongoing streams | 1000 times/minute | 2000 times/minute |

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| Notification management | <ul><li>Adding and modifying stream notification configurations</li><li>Querying stream notification configurations</li><li>Deleting stream notification configurations</li></ul> | 300 times/ minute | 3000 times/minute |
| Authentication | <ul><li>Configuring a referer validation ACL</li><li>Deleting a referer validation ACL</li><li>Querying referer validation ACLs</li><li>Querying IP ACLs</li><li>Modifying an IP ACL</li><li>Generating a signed URL</li></ul> | 300 times/ minute | 3000 times/minute |
| | Querying supported areas of a streaming domain name | 30 times/minute | 300 times/minute |
| | Modifying supported areas of a streaming domain name | 30 times/minute | 100 times/minute |

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| | • Querying the URL validation configuration of a specified domain name<br>• Modifying the URL validation configuration of a specified domain name<br>• Deleting the URL validation configuration of a specified domain name | 150 times/minute | 300 times/minute |
| Snapshot management | • Creating a snapshot capturing template<br>• Modifying a snapshot capturing template<br>• Querying snapshot capturing templates<br>• Deleting a snapshot capturing template | 150 times/minute | 300 times/minute |
| Log management | Obtaining livestreaming logs | 300 times/minute | 3000 times/minute |

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| Recording management | ● Creating a recording template<br>● Querying recording templates<br>● Modifying a recording template<br>● Deleting a recording template<br>● Querying recording template configurations<br>● Submitting a recording command | 300 times/ minute | 3000 times/minute |
| | Creating a video recording index | 1200 times/ minute | 3000 times/minute |
| Recording callback management | ● Creating a recording callback<br>● Querying recording callbacks<br>● Modifying a recording callback<br>● Querying recording callbacks<br>● Deleting a recording callback | 300 times/ minute | 300 times/minute |

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| HTTPS certificate management | ● Modifying the HTTPS certificate configuration of a specified domain name<br><br>● Querying the HTTPS certificate configuration of a specified domain name<br><br>● Deleting the HTTPS certificate configuration of a specified domain name | 150 times/ minute | 300 times/minute |
| OBS bucket management | Granting or canceling authorization of accessing OBS buckets | 150 times/ minute | 300 times/minute |
| Statistical analysis | ● Querying the duration of transcoded outputs<br><br>● Querying the number of recording channels<br><br>● Querying the number of snapshots<br><br>● Querying playback profiles | 60 times/minute | 5000 times/minute |

| API Category | API Name | Max. User Requests | Max. API Requests |
|---|---|---|---|
| | <ul><li>Querying the peak bandwidth</li><li>Querying the total playback traffic</li><li>Querying HTTP status codes</li><li>Querying upstream bandwidth</li><li>Querying the number of stream push channels</li><li>Querying historical streams</li></ul> | 20 times/minute | 5000 times/minute |
| | Querying the distribution of livestreaming metrics by region | 50 times/second | 150 times/second |
| Stream analytics | <ul><li>Querying the stream frame rate</li><li>Querying the stream bitrate</li></ul> | 20 times/minute | 5000 times/minute |
| | Querying stream analytics | Once per second | 5 times/second |
| | Querying CDN upstream streaming quality data | 60 times/second | 300 times/second |

# 1.5 Concepts

- Account

  A domain is created upon successful registration. The domain has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used to perform routine management. For security

purposes, create IAM users and grant them permissions for routine management.

- IAM user

  An IAM user is created using an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).

  An IAM user can view the account ID and user ID on the My Credentials page of the console. The domain name, username, and password will be required for API authentication.

- Region

  A region is a physical location where cloud resources are deployed. Availability zones (AZs) in the same region can communicate with each other over an intranet but AZs in different regions cannot communicate with each other. For low network latency and quick resource access, select the nearest region. The choice of regions may also be subject to legal compliance requirements.

- AZ

  An AZ is one or more physical data centers within a region. It has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, compute, networking, storage, and other resources are logically divided into multiple clusters. AZs within a region are connected using high-speed optical fibers for high availability.

- Project

  Projects group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. For more refined access control, create subprojects under a project and purchase resources in the subprojects. Users can then be assigned permissions to access only specific resources in the subprojects.

**Figure 1-1** Project isolating model
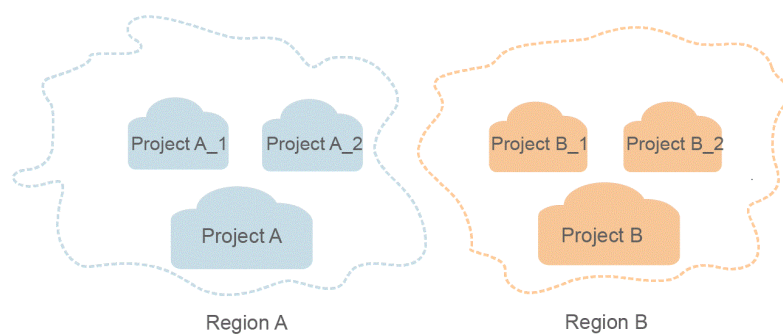
# 2 API Overview

The following tables list the Live APIs. Before calling a Live API, obtain a user token. The obtained token can then be used to authenticate the calling of other APIs. For details about how to call a Live API, see **Example 1: Creating a Transcoding Template**.

## Domain Name Management APIs

**Table 2-1** Domain name management APIs

| API | Description |
| --- | --- |
| POST /v1/{project_id}/domain | **Creating a Domain Name** |
| DELETE /v1/{project_id}/domain | **Deleting a Domain Name** |
| PUT /v1/{project_id}/domain | **Modifying a Domain Name** |
| GET /v1/{project_id}/domain | **Querying Domain Names** |
| PUT /v1/{project_id}/ domains_mapping | **Mapping Domain Names** |
| DELETE /v1/{project_id}/ domains_mapping | **Deleting a Domain Name Mapping** |
| PUT /v1/{project_id}/domain/ipv6-switch | **Configuring the Domain Name IPv6 Switch** |
| GET /v1/{project_id}/cdn/ip-info | **Querying IP Address Information** |
| PUT /v1/{project_id}/domain/delay | **Modifying the Streaming Domain Name Delay** |
| GET /v1/{project_id}/domain/delay | **Querying the Streaming Domain Name Delay** |
| PUT /v1/{project_id}/domain/hls | **Modifying the HLS Configuration of a Domain Name** |

| API | Description |
|---|---|
| GET /v1/{project_id}/domain/hls | **Querying HLS Configurations of Domain Names** |
| PUT /v1/{project_id}/domain/pull-sources | **Modifying Origin Pull Settings** |
| GET /v1/{project_id}/domain/pull-sources | **Querying Origin Pull Settings** |

## Transcoding Template Management APIs

**Table 2-2** Transcoding template management APIs

| API | Description |
|---|---|
| POST /v1/{project_id}/template/transcodings | **Creating a Transcoding Template** |
| DELETE /v1/{project_id}/template/transcodings | **Deleting a Transcoding Template** |
| PUT /v1/{project_id}/template/transcodings | **Modifying a Transcoding Template** |
| GET /v1/{project_id}/template/transcodings | **Querying Transcoding Templates** |

## Stream Management APIs

**Table 2-3** Stream management APIs

| API | Description |
|---|---|
| POST /v1/{project_id}/stream/blocks | **Disabling a Push Stream** |
| GET /v1/{project_id}/stream/blocks | **Querying Disabled Streams** |
| DELETE /v1/{project_id}/stream/blocks | **Resuming a Push Stream** |
| PUT /v1/{project_id}/stream/blocks | **Modifying the Attribute of a Disabled Stream** |
| GET /v1/{project_id}/realtime/streams | **Querying Ongoing Streams** |

## Notification Management APIs

**Table 2-4** Notification management APIs

| API | Description |
|-----|-------------|
| PUT /v1/{project_id}/notifications/ publish | **Adding and Modifying Stream Notification Configurations** |
| GET /v1/{project_id}/notifications/ publish | **Querying Stream Notification Configurations** |
| DELETE /v1/{project_id}/notifications/ publish | **Deleting Stream Notification Configurations** |

## Access Control APIs

**Table 2-5** Access control APIs

| API | Description |
|-----|-------------|
| PUT /v1/{project_id}/guard/referer-chain | **Configuring a Referer Validation ACL** |
| DELETE /v1/{project_id}/guard/referer-chain | **Deleting a Referer Validation ACL** |
| GET /v1/{project_id}/guard/referer-chain | **Querying Referer Validation ACLs** |
| GET /v1/{project_id}/guard/ip | **Querying IP Address ACLs** |
| PUT /v1/{project_id}/guard/ip | **Modifying an IP Address ACL** |
| POST /v1/{project_id}/auth/chain | **Generating a Signed URL** |
| GET /v1/{project_id}/domain/geo-blocking | **Querying Supported Areas of a Streaming Domain Name** |
| PUT /v1/{project_id}/domain/geo-blocking | **Modifying Supported Areas of a Streaming Domain Name** |
| GET /v1/{project_id}/guard/key-chain | **Querying the URL Validation Configuration of a Specified Domain Name** |
| PUT /v1/{project_id}/guard/key-chain | **Modifying the URL Validation Configuration of a Specified Domain Name** |
| DELETE /v1/{project_id}/guard/key-chain | **Deleting the URL Validation Configuration of a Specified Domain Name** |

## Snapshot Management APIs

**Table 2-6** Snapshot management APIs

| API | Description |
|---|---|
| POST /v1/{project_id}/stream/snapshot | **Creating a Snapshot Capturing Template** |
| PUT /v1/{project_id}/stream/snapshot | **Modifying a Snapshot Capturing Template** |
| GET /v1/{project_id}/stream/snapshot | **Querying Snapshot Capturing Templates** |
| DELETE /v1/{project_id}/stream/snapshot | **Deleting a Snapshot Capturing Template** |

## Log Management APIs

**Table 2-7** Log management APIs

| API | Description |
|---|---|
| GET /v1/{project_id}/logs | Obtaining Livestreaming Logs |

## Recording APIs

**Table 2-8** Recording APIs

| API | Description |
|---|---|
| POST /v1/{project_id}/record/rules | **Creating a Recording Template** |
| GET /v1/{project_id}/record/rules | **Querying Recording Templates** |
| PUT /v1/{project_id}/record/rules/{id} | **Modifying a Recording Template** |
| DELETE /v1/{project_id}/record/rules/{id} | **Deleting a Recording Template** |
| GET /v1/{project_id}/record/rules/{id} | **Querying Recording Template Configurations** |
| POST /v1/{project_id}/record/control | **Submitting a Recording Command** |
| POST /v1/{project_id}/record/indexes | **Creating a Video Recording Index** |

## Recording Callback Management APIs

**Table 2-9** Recording callback management APIs

| API | Description |
|---|---|
| POST /v1/{project_id}/record/callbacks | **Creating a Recording Callback** |
| GET /v1/{project_id}/record/callbacks | **Querying Recording Callbacks** |
| PUT /v1/{project_id}/record/callbacks/{id} | **Modifying a Recording Callback** |
| GET /v1/{project_id}/record/callbacks/{id} | **Querying Recording Callbacks** |
| DELETE /v1/{project_id}/record/callbacks/{id} | **Deleting a Recording Callback** |

## HTTPS Certificate Management APIs

**Table 2-10** HTTPS certificate management APIs

| API | Description |
|---|---|
| PUT /v1/{project_id}/guard/https-cert | **Modifying the HTTPS Certificate Configuration of a Specified Domain Name** |
| GET /v1/{project_id}/guard/https-cert | **Querying the HTTPS Certificate Configuration of a Specified Domain Name** |
| DELETE /v1/{project_id}/guard/https-cert | **Deleting the HTTPS Certificate Configuration of a Specified Domain Name** |

## OBS Bucket Management APIs

**Table 2-11** OBS bucket management APIs

| API | Description |
|---|---|
| PUT /v1/{project_id}/obs/authority | **Granting or Canceling Authorization of Accessing OBS Buckets** |

## Statistics Analysis APIs

**Table 2-12** Statistics analysis APIs

| API | Description |
| --- | --- |
| GET /v2/{project_id}/stats/bandwidth/peak | **Querying Peak Bandwidth** |
| GET /v2/{project_id}/stats/traffic/summary | **Querying Total Traffic** |
| GET /v2/{project_id}/stats/httpcodes | **Querying HTTP Status Codes for Pulling Live Streams** |
| GET /v2/{project_id}/stats/transcode | **Querying the Duration of Transcoded Outputs** |
| GET /v2/{project_id}/stats/record | **Querying the Number of Recording Channels** |
| GET /v2/{project_id}/stats/snapshot | **Querying the Number of Snapshots** |
| GET /v2/{project_id}/stats/up-bandwidth/detail | **Querying Upstream Bandwidth** |
| GET /v2/{project_id}/stats/stream-count | **Querying the Number of Stream Push Channels** |
| GET /v2/{project_id}/stats/history/streams | **Querying Historical Streams** |
| GET /v2/{project_id}/stats/stream-portraits | **Querying Playback Profiles** |
| GET /v2/{project_id}/stats/area/detail | **Querying the Distribution of Livestreaming Metrics by Region** |

## Stream Analytics APIs

**Table 2-13** Stream analytics APIs

| API | Description |
| --- | --- |
| GET /v2/{project_id}/stats/stream/framerate | **Querying the Stream Frame Rate** |
| GET /v2/{project_id}/stats/stream/bitrate | **Querying the Stream Bitrate** |
| GET /v2/{project_id}/stats/stream-detail | **Querying Stream Push Monitoring Data** |

| API | Description |
|---|---|
| GET /v2/{project_id}/stats/up-stream/detail | **Querying CDN Upstream Streaming Quality Data** |

# 3 Calling APIs

## 3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for **creating an IAM User** as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

### Request URI

A request URI is in the following format:

**{URI-scheme}://{Endpoint}/{resource-path}?{query-string}**

Although a request URI is included in the request header, most programming languages or frameworks require the request URI to be transmitted separately.

**Table 3-1** URI parameter description

| Parameter | Description |
|---|---|
| URI-scheme | Protocol used to transmit requests. All APIs use HTTPS. |
| Endpoint | Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from Regions and Endpoints. |
| | For example, the endpoint of IAM in region **Dublin** is **iam.myhuaweicloud.eu**. |
| resource-path | Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the **resource-path** of the API used to obtain a user token is **/v3/ auth/tokens**. |

| Parameter | Description |
|---|---|
| query-string | Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of *Parameter name=Parameter value*. For example, **? limit=10** indicates that a maximum of 10 data records will be displayed. |

IAM is a global service. You can create an IAM user using the endpoint of IAM in any region. For example, to create an IAM user in the **EU-Dublin** region, obtain the endpoint of IAM (**iam.myhuaweicloud.eu**) for this region and the **resource-path** (**/v3.0/OS-USER/users**) in the URI of the API for **creating an IAM user**. Then construct the URI as follows:

https://iam.myhuaweicloud.eu/v3.0/OS-USER/users

📖 **NOTE**

> To simplify the URI display in this document, each API is provided only with a **resource-path** and a request method. The **URI-scheme** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

## Request Methods

The HTTP protocol defines the following request methods that can be used to send a request to the server.

**Table 3-2** HTTP methods

| Method | Description |
|---|---|
| GET | Requests the server to return specified resources. |
| PUT | Requests the server to update specified resources. |
| POST | Requests the server to add resources or perform special operations. |
| DELETE | Requests the server to delete specified resources, for example, an object. |
| HEAD | Same as GET except that the server must return only the response header. |
| PATCH | Requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created. |

For example, in the case of the API for **creating an IAM user**, the request method is **POST**. An example request is as follows:

POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users

## Request Header

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Common request header fields are as follows.

**Table 3-3** Common request header fields

| Parameter | Description | Mandatory | Example Value |
|---|---|---|---|
| Host | Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of *Hostname:Port number*. If the port number is not specified, the default port is used. The default port number for **https** is **443**. | No<br>This field is mandatory for AK/SK authentication. | code.test.com<br>or<br>code.test.com:443 |
| Content-Type | Specifies the type (or format) of the message body. The default value **application/json** is recommended. Other values of this field will be provided for specific APIs if any. | Yes | application/json |
| Content-Length | Specifies the length of the request body. The unit is byte. | No | 3495 |
| X-Project-Id | Specifies the project ID. Obtain the project ID by following the instructions in **Obtaining a Project ID**. | No<br>This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario. | e9993fc787d94b6c886cbaa340f9c0f4 |

| Parameter | Description | Mandatory | Example Value |
|---|---|---|---|
| X-Auth-Token | Specifies the user token.<br><br>It is a response to the API for **obtaining a user token** (This is the only API that does not require authentication).<br><br>After the request is processed, the value of **X-Subject-Token** in the response header is the token value. | No<br><br>This field is mandatory for token authentication. | The following is part of an example token:<br><br>MIIPAgYJKoZIhvc NAQcCo...ggg1B BIINPXsidG9rZ |

📖 **NOTE**

In addition to supporting authentication using tokens, APIs support authentication using AK/SK, which uses SDKs to sign a request. During the signature, the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added in the request.

For more details, see "Authentication Using AK/SK" in **Authentication**.

The following shows an example request of the API for **creating an IAM user** when AK/SK authentication is used:

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=***************, SignedHeaders=content-type;host;x-sdk-date,
Signature=****************
```

## (Optional) Request Body

This part is optional. A request body is generally sent in a structured format (for example, JSON or XML), which is specified by **Content-Type** in the request header. It is used to transfer content other than the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies depending on APIs. Certain APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

The following shows an example request (a request body included) of the API for **creating an IAM user**. You can learn about request parameters and related description from this example. The bold parameters need to be replaced for a real request.

- **accountid**: account ID of an IAM user
- **username**: name of an IAM user
- **email**: email of an IAM user
- **password**: login password of an IAM user

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
```

```
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=***************, SignedHeaders=content-type;host;x-sdk-date,
Signature=****************

{
    "user": {
        "domain_id": "accountid",
        "name": "username",
        "password": "**********",
        "email": "email",
        "description": "IAM User Description"
    }
}
```

If all data required for the API request is available, you can send the request to call the API through **curl**, **Postman**, or coding. In the response to the API used to obtain a user token, **X-Subject-Token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

# 3.2 Authentication

Requests for calling an API can be authenticated using either of the following methods:

- AK/SK authentication: Requests are encrypted using AK/SK pairs. AK/SK authentication is recommended because it is more secure than token authentication.
- Token authentication: Requests are authenticated using tokens.

## AK/SK Authentication

☐ NOTE

AK/SK authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token authentication is recommended.

In AK/SK authentication, AK/SK is used to sign requests and the signature is then added to the requests for authentication.

- AK: access key ID, which is a unique identifier used in conjunction with a secret access key to sign requests cryptographically.
- SK: secret access key, which is used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK authentication, you can use an AK/SK to sign requests based on the signature algorithm or using the signing SDK. For details about how to sign requests and use the signing SDK, see **API Request Signing Guide**.

☐ NOTE

The signing SDK is only used for signing requests and is different from the SDKs provided by services.

## Token Authentication

📖 **NOTE**

> The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API. You can obtain a token by calling the **Obtaining User Token** API.

IMS is a project-level service. When you call the API, set **auth.scope** in the request body to **project**.

```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",   // IAM user name
                    "password": $ADMIN_PASS, //IAM user password. You are advised to store it in ciphertext in
the configuration file or an environment variable and decrypt it when needed to ensure security.
                    "domain": {
                        "name": "domainname"  // Name of the account to which the IAM user belongs
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxx"    // Project name
            }
        }
    }
}
```

After a token is obtained, the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
POST https://iam.myhuaweicloud.eu/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

# 3.3 Response

## Status Code

After sending a request, you will receive a response, including a status code, response header, and response body.

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see **Status Codes**.

For example, if status code **201** is returned for calling the API used to **create an IAM user**, the request is successful.

## Response Header

Similar to a request, a response also has a header, for example, **Content-Type**.

**Figure 3-1** shows the response header fields for the API used to **create an IAM user**. The **X-Subject-Token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

📖 NOTE

For security purposes, you are advised to set the token in ciphertext in configuration files or environment variables and decrypt it when using it.

**Figure 3-1** Header fields of the response to the request for creating an IAM user

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_____null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

## (Optional) Response Body

The body of a response is often returned in a structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The response body transfers content except the response header.

The following is part of the response body for the API used to **create an IAM user**.

```
{
    "user": {
        "id": "c131886aec...",
        "name": "IAMUser",
        "description": "IAM User Description",
        "areacode": "",
        "phone": "",
        "email": "***@***.com",
        "status": null,
        "enabled": true,
        "pwd_status": false,
        "access_mode": "default",
        "is_domain_owner": false,
        "xuser_id": "",
        "xuser_type": "",
        "password_expires_at": null,
        "create_time": "2024-05-21T09:03:41.000000",
        "domain_id": "d78cbac1..........",
        "xdomain_id": "30086000........",
        "xdomain_type": "",
        "default_project_id": null
    }
}
```

If an error occurs during API calling, an error code and a message will be displayed. The following shows an error response body.

```
{
   "error_msg": "The request message format is invalid.",
   "error_code": "IMG.0001"
}
```

In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

# 4 Examples

## 4.1 Example 1: Creating a Transcoding Template

This section describes how to call Live APIs to create a transcoding template.

**Involved APIs**

To use token-based authentication, **obtain a user token** and add **X-Auth-Token** to the request header of the service API when making an API request.

**Procedure**

**Step 1** **Obtain a user token** and use it to authenticate the calling of Live APIs.

For details, see **Making an API Request**. **CN North-Beijing4** is used as an example. If you need to call a Live API in another region, replace the endpoint with the IAM endpoint of the region.

```
POST https://iam.cn-north-4.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "password",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "projectname"
      }
    }
  }
}
```

```
    }
  }
}
```

As shown in **Figure 4-1**, information in the red box indicates the user token.

**Figure 4-1** Obtaining the user token



**Step 2** Select the POST request method and enter the request URI.

POST https://**live.cn-north-4.myhuaweicloud.com**/v1/{project_id}/template/transcodings

**live.cn-north-4.myhuaweicloud.com** is the endpoint of Live. You can obtain the endpoint from **Endpoints**.

> **NOTE**
>
> The region where an IAM API is called must be the same as the region where a Live API is called. For example, the user token obtained when you call an IAM API in the **CN North-Beijing4** region can only be used to authenticate the requests for calling Live APIs in the **CN North-Beijing4** region.

**Step 3** In the request header, add **X-Auth-Token** and set its value to be the token obtained in **Step 1**.

**Step 4** Add the following parameters to the request message body. For more information about the parameters, see the API for **creating a transcoding template**.

```
{
  "domain": "play.example.com",
  "app_name": "live",
  "quality_info":
  [
    {
      "templateName": "",
      "quality": "lsd",
      "hdlb": "off",
      "PVC": "off",
      "codec": "H264",
      "width": 854,
      "height": 480,
      "bitrate": 600,
      "video_frame_rate": 0,
      "protocol": "HLS",
      "iFrameInterval": 0
```

```
    }
  ]
}
```

If the request succeeds, only a status code 201 Created is returned.

If the request fails, the following error code and error description are returned along with a status code 400 Bad Request:

```
"error_code": "LIVE.100011001",
"error_msg": "Failed to verify template settings."
```

**----End**

# 4.2 Example 2: Creating a Recording Template

## Scenario

If you want to record a livestream and store the recordings in OBS, you can call an API to configure a recording template.

This section describes how to configure a recording template by calling an API.

## Prerequisites

- You have determined the region where the streaming domain name for which the recording template needs to be configured is located and obtained the endpoint of the region from .
- You have obtained the project ID of the region where the streaming domain name is located. For details, see **Obtaining a Project ID**.

## Overall Process

- **Obtain the Streaming Domain Name**
- **Configure a Recording Template**

## Procedure

**Step 1** Log in to the Live console and obtain the target streaming domain name.

**Step 2** **Obtain a user token** and use it to authenticate the calling of Live APIs.

For details, see **Making an API Request**. **CN North-Beijing4** is used as an example. If you need to call a Live API in another region, replace the endpoint with the IAM endpoint of the region.

```
POST https://iam.cn-north-4.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
```

```
        "password": "password",
        "domain": {
          "name": "domainname"
        }
      }
    }
  },
  "scope": {
    "project": {
      "name": "projectname"
    }
  }
 }
}
```

As shown in **Figure 4-2**, information in the red box indicates the user token.

**Figure 4-2** Obtaining the user token



**Step 3** Call the API for **creating a recording template** to configure recording parameters.

1.  Select the POST request method and enter the request URI.
    https://{**endpoint**}/v1/{**project_id**}/record/rules

2.  In the request header, add **X-Auth-Token** and set its value to be the token obtained in **Step 2**.

3.  Specify the following parameters in the request body:

```
{
  "publish_domain" : "publish.example.com",
  "app" : "live",
  "stream" : "*",
  "record_type" : "CONTINUOUS_RECORD",
  "default_record_config" : {
    "record_format" : [ "HLS", "FLV" ],
    "hls_config" : {
      "record_cycle" : 3600,
      "record_prefix" : "Record/{publish_domain}/{app}/{record_type}/{record_format}/
{stream}_{file_start_time}/{file_start_time}",
      "record_ts_prefix" : "{file_start_time_unix}-{file_end_time_unix}-{ts_sequence_number}",
      "record_slice_duration" : 10,
      "record_max_duration_to_merge_file" : 0
    },
    "flv_config" : {
      "record_cycle" : 9000,
      "record_prefix" : "Record/{publish_domain}/{app}/{record_format}/{stream}_{file_start_time}/
{file_start_time}",
```

```
      "record_max_duration_to_merge_file" : 0
    },
    "obs_addr" : {
      "bucket" : "mybucket",
      "location" : "cn-north-4",
      "object" : "record/"
    }
  }
}
```

4.    If the request succeeds, only a status code 201 Created is returned.

**Step 4**    Start pushing a stream. The stream will be recorded and the recording will be saved in OBS. For details about how to obtain the recording, see **Managing Recordings**.

**----End**

# 4.3 Example 3: Disabling a Livestream

## Scenario

If live content is non-compliant or the ingest URL has been used by unauthorized users, you can call an API to disable the livestream to protect your content.

This section describes how to disable a livestream by calling an API.

## Prerequisites

- You have determined the region where the ingest domain name for which a livestream needs to be disabled is located and obtained the endpoint of the region from .

- You have obtained the project ID of the region where the ingest domain name is located. For details, see **Obtaining a Project ID**.

## Overall Process

- **Obtain information about the livestream to be disabled**.
- **Disable the livestream**.
- **Query disabled streams**.

## Procedure

**Step 1**    Log in to the Live console and choose **Streaming** > **Streams** to obtain information about the livestream to be disabled, including the ingest domain name, **App Name**, and **Stream Name**.

**Step 2**    **Obtain a user token** and use it to authenticate the calling of Live APIs.

For details, see **Making an API Request**. **CN North-Beijing4** is used as an example. If you need to call a Live API in another region, replace the endpoint with the IAM endpoint of the region.

```
POST https://iam.cn-north-4.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
{
  "auth": {
```

```
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "password",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "projectname"
    }
    }
  }
 }
}
```

As shown in **Figure 4-3**, information in the red box indicates the user token.

**Figure 4-3** Obtaining the user token



cache-control →  no-cache, no-store, must-revalidate

connection →  keep-alive

content-length →  15185

content-type →  application/json; charset=UTF-8

date →  Wed, 29 May 2019 08:02:38 GMT

expires →  Thu, 01 Jan 1970 00:00:00 GMT

pragma →  no-cache

server →  api-gateway

strict-transport-security →  max-age=31536000; includeSubdomains;

via →  proxy A

x-content-type-options →  nosniff

x-download-options →  noopen

x-frame-options →  SAMEORIGIN

x-iam-trace-id →  token_global_null_2fed19b42067d0b94ae73dbe0b8b7841

x-request-id →  fd8e4d01ae9caf9f58af20cbdb2c88e2

x-subject-token
→  MIIYdwYJKoZIhvcNAQcCoIIYaDCCGGQCAQExDTAL8gIghkgBZQMEAgEwghbFBgkqhkiG9w0BBwGggha2BIIWsnsidG9rZW4iOnsiZXhwaXJlc19hdCI6IjIwMTktMDUtMzBUMDg6MDI6MzguNTgxMDAwWiIslm1IdGhvZHMiOlsicGFzc3dvcmQiXSwiY2F0YWxvZy
wN-yN0wpSwyRGtY3upfYOauVL-E275QpmEOPG4qKzPx4Yeo2Hr8ZdFptB6AZt-
RGdroWLe95InegpR0PGK9zgbuRiWYATdQL3xGxVvC1Um8XJADnwO2TWxgbmzrPiwFBvhP3F20TK4v9XhxWHUxH2yfo+KScgsXHAzv6VURCIWMdV+UeESwZo7vB22C77p2B9d8Isyb3oQoZmTyrIaupZf6U4PX2J+rW4aplwEszdvrRQLLYOzxinGG3Af

x-xss-protection →  1; mode=block;

**Step 3** Call the API for **disabling a push stream** and configure related parameters.

1.  Select the POST request method and enter the request URI.
    https://{**endpoint**}/v1/{**project_id**}/stream/blocks

2.  In the request header, add **X-Auth-Token** and set its value to be the token obtained in **2**.

3.  Specify the following parameters in the request body:
    ```
    {
      "domain" : "publish.example.huawei.com",
      "app_name" : "live",
      "stream_name" : "huawei",
      "resume_time" : "2020-05-19T21:10:15Z"
    }
    ```

    **resume_time** indicates the time when the stream is resumed. The format is yyyy-MM-ddThh:mm:ssZ (UTC time). If this parameter is not specified, the stream is permanently disabled.

4. If the request succeeds, only a status code 204 is returned.

**Step 4** Call the API for **querying disabled streams** to check whether the stream is included in the returned list.

1. Select the GET request method and enter the request URI.
   https://{*endpoint*}/v1/{*project_id*}/stream/blocks?
   domain=publish.example.huawei.com&app_name=live&stream_name=huawei

2. In the request header, add **X-Auth-Token** and set its value to be the token obtained in **2**.

3. View the queried stream information if the request succeeds.
```
{
  "total" : 1,
  "blocks" : [ {
    "app_name" : "live",
    "stream_name" : "huawei",
    "resume_time" : "2020-05-19T21:10:15Z"
  }
  ]
}
```

**----End**

# 5 Domain Name Management

## 5.1 Creating a Domain Name

### Function

This API is used to create a streaming domain name or ingest domain name. You can create up to 64 domain names.

### Calling Method

For details, see **Calling APIs**.

### URI

POST /v1/{project_id}/domain

**Table 5-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 5-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name. |
| domain_type | Yes | String | Domain name type.<br>● pull: Streaming domain name<br>● push: Ingest domain name |
| region | Yes | String | Live center to which a live streaming channel belongs. |
| service_area | No | String | Domain name acceleration area.<br>● mainland_china: Chinese mainland<br>● outside_mainland_china: Outside the Chinese mainland<br>● global: Global acceleration |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| enterprise_project_id | No | String | Enterprise project ID |

## Response Parameters

**Status code: 201**

**Table 5-4** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| domain | String | Domain name. |
| domain_type | String | Domain name type.<br>● pull: Streaming domain name<br>● push: Ingest domain name |
| domain_cname | String | CNAME record of the domain name. |
| region | String | Region where the origin server is |
| status | String | Status of the domain name. |
| create_time | String | Time when the domain name was created. The value is in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| status_describe | String | Status description. |
| service_area | String | Domain name acceleration area.<br>● mainland_china: Chinese mainland<br>● outside_mainland_china: Outside the Chinese mainland<br>● global: Global acceleration |
| enterprise_project_id | String | Enterprise project ID |

**Status code: 400**

**Table 5-5** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |

| Parameter | Type | Description |
|-----------|------|-------------|
| error_msg | String | Error description |

## Example Requests

Creates a streaming domain name. The domain name is **play.example.com**, an ingest domain name in CN North-Beijing4.

```
POST https://{endpoint}/v1/{project_id}/domain

{
  "domain" : "play.example.com",
  "domain_type" : "pull",
  "region" : "cn-north-4"
}
```

## Example Responses

**Status code: 201**

Domain name created.

```
{
  "domain" : "play.example.com",
  "domain_type" : "pull",
  "domain_cname" : "play.example.com.c.cdnhwc3.com",
  "region" : "region1",
  "status" : "configuring",
  "create_time" : "2020-01-19T02:57:00Z"
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 201 | Domain name created. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 5.2 Deleting a Domain Name

## Function

This API is used to delete a domain name. Only domain names in the **off** state can be deleted.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/domain

**Table 5-6** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-7** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name. |

## Request Parameters

**Table 5-8** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 5-9** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Deletes a domain name.

DELETE https://{endpoint}/v1/{project_id}/domain?domain=play.example.com

## Example Responses

**Status code: 400**

Failed to delete the domain name.

```
{
  "error_code" : "LIVE.103011022",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 204 | Domain name deleted. |
| 400 | Failed to delete the domain name. |

## Error Codes

See **Error Codes**.

# 5.3 Modifying a Domain Name

## Function

This API is used to modify details about a streaming domain name or an ingest domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domain

**Table 5-10** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-11** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 5-12** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name, which cannot be changed. |
| status | No | String | Status of the domain name. You can modify this parameter to enable or disable the domain name. You cannot enable or disable a domain name that is being configured. |
| enterprise_project_id | No | String | Enterprise project ID |

## Response Parameters

**Status code: 200**

**Table 5-13** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| domain | String | Domain name. |
| domain_type | String | Domain name type. <br> • pull: Streaming domain name <br> • push: Ingest domain name |
| domain_cname | String | CNAME record of the domain name. |
| region | String | Region where the origin server is |
| status | String | Status of the domain name. |
| create_time | String | Time when the domain name was created. The value is in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| status_describe | String | Status description. |

| Parameter | Type | Description |
|-----------|------|-------------|
| service_area | String | Domain name acceleration area.<br>● mainland_china: Chinese mainland<br>● outside_mainland_china: Outside the Chinese mainland<br>● global: Global acceleration |
| enterprise_project_id | String | Enterprise project ID |

**Status code: 400**

**Table 5-14** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Changes the status of a domain name to **Disabled**.

```
PUT https://{endpoint}/v1/{project_id}/domain

{
  "domain" : "play.example.com",
  "status" : "off"
}
```

## Example Responses

**Status code: 200**

Domain name modified.

```
{
  "domain" : "play.example.com",
  "domain_type" : "pull",
  "domain_cname" : "play.example.com.c.cdnhwc3.com",
  "region" : "region1",
  "status" : "off",
  "create_time" : "2020-01-19T02:57:00Z"
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Domain name modified. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 5.4 Querying a Domain Name

## Function

This API is used to query a domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/domain

**Table 5-15** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-16** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | No | String | Domain name. If this parameter is not specified, all domain names under your account are returned. |
| enterprise_project_id | No | String | Enterprise project ID. If this parameter is not specified, information about all domain names is returned. |

## Request Parameters

**Table 5-17** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 5-18** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| total | Number | Total number of records in the query result. |
| domain_info | Array of **DecoupledLiveDomainInfo** objects | Domain name list. |

**Table 5-19** DecoupledLiveDomainInfo

| Parameter | Type | Description |
|---|---|---|
| domain | String | Domain name. |
| domain_type | String | Domain name type. |

| Parameter | Type | Description |
|---|---|---|
| vendor | String | CDN vendor. |
| region | String | Region where the origin server is |
| domain_cname e | String | CNAME record of the domain name. |
| status | String | Status of the domain name. |
| related_domai n | String | Ingest domain name associated with the streaming domain name. This parameter is valid only when **domain_type** is set to **pull**. |
| create_time | String | Time when the domain name was created. The value is in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| status_describ e | String | Status description. |
| service_area | String | Domain name acceleration area.<br>● mainland_china: Chinese mainland<br>● outside_mainland_china: Outside the Chinese mainland<br>● global: Global acceleration |
| enterprise_pro ject_id | String | Enterprise project ID |
| is_ipv6 | Boolean | Specifies whether to enable the IPv6 function. **true** indicates that IPv6 is enabled, and **false** indicates that IPv6 is disabled or the value is empty. The default value is **false**. |

**Status code: 404**

**Table 5-20** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries domain names.

GET https://{endpoint}/v1/{project_id}/domain

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "total" : 2,
  "domain_info" : [ {
    "domain" : "play.example.huawei.com",
    "domain_type" : "pull",
    "vendor" : "uCDN",
    "domain_cname" : "play.example.huawei.com.c.cdnhwc3.com",
    "region" : "region1",
    "status" : "on",
    "related_domain" : "publish.example.huawei.com",
    "create_time" : "2020-01-19T02:57:00Z"
  }, {
    "domain" : "publish.example.huawei.com",
    "domain_type" : "push",
    "vendor" : "uCDN",
    "domain_cname" : "publish.example.huawei.com.c.cdnhwc3.com",
    "region" : "region1",
    "status" : "on",
    "related_domain" : "",
    "create_time" : "2020-01-19T02:58:00Z"
  } ]
}
```

**Status code: 404**

Query failed.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Query succeeded. |
| 404 | Query failed. |

## Error Codes

See **Error Codes**.

# 5.5 Mapping Domain Names

## Function

This API is used to map a streaming domain name and an ingest domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domains_mapping

**Table 5-21** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-22** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 5-23** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| pull_domain | Yes | String | Streaming domain name. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| push_domain | Yes | String | Ingest domain name associated with the streaming domain name. |

## Response Parameters

**Status code: 200**

**Table 5-24** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| pull_domain | String | Streaming domain name. |
| push_domain | String | Ingest domain name associated with the streaming domain name. |

**Status code: 404**

**Table 5-25** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Creates a domain name mapping. The streaming domain name is **play.example.com**, and the ingest domain name is **publish.example.com**.

```
PUT https://{endpoint}/v1/{project_id}/domains_mapping

{
  "pull_domain" : "play.example.com",
  "push_domain" : "publish.example.com"
}
```

## Example Responses

**Status code: 200**

Domain names mapped.

```
{
  "pull_domain" : "play.example.com",
  "push_domain" : "publish.example.com"
}
```

**Status code: 404**

Failed to map the domain names.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Domain names mapped. |
| 404 | Failed to map the domain names. |

## Error Codes

See **Error Codes**.

# 5.6 Deleting a Domain Name Mapping

## Function

This API is used to delete the mapping between a streaming domain name and an ingest domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/domains_mapping

**Table 5-26** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-27** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| pull_domain | Yes | String | Streaming domain name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| push_domain | Yes | String | Ingest domain name. |

## Request Parameters

**Table 5-28** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 5-29** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/domains_mapping?
pull_domain=play.example.huawei.com&push_domain=publish.example.huawei.com
```

## Example Responses

**Status code: 400**

Failed to delete the domain name mapping.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | The Live domain name mapping has been deleted. |
| 400 | Failed to delete the domain name mapping. |

## Error Codes

See **Error Codes**.

# 5.7 Configuring the Domain Name IPv6 Function

## Function

Configures the IPv6 function

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domain/ipv6-switch

**Table 5-30** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-31** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

**Table 5-32** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Domain name |
| is_ipv6 | No | Boolean | Specifies whether to enable the IPv6 function. **true** indicates that IPv6 is enabled, and **false** indicates that IPv6 is disabled. The default value is **false**. |

## Response Parameters

**Status code: 400**

**Table 5-33** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Changes IPv6 of a domain name. The domain name is **example.com**. IPv6 is enabled.

```
PUT https://{endpoint}/v1/{project_id}/domain/ipv6-switch

{
  "domain" : "example.com",
```

```
    "is_ipv6" : true
}
```

## Example Responses

**Status code: 400**

The parameter is incorrect.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | IPv6 has been configured. |
| 400 | The parameter is incorrect. |

## Error Codes

See **Error Codes**.

# 5.8 Querying IP Address Information

## Function

Queries the homing information of the IP address of a CDN PoP.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/cdn/ip-info

**Table 5-34** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-35** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| ip | Yes | Array | Specifies the list of IP addresses, which can contain up to 20 IP addresses. |

## Request Parameters

**Table 5-36** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 5-37** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| cdn_ips | Array of **CdnIp** objects | Specifies the homing information of IP addresses. |

**Table 5-38** CdnIp

| Parameter | Type | Description |
|---|---|---|
| ip | String | Specifies the IP address to be queried. |
| belongs | Boolean | Indicates whether the CDN PoP is on [Huawei Cloud](tag: hws).<br>● true: The CDN PoP is on [Huawei Cloud] (tag: hws).<br>● false: The CDN PoP is not on [Huawei Cloud](tag: hws). |
| region | String | Specifies the homing information of an IP address. **Unknown** indicates that the homing information is unknown. |
| isp | String | Specifies the carrier. If the homing information of the IP address is unknown, **null** is returned for this field. |
| platform | String | Platform name. If the platform name is unknown, null is returned for this field. |

**Status code: 400**

**Table 5-39** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 5-40** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

● Queries IP address home information. Format 1: IP addresses are concatenated by ampersands (&).

```
GET https://{endpoint}/v1/{project_id}/cdn/ip-info?ip=192.168.1.1&ip=192.168.1.2
```

- Queries IP address home information. Format 2: IP addresses are separated by commas (,).

```
GET https://{endpoint}/v1/{project_id}/cdn/ip-info?ip=192.168.1.1,192.168.1.2
```

## Example Responses

**Status code: 200**

Operation successful.

```
{
  "cdn_ips" : [ {
    "ip" : "192.168.1.1",
    "region" : "Sichuan",
    "platform" : null,
    "isp" : "Dianxin",
    "belongs" : true
  }, {
    "ip" : "192.168.1.2",
    "region" : "Unknown",
    "platform" : null,
    "isp" : null,
    "belongs" : false
  } ]
}
```

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 500**

Internal service error.

```
{
  "error_code" : "LIVE.100011005",
  "error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Operation successful. |
| 400 | Invalid parameter. |
| 500 | Internal service error. |

## Error Codes

See **Error Codes**.

# 5.9 Modifying the Streaming Domain Name Delay

## Function

Modifies the streaming domain name delay.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domain/delay

**Table 5-41** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-42** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 5-43** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domain | Yes | String | Streaming domain name. |
| app | No | String | Application name. The default value is **live**. |
| delay | Yes | Integer | Indicates the delay, in ms. The options are as follows:<br>• **2000** (low)<br>• **4000** (medium)<br>• **6000** (high) |

## Response Parameters

**Status code: 400**

**Table 5-44** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies the streaming domain name delay.

```
PUT https://{endpoint}/v1/{project_id}/domain/delay

{
  "play_domain" : "pull.example.test.com",
  "app" : "live",
  "delay" : 2000
}
```

## Example Responses

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Streaming domain name delay modified. |
| 400 | Invalid parameter. |

## Error Codes

See **Error Codes**.

# 5.10 Querying the Streaming Domain Name Delay

## Function

Queries the streaming domain name delay.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/domain/delay

**Table 5-45** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-46** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domain | Yes | String | Streaming domain name. |

## Request Parameters

**Table 5-47** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 5-48** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| play_domain | String | Streaming domain name. |
| delay_config | Array of **DelayConfig** objects | Live delay configuration. |

**Table 5-49** DelayConfig

| Parameter | Type | Description |
|---|---|---|
| app | String | Application name. The default value is **live**. |

| Parameter | Type | Description |
|-----------|------|-------------|
| delay | Integer | Indicates the delay, in ms.<br>The options are as follows:<br>● **2000** (low)<br>● **4000** (medium)<br>● **6000** (high) |

**Status code: 400**

**Table 5-50** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries the streaming domain name delay.

```
GET https://{endpoint}/v1/{project_id}/domain/delay?play_domain=pull.example.test.com
```

## Example Responses

**Status code: 200**

Streaming domain name delay queried.

```
{
  "play_domain" : "pull.example.test.com",
  "delay_config" : [ {
    "app" : "live",
    "delay" : 6000
  } ]
}
```

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Streaming domain name delay queried. |

| Status Code | Description |
|---|---|
| 400 | Invalid parameter. |

**Error Codes**

See **Error Codes**.

# 5.11 Modifying the HLS Configuration of a Domain Name

## Function

Modifies the HLS configuration of a domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domain/hls

**Table 5-51** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-52** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 5-53** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| push_domain | Yes | String | Ingest domain name |
| application | Yes | Array of **PushDomain Application** objects | Ingest domain name app configuration |

**Table 5-54** PushDomainApplication

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| name | No | String | App name. The default value is **live**. |
| hls_fragment | No | Integer | HLS segment duration, in second. |
| hls_ts_count | No | Integer | Number of TS segments in each M3U8 file |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| hls_min_frags | No | Integer | Minimum number of TS segments in each M3U8 file |

## Response Parameters

**Status code: 200**

**Table 5-55** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| push_domain | String | Ingest domain name |
| application | Array of **PushDomain Application** objects | Ingest domain name app configuration |

**Table 5-56** PushDomainApplication

| Parameter | Type | Description |
|---|---|---|
| name | String | App name. The default value is **live**. |
| hls_fragment | Integer | HLS segment duration, in second. |
| hls_ts_count | Integer | Number of TS segments in each M3U8 file |
| hls_min_frags | Integer | Minimum number of TS segments in each M3U8 file |

**Status code: 400**

**Table 5-57** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies the HLS configuration of a domain name.

```
PUT https://{endpoint}/v1/{project_id}/domain/hls
```

```
{
  "push_domain" : "push.example.com",
  "application" : [ {
    "name" : "live",
    "hls_fragment" : 2,
    "hls_ts_count" : 3,
    "hls_min_frags" : 3
  } ]
}
```

## Example Responses

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | HLS configuration of the domain name modified. |
| 400 | Invalid parameter. |

## Error Codes

See **Error Codes**.

# 5.12 Querying HLS Configurations of Domain Names

## Function

Queries HLS configurations of domain names.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/domain/hls

**Table 5-58** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-59** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| push_domain | Yes | String | Ingest domain name |

## Request Parameters

**Table 5-60** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 5-61** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| push_domain | String | Ingest domain name |
| application | Array of **PushDomain Application** objects | Ingest domain name app configuration |

**Table 5-62** PushDomainApplication

| Parameter | Type | Description |
|---|---|---|
| name | String | App name. The default value is **live**. |
| hls_fragment | Integer | HLS segment duration, in second. |
| hls_ts_count | Integer | Number of TS segments in each M3U8 file |
| hls_min_frags | Integer | Minimum number of TS segments in each M3U8 file |

**Status code: 400**

**Table 5-63** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries HLS configurations of domain names.

GET https://{endpoint}/v1/{project_id}/domain/hls?push_domain=push.example.com

## Example Responses

**Status code: 200**

HLS configurations of domain names queried.

```
{
  "push_domain" : "push.example.com",
  "application" : [ {
    "name" : "live",
    "hls_fragment" : 2,
    "hls_ts_count" : 3,
    "hls_min_frags" : 3
```

```
  }]
}
```

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | HLS configurations of domain names queried. |
| 400 | Invalid parameter. |

## Error Codes

See **Error Codes**.

# 5.13 Modifying Origin Pull Settings

## Function

Modifies origin pull settings. Only RTMP and FLV domain names are supported.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domain/pull-sources

**Table 5-64** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 5-65** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 5-66** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domain | Yes | String | Streaming domain name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| source_type | Yes | String | Origin pull method.<br><br>The options are as follows:<br><br>● **domain**: Origin pull from the customer's origin server. The origin server address is in the domain name format. Multiple domain names for origin pull can be configured. If origin pull fails, domain names are polled based on the configured sequence until origin pull succeeds.<br><br>● **ipaddr**: Origin pull from the customer's origin server. The origin server address is in the IP address format. Multiple IP addresses for origin pull can be configured. If origin pull fails, IP addresses are polled based on the configured sequence until origin pull succeeds. A maximum of one domain name for origin pull can be configured. During origin pull, set the header of **httpflv HOST** and the **RTMP tcurl** field to the configured domain name, respectively. Otherwise, the current IP address is used as the **HOST**.<br><br>● **huawei**: Origin pull from the Huawei origin server. The default value after the domain name is created is used. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| sources | No | Array of strings | Domain names for origin pull. A maximum of 10 domain names are allowed.<br><br>● This parameter is mandatory when the value is **domain**. If multiple domain names are configured and origin pull fails, domain names are polled based on the configured sequence until origin pull succeeds.<br><br>● A maximum of one domain name for origin pull can be configured when the value is **ipaddr**. During origin pull, set the header of **httpflv HOST** and the **RTMP tcurl** field to the configured domain name, respectively. Otherwise, the current IP address is used as the **HOST**. |
| sources_ip | No | Array of strings | IP addresses for origin pull. A maximum of 10 IP addresses are allowed. This parameter is mandatory when the value is **ipaddr**. If multiple IP addresses are configured and origin pull fails, IP addresses are polled based on the configured sequence until origin pull succeeds. |
| source_port | No | Integer | Origin pull port. |
| scheme | No | String | Origin pull protocol. This parameter is mandatory when the origin pull method is not **huawei**.<br><br>The options are as follows:<br>● http<br>● rtmp |
| additional_args | No | Map<String,String> | Parameter carried in the URL for origin pull from the customer's origin server. |

## Response Parameters

**Status code: 400**

**Table 5-67** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies origin pull settings. Only RTMP and FLV domain names are supported.

```
PUT https://{endpoint}/v1/{project_id}/domain/pull-sources

{
  "play_domain" : "pull.example.test.com",
  "source_type" : "domain",
  "sources" : [ "example1.test.com", "example2.test.com" ],
  "scheme" : "http",
  "additional_args" : {
    "key1" : "value1",
    "key2" : "value2"
  }
}
```

## Example Responses

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Origin pull settings modified. |
| 400 | Invalid parameter. |

## Error Codes

See **Error Codes**.

# 5.14 Querying Origin Pull Settings

## Function

Queries origin pull settings. Only RTMP and FLV domain names are supported.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/domain/pull-sources

**Table 5-68** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 5-69** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| play_domain | Yes | String | Streaming domain name. |

## Request Parameters

**Table 5-70** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 5-71** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| play_domain | String | Streaming domain name. |
| source_type | String | Origin pull method.<br><br>● **domain**: Origin pull from the customer's origin server. The origin server address is in the domain name format. Multiple domain names for origin pull can be configured. If origin pull fails, domain names are polled based on the configured sequence until origin pull succeeds.<br><br>● **ipaddr**: Origin pull from the customer's origin server. The origin server address is in the IP address format. Multiple IP addresses for origin pull can be configured. If origin pull fails, IP addresses are polled based on the configured sequence until origin pull succeeds. A maximum of one domain name for origin pull can be configured. During origin pull, set the header of **httpflv HOST** and the **RTMP tcurl** field to the configured domain name, respectively. Otherwise, the current IP address is used as the **HOST**.<br><br>● **huawei**: Origin pull from the Huawei origin server. The default value after the domain name is created is used. |

| Parameter | Type | Description |
|---|---|---|
| sources | Array of strings | Domain names for origin pull. A maximum of 10 domain names are allowed.<br><br>● This parameter is mandatory when the value is **domain**. If multiple domain names are configured and origin pull fails, domain names are polled based on the configured sequence until origin pull succeeds.<br><br>● A maximum of one domain name for origin pull can be configured when the value is **ipaddr**. During origin pull, set the header of **httpflv HOST** and the **RTMP tcurl** field to the configured domain name, respectively. Otherwise, the current IP address is used as the **HOST**. |
| sources_ip | Array of strings | IP addresses for origin pull. A maximum of 10 IP addresses are allowed. This parameter is mandatory when the value is **ipaddr**. If multiple IP addresses are configured and origin pull fails, IP addresses are polled based on the configured sequence until origin pull succeeds. |
| source_port | Integer | Origin pull port. |
| scheme | String | Origin pull protocol. This parameter is mandatory when the origin pull method is not **huawei**. |
| additional_args | Map<String,String> | Parameter carried in the URL for origin pull from the customer's origin server. |

**Status code: 400**

**Table 5-72** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries origin pull settings. Only RTMP and FLV domain names are supported.

```
GET https://{endpoint}/v1/{project_id}/domain/pull-sources?play_domain=pull.example.test.com
```

## Example Responses

**Status code: 200**

Origin pull settings queried.

```
{
  "play_domain" : "pull.example.test.com",
  "source_type" : "domain",
  "sources" : [ "example1.test.com", "example2.test.com" ],
  "scheme" : "http",
  "additional_args" : {
    "key1" : "value1",
    "key2" : "value2"
  }
}
```

**Status code: 400**

Invalid parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Origin pull settings queried. |
| 400 | Invalid parameter. |

## Error Codes

See **Error Codes**.

# 6 Notification Management

## 6.1 Adding and Modifying Stream Notification Configurations

### Function

Adds and modifies stream notification configurations.

### Calling Method

For details, see **Calling APIs**.

### URI

PUT /v1/{project_id}/notifications/publish

**Table 6-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 6-2** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Ingest domain name. |

## Request Parameters

**Table 6-3** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

**Table 6-4** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| url | Yes | String | Callback URL. |
| auth_sign_key | No | String | Authentication key. |
| call_back_area | No | String | Area where the server for receiving callback notifications is located. The options are as follows: <br> • **mainland_china**: Chinese mainland <br> • **outside_mainland_china**: outside the Chinese mainland |

## Response Parameters

**Status code: 400**

**Table 6-5** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

PUT https://{endpoint}/v1/{project_id}/notifications/publish?domain=push.example.com

```
{
  "url" : "https://endpoint.com/v1/test"
}
```

## Example Responses

**Status code: 400**

Modify the stream notification configuration failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Stream notification configuration modified. |
| 201 | Stream notification configuration added. |
| 400 | Modify the stream notification configuration failed. |

## Error Codes

See **Error Codes**.

# 6.2 Querying Stream Notification Configurations

## Function

Queries stream notification configurations.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/notifications/publish

**Table 6-6** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 6-7** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |

## Request Parameters

**Table 6-8** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

## Response Parameters

**Status code: 200**

**Table 6-9** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| url | String | Callback URL. |
| auth_sign_key | String | Authentication key. |
| call_back_area | String | Area where the server for receiving callback notifications is located. The options are as follows: <br>● **mainland_china**: Chinese mainland<br>● **outside_mainland_china**: outside the Chinese mainland |

**Status code: 400**

**Table 6-10** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |

| Parameter | Type | Description |
|-----------|------|-------------|
| error_msg | String | Error description |

## Example Requests

GET https://{endpoint}/v1/{project_id}/notifications/publish?domain=push.example.com

## Example Responses

**Status code: 200**

Stream notification configurations queried.

```
{
  "url" : "https://endpoint.com/v1/test"
}
```

**Status code: 400**

Query stream notification configurations failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Stream notification configurations queried. |
| 400 | Query stream notification configurations failed. |

## Error Codes

See **Error Codes**.

# 6.3 Deleting a Stream Notification Configuration

## Function

Deletes a stream notification configuration.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/notifications/publish

**Table 6-11** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 6-12** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |

## Request Parameters

**Table 6-13** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

## Response Parameters

**Status code: 400**

**Table 6-14** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

DELETE https://{endpoint}/v1/{project_id}/notifications/publish?domain=push.example.com

## Example Responses

**Status code: 400**

Delete the stream notification configuration failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 204 | Stream notification configuration deleted. |
| 400 | Delete the stream notification configuration failed. |

## Error Codes

See **Error Codes**.

# 7 Authentication Management

## 7.1 Configuring a Referer Validation ACL

### Function

You can configure a referer validation access control list (ACL), based on which Live will identify and filter access requests of users. Only qualified users can access the content.

### Calling Method

For details, see **Calling APIs**.

### URI

PUT /v1/{project_id}/guard/referer-chain

**Table 7-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 7-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 7-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Domain name |
| guard_switch | Yes | String | Whether to enable referer validation. **true**: enable; **false**: disable. |
| referer_config _empty | No | String | Whether the referer header is included. **true**: included; **false**: not included. This parameter is mandatory when **guard_switch** is set to **true**. |
| referer_white_ list | No | String | Whether it is a referer whitelist. **true**: whitelist; **false**: blacklist. This parameter is mandatory when **guard_switch** is set to **true**. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| referer_auth_list | No | Array of strings | Domain name list. Each domain name is a regular expression. A maximum of 100 domain names can be included and separated by semicolons (;). This parameter is mandatory when **guard_switch** is set to **true**. |

## Response Parameters

**Status code: 400**

**Table 7-4** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

```
PUT https://{endpoint}/v1/{project_id}/guard/referer-chain

{
  "domain" : "play.example.huawei.com",
  "guard_switch" : "true",
  "referer_config_empty" : "true",
  "referer_white_list" : "false",
  "referer_auth_list" : [ "^http://test.*com$", "abc.com" ]
}
```

## Example Responses

**Status code: 400**

Configuring the referer validation ACL failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Referer validation ACL configured. |

| Status Code | Description |
|---|---|
| 400 | Configuring the referer validation ACL failed. |

### Error Codes

See **Error Codes**.

# 7.2 Deleting a Referer Validation ACL

## Function

Deletes a referer validation ACL.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/guard/referer-chain

**Table 7-5** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-6** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name |

## Request Parameters

**Table 7-7** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 7-8** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

DELETE https://{endpoint}/v1/{project_id}/guard/referer-chain?domain=play.example.huawei.com

## Example Responses

**Status code: 400**

Deleting the referer validation ACL failed.

```
{
  "error_code" : "LIVE.100011001",
```

```
"error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Referer validation ACL deleted. |
| 400 | Deleting the referer validation ACL failed. |

## Error Codes

See **Error Codes**.

# 7.3 Querying Referer Validation ACLs

## Function

Queries referer validation ACLs.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/guard/referer-chain

**Table 7-9** Path Parameters

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-10** Query Parameters

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| domain | Yes | String | Streaming domain name |

## Request Parameters

**Table 7-11** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 7-12** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| domain | String | Domain name |
| guard_switch | String | Whether to enable referer validation. **true**: enable; **false**: disable. |
| referer_config _empty | String | Whether the referer header is included. **true**: included; **false**: not included. This parameter is mandatory when **guard_switch** is set to **true**. |
| referer_white_ list | String | Whether it is a referer whitelist. **true**: whitelist; **false**: blacklist. This parameter is mandatory when **guard_switch** is set to **true**. |

| Parameter | Type | Description |
|---|---|---|
| referer_auth_list | Array of strings | Domain name list. Each domain name is a regular expression. A maximum of 100 domain names can be included and separated by semicolons (;). This parameter is mandatory when **guard_switch** is set to **true**. |

**Status code: 400**

**Table 7-13** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

GET https://{endpoint}/v1/{project_id}/guard/referer-chain?domain=play.example.huawei.com

## Example Responses

**Status code: 200**

Referer validation ACLs queried.

```
{
  "domain" : "play.example.huawei.com",
  "guard_switch" : "true",
  "referer_config_empty" : "true",
  "referer_white_list" : "false",
  "referer_auth_list" : [ "^http://test.*com$", "abc.com" ]
}
```

**Status code: 400**

Querying referer validation ACLs failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Referer validation ACLs queried. |
| 400 | Querying referer validation ACLs failed. |

## Error Codes

See **Error Codes**.

# 7.4 Querying IP Address ACLs

## Function

Queries the IP address blacklist or whitelist of an ingest or streaming domain name.

- Blacklist: Specified IP addresses or network segments are not allowed.
- Whitelist: Only specified IP addresses or network segments are allowed.
- Default: All IP addresses or network segments are allowed.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/guard/ip

**Table 7-14** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-15** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest or streaming domain name. |

## Request Parameters

**Table 7-16** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 7-17** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 7-18** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| domain | String | Ingest or streaming domain name. |

| Parameter | Type | Description |
|---|---|---|
| auth_type | String | Authentication mode. The options are as follows: <br>● **WHITE**: IP address whitelist authentication. <br>● **BLACK**: IP address blacklist authentication. <br>● **NONE**: No authentication is performed. |
| ip_auth_list | String | IP address blacklist. Use semicolons (;) to separate IP addresses, for example, 192.168.0.0;192.168.0.8. A maximum of 100 IP addresses are allowed. IP network segments can be added. For example, 127.0.0.1/24 indicates that the first 24 bits of a subnet mask are valid. That is, 8bit (32–24) is used to indicate the host ID. The subnet can contain 254 hosts (28 – 2). Therefore, 127.0.0.1/24 indicates that the IP network segment ranges from 127.0.0.1 to 127.0.0.255. |

**Status code: 400**

**Table 7-19** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 7-20** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

GET https://{endpoint}/v1/{project_id}/guard/ip?domain=play.example.huawei.com

# Example Responses

**Status code: 200**

IP address ACLs queried.

```
{
  "domain" : "play.example.huawei.com",
  "auth_type" : "WHITE",
  "ip_auth_list" : "192.168.0.0;192.168.0.8"
}
```

**Status code: 400**

Query IP address ACLs failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | IP address ACLs queried. |
| 400 | Query IP address ACLs failed. |

## Error Codes

See **Error Codes**.

# 7.5 Modifying an IP Address ACL

## Function

Modifies the IP address ACL of an ingest or streaming domain name. Currently, only IPv4 addresses are supported.

- Blacklist: Specified IP addresses or network segments are not allowed.
- Whitelist: Only specified IP addresses or network segments are allowed.
- Default: All IP addresses or network segments are allowed.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/guard/ip

**Table 7-21** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 7-22** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 7-23** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest or streaming domain name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| auth_type | Yes | String | Authentication mode.<br><br>The options are as follows:<br><br>● **WHITE**: IP address whitelist authentication.<br><br>● **BLACK**: IP address blacklist authentication.<br><br>● **NONE**: No authentication is performed. |
| ip_auth_list | Yes | String | IP address blacklist. Use semicolons (;) to separate IP addresses, for example, 192.168.0.0;192.168.0.8. A maximum of 100 IP addresses are allowed. IP network segments can be added. For example, 127.0.0.1/24 indicates that the first 24 bits of a subnet mask are valid. That is, 8bit (32–24) is used to indicate the host ID. The subnet can contain 254 hosts (28 – 2). Therefore, 127.0.0.1/24 indicates that the IP network segment ranges from 127.0.0.1 to 127.0.0.255. |

## Response Parameters

**Status code: 200**

**Table 7-24** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Status code: 400**

**Table 7-25** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 7-26** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

```
PUT https://{endpoint}/v1/{project_id}/guard/ip

{
  "domain" : "play.example.huawei.com",
  "auth_type" : "WHITE",
  "ip_auth_list" : "192.168.0.0/16;192.168.0.8"
}
```

## Example Responses

**Status code: 400**

Set the IP address blacklist failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | IP address blacklist set. |
| 400 | Set the IP address blacklist failed. |

## Error Codes

See **Error Codes**.

# 7.6 Generating a Signed URL

## Function

Generates a signed URL.

## Calling Method

For details, see **Calling APIs**.

## URI

POST /v1/{project_id}/auth/chain

**Table 7-27** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 7-28** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

**Table 7-29** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest or streaming domain name. |
| domain_type | Yes | String | Domain name type. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| stream | Yes | String | Stream name, which is the same as the *StreamName* in an ingest or streaming URL. |
| app | Yes | String | Application name, which is the same as the *AppName* in an ingest or streaming URL. |
| check_level | No | Integer | Signing method C is mandatory. Check level. The value of **LiveID** consists of *AppName* and *StreamName*, that is, *<app_name>/<stream_name>*. The options are as follows: <br> • **3**: The system checks only **LiveID** but not the validity of the signed URL. <br> • **5**: The system checks **LiveID** and the validity of **Timestamp**. |
| start_time | No | String | Start time of the valid access time defined by the user, for example, 2006-01-02T15:04:05Z07:00. If this parameter is not specified or is left empty, the current time is used. |

## Response Parameters

**Status code: 200**

**Table 7-30** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| keychain | Array of strings | Generated signed URLs. |

**Status code: 400**

**Table 7-31** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

```
POST /v1/{project_id}/auth/chain

{
  "domain" : "string",
  "domain_type" : "string",
  "stream" : "string",
  "app" : "string",
  "check_level" : 0,
  "start_time" : "string"
}
```

## Example Responses

**Status code: 200**

Signed URL obtained.

```
{
  "keychain" : [ "http://pull.domain.com/live/stream.flv?secret=xxx&time=ttt", "rtmp://pull.domain.com/live/
stream?secret=xxx&time=ttt" ]
}
```

**Status code: 400**

Obtain the signed URL failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Parameter verification failed."
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Signed URL obtained. |
| 400 | Obtain the signed URL failed. |

## Error Codes

See **Error Codes**.

# 7.7 Querying Supported Areas of a Streaming Domain Name

## Function

Queries supported areas of a streaming domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/domain/geo-blocking

**Table 7-32** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-33** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domain | Yes | String | Streaming domain name. |

## Request Parameters

**Table 7-34** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 7-35** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 7-36** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| play_domain | String | Streaming domain name. |
| apps | Array of **GeoBlocking ConfigInfo** objects | Applications. |

**Table 7-37** GeoBlockingConfigInfo

| Parameter | Type | Description |
|---|---|---|
| app | String | Application name. |

| Parameter | Type | Description |
|---|---|---|
| area_whitelist | Array of strings | List of supported areas. An empty list indicates no restriction.<br><br>The values of all region codes, except that of China, contain two uppercase letters. For the code format, see ISO 3166-1alpha-2<br><br>(https://www.iso.org/obp/ui/#search/code/).<br><br>Some options are as follows:<br>● **CN-IN**: Chinese mainland<br>● **CN-HK**: Hong Kong (China)<br>● **CN-MO**: Macao (China)<br>● **CN-TW**: Taiwan (China)<br>● **BR**: Brazil |

**Status code: 400**

**Table 7-38** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 7-39** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

GET https://{endpoint}/v1/{project_id}/domain/geo-blocking?play_domain=play.example.huawei.com

## Example Responses

**Status code: 200**

Supported areas queried.

```
{
  "play_domain" : "play.example.huawei.com",
```

```
"apps" : [ {
  "app" : "live,",
  "area_whitelist" : [ "CN-IN", "CN-HK", "CN-MO", "CN-TW", "BR" ]
 } ]
}
```

**Status code: 400**

Query supported areas failed.

```
{
 "error_code" : "LIVE.100011001",
 "error_msg" : "Request Illegal"
}
```

### Status Codes

| Status Code | Description |
|---|---|
| 200 | Supported areas queried. |
| 400 | Query supported areas failed. |

### Error Codes

See **Error Codes**.

# 7.8 Modifying Supported Areas of a Streaming Domain Name

## Function

Modifies supported areas of a streaming domain name to allow access from the selected areas.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/domain/geo-blocking

**Table 7-40** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-41** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domain | Yes | String | Streaming domain name. |

## Request Parameters

**Table 7-42** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 7-43** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| app | Yes | String | Application name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| area_whitelist | No | Array of strings | List of supported areas. An empty list indicates no restriction.<br><br>The values of all region codes, except that of China, contain two uppercase letters. For the code format, see ISO 3166-1alpha-2<br><br>(https://www.iso.org/obp/ui/#search/code/).<br><br>Some options are as follows:<br>● **CN-IN**: Chinese mainland<br>● **CN-HK**: Hong Kong (China)<br>● **CN-MO**: Macao (China)<br>● **CN-TW**: Taiwan (China)<br>● **BR**: Brazil |

## Response Parameters

**Status code: 200**

**Table 7-44** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Status code: 400**

**Table 7-45** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 7-46** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

```
PUT https://{endpoint}/v1/{project_id}/domain/geo-blocking?play_domain=play.example.huawei.com

{
  "app" : "live",
  "area_whitelist" : [ "CN-IN", "CN-HK", "CN-MO", "CN-TW", "BR" ]
}
```

## Example Responses

**Status code: 400**

Set supported areas failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Supported areas set. |
| 400 | Set supported areas failed. |

## Error Codes

See **Error Codes**.

# 7.9 Querying the URL Validation Configuration of a Specified Domain Name

## Function

API for querying the URL validation configuration of a specified domain name

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/guard/key-chain

**Table 7-47** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-48** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain names, including the ingest domain name and streaming domain name. |

## Request Parameters

**Table 7-49** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

Status code: 200

**Table 7-50** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| key | String | URL validation value, which consists of 32 characters, including uppercase letters, lowercase letters, and digits. The value cannot contain only digits or letters. |
| auth_type | String | Signing method. The options are as follows:<br>● **d_sha256**: signing method D, which uses the HMAC-SHA256 algorithm. This method is recommended.<br>● **c_aes**: signing method C, which uses the symmetric encryption algorithm<br>● **b_md5**: signing method B, which uses the MD5 algorithm<br>● **a_md5**: signing method A, which uses the MD5 algorithm<br>**NOTE**<br>Signing methods A, B, and C have security risks. Signing method D is more secure and recommended. |
| timeout | Integer | Timeout interval of URL validation.<br>Value range: [60, 2,592,000], that is, 1 minute to 30 days<br>Unit: second<br>Maximum difference between the request time carried in the authentication information and the time when Live receives the request. This parameter is used to check whether the Live ingest URL or streaming URL has expired. |

Status code: 400

**Table 7-51** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

Status code: 401

**Table 7-52** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 7-53** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 7-54** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Queries the URL validation configuration of a specified domain name.

GET https://{endpoint}/v1/{project_id}/guard/key-chain?domain=play.example.huawei.com

# Example Responses

**Status code: 200**

Query succeeded.

```
{
  "key" : "IbBIzklRGCyMEd18oPV9sxAuuwNIzT81",
  "auth_type" : "d_sha256",
  "timeout" : 3600
}
```

**Status code: 400**

Parameter verification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 401**

The API is not authorized to access resources.

```
{
  "error_code" : "LIVE.100011003",
  "error_msg" : "Unauthorized access to the interface, please contact the main account administrator to
open the interface permissions"
}
```

**Status code: 404**

The resource to be accessed does not exist. For example, the domain name does not exist.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "The resource to access is not exists"
}
```

**Status code: 500**

Internal service error

```
{
  "error_code" : "LIVE.100011005",
  "error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Query succeeded. |
| 400 | Parameter verification failed. |
| 401 | The API is not authorized to access resources. |
| 404 | The resource to be accessed does not exist. For example, the domain name does not exist. |
| 500 | Internal service error |

## Error Codes

See **Error Codes**.

# 7.10 Modifying the URL Validation Configuration of a Specified Domain Name

## Function

API for updating the URL validation configuration of a specified domain name

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/guard/key-chain

**Table 7-55** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-56** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Domain names, including the ingest domain name and streaming domain name. |

## Request Parameters

**Table 7-57** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 7-58** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| key | Yes | String | URL validation value, which consists of 32 characters, including uppercase letters, lowercase letters, and digits. The value cannot contain only digits or letters. |
| auth_type | Yes | String | Signing method. The options are as follows:<br><br>• **d_sha256**: signing method D, which uses the HMAC-SHA256 algorithm. This method is recommended.<br><br>• **c_aes**: signing method C, which uses the symmetric encryption algorithm<br><br>• **b_md5**: signing method B, which uses the MD5 algorithm<br><br>• **a_md5**: signing method A, which uses the MD5 algorithm<br><br>**NOTE**<br>Signing methods A, B, and C have security risks. Signing method D is more secure and recommended. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| timeout | Yes | Integer | Timeout interval of URL validation. Value range: [60, 2,592,000], that is, 1 minute to 30 days Unit: second Maximum difference between the request time carried in the authentication information and the time when Live receives the request. This parameter is used to check whether the Live ingest URL or streaming URL has expired. |

## Response Parameters

**Status code: 400**

**Table 7-59** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 401**

**Table 7-60** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 7-61** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 7-62** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Updates the URL validation configuration of a specified domain name.

```
PUT https://{endpoint}/v1/{project_id}/guard/key-chain?domain=play.example.huawei.com

{
  "key" : "IbBIzklRGCyMEd18oPV9sxAuuwNIzT81",
  "auth_type" : "d_sha256",
  "timeout" : 3600
}
```

## Example Responses

**Status code: 400**

Parameter verification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 401**

The API is not authorized to access resources.

```
{
  "error_code" : "LIVE.100011003",
  "error_msg" : "Unauthorized access to the interface, please contact the main account administrator to open the interface permissions"
}
```

**Status code: 404**

The domain name does not exist.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "The resource to access is not exists"
}
```

**Status code: 500**

Internal service error

```
{
  "error_code" : "LIVE.100011005",
  "error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Request succeeded. |
| 400 | Parameter verification failed. |
| 401 | The API is not authorized to access resources. |
| 404 | The domain name does not exist. |
| 500 | Internal service error |

## Error Codes

See **Error Codes**.

# 7.11 Deleting the URL Validation Configuration of a Specified Domain Name

## Function

API for deleting the URL validation configuration of a specified domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/guard/key-chain

**Table 7-63** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 7-64** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain names, including the ingest domain name and streaming domain name. |

## Request Parameters

**Table 7-65** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 7-66** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 401**

**Table 7-67** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |

| Parameter | Type | Description |
|-----------|------|-------------|
| error_msg | String | Error description |

**Status code: 404**

**Table 7-68** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 7-69** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Deletes the URL validation configuration of a specified domain name.

DELETE https://{endpoint}/v1/{project_id}/guard/key-chain?domain=play.example.huawei.com

# Example Responses

**Status code: 400**

Parameter verification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 401**

The API is not authorized to access resources.

```
{
  "error_code" : "LIVE.100011003",
  "error_msg" : "Unauthorized access to the interface, please contact the main account administrator to open the interface permissions"
}
```

**Status code: 404**

The resource to be accessed does not exist. For example, the domain name does not exist.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "The resource to access is not exists"
}
```

**Status code: 500**

Internal service error

```
{
  "error_code" : "LIVE.100011005",
  "error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Deleted. |
| 400 | Parameter verification failed. |
| 401 | The API is not authorized to access resources. |
| 404 | The resource to be accessed does not exist. For example, the domain name does not exist. |
| 500 | Internal service error |

## Error Codes

See **Error Codes**.

# 8 Snapshot Management

## 8.1 Creating a Snapshot Capturing Template

### Function

API for creating a snapshot capturing template.

### Calling Method

For details, see **Calling APIs**.

### URI

POST /v1/{project_id}/stream/snapshot

**Table 8-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 8-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 8-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name |
| app_name | Yes | String | Application name |
| auth_key | No | String | Callback authentication key value<br>Length range: [32-128]<br>If callback authentication is required, specify this parameter. Otherwise, leave it empty. |
| time_interval | Yes | Integer | Snapshot capturing frequency<br>Value range: 5 to 3600<br>Unit: second |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| object_write_mode | Yes | Integer | Method for storing snapshots in an OBS bucket:<br><br>• **0**: **All**. A snapshot file name contains the timestamp. All snapshot files of each stream are stored in OBS. Example: snapshot/{domain}/{app_name}/{stream_name}/{UnixTimestamp}.jpg<br><br>• **1**: **Latest**. A snapshot file name does not contain the timestamp. Only the latest snapshot file of each stream will be saved. A new snapshot file overwrites the previous one. Example: snapshot/{domain}/{app_name}/{stream_name}.jpg |
| obs_location | Yes | **ObsFileAddr** object | OBS bucket location information |
| call_back_enable | No | String | Whether to enable callback notification.<br><br>• **on**: enabled<br>• **off**: disabled |
| call_back_url | No | String | Address of the server for receiving callback notifications. The value must be a valid URL that contains a protocol, which can be HTTP or HTTPS. After snapshot capturing, Live pushes the snapshot status information to this address. |

**Table 8-4** ObsFileAddr

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| bucket | Yes | String | OBS bucket name |
| location | Yes | String | Region where the OBS bucket is located. The region must be the same as that of the Live service. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| object | Yes | String | OBS object path, which complies with the OSS Object definition.<br>• If this parameter is used for an input, an object must be specified.<br>• If this parameter is used for an output, only the directory for storing the snapshot needs to be specified. |

## Response Parameters

**Status code: 400**

**Table 8-5** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Creates a snapshot capturing template.

```
POST https://{endpoint}/v1/{project_id}/stream/snapshot

{
  "domain" : "play.example.huawei.com",
  "app_name" : "live",
  "time_interval" : 5,
  "object_write_mode" : 1,
  "obs_location" : {
    "bucket" : "cls-test",
    "location" : "region1",
    "object" : "/ffff/aa/"
  }
}
```

## Example Responses

**Status code: 400**

The snapshot capturing template configuration failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | The snapshot capturing template has been configured. |
| 400 | The snapshot capturing template configuration failed. |

## Error Codes

See **Error Codes**.

# 8.2 Modifying a Snapshot Capturing Template

## Function

API for modifying a snapshot capturing template.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/stream/snapshot

**Table 8-6** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 8-7** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 8-8** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Ingest domain name |
| app_name | Yes | String | Application name |
| auth_key | No | String | Callback authentication key value<br>Length range: [32-128]<br>If callback authentication is required, specify this parameter. Otherwise, leave it empty. |
| time_interval | Yes | Integer | Snapshot capturing frequency<br>Value range: 5 to 3600<br>Unit: second |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| object_write_mode | Yes | Integer | Method for storing snapshots in an OBS bucket:<br><br>● **0**: **All**. A snapshot file name contains the timestamp. All snapshot files of each stream are stored in OBS. Example: snapshot/{domain}/{app_name}/{stream_name}/{UnixTimestamp}.jpg<br><br>● **1**: **Latest**. A snapshot file name does not contain the timestamp. Only the latest snapshot file of each stream will be saved. A new snapshot file overwrites the previous one. Example: snapshot/{domain}/{app_name}/{stream_name}.jpg |
| obs_location | Yes | **ObsFileAddr** object | OBS bucket location information |
| call_back_enable | No | String | Whether to enable callback notification.<br><br>● **on**: enabled<br><br>● **off**: disabled |
| call_back_url | No | String | Address of the server for receiving callback notifications. The value must be a valid URL that contains a protocol, which can be HTTP or HTTPS. After snapshot capturing, Live pushes the snapshot status information to this address. |

**Table 8-9** ObsFileAddr

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| bucket | Yes | String | OBS bucket name |
| location | Yes | String | Region where the OBS bucket is located. The region must be the same as that of the Live service. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| object | Yes | String | OBS object path, which complies with the OSS Object definition.<br>● If this parameter is used for an input, an object must be specified.<br>● If this parameter is used for an output, only the directory for storing the snapshot needs to be specified. |

## Response Parameters

**Status code: 400**

**Table 8-10** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies a snapshot capturing template.

```
PUT https://{endpoint}/v1/{project_id}/stream/snapshot

{
  "domain" : "play.example.huawei.com",
  "app_name" : "live",
  "time_interval" : 5,
  "object_write_mode" : 1,
  "obs_location" : {
    "bucket" : "cls-test",
    "location" : "region1",
    "object" : "/ffff/aa/"
  }
}
```

## Example Responses

**Status code: 400**

The snapshot capturing template modification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | The snapshot capturing template has been modified. |
| 400 | The snapshot capturing template modification failed. |

## Error Codes

See **Error Codes**.

# 8.3 Querying Snapshot Capturing Templates

## Function

API for querying snapshot capturing templates.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/stream/snapshot

**Table 8-11** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 8-12** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name |
| app_name | No | String | Application name |
| limit | No | Integer | Number of records on each page<br>Value range: [1, 100]<br>Default value: 10 |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| offset | No | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. |

## Request Parameters

**Table 8-13** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 8-14** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| total | Integer | Total number of records |
| snapshot_config_list | Array of **LiveSnapshotConfig** objects | Snapshot capturing |

| Parameter | Type | Description |
|-----------|------|-------------|
| limit | Integer | Number of records on each page |
| offset | Integer | Offset |

**Table 8-15** LiveSnapshotConfig

| Parameter | Type | Description |
|-----------|------|-------------|
| domain | String | Ingest domain name |
| app_name | String | Application name |
| auth_key | String | Callback authentication key value<br>Length range: [32-128]<br>If callback authentication is required, specify this parameter. Otherwise, leave it empty. |
| time_interval | Integer | Snapshot capturing frequency<br>Value range: 5 to 3600<br>Unit: second |
| object_write_mode | Integer | Method for storing snapshots in an OBS bucket:<br>● **0**: **All**. A snapshot file name contains the timestamp. All snapshot files of each stream are stored in OBS. Example: snapshot/{domain}/{app_name}/{stream_name}/{UnixTimestamp}.jpg<br>● **1**: **Latest**. A snapshot file name does not contain the timestamp. Only the latest snapshot file of each stream will be saved. A new snapshot file overwrites the previous one. Example: snapshot/{domain}/{app_name}/{stream_name}.jpg |
| obs_location | **ObsFileAddr** object | OBS bucket location information |
| call_back_enable | String | Whether to enable callback notification.<br>● **on**: enabled<br>● **off**: disabled |
| call_back_url | String | Address of the server for receiving callback notifications. The value must be a valid URL that contains a protocol, which can be HTTP or HTTPS. After snapshot capturing, Live pushes the snapshot status information to this address. |

**Table 8-16** ObsFileAddr

| Parameter | Type | Description |
|---|---|---|
| bucket | String | OBS bucket name |
| location | String | Region where the OBS bucket is located. The region must be the same as that of the Live service. |
| object | String | OBS object path, which complies with the OSS Object definition.<br>● If this parameter is used for an input, an object must be specified.<br>● If this parameter is used for an output, only the directory for storing the snapshot needs to be specified. |

**Status code: 400**

**Table 8-17** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Queries snapshot capturing templates.

```
GET https://{endpoint}/v1/{project_id}/stream/snapshot?
domain=testsnapshot.com&app_name=live&offset=0&limit=10
```

# Example Responses

**Status code: 200**

The snapshot capturing template query succeeded.

```
{
 "total" : 2,
 "offset" : 0,
 "limit" : 10,
 "snapshot_config_list" : [ {
   "domain" : "testsnapshot.huawei.com",
   "app_name" : "live",
   "time_interval" : 5,
   "object_write_mode" : 1,
   "obs_location" : {
     "bucket" : "obs-d95a",
     "location" : "region1",
     "object" : "test1/"
   }
```

```
   }, {
    "domain" : "testsnapshot.huawei.com",
    "app_name" : "src",
    "time_interval" : 5,
    "object_write_mode" : 1,
    "obs_location" : {
      "bucket" : "obs-d95a",
      "location" : "region1",
      "object" : "test2/"
    }
  } ]
}
```

**Status code: 400**

The snapshot capturing template query failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | The snapshot capturing template query succeeded. |
| 400 | The snapshot capturing template query failed. |

## Error Codes

See **Error Codes**.

# 8.4 Deleting a Snapshot Capturing Template

## Function

API for deleting a snapshot capturing template.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/stream/snapshot

**Table 8-18** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 8-19** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Streaming domain name |
| app_name | Yes | String | Application name |

## Request Parameters

**Table 8-20** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 8-21** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Deletes a snapshot capturing template.

DELETE https://{endpoint}/v1/{project_id}/stream/snapshot?domain=testsnapshot.com&app_name=live

## Example Responses

**Status code: 400**

The snapshot capturing template deletion failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | The snapshot capturing template has been deleted. |
| 400 | The snapshot capturing template deletion failed. |

## Error Codes

See **Error Codes**.

# 9 Recording Management

## 9.1 Creating a Recording Template

### Function

Creates a recording template. The recording template only takes effect for streams that are pushed after the template is created. Using this function will incur live recording fees.

### Calling Method

For details, see **Calling APIs**.

### URI

POST /v1/{project_id}/record/rules

**Table 9-1** Path Parameters

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 9-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 9-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | Yes | String | Ingest domain name. |
| app | Yes | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| stream | Yes | String | Stream name. To match any stream, set this parameter to a wildcard character (*). Exact stream matching is preferred. If no stream is matched, all streams will be matched. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_type | No | String | Recording type. The options are **CONTINUOUS_RECORD** and **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**. <br>● CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system. <br>● COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording. |
| default_record _config | Yes | **DefaultRecordConfig** object | Default recording template. |

**Table 9-4** DefaultRecordConfig

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_format | Yes | Array of strings | Recording format. |
| obs_addr | Yes | **RecordObsFileAddr** object | Details about the bucket for storing recordings. |
| hls_config | No | **HLSRecordConfig** object | HLS configuration rule. |
| flv_config | No | **FLVRecordConfig** object | FLV configuration rule. |
| mp4_config | No | **MP4RecordConfig** object | MP4 configuration rule. |

**Table 9-5** RecordObsFileAddr

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| bucket | Yes | String | OBS bucket name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| location | Yes | String | ID of the region where the OBS bucket resides. |
| object | Yes | String | OBS object path, which complies with the OBS object definition. If this parameter is left empty, recordings will be saved to the root directory. |

**Table 9-6** HLSRecordConfig

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_cycle | Yes | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 12 hours (43,200 seconds). If the value is 0, the default value 6 hours (21,600 seconds) is used. |
| record_prefix | No | String | Path and file name prefix of an M3U8 file. The default value is **Record**/*{publish_domain}/{app}/ {record_type}/{record_format}/ {stream}{file_start_time}/ {stream}{file_start_time}*. |
| record_ts_prefix | No | String | TS file name prefix. The default value is *{file_start_time_unix} {file_end_time_unix} {ts_sequence_number}*. |
| record_slice_duration | No | Integer | (Optional) TS slice duration for HLS recording. Value range: [2,60] Unit: second Default value: 10 |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_max_duration_to_merge_file | No | Integer | Interval threshold for combining HLS chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. <br> Unit: second <br> Default value: 0 <br> • **0**: A new file will be generated once the stream is interrupted. <br> • **–1**: After the same stream is resumed, the recording will be saved in the previous file within 30 days. |

**Table 9-7** FLVRecordConfig

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_cycle | Yes | Integer | Duration of periodic recording. <br> Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). <br> If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | No | String | Path and file name prefix of an FLV file. The default value is **Record/{publish_domain}/{app}/{record_type}/{record_format}/{stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | No | Integer | Interval threshold for combining FLV chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. <br> Unit: second <br> Default value: 0 |

**Table 9-8** MP4RecordConfig

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_cycle | Yes | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | No | String | Path and file name prefix of the file. The default value is **Record/{publish_domain}/ {app}/{record_type}/ {record_format}/ {stream}_{file_start_time}/ {file_start_time}*. |
| record_max_d uration_to_m erge_file | No | Integer | Interval threshold for combining MP4 chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. Unit: second Default value: 0 |

## Response Parameters

**Status code: 201**

**Table 9-9** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-10** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| id | String | Rule ID, which is returned by the server. This parameter is not needed during creation or modification. |
| publish_domain | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| stream | String | Stream name. To match any stream, set this parameter to a wildcard character (*). Exact stream matching is preferred. If no stream is matched, all streams will be matched. |
| record_type | String | Recording type. The options are **CONTINUOUS_RECORD** and **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**.<br>● CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system.<br>● COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording. |
| default_record _config | **DefaultRecordConfig** object | Default recording template. |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Table 9-11** DefaultRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_format | Array of strings | Recording format. |
| obs_addr | **RecordObsFileAddr** object | Details about the bucket for storing recordings. |

| Parameter | Type | Description |
|-----------|------|-------------|
| hls_config | **HLSRecordConfig** object | HLS configuration rule. |
| flv_config | **FLVRecordConfig** object | FLV configuration rule. |
| mp4_config | **MP4RecordConfig** object | MP4 configuration rule. |

**Table 9-12** RecordObsFileAddr

| Parameter | Type | Description |
|-----------|------|-------------|
| bucket | String | OBS bucket name. |
| location | String | ID of the region where the OBS bucket resides. |
| object | String | OBS object path, which complies with the OBS object definition. If this parameter is left empty, recordings will be saved to the root directory. |

**Table 9-13** HLSRecordConfig

| Parameter | Type | Description |
|-----------|------|-------------|
| record_cycle | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 12 hours (43,200 seconds). If the value is 0, the default value 6 hours (21,600 seconds) is used. |
| record_prefix | String | Path and file name prefix of an M3U8 file. The default value is **Record**/*{publish_domain}/ {app}/{record_type}/{record_format}/{stream} {file_start_time}/{stream}{file_start_time}*. |
| record_ts_prefix | String | TS file name prefix. The default value is *{file_start_time_unix}{file_end_time_unix} {ts_sequence_number}*. |
| record_slice_duration | Integer | (Optional) TS slice duration for HLS recording. Value range: [2,60] Unit: second Default value: 10 |

| Parameter | Type | Description |
|---|---|---|
| record_max_duration_to_merge_file | Integer | Interval threshold for combining HLS chunks. If the stream interruption duration exceeds this threshold, a new file will be generated.<br><br>Unit: second<br><br>Default value: 0<br><br>● **0**: A new file will be generated once the stream is interrupted.<br><br>● **–1**: After the same stream is resumed, the recording will be saved in the previous file within 30 days. |

**Table 9-14** FLVRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording.<br><br>Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds).<br><br>If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of an FLV file. The default value is **Record/{publish_domain}/{app}/{record_type}/{record_format}/{stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | Integer | Interval threshold for combining FLV chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted.<br><br>Unit: second<br><br>Default value: 0 |

**Table 9-15** MP4RecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording.<br><br>Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds).<br><br>If the value is **0**, the default value 2 hours (7,200 seconds) is used. |

| Parameter | Type | Description |
|---|---|---|
| record_prefix | String | Path and file name prefix of the file. The default value is **Record/{publish_domain}/{app}/{record_type}/{record_format}/{stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | Integer | Interval threshold for combining MP4 chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted.<br><br>Unit: second<br><br>Default value: 0 |

**Status code: 400**

**Table 9-16** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-17** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Creates a recording rule.

```
POST https://{endpoint}/v1/{project_id}/record/rules

{
  "publish_domain" : "publish.example.com",
  "app" : "live",
  "stream" : "*",
  "record_type" : "CONTINUOUS_RECORD",
  "default_record_config" : {
    "record_format" : [ "HLS", "FLV" ],
    "hls_config" : {
      "record_cycle" : 3600,
```

```
        "record_prefix" : "Record/{publish_domain}/{app}/{record_type}/{record_format}/
{stream}_{file_start_time}/{file_start_time}",
        "record_ts_prefix" : "{file_start_time_unix}-{file_end_time_unix}-{ts_sequence_number}",
        "record_slice_duration" : 10,
        "record_max_duration_to_merge_file" : 0
      },
      "flv_config" : {
        "record_cycle" : 9000,
        "record_prefix" : "Record/{publish_domain}/{app}/{record_format}/{stream}_{file_start_time}/
{file_start_time}",
        "record_max_duration_to_merge_file" : 0
      },
      "obs_addr" : {
        "bucket" : "mybucket",
        "location" : "region1",
        "object" : "record/"
      }
    }
  }
}
```

## Example Responses

**Status code: 400**

Failed to create the recording template.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 201 | Recording template created. |
| 400 | Failed to create the recording template. |

## Error Codes

See **Error Codes**.

# 9.2 Querying Recording Templates

## Function

This API is used to query recording templates that meet specific conditions.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/record/rules

**Table 9-18** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 9-19** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_doma in | No | String | Ingest domain name. |
| app | No | String | Application name. |
| stream | No | String | Stream name. |
| record_type | No | String | Recording type. If this parameter is left empty, templates of all recording types are queried. The value can be **CONTINUOUS_RECORD** or **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**. <ul><li>CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system.</li><li>COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording.</li></ul> |
| offset | No | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. |
| limit | No | Integer | Number of records on each page. The value ranges from 1 to 100 and defaults to **10**. |

## Request Parameters

**Table 9-20** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 9-21** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-22** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| total | Integer | Total number of elements in the query result. |

| Parameter | Type | Description |
|---|---|---|
| record_config | Array of **RecordRule** objects | Recording template array. |

**Table 9-23** RecordRule

| Parameter | Type | Description |
|---|---|---|
| id | String | Rule ID, which is returned by the server. This parameter is not needed during creation or modification. |
| publish_domain | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| stream | String | Stream name. To match any stream, set this parameter to a wildcard character (*). Exact stream matching is preferred. If no stream is matched, all streams will be matched. |
| record_type | String | Recording type. The options are **CONTINUOUS_RECORD** and **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**. <br>● CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system. <br>● COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording. |
| default_record_config | **DefaultRecordConfig** object | Default recording template. |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Table 9-24** DefaultRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_format | Array of strings | Recording format. |
| obs_addr | **RecordObsFileAddr** object | Details about the bucket for storing recordings. |
| hls_config | **HLSRecordConfig** object | HLS configuration rule. |
| flv_config | **FLVRecordConfig** object | FLV configuration rule. |
| mp4_config | **MP4RecordConfig** object | MP4 configuration rule. |

**Table 9-25** RecordObsFileAddr

| Parameter | Type | Description |
|---|---|---|
| bucket | String | OBS bucket name. |
| location | String | ID of the region where the OBS bucket resides. |
| object | String | OBS object path, which complies with the OBS object definition. If this parameter is left empty, recordings will be saved to the root directory. |

**Table 9-26** HLSRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording.<br>Unit: second. The value ranges from 1 minute (60 seconds) to 12 hours (43,200 seconds).<br>If the value is 0, the default value 6 hours (21,600 seconds) is used. |
| record_prefix | String | Path and file name prefix of an M3U8 file. The default value is **Record**/*{publish_domain}/ {app}/{record_type}/{record_format}/{stream} {file_start_time}/{stream}{file_start_time}*. |
| record_ts_prefix | String | TS file name prefix. The default value is *{file_start_time_unix}{file_end_time_unix} {ts_sequence_number}*. |

| Parameter | Type | Description |
|---|---|---|
| record_slice_d uration | Integer | (Optional) TS slice duration for HLS recording. Value range: [2,60] Unit: second Default value: 10 |
| record_max_d uration_to_m erge_file | Integer | Interval threshold for combining HLS chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. Unit: second Default value: 0 <br> • **0**: A new file will be generated once the stream is interrupted. <br> • **–1**: After the same stream is resumed, the recording will be saved in the previous file within 30 days. |

**Table 9-27** FLVRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of an FLV file. The default value is **Record/{publish_domain}/ {app}/{record_type}/{record_format}/ {stream}_{file_start_time}/{file_start_time}*. |
| record_max_d uration_to_m erge_file | Integer | Interval threshold for combining FLV chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. Unit: second Default value: 0 |

**Table 9-28** MP4RecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of the file. The default value is **Record/{publish_domain}/ {app}/{record_type}/{record_format}/ {stream}_{file_start_time}/{file_start_time}*. |
| record_max_d uration_to_m erge_file | Integer | Interval threshold for combining MP4 chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. Unit: second Default value: 0 |

**Status code: 400**

**Table 9-29** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-30** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Queries recording rules.

GET https://live.hwcloud.com/v1/{project_id}/record/rules?publish_domain=xxx

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "total" : 1,
  "record_config" : [ {
    "id" : "42810594c2fc9xxxx36b7784c76a06e8",
    "publish_domain" : "publish.example.com",
    "app" : "live",
    "stream" : "*",
    "record_type" : "CONTINUOUS_RECORD",
    "default_record_config" : {
      "record_format" : [ "HLS" ],
      "obs_addr" : {
        "bucket" : "mybucket",
        "location" : "region1",
        "object" : "record/"
      },
      "hls_config" : {
        "record_cycle" : 900,
        "record_prefix" : "record-publish_domain-app-stream-file_start_time_unix/record-publish_domain-app-stream-file_start_time_unix",
        "record_ts_prefix" : "{stream}-{file_start_time_unix}-{file_end_time_unix}-{ts_sequence_number}",
        "record_slice_duration" : 10,
        "record_max_duration_to_merge_file" : 60
      }
    }
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Query succeeded. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 9.3 Modifying a Recording Template

## Function

This API is used to modify a recording template. The modified recording template only takes effect for streams that are pushed after the template is modified.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/record/rules/{id}

**Table 9-31** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |
| id | Yes | String | Template ID, which is returned after the template is created. |

## Request Parameters

**Table 9-32** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 9-33** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| publish_doma in | Yes | String | Ingest domain name. |
| app | Yes | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| stream | Yes | String | Stream name. To match any stream, set this parameter to a wildcard character (*). Exact stream matching is preferred. If no stream is matched, all streams will be matched. |
| record_type | No | String | Recording type. The options are **CONTINUOUS_RECORD** and **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**.<br>● CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system.<br>● COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording. |
| default_record _config | Yes | **DefaultRecor dConfig** object | Default recording template. |

**Table 9-34** DefaultRecordConfig

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| record_format | Yes | Array of strings | Recording format. |
| obs_addr | Yes | **RecordObsFileAddr** object | Details about the bucket for storing recordings. |
| hls_config | No | **HLSRecordConfig** object | HLS configuration rule. |
| flv_config | No | **FLVRecordConfig** object | FLV configuration rule. |
| mp4_config | No | **MP4RecordConfig** object | MP4 configuration rule. |

**Table 9-35** RecordObsFileAddr

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| bucket | Yes | String | OBS bucket name. |
| location | Yes | String | ID of the region where the OBS bucket resides. |
| object | Yes | String | OBS object path, which complies with the OBS object definition. If this parameter is left empty, recordings will be saved to the root directory. |

**Table 9-36** HLSRecordConfig

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| record_cycle | Yes | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 12 hours (43,200 seconds). If the value is 0, the default value 6 hours (21,600 seconds) is used. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_prefix | No | String | Path and file name prefix of an M3U8 file. The default value is **Record**/*{publish_domain}/{app}/{record_type}/{record_format}/{stream}{file_start_time}/{stream}{file_start_time}*. |
| record_ts_prefix | No | String | TS file name prefix. The default value is *{file_start_time_unix}{file_end_time_unix}{ts_sequence_number}*. |
| record_slice_duration | No | Integer | (Optional) TS slice duration for HLS recording. Value range: [2,60] Unit: second Default value: 10 |
| record_max_duration_to_merge_file | No | Integer | Interval threshold for combining HLS chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. Unit: second Default value: 0 <br> ● **0**: A new file will be generated once the stream is interrupted. <br> ● **–1**: After the same stream is resumed, the recording will be saved in the previous file within 30 days. |

**Table 9-37** FLVRecordConfig

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_cycle | Yes | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_prefix | No | String | Path and file name prefix of an FLV file. The default value is **Record/{publish_domain}/{app}/{record_type}/{record_format}/{stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | No | Integer | Interval threshold for combining FLV chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. Unit: second Default value: 0 |

**Table 9-38** MP4RecordConfig

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| record_cycle | Yes | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | No | String | Path and file name prefix of the file. The default value is **Record/{publish_domain}/{app}/{record_type}/{record_format}/{stream}_{file_start_time}/{file_start_time}*. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| record_max_duration_to_merge_file | No | Integer | Interval threshold for combining MP4 chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted.<br>Unit: second<br>Default value: 0 |

## Response Parameters

**Status code: 200**

**Table 9-39** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-40** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| id | String | Rule ID, which is returned by the server. This parameter is not needed during creation or modification. |
| publish_domain | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| stream | String | Stream name. To match any stream, set this parameter to a wildcard character (*). Exact stream matching is preferred. If no stream is matched, all streams will be matched. |

| Parameter | Type | Description |
|-----------|------|-------------|
| record_type | String | Recording type. The options are **CONTINUOUS_RECORD** and **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**.<br>● CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system.<br>● COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording. |
| default_record_config | **DefaultRecordConfig** object | Default recording template. |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Table 9-41** DefaultRecordConfig

| Parameter | Type | Description |
|-----------|------|-------------|
| record_format | Array of strings | Recording format. |
| obs_addr | **RecordObsFileAddr** object | Details about the bucket for storing recordings. |
| hls_config | **HLSRecordConfig** object | HLS configuration rule. |
| flv_config | **FLVRecordConfig** object | FLV configuration rule. |
| mp4_config | **MP4RecordConfig** object | MP4 configuration rule. |

**Table 9-42** RecordObsFileAddr

| Parameter | Type | Description |
|-----------|------|-------------|
| bucket | String | OBS bucket name. |
| location | String | ID of the region where the OBS bucket resides. |

| Parameter | Type | Description |
|---|---|---|
| object | String | OBS object path, which complies with the OBS object definition. If this parameter is left empty, recordings will be saved to the root directory. |

**Table 9-43** HLSRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 12 hours (43,200 seconds). If the value is 0, the default value 6 hours (21,600 seconds) is used. |
| record_prefix | String | Path and file name prefix of an M3U8 file. The default value is **Record**/*{publish_domain}/ {app}/{record_type}/{record_format}/{stream} {file_start_time}/{stream}{file_start_time}*. |
| record_ts_prefix | String | TS file name prefix. The default value is *{file_start_time_unix}{file_end_time_unix} {ts_sequence_number}*. |
| record_slice_duration | Integer | (Optional) TS slice duration for HLS recording. Value range: [2,60] Unit: second Default value: 10 |
| record_max_duration_to_merge_file | Integer | Interval threshold for combining HLS chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. Unit: second Default value: 0 <ul><li>**0**: A new file will be generated once the stream is interrupted.</li><li>**–1**: After the same stream is resumed, the recording will be saved in the previous file within 30 days.</li></ul> |

**Table 9-44** FLVRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording.<br><br>Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds).<br><br>If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of an FLV file. The default value is **Record/{publish_domain}/ {app}/{record_type}/{record_format}/ {stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | Integer | Interval threshold for combining FLV chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted.<br><br>Unit: second<br><br>Default value: 0 |

**Table 9-45** MP4RecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording.<br><br>Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds).<br><br>If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of the file. The default value is **Record/{publish_domain}/ {app}/{record_type}/{record_format}/ {stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | Integer | Interval threshold for combining MP4 chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted.<br><br>Unit: second<br><br>Default value: 0 |

**Status code: 400**

**Table 9-46** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-47** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies a recording rule.

```
PUT https://{endpoint}/v1/{project_id}/record/rule/e89b76xxxxxx3425ui80af501cdxxxxxx

{
  "publish_domain" : "publish.example.com",
  "app" : "live",
  "stream" : "*",
  "record_type" : "CONTINUOUS_RECORD",
  "default_record_config" : {
    "record_format" : [ "HLS", "FLV" ],
    "hls_config" : {
      "record_cycle" : 3600,
      "record_prefix" : "Record/{publish_domain}/{app}/{record_type}/{record_format}/
{stream}_{file_start_time}/{file_start_time}",
      "record_ts_prefix" : "{file_start_time_unix}-{file_end_time_unix}-{ts_sequence_number}",
      "record_slice_duration" : 10,
      "record_max_duration_to_merge_file" : 0
    },
    "flv_config" : {
      "record_cycle" : 9000,
      "record_prefix" : "Record/{publish_domain}/{app}/{record_format}/{stream}_{file_start_time}/
{file_start_time}",
      "record_max_duration_to_merge_file" : 0
    },
    "obs_addr" : {
      "bucket" : "mybucket",
      "location" : "region1",
      "object" : "record/"
    }
  }
}
```

## Example Responses

**Status code: 400**

Failed to modify the recording template.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Recording template modified. |
| 400 | Failed to modify the recording template. |

## Error Codes

See **Error Codes**.

# 9.4 Deleting a Recording Template

## Function

This API is used to delete a recording template.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/record/rules/{id}

**Table 9-48** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |
| id | Yes | String | Template ID. |

## Request Parameters

**Table 9-49** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 204**

**Table 9-50** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Status code: 400**

**Table 9-51** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-52** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 9-53** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-54** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Deletes a recording rule.

```
DELETE https://{endpoint}/v1/{project_id}/record/rule/e89b76xxxxxx3425ui80af501cdxxxxxx
```

## Example Responses

**Status code: 400**

Failed to delete the recording template.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 404**

The record does not exist.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Recording template deleted. |
| 400 | Failed to delete the recording template. |
| 404 | The record does not exist. |

## Error Codes

See **Error Codes**.

# 9.5 Querying a Recording Template

## Function

This API is used to query a recording template.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/record/rules/{id}

**Table 9-55** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |
| id | Yes | String | Template ID. |

## Request Parameters

**Table 9-56** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 9-57** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-58** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| id | String | Rule ID, which is returned by the server. This parameter is not needed during creation or modification. |
| publish_doma in | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| stream | String | Stream name. To match any stream, set this parameter to a wildcard character (*). Exact stream matching is preferred. If no stream is matched, all streams will be matched. |
| record_type | String | Recording type. The options are **CONTINUOUS_RECORD** and **COMMAND_RECORD**. The default value is **CONTINUOUS_RECORD**.<br>● CONTINUOUS_RECORD: continuous recording. Recording is triggered when streams are pushed to the recording system.<br>● COMMAND_RECORD: command-based recording. After streams are pushed to the recording system, you must **run commands** to start and stop stream recording. |
| default_record _config | **DefaultRecor dConfig** object | Default recording template. |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

| Parameter | Type | Description |
|-----------|------|-------------|
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Table 9-59** DefaultRecordConfig

| Parameter | Type | Description |
|-----------|------|-------------|
| record_format | Array of strings | Recording format. |
| obs_addr | **RecordObsFileAddr** object | Details about the bucket for storing recordings. |
| hls_config | **HLSRecordConfig** object | HLS configuration rule. |
| flv_config | **FLVRecordConfig** object | FLV configuration rule. |
| mp4_config | **MP4RecordConfig** object | MP4 configuration rule. |

**Table 9-60** RecordObsFileAddr

| Parameter | Type | Description |
|-----------|------|-------------|
| bucket | String | OBS bucket name. |
| location | String | ID of the region where the OBS bucket resides. |
| object | String | OBS object path, which complies with the OBS object definition. If this parameter is left empty, recordings will be saved to the root directory. |

**Table 9-61** HLSRecordConfig

| Parameter | Type | Description |
|-----------|------|-------------|
| record_cycle | Integer | Duration of periodic recording.<br>Unit: second. The value ranges from 1 minute (60 seconds) to 12 hours (43,200 seconds).<br>If the value is 0, the default value 6 hours (21,600 seconds) is used. |

| Parameter | Type | Description |
|---|---|---|
| record_prefix | String | Path and file name prefix of an M3U8 file. The default value is **Record**/*{publish_domain}/ {app}/{record_type}/{record_format}/{stream} {file_start_time}/{stream}{file_start_time}*. |
| record_ts_pref ix | String | TS file name prefix. The default value is *{file_start_time_unix}{file_end_time_unix} {ts_sequence_number}*. |
| record_slice_d uration | Integer | (Optional) TS slice duration for HLS recording. Value range: [2,60] Unit: second Default value: 10 |
| record_max_d uration_to_m erge_file | Integer | Interval threshold for combining HLS chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. Unit: second Default value: 0 <ul><li>**0**: A new file will be generated once the stream is interrupted.</li><li>**–1**: After the same stream is resumed, the recording will be saved in the previous file within 30 days.</li></ul> |

**Table 9-62** FLVRecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of an FLV file. The default value is **Record/{publish_domain}/ {app}/{record_type}/{record_format}/ {stream}_{file_start_time}/{file_start_time}*. |
| record_max_d uration_to_m erge_file | Integer | Interval threshold for combining FLV chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. Unit: second Default value: 0 |

**Table 9-63** MP4RecordConfig

| Parameter | Type | Description |
|---|---|---|
| record_cycle | Integer | Duration of periodic recording. Unit: second. The value ranges from 1 minute (60 seconds) to 6 hours (21,600 seconds). If the value is **0**, the default value 2 hours (7,200 seconds) is used. |
| record_prefix | String | Path and file name prefix of the file. The default value is **Record/{publish_domain}/{app}/{record_type}/{record_format}/{stream}_{file_start_time}/{file_start_time}*. |
| record_max_duration_to_merge_file | Integer | Interval threshold for combining MP4 chunks. If the stream interruption duration exceeds this threshold, a new file will be generated. If the value is set to **0**, a new file will be generated once the stream is interrupted. Unit: second. Default value: 0 |

**Status code: 400**

**Table 9-64** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 9-65** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries recording rules.

```
GET https://{endpoint}/v1/{project_id}/record/rule/e89b76xxxxxx3425ui80af501cdxxxxxx
```

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "id" : "0f78cc406baad9ca3e1fd76656dea1ab",
  "publish_domain" : "publish.example.com",
  "app" : "live",
  "stream" : "*",
  "record_type" : "CONTINUOUS_RECORD",
  "default_record_config" : {
    "record_format" : [ "MP4", "FLV" ],
    "obs_addr" : {
      "bucket" : "mybucket",
      "location" : "region1",
      "object" : "record/"
    },
    "hls_config" : {
      "record_cycle" : 0,
      "record_prefix" : "",
      "record_ts_prefix" : "",
      "record_slice_duration" : 0,
      "record_max_duration_to_merge_file" : 0
    },
    "flv_config" : {
      "record_cycle" : 3600,
      "record_prefix" : "Record/publish_domain/app/record_type/record_format/stream_file_start_time/
file_start_time",
      "record_max_duration_to_merge_file" : 0
    },
    "mp4_config" : {
      "record_cycle" : 900,
      "record_prefix" : "Record/publish_domain/app/record_type/record_format/stream_file_start_time/
file_start_time",
      "record_max_duration_to_merge_file" : 0
    }
  },
  "create_time" : "2020-05-20T02:13:49.062Z",
  "update_time" : "0001-01-01T00:00:00Z"
}
```

**Status code: 400**

Query failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Query succeeded. |
| 400 | Query failed. |

## Error Codes

See **Error Codes**.

# 9.6 Submitting a Recording Command

## Function

This API is used to control the recording of a single stream in real time.

## Constraints

Requests are valid only when the recording rule type is set to **COMMAND_RECORD**.

## Calling Method

For details, see **Calling APIs**.

## URI

POST /v1/{project_id}/record/control

**Table 9-66** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 9-67** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| action | Yes | String | Operation.<br><br>(After the command for stopping recording is delivered, the interval for delivering the command for starting recording for the same stream must be greater than 10 seconds.)<br><br>Possible options:<br><br>● START: Starts recording a pushed stream. If stream interruption occurs and the interruption duration exceeds the threshold, the recording is stopped and will not be automatically started after stream push resumes.<br>● STOP: Stops recording a specific stream. |

## Request Parameters

**Table 9-68** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 9-69** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | Yes | String | Ingest domain name. |
| app | Yes | String | Application name. |
| stream | Yes | String | Name of the stream whose recording is to be started or stopped. |

## Response Parameters

**Status code: 200**

**Table 9-70** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp, and *hostname* is the name of the server that processes the current request.) |

**Status code: 400**

**Table 9-71** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. The format is *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 9-72** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 9-73** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. The format is *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp. *hostname* is the name of the server that processes the current request.) |

**Table 9-74** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Creates a recording control command.

```
POST https://{endpoint}/v1/{project_id}/record/control?action=START

{
  "publish_domain" : "publish.example.com",
  "app" : "live",
  "stream" : "mystream"
}
```

# Example Responses

**Status code: 400**

Operation failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 404**

The record does not exist.

```
{
 "error_code" : "LIVE.100011001",
 "error_msg" : "The resource to access is not exists"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Operation succeeded. |
| 400 | Operation failed. |
| 404 | The record does not exist. |

## Error Codes

See **Error Codes**.

# 9.7 Creating a Video Recording Index

## Function

A recording index is a TS file recorded in HLS video streams. A new M3U8 file is generated based on the specified time range.

## Constraints

In the recording configuration, the recording format must contain HLS, and the **record_ts_prefix** parameter must be set to the default value **{file_start_time_unix}***{file_end_time_unix}***{ts_sequence_number}**. There must be streams that are successfully pushed in the requested time range. The recording files involved in the same request must be in the same OBS bucket. A recording index can be created only when its start time is within 30 days later than the current time. If the duration of the request time segment is shorter than the TS segment duration in the HLS recording configuration, the TS segment that overlaps the request time segment is returned and the TS file is not tailored. If the interval between the request time and the start time in the request is less than the duration of a TS segment, the request may fail because the TS segment recording is not complete.

## Calling Method

For details, see **Calling APIs**.

## URI

POST /v1/{project_id}/record/indexes

**Table 9-75** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 9-76** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 9-77** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | Yes | String | Ingest domain name |
| app | Yes | String | App name |
| stream | Yes | String | Stream name |
| start_time | Yes | String | Start time. The format is YYYY-MM-DDTHH:mm:ssZ (UTC time). The maximum interval between the start time and end time is 12 hours. The start time cannot be later than the current time. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| end_time | Yes | String | End time. The format is YYYY-MM-DDTHH:mm:ssZ (UTC time). The maximum interval between the start time and end time is 12 hours. The start time must be earlier than the end time. |
| object | No | String | Path for storing M3U8 files in an OBS bucket. The following strings can be escaped: -{publish_domain} - {app} - {stream} - {start_time} - {end_time} - {start_time_unix} - {end_time_unix}, where {start_time}, {end_time}, {start_time_unix}, and {end_time_unix} indicate the actual time when the result is returned. The default value is **Index/{publish_domain}/{app}/{stream}/{stream}-{start_time}-{end_time}**. |

## Response Parameters

**Status code: 201**

**Table 9-78** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp, and *hostname* is the name of the server that processes the current request.) |

**Table 9-79** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| index_url | String | Index file address |
| publish_domain | String | Ingest domain name |

| Parameter | Type | Description |
|-----------|------|-------------|
| app | String | App name |
| stream | String | Stream name |
| start_time | String | Start time. The format is yyyy-MM-ddTHH:mm:ssZ (UTC time). (Actual video start time) |
| end_time | String | End time. The format is yyyy-MM-ddTHH:mm:ssZ (UTC time). (Actual video end time) |
| duration | Integer | Recording duration<br>Unit: second |
| width | Integer | Video width. |
| height | Integer | Video height |
| location | String | ID of the region where the OBS bucket resides |
| bucket | String | Bucket name |
| object | String | M3U8 file path, which defaults to **Index/ {publish_domain}/{app}/{stream}- {start_time}-{end_time}** |

**Status code: 400**

**Table 9-80** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* is the current timestamp, and *hostname* is the name of the server that processes the current request.) |

**Table 9-81** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Creates a video recording index.

```
POST https://{endpoint}/v1/{project_id}/record/indexes

{
  "publish_domain" : "push.example.com",
  "app" : "live",
  "stream" : "index",
  "start_time" : "2022-07-25T16:20:00+08:00",
  "end_time" : "2022-07-25T16:30:00+08:00",
  "object" : "Index/{publish_domain}/{app}/{stream}/{stream}-{start_time}-{end_time}"
}
```

## Example Responses

**Status code: 201**

Creation of the video recording index succeeded.

```
{
  "index_url" : "http://obs***.com/push.test.com/live/stream01-20220901000000-20220901001000.m3u8",
  "duration" : 600,
  "height" : 1080,
  "width" : 720,
  "publish_domain" : "push.test.com",
  "app" : "live",
  "stream" : "stream01",
  "start_time" : "2022-09-01T00:00:00Z",
  "end_time" : "2022-09-01T00:10:00Z",
  "bucket" : "obs_bucket_name",
  "location" : "cn-north-5",
  "object" : "push.test.com/live/stream01-20220901000000-20220901001000.m3u8"
}
```

**Status code: 400**

Create a video recording index failed. Common errors:

● illegal time range: The request time range is incorrect. Check the **start_time** and **end_time**.

● no record info found: No recording task is found in the request time segment. The possible cause is that no livestream is successfully pushed in the time segment or command recording is not started under the command recording rule.

● no ts info found: No TS file is found in the request time segment. The possible cause is that stream interruption occurs in the request time segment or the TS segment recording is not complete when the request is sent.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Parameter verification failed."
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 201 | Creation of the video recording index succeeded. |

| Status Code | Description |
|---|---|
| 400 | Create a video recording index failed. Common errors: <br><br> ● illegal time range: The request time range is incorrect. Check the **start_time** and **end_time**. <br><br> ● no record info found: No recording task is found in the request time segment. The possible cause is that no livestream is successfully pushed in the time segment or command recording is not started under the command recording rule. <br><br> ● no ts info found: No TS file is found in the request time segment. The possible cause is that stream interruption occurs in the request time segment or the TS segment recording is not complete when the request is sent. |

## Error Codes

See **Error Codes**.

# 10 Recording Callback Management

## 10.1 Creating a Recording Callback

### Function

This API is used to create a recording callback.

### Calling Method

For details, see **Calling APIs**.

### URI

POST /v1/{project_id}/record/callbacks

**Table 10-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 10-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 10-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_doma in | Yes | String | Ingest domain name. |
| app | Yes | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| notify_callbac k_url | No | String | Callback URL for sending recording notifications. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| notify_event_subscription | No | Array of strings | Type of recording notifications. **RECORD_NEW_FILE_START**: Recording started. **RECORD_FILE_COMPLETE**: Recording file generated. **RECORD_OVER**: Recording completed. **RECORD_FAILED**: Recording failed. The default value is **RECORD_FILE_COMPLETE**. |
| sign_type | No | String | Encryption type. The options are as follows:<br>• HMACSHA256<br>• MD5<br>If this parameter is not specified, the default value **HMACSHA256** is used. |
| key | No | String | Callback key, which is used for authentication. To ensure user data security, you are advised to set this parameter. |

## Response Parameters

**Status code: 201**

**Table 10-4** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-5** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| id | String | Recording callback ID, which is returned by the server. This parameter does not need to be carried during creation or modification. |

| Parameter | Type | Description |
|---|---|---|
| publish_doma in | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| notify_callbac k_url | String | Callback URL for sending recording notifications. |
| notify_event_s ubscription | Array of strings | Type of recording notifications. **RECORD_NEW_FILE_START**: Recording started. **RECORD_FILE_COMPLETE**: Recording file generated. **RECORD_OVER**: Recording completed. **RECORD_FAILED**: Recording failed. The default value is **RECORD_FILE_COMPLETE**. |
| sign_type | String | Encryption type. The options are as follows:<br>• HMACSHA256<br>• MD5 |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Status code: 400**

**Table 10-6** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-7** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |

| Parameter | Type | Description |
|-----------|------|-------------|
| error_msg | String | Error description |

## Example Requests

Creates a recording callback configuration.

```
POST https://{endpoint}/v1/{project_id}/record/callbacks

{
  "publish_domain" : "publish.example.com",
  "app" : "**",
  "notify_callback_url" : "https://mycallback.com.cn/record_notify",
  "notify_event_subscription" : [ "RECORD_FILE_COMPLETE" ]
}
```

## Example Responses

### Status code: 400

Failed to create the recording callback.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 201 | Recording callback created. |
| 400 | Failed to create the recording callback. |

## Error Codes

See **Error Codes**.

# 10.2 Querying the List of Recording Callbacks

## Function

This API is used to query the list of recording callbacks that meet specific conditions.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/record/callbacks

**Table 10-8** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 10-9** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| publish_doma in | No | String | Ingest domain name. |
| app | No | String | Application name. |
| offset | No | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. |
| limit | No | Integer | Number of records on each page. The value ranges from 1 to 100 and defaults to **10**. |

## Request Parameters

**Table 10-10** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 10-11** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-12** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| total | Integer | Total number of elements in the query result. |
| callback_config | Array of **RecordCallbackConfig** objects | Recording callback configuration list. |

**Table 10-13** RecordCallbackConfig

| Parameter | Type | Description |
|-----------|------|-------------|
| id | String | Recording callback ID, which is returned by the server. This parameter does not need to be carried during creation or modification. |
| publish_domain | String | Ingest domain name. |

| Parameter | Type | Description |
|-----------|------|-------------|
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| notify_callbac k_url | String | Callback URL for sending recording notifications. |
| notify_event_s ubscription | Array of strings | Type of recording notifications. **RECORD_NEW_FILE_START**: Recording started. **RECORD_FILE_COMPLETE**: Recording file generated. **RECORD_OVER**: Recording completed. **RECORD_FAILED**: Recording failed. The default value is **RECORD_FILE_COMPLETE**. |
| sign_type | String | Encryption type. The options are as follows:<br>● HMACSHA256<br>● MD5 |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Status code: 400**

**Table 10-14** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-15** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries recording callback configurations.

GET https://{endpoint}/v1/{project_id}/record/callbacks?publish_domain=publish.example.com

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "total" : 1,
  "callback_config" : [ {
    "id" : "e2fe84def7e476651034ec4b9e92bc30",
    "publish_domain" : "publish.example.com",
    "app" : "*",
    "notify_callback_url" : "http://100.95.129.234:8456/base_record_notify",
    "notify_event_subscription" : [ "RECORD_FILE_COMPLETE", "RECORD_NEW_FILE_START" ],
    "create_time" : "2020-03-02T08:59:45Z",
    "update_time" : "2020-03-09T08:59:45Z"
  } ]
}
```

**Status code: 400**

Query failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Query succeeded. |
| 400 | Query failed. |

## Error Codes

See **Error Codes**.

# 10.3 Modifying a Recording Callback

## Function

This API is used to modify a recording callback.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/record/callbacks/{id}

**Table 10-16** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |
| id | Yes | String | Recording callback ID, which was returned after the callback was created. |

## Request Parameters

**Table 10-17** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 10-18** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_doma in | Yes | String | Ingest domain name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| app | Yes | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| notify_callback_url | No | String | Callback URL for sending recording notifications. |
| notify_event_subscription | No | Array of strings | Type of recording notifications. **RECORD_NEW_FILE_START**: Recording started. **RECORD_FILE_COMPLETE**: Recording file generated. **RECORD_OVER**: Recording completed. **RECORD_FAILED**: Recording failed. The default value is **RECORD_FILE_COMPLETE**. |
| sign_type | No | String | Encryption type. The options are as follows:<br>● HMACSHA256<br>● MD5<br><br>If this parameter is not specified, the default value **HMACSHA256** is used. |
| key | No | String | Callback key, which is used for authentication. To ensure user data security, you are advised to set this parameter. |

## Response Parameters

**Status code: 200**

**Table 10-19** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-20** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| id | String | Recording callback ID, which is returned by the server. This parameter does not need to be carried during creation or modification. |
| publish_doma in | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| notify_callbac k_url | String | Callback URL for sending recording notifications. |
| notify_event_s ubscription | Array of strings | Type of recording notifications. **RECORD_NEW_FILE_START**: Recording started. **RECORD_FILE_COMPLETE**: Recording file generated. **RECORD_OVER**: Recording completed. **RECORD_FAILED**: Recording failed. The default value is **RECORD_FILE_COMPLETE**. |
| sign_type | String | Encryption type. The options are as follows:<br>● HMACSHA256<br>● MD5 |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Status code: 400**

**Table 10-21** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-22** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies a recording callback configuration.

```
PUT https://{endpoint}/v1/{project_id}/record/callback/e89b76xxxxxx3425ui80af501cdxxxxxx

{
  "publish_domain" : "publish.example.com",
  "app" : "**",
  "notify_callback_url" : "https://mycallback.com.cn/record_notify",
  "notify_event_subscription" : [ "RECORD_FILE_COMPLETE" ]
}
```

## Example Responses

**Status code: 400**

Failed to create the recording callback.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Recording callback modified. |
| 400 | Failed to create the recording callback. |

## Error Codes

See **Error Codes**.

# 10.4 Querying a Recording Callback

## Function

This API is used to query details about a recording callback.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/record/callbacks/{id}

**Table 10-23** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |
| id | Yes | String | Recording callback ID. |

## Request Parameters

**Table 10-24** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |

## Response Parameters

**Status code: 200**

**Table 10-25** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-26** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| id | String | Recording callback ID, which is returned by the server. This parameter does not need to be carried during creation or modification. |
| publish_doma in | String | Ingest domain name. |
| app | String | Application name. To match any application, set this parameter to a wildcard character (*). Exact application matching is preferred. If no application is matched, all applications will be matched. |
| notify_callbac k_url | String | Callback URL for sending recording notifications. |
| notify_event_s ubscription | Array of strings | Type of recording notifications. **RECORD_NEW_FILE_START**: Recording started. **RECORD_FILE_COMPLETE**: Recording file generated. **RECORD_OVER**: Recording completed. **RECORD_FAILED**: Recording failed. The default value is **RECORD_FILE_COMPLETE**. |
| sign_type | String | Encryption type. The options are as follows:<br>● HMACSHA256<br>● MD5 |
| create_time | String | Creation time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |
| update_time | String | Modification time in the format of yyyy-mm-ddThh:mm:ssZ (UTC time). |

**Status code: 404**

**Table 10-27** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-28** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries a recording callback configuration.

GET https://{endpoint}/v1/{project_id}/record/callback/e89b76xxxxxx3425ui80af501cdxxxxxx

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "id" : "e2fe84def7e476651034ec4b9e92bc30",
  "publish_domain" : "publish.example.com",
  "app" : "*",
  "notify_callback_url" : "http://100.95.129.234:8456/base_record_notify",
  "notify_event_subscription" : [ "RECORD_FILE_COMPLETE", "RECORD_NEW_FILE_START" ],
  "create_time" : "2020-03-02T08:59:45Z",
  "update_time" : "2020-03-09T08:59:45Z"
}
```

**Status code: 404**

The record does not exist.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | Query succeeded. |
| 404 | The record does not exist. |

## Error Codes

See **Error Codes**.

# 10.5 Deleting a Recording Callback

## Function

This API is used to delete a recording callback.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/record/callbacks/{id}

**Table 10-29** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |
| id | Yes | String | Recording callback ID. |

## Request Parameters

**Table 10-30** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 204**

**Table 10-31** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Status code: 400**

**Table 10-32** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-request-id | String | Request ID for task tracing. Format: *request_id-timestamp-hostname*. (*request_id* is the UUID generated on the server. *timestamp* indicates the current timestamp, and *hostname* is the name of the server that processes the current API.) |

**Table 10-33** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Deletes a recording callback configuration.

DELETE https://{endpoint}/v1/{project_id}/record/callback/e89b76xxxxxx3425ui80af501cdxxxxxx

## Example Responses

**Status code: 400**

Failed to delete the recording callback.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Recording callback deleted. |
| 400 | Failed to delete the recording callback. |

## Error Codes

See **Error Codes**.

# 11 HTTPS Certificate Management

## 11.1 Modifying the HTTPS Certificate Configuration of a Specified Domain Name

### Function

API for modifying the HTTPS certificate configuration of a specified domain name.

### Calling Method

For details, see **Calling APIs**.

### URI

PUT /v1/{project_id}/guard/https-cert

**Table 11-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 11-2** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Streaming domain name |

## Request Parameters

**Table 11-3** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 11-4** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| certificate_format | No | String | Certificate format. The default value is PEM. Currently, only PEM is supported. |
| certificate | No | String | Certificate |
| certificate_key | No | String | Private key |
| force_redirect | No | Boolean | Whether to enable redirection. The default value is false. |
| gm_certificate | No | **GmCertificateInfo** object | Chinese (SM) certificate settings. Configure one international certificate, one Chinese (SM) certificate, or one international certificate and one Chinese (SM) certificate. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| tls_certificate | No | **TlsCertificate Info** object | Chinese (SM) certificate settings. Configure one international certificate, one Chinese (SM) certificate, or one international certificate and one Chinese (SM) certificate. If this field is specified, you can skip the settings of **certificate** and **certificate_key**. |

**Table 11-5** GmCertificateInfo

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| source | No | String | Certificate source. Options are **scm** (Cloud Certificate Manager, CCM) and **user** (default, the user's own certificate). |
| cert_name | No | String | (Optional) SCM certificate name. |
| cert_id | No | String | SCM certificate ID. This parameter is mandatory when the certificate source is **scm**. |
| sign_certificate | No | String | Chinese (SM) signature certificate body |
| sign_certificate_key | No | String | Chinese (SM) signature private key |
| enc_certificate | No | String | Chinese (SM) encryption certificate body |
| enc_certificate_key | No | String | Chinese (SM) encryption private key |

**Table 11-6** TlsCertificateInfo

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| source | No | String | Certificate source. Options are **scm** (Cloud Certificate Manager, CCM) and **user** (default, the user's own certificate). |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| cert_name | No | String | SCM certificate name. This parameter is available when the certificate source is **scm**. |
| cert_id | No | String | SCM certificate ID. This parameter is mandatory when the certificate source is **scm**. |
| certificate | No | String | Certificate body. This parameter is mandatory when the certificate source is **user**. |
| certificate_key | No | String | Private key. This parameter is mandatory when the certificate source is **user**. |

## Response Parameters

**Status code: 400**

**Table 11-7** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 401**

**Table 11-8** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 11-9** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 11-10** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Modifies the HTTPS certificate configuration of a specified domain name.

```
PUT https://{endpoint}/v1/{project_id}/guard/https-cert?domain=play.example.huawei.com

{
  "certificate_format" : "PEM",
  "certificate" : "your cert",
  "certificate_key" : "your cert key",
  "force_redirect" : true
}
```

# Example Responses

**Status code: 400**

Parameter verification failed. For example, the input **domain** value is empty or the certificate verification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 401**

The API is not authorized to access resources.

```
{
  "error_code" : "LIVE.100011003",
  "error_msg" : "Unauthorized access to the interface, please contact the main account administrator to open the interface permissions"
}
```

**Status code: 404**

The resource to be accessed does not exist. For example, the domain name does not exist.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "The resource to access is not exists"
}
```

**Status code: 500**

Internal service error

```
{
"error_code" : "LIVE.100011005",
"error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Updated. |
| 400 | Parameter verification failed. For example, the input **domain** value is empty or the certificate verification failed. |
| 401 | The API is not authorized to access resources. |
| 404 | The resource to be accessed does not exist. For example, the domain name does not exist. |
| 500 | Internal service error |

## Error Codes

See **Error Codes**.

# 11.2 Querying the HTTPS Certificate Configuration of a Specified Domain Name

## Function

API for querying the HTTPS certificate configuration of a specified domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/guard/https-cert

**Table 11-11** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 11-12** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Streaming domain name |

## Request Parameters

**Table 11-13** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 11-14** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| certificate_format | String | Certificate format. The default value is PEM. Currently, only PEM is supported. |
| certificate | String | Certificate |
| certificate_key | String | Private key |
| force_redirect | Boolean | Whether to enable redirection. The default value is false. |

| Parameter | Type | Description |
|---|---|---|
| gm_certificate | **GmCertificat eInfo** object | Chinese (SM) certificate settings. Configure one international certificate, one Chinese (SM) certificate, or one international certificate and one Chinese (SM) certificate. |
| tls_certificate | **TlsCertificate Info** object | Chinese (SM) certificate settings. Configure one international certificate, one Chinese (SM) certificate, or one international certificate and one Chinese (SM) certificate. If this field is specified, you can skip the settings of **certificate** and **certificate_key**. |

**Table 11-15** GmCertificateInfo

| Parameter | Type | Description |
|---|---|---|
| source | String | Certificate source. Options are **scm** (Cloud Certificate Manager, CCM) and **user** (default, the user's own certificate). |
| cert_name | String | (Optional) SCM certificate name. |
| cert_id | String | SCM certificate ID. This parameter is mandatory when the certificate source is **scm**. |
| sign_certificat e | String | Chinese (SM) signature certificate body |
| sign_certificat e_key | String | Chinese (SM) signature private key |
| enc_certificate | String | Chinese (SM) encryption certificate body |
| enc_certificate _key | String | Chinese (SM) encryption private key |

**Table 11-16** TlsCertificateInfo

| Parameter | Type | Description |
|---|---|---|
| source | String | Certificate source. Options are **scm** (Cloud Certificate Manager, CCM) and **user** (default, the user's own certificate). |
| cert_name | String | SCM certificate name. This parameter is available when the certificate source is **scm**. |
| cert_id | String | SCM certificate ID. This parameter is mandatory when the certificate source is **scm**. |

| Parameter | Type | Description |
|---|---|---|
| certificate | String | Certificate body. This parameter is mandatory when the certificate source is **user**. |
| certificate_key | String | Private key. This parameter is mandatory when the certificate source is **user**. |

**Status code: 400**

**Table 11-17** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 401**

**Table 11-18** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 11-19** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 11-20** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |

| Parameter | Type | Description |
|-----------|------|-------------|
| error_msg | String | Error description |

## Example Requests

Queries the HTTPS certificate configuration of a specified domain name.

GET https://{endpoint}/v1/{project_id}/guard/https-cert?domain=play.example.huawei.com

## Example Responses

**Status code: 200**

Query succeeded.

Note: If **certificate_key** is not returned, the value is empty.

```
{
  "certificate_format" : "PEM",
  "certificate" : "",
  "certificate_key" : "",
  "force_redirect" : false
}
```

**Status code: 400**

Parameter verification failed. For example, the input **domain** value is empty or the certificate verification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 401**

The API is not authorized to access resources.

```
{
  "error_code" : "LIVE.100011003",
  "error_msg" : "Unauthorized access to the interface, please contact the main account administrator to open the interface permissions"
}
```

**Status code: 404**

The resource to be accessed does not exist. For example, the domain name does not exist.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "The resource to access is not exists"
}
```

**Status code: 500**

Internal service error

```
{
  "error_code" : "LIVE.100011005",
  "error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Query succeeded. Note: If **certificate_key** is not returned, the value is empty. |
| 400 | Parameter verification failed. For example, the input **domain** value is empty or the certificate verification failed. |
| 401 | The API is not authorized to access resources. |
| 404 | The resource to be accessed does not exist. For example, the domain name does not exist. |
| 500 | Internal service error |

## Error Codes

See **Error Codes**.

# 11.3 Deleting the HTTPS Certificate Configuration of a Specified Domain Name

## Function

API for deleting the HTTPS certificate configuration of a specified domain name.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/guard/https-cert

**Table 11-21** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 11-22** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Streaming domain name |

## Request Parameters

**Table 11-23** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 11-24** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 401**

**Table 11-25** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 404**

**Table 11-26** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

**Status code: 500**

**Table 11-27** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

# Example Requests

Deletes the HTTPS certificate configuration of a specified domain name.

DELETE https://{endpoint}/v1/{project_id}/guard/https-cert?domain=play.example.huawei.com

# Example Responses

**Status code: 400**

Parameter verification failed. For example, the input **domain** value is empty or the certificate verification failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

**Status code: 401**

The API is not authorized to access resources.

```
{
  "error_code" : "LIVE.100011003",
  "error_msg" : "Unauthorized access to the interface, please contact the main account administrator to
```

```
open the interface permissions"
}
```

**Status code: 404**

The resource to be accessed does not exist. For example, the domain name does not exist.

```
{
  "error_code" : "LIVE.103011019",
  "error_msg" : "The resource to access is not exists"
}
```

**Status code: 500**

Internal service error

```
{
  "error_code" : "LIVE.100011005",
  "error_msg" : "Server internal error, please try again later or contact customer service staff to help solve"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Deleted. |
| 400 | Parameter verification failed. For example, the input **domain** value is empty or the certificate verification failed. |
| 401 | The API is not authorized to access resources. |
| 404 | The resource to be accessed does not exist. For example, the domain name does not exist. |
| 500 | Internal service error |

## Error Codes

See **Error Codes**.

# 12 OBS Bucket Management

## 12.1 Granting or Canceling Authorization of Accessing OBS Buckets

### Function

API for granting or canceling authorization of accessing OBS buckets.

### Calling Method

For details, see **Calling APIs**.

### URI

PUT /v1/{project_id}/obs/authority

**Table 12-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 12-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 12-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| bucket | Yes | String | OBS bucket name |
| operation | Yes | Integer | Operation<br>● **1**: Access is authorized.<br>● **0**: The authorization is canceled. |

## Response Parameters

**Status code: 400**

**Table 12-4** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies the authorization policy of the OBS bucket. The bucket name is **video-test02** and the operation is **Authorize**.

```
PUT https://{endpoint}/v1/${project_id}/obs/authority

{
  "bucket" : "video-test02",
  "operation" : 1
}
```

## Example Responses

**Status code: 400**

Update the authorization of accessing OBS buckets failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Authorization of accessing OBS buckets updated. |
| 400 | Update the authorization of accessing OBS buckets failed. |

## Error Codes

See **Error Codes**.

# 13 Transcoding Template Management

## 13.1 Creating a Transcoding Template

### Function

Creates a transcoding template. Using this function will incur live transcoding fees.

### Calling Method

For details, see **Calling APIs**.

### URI

POST /v1/{project_id}/template/transcodings

**Table 13-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 13-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 13-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app_name | Yes | String | Application name. |
| trans_type | No | String | Transcoding stream triggering mode.<br>● play: Transcoding is triggered by stream pull.<br>● publish: Transcoding is triggered by stream push.<br>The default value is **play**. |
| quality_info | Yes | Array of **QualityInfo** objects | Video quality information. |

**Table 13-4** QualityInfo

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| quality | Yes | String | The options are as follows:<br>• **lud**: ultra HD (default name)<br>• **lhd**: HD (default name)<br>• **lsd**: SD (default name)<br>• **lld**: smooth (default name)<br>• **userdefine**: custom video quality. When **userdefine** is specified, the **templateName** field cannot be empty. |
| templateNam e | No | String | Customizes a template name.<br>• To customize a template name, set **quality** to **userdefine**.<br>• The name of each custom template must be unique.<br>• The name of a custom template cannot be the same as the value of **quality** of another template.<br>• If **quality** is not set to **userdefine**, do not set this parameter. |
| PVC | No | String | Indicates whether to use narrowband HD transcoding.<br>Note: This field is no longer used. Use **hdlb** instead.<br>The options are as follows:<br>• **off**: disabled<br>• **on**: enabled<br>Default value: **off** |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| hdlb | No | String | Indicates whether to enable low-bitrate HD. The image quality is better than PVC.<br><br>Note: When the **hdlb** field is used to enable low-bitrate HD, the **PVC** field does not take effect.<br><br>The options are as follows:<br><br>• **off**: Low-bitrate HD is disabled.<br>• **on**: Low-bitrate HD is enabled.<br><br>Default value: **off** |
| codec | No | String | Video encoding format.<br><br>The options are as follows:<br><br>• **H264**: H.264 is used.<br>• **H265**: H.265 is used.<br><br>The default value is **H264**. |
| width | No | Integer | Long side of the video. The landscape is a width, that is, a long side, and the portrait is a height. Unit: pixel.<br><br>The options are as follows:<br><br>• When **codec** is set to **H264**, the recommended value range of **width** is [32, 3840] and the value must be an integer multiple of 2.<br>• When **codec** is set to **H265**, the recommended value range of **width** is [320, 3840] and the value must be an integer multiple of 2.<br><br>Note: If the input value of both sides is **0**, the output video resolution is the same as the source video resolution. If the value of one side is set to **0**, the output video resolution will be scaled proportionally according to the input value of the other side.<br><br>Default value: **0** |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| height | No | Integer | Short side of the video. The landscape is a width, and the portrait is a height, that is, a short side. Unit: pixel. The options are as follows: <br>• When **codec** is set to **H264**, the recommended value range of **height** is [32, 2160] and the value must be an integer multiple of 2. <br>• When **codec** is set to **H265**, the recommended value range of **height** is [240, 2160] and the value must be an integer multiple of 2. <br>Note: If the input value of both sides is **0**, the output video resolution is the same as the source video resolution. If the value of one side is set to **0**, the output video resolution will be scaled proportionally according to the input value of the other side. <br>Default value: **0** |
| bitrate | Yes | Integer | Bitrate of the transcoded video. <br>Unit: kbit/s <br>Value range: 40–30,000 |
| video_frame_rate | No | Integer | Frame rate of the transcoded video. <br>Unit: FPS <br>Value range: 0–60. The value **0** indicates that the frame rate remains unchanged. <br>Default value: **0** |
| protocol | No | String | Protocol type supported by transcoded outputs. The default value is **RTMP**. Currently, only RTMP is supported. <br>The options are as follows: <br>• RTMP |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| iFrameInterval | No | Integer | Maximum I-frame interval.<br><br>Unit: number of frames<br><br>Value range: 0–500. Default value: **50**.<br><br>Note: If you want to set the I-frame interval using **iFrameInterval**, set **gop** to **0** or do not set **gop**. |
| gop | No | Integer | I-frame interval by time.<br><br>Unit: second<br><br>Value range: 0–10. Default value: **2**.<br><br>Note: If **gop** is not **0**, the I-frame interval is set based on **gop**, and the **iFrameInterval** field does not take effect. |
| bitrate_adaptive | No | String | Adaptive bitrate parameter.<br><br>The options are as follows:<br><br>● **off**: Bitrate adaptation is disabled. The target bitrate is output as specified.<br><br>● **minimum**: The target bitrate is the smaller value between the specified bitrate and the bitrate of the source file. That is, the bitrate does not increase.<br><br>● **adaptive**: The target bitrate is adaptive to the bitrate of the source file.<br><br>Default value: **off** |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| i_frame_policy | No | String | Policy for outputting I-frames during encoding.<br><br>The options are as follows:<br><br>● **auto**: I-frames are output based on the configured GOP duration.<br><br>● **strictSync**: The output I-frames are the same as those of the source. If the source contains I-frames, the output I-frames are encoded. If the source does not contain I-frames, the output non-I-frames are encoded. After this parameter is set, the GOP duration is invalid.<br><br>Default value: **auto** |

## Response Parameters

**Status code: 400**

**Table 13-5** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Creates a transcoding template. Set the application name to **live**, transcoding quality to SD, transcoding format to H.264, width to 1920 pixels, and height to 1080 pixels.

```
POST https://{endpoint}/v1/{project_id}/template/transcodings

{
  "domain" : "play.example.com",
  "app_name" : "live",
  "quality_info" : [ {
    "quality" : "lsd",
    "hdlb" : "off",
    "codec" : "H264",
    "width" : 1920,
    "height" : 1080,
    "bitrate" : 4500,
    "video_frame_rate" : 20,
```

```
    "gop" : 4
  }, {
    "quality" : "userdefine",
    "templateName" : "yourTemplateName",
    "hdlb" : "off",
    "codec" : "H264",
    "width" : 1920,
    "height" : 1080,
    "bitrate" : 4500,
    "video_frame_rate" : 20,
    "gop" : 4
  } ]
}
```

## Example Responses

### Status code: 400

Failed to create a transcoding template.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 201 | Transcoding template created successfully. |
| 400 | Failed to create a transcoding template. |

## Error Codes

See **Error Codes**.

# 13.2 Deleting a Transcoding Template

## Function

This API is used to delete a transcoding template.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/template/transcodings

**Table 13-6** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 13-7** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app_name | Yes | String | Application name. |

## Request Parameters

**Table 13-8** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 13-9** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Deletes a transcoding template.

```
DELETE https://{endpoint}/v1/{project_id}/template/transcodings?
domain=play.example.com&app_name=live
```

## Example Responses

**Status code: 400**

Failed to delete the transcoding template.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200 | The Live transcoding template has been deleted. |
| 400 | Failed to delete the transcoding template. |

## Error Codes

See **Error Codes**.

# 13.3 Modifying a Transcoding Template

## Function

This API is used to modify a transcoding template.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/template/transcodings

**Table 13-10** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 13-11** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 13-12** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app_name | Yes | String | Application name. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| trans_type | No | String | Transcoding stream triggering mode.<br>● play: Transcoding is triggered by stream pull.<br>● publish: Transcoding is triggered by stream push.<br>The default value is **play**. |
| quality_info | Yes | Array of **QualityInfo** objects | Video quality information. |

**Table 13-13** QualityInfo

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| quality | Yes | String | The options are as follows:<br>● **lud**: ultra HD (default name)<br>● **lhd**: HD (default name)<br>● **lsd**: SD (default name)<br>● **lld**: smooth (default name)<br>● **userdefine**: custom video quality. When **userdefine** is specified, the **templateName** field cannot be empty. |
| templateName | No | String | Customizes a template name.<br>● To customize a template name, set **quality** to **userdefine**.<br>● The name of each custom template must be unique.<br>● The name of a custom template cannot be the same as the value of **quality** of another template.<br>● If **quality** is not set to **userdefine**, do not set this parameter. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| PVC | No | String | Indicates whether to use narrowband HD transcoding. Note: This field is no longer used. Use **hdlb** instead. The options are as follows: <br>• **off**: disabled <br>• **on**: enabled <br>Default value: **off** |
| hdlb | No | String | Indicates whether to enable low-bitrate HD. The image quality is better than PVC. Note: When the **hdlb** field is used to enable low-bitrate HD, the **PVC** field does not take effect. The options are as follows: <br>• **off**: Low-bitrate HD is disabled. <br>• **on**: Low-bitrate HD is enabled. <br>Default value: **off** |
| codec | No | String | Video encoding format. The options are as follows: <br>• **H264**: H.264 is used. <br>• **H265**: H.265 is used. <br>The default value is **H264**. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| width | No | Integer | Long side of the video. The landscape is a width, that is, a long side, and the portrait is a height. Unit: pixel.<br><br>The options are as follows:<br><br>● When **codec** is set to **H264**, the recommended value range of **width** is [32, 3840] and the value must be an integer multiple of 2.<br><br>● When **codec** is set to **H265**, the recommended value range of **width** is [320, 3840] and the value must be an integer multiple of 2.<br><br>Note: If the input value of both sides is **0**, the output video resolution is the same as the source video resolution. If the value of one side is set to **0**, the output video resolution will be scaled proportionally according to the input value of the other side.<br><br>Default value: **0** |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| height | No | Integer | Short side of the video. The landscape is a width, and the portrait is a height, that is, a short side. Unit: pixel. <br><br> The options are as follows: <br><br> • When **codec** is set to **H264**, the recommended value range of **height** is [32, 2160] and the value must be an integer multiple of 2. <br><br> • When **codec** is set to **H265**, the recommended value range of **height** is [240, 2160] and the value must be an integer multiple of 2. <br><br> Note: If the input value of both sides is **0**, the output video resolution is the same as the source video resolution. If the value of one side is set to **0**, the output video resolution will be scaled proportionally according to the input value of the other side. <br><br> Default value: **0** |
| bitrate | Yes | Integer | Bitrate of the transcoded video. <br> Unit: kbit/s <br> Value range: 40–30,000 |
| video_frame_rate | No | Integer | Frame rate of the transcoded video. <br> Unit: FPS <br> Value range: 0–60. The value **0** indicates that the frame rate remains unchanged. <br> Default value: **0** |
| protocol | No | String | Protocol type supported by transcoded outputs. The default value is **RTMP**. Currently, only RTMP is supported. <br><br> The options are as follows: <br><br> • RTMP |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| iFrameInterval | No | Integer | Maximum I-frame interval.<br>Unit: number of frames<br>Value range: 0–500. Default value: **50**.<br>Note: If you want to set the I-frame interval using **iFrameInterval**, set **gop** to **0** or do not set **gop**. |
| gop | No | Integer | I-frame interval by time.<br>Unit: second<br>Value range: 0–10. Default value: **2**.<br>Note: If **gop** is not **0**, the I-frame interval is set based on **gop**, and the **iFrameInterval** field does not take effect. |
| bitrate_adaptive | No | String | Adaptive bitrate parameter.<br>The options are as follows:<br>● **off**: Bitrate adaptation is disabled. The target bitrate is output as specified.<br>● **minimum**: The target bitrate is the smaller value between the specified bitrate and the bitrate of the source file. That is, the bitrate does not increase.<br>● **adaptive**: The target bitrate is adaptive to the bitrate of the source file.<br>Default value: **off** |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| i_frame_policy | No | String | Policy for outputting I-frames during encoding. The options are as follows: <ul><li>**auto**: I-frames are output based on the configured GOP duration.</li><li>**strictSync**: The output I-frames are the same as those of the source. If the source contains I-frames, the output I-frames are encoded. If the source does not contain I-frames, the output non-I-frames are encoded. After this parameter is set, the GOP duration is invalid.</li></ul> Default value: **auto** |

## Response Parameters

**Status code: 400**

**Table 13-14** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies a transcoding template. Set the application name to **live**, transcoding quality to SD, transcoding format to H.264, width to 1920 pixels, and height to 1080 pixels.

```
PUT https://{endpoint}/v1/{project_id}/template/transcodings

{
  "domain" : "play.example.com",
  "app_name" : "live",
  "quality_info" : [ {
    "quality" : "lsd",
    "hdlb" : "off",
    "codec" : "H264",
    "width" : 1920,
    "height" : 1080,
    "bitrate" : 4500,
    "video_frame_rate" : 20,
```

```
    "gop" : 4
  }, {
    "quality" : "userdefine",
    "templateName" : "yourTemplateName",
    "hdlb" : "off",
    "codec" : "H264",
    "width" : 1920,
    "height" : 1080,
    "bitrate" : 4500,
    "video_frame_rate" : 20,
    "gop" : 4
  } ]
}
```

## Example Responses

**Status code: 400**

Failed to modify the transcoding template.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Transcoding template modified successfully. |
| 400 | Failed to modify the transcoding template. |

## Error Codes

See **Error Codes**.

# 13.4 Querying Transcoding Templates

## Function

This API is used to query transcoding templates.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/template/transcodings

**Table 13-15** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 13-16** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app_name | No | String | Application name. |
| page | No | Integer | Page number,default value: 0 |
| size | No | Integer | Number of records on each page. The value ranges from 1 to 100 The default value is **10**. |

## Request Parameters

**Table 13-17** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

Status code: 200

**Table 13-18** Response body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| total | Integer | Number of apps in the query result. |
| domain | String | Streaming domain name. |
| templates | Array of **AppQualityInfo** objects | Transcoding Template |

**Table 13-19** AppQualityInfo

| Parameter | Type | Description |
| --- | --- | --- |
| app_name | String | Application name. |
| quality_info | Array of **QualityInfo** objects | Video quality information. |

**Table 13-20** QualityInfo

| Parameter | Type | Description |
| --- | --- | --- |
| quality | String | The options are as follows:<br>● **lud**: ultra HD (default name)<br>● **lhd**: HD (default name)<br>● **lsd**: SD (default name)<br>● **lld**: smooth (default name)<br>● **userdefine**: custom video quality. When **userdefine** is specified, the **templateName** field cannot be empty. |

| Parameter | Type | Description |
|---|---|---|
| templateName e | String | Customizes a template name.<br>• To customize a template name, set **quality** to **userdefine**.<br>• The name of each custom template must be unique.<br>• The name of a custom template cannot be the same as the value of **quality** of another template.<br>• If **quality** is not set to **userdefine**, do not set this parameter. |
| PVC | String | Indicates whether to use narrowband HD transcoding.<br>Note: This field is no longer used. Use **hdlb** instead.<br>The options are as follows:<br>• **off**: disabled<br>• **on**: enabled<br>Default value: **off** |
| hdlb | String | Indicates whether to enable low-bitrate HD. The image quality is better than PVC.<br>Note: When the **hdlb** field is used to enable low-bitrate HD, the **PVC** field does not take effect.<br>The options are as follows:<br>• **off**: Low-bitrate HD is disabled.<br>• **on**: Low-bitrate HD is enabled.<br>Default value: **off** |
| codec | String | Video encoding format.<br>The options are as follows:<br>• **H264**: H.264 is used.<br>• **H265**: H.265 is used.<br>The default value is **H264**. |

| Parameter | Type | Description |
|-----------|------|-------------|
| width | Integer | Long side of the video. The landscape is a width, that is, a long side, and the portrait is a height. Unit: pixel.<br><br>The options are as follows:<br><br>● When **codec** is set to **H264**, the recommended value range of **width** is [32, 3840] and the value must be an integer multiple of 2.<br><br>● When **codec** is set to **H265**, the recommended value range of **width** is [320, 3840] and the value must be an integer multiple of 2.<br><br>Note: If the input value of both sides is **0**, the output video resolution is the same as the source video resolution. If the value of one side is set to **0**, the output video resolution will be scaled proportionally according to the input value of the other side.<br><br>Default value: **0** |
| height | Integer | Short side of the video. The landscape is a width, and the portrait is a height, that is, a short side. Unit: pixel.<br><br>The options are as follows:<br><br>● When **codec** is set to **H264**, the recommended value range of **height** is [32, 2160] and the value must be an integer multiple of 2.<br><br>● When **codec** is set to **H265**, the recommended value range of **height** is [240, 2160] and the value must be an integer multiple of 2.<br><br>Note: If the input value of both sides is **0**, the output video resolution is the same as the source video resolution. If the value of one side is set to **0**, the output video resolution will be scaled proportionally according to the input value of the other side.<br><br>Default value: **0** |
| bitrate | Integer | Bitrate of the transcoded video.<br>Unit: kbit/s<br>Value range: 40–30,000 |

| Parameter | Type | Description |
|---|---|---|
| video_frame_rate | Integer | Frame rate of the transcoded video.<br>Unit: FPS<br>Value range: 0–60. The value **0** indicates that the frame rate remains unchanged.<br>Default value: **0** |
| protocol | String | Protocol type supported by transcoded outputs. The default value is **RTMP**. Currently, only RTMP is supported.<br>The options are as follows:<br>● RTMP |
| iFrameInterval | Integer | Maximum I-frame interval.<br>Unit: number of frames<br>Value range: 0–500. Default value: **50**.<br>Note: If you want to set the I-frame interval using **iFrameInterval**, set **gop** to **0** or do not set **gop**. |
| gop | Integer | I-frame interval by time.<br>Unit: second<br>Value range: 0–10. Default value: **2**.<br>Note: If **gop** is not **0**, the I-frame interval is set based on **gop**, and the **iFrameInterval** field does not take effect. |
| bitrate_adaptive | String | Adaptive bitrate parameter.<br>The options are as follows:<br>● **off**: Bitrate adaptation is disabled. The target bitrate is output as specified.<br>● **minimum**: The target bitrate is the smaller value between the specified bitrate and the bitrate of the source file. That is, the bitrate does not increase.<br>● **adaptive**: The target bitrate is adaptive to the bitrate of the source file.<br>Default value: **off** |

| Parameter | Type | Description |
|---|---|---|
| i_frame_policy | String | Policy for outputting I-frames during encoding. The options are as follows:<br>● **auto**: I-frames are output based on the configured GOP duration.<br>● **strictSync**: The output I-frames are the same as those of the source. If the source contains I-frames, the output I-frames are encoded. If the source does not contain I-frames, the output non-I-frames are encoded. After this parameter is set, the GOP duration is invalid.<br>Default value: **auto** |

**Status code: 400**

**Table 13-21** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries transcoding templates.

```
GET https://{endpoint}/v1/{project_id}/template/transcodings?
domain=play.example.com&app_name=live&page=0&size=10
```

## Example Responses

**Status code: 200**

Transcoding templates queried successfully.

```
{
  "domain" : "play.example.com",
  "total" : 1,
  "templates" : [ {
    "app_name" : "live",
    "quality_info" : [ {
      "quality" : "lsd",
      "hdlb" : "off",
      "codec" : "H264",
      "width" : 1920,
      "height" : 1080,
      "bitrate" : 4500,
      "video_frame_rate" : 20,
      "gop" : 4
    }, {
      "quality" : "userdefine",
```

```
      "templateName" : "yourTemplateName",
      "hdlb" : "off",
      "codec" : "H264",
      "width" : 1920,
      "height" : 1080,
      "bitrate" : 4500,
      "video_frame_rate" : 20,
      "gop" : 4
    } ]
  } ]
}
```

**Status code: 400**

Failed to query the transcoding templates.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Transcoding templates queried successfully. |
| 400 | Failed to query the transcoding templates. |

## Error Codes

See **Error Codes**.

# 14 Stream Management

## 14.1 Disabling a Push Stream

### Function

This API is used to disable a push stream.

### Calling Method

For details, see **Calling APIs**.

### URI

POST /v1/{project_id}/stream/blocks

**Table 14-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 14-2** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 14-3** Request body parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name |
| app_name | Yes | String | Application name. |
| stream_name | Yes | String | Stream name (not *) |
| resume_time | No | String | Specifies the time of resuming stream push. The value is a UTC time in the format of yyyy-mm-ddThh:mm:ssZ. If this parameter is not specified, the default value is 7 days. The maximum value is 90 days. **resume_time** cannot be earlier than the current time. |

## Response Parameters

**Status code: 400**

**Table 14-4** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Creates an attribute for forbidding stream push.

```
POST https://{endpoint}/v1/{project_id}/stream/blocks

{
  "domain" : "publish.example.huawei.com",
  "app_name" : "live",
  "stream_name" : "huawei",
  "resume_time" : "2018-05-19T21:10:15Z"
}
```

## Example Responses

**Status code: 400**

Failed to disable the stream.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Stream disabled successfully. |
| 400 | Failed to disable the stream. |

## Error Codes

See **Error Codes**.

# 14.2 Querying Disabled Streams

## Function

This API is used to query disabled streams.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/stream/blocks

**Table 14-5** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 14-6** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Domain name |
| app_name | No | String | Application name. If this parameter is not specified, the disabled streams under all applications for the domain are queried. |
| stream_name | No | String | Stream name. |
| page | No | Integer | Page number. The default value is **0**. |
| size | No | Integer | Number of records on each page. The value ranges from 1 to 100 The default value is **10**. |

## Request Parameters

**Table 14-7** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 14-8** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| total | Integer | Total number of elements in the query result. |
| blocks | Array of **StreamForbiddenList** objects | Information about disabled streams |

**Table 14-9** StreamForbiddenList

| Parameter | Type | Description |
|-----------|------|-------------|
| app_name | String | Application name. |
| stream_name | String | Stream name. |

| Parameter | Type | Description |
|---|---|---|
| resume_time | String | Time to resume stream push. The format is yyyy-mm-ddThh:mm:ssZ (UTC time). The default value is 7 days. The maximum value is 90 days. |

**Status code: 400**

**Table 14-10** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Queries disabled streams.

GET https://{endpoint}/v1/{project_id}/stream/blocks?domain=publish.example.huawei.com&app_name=live

## Example Responses

**Status code: 200**

Disabled streams queried successfully.

```
{
  "total" : 2,
  "blocks" : [ {
    "app_name" : "live",
    "stream_name" : "test_001",
    "resume_time" : "2018-05-19T21:10:15Z"
  }, {
    "app_name" : "live",
    "stream_name" : "test_002",
    "resume_time" : "2018-06-12T20:10:10Z"
  } ]
}
```

**Status code: 400**

Failed to query disabled streams.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Disabled streams queried successfully. |
| 400 | Failed to query disabled streams. |

## Error Codes

See **Error Codes**.

# 14.3 Resuming a Push Stream

## Function

This API is used to resume a push stream.

## Calling Method

For details, see **Calling APIs**.

## URI

DELETE /v1/{project_id}/stream/blocks

**Table 14-11** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 14-12** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app_name | Yes | String | Application name. |
| stream_name | Yes | String | Stream name (not *) |

## Request Parameters

**Table 14-13** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 400**

**Table 14-14** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

DELETE https://{endpoint}/v1/{project_id}/stream/blocks?
domain=publish.example.huawei.com&app_name=live&stream_name=test_001

## Example Responses

**Status code: 400**

Failed to resume the stream.

```
{
  "error_code" : "LIVE.100011001",
```

```
"error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Stream resumed successfully. |
| 400 | Failed to resume the stream. |

## Error Codes

See **Error Codes**.

# 14.4 Modifying the Attribute of a Disabled Stream

## Function

This API is used to modify the attribute of a disabled stream.

## Calling Method

For details, see **Calling APIs**.

## URI

PUT /v1/{project_id}/stream/blocks

**Table 14-15** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

## Request Parameters

**Table 14-16** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | Yes | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

**Table 14-17** Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Domain name |
| app_name | Yes | String | Application name. |
| stream_name | Yes | String | Stream name (not *) |
| resume_time | No | String | Specifies the time of resuming stream push. The value is a UTC time in the format of yyyy-mm-ddThh:mm:ssZ. If this parameter is not specified, the default value is 7 days. The maximum value is 90 days. **resume_time** cannot be earlier than the current time. |

## Response Parameters

**Status code: 400**

**Table 14-18** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

Modifies the attribute for forbidding stream push.

```
POST https://{endpoint}/v1/{project_id}/stream/blocks

{
  "domain" : "publish.example.huawei.com",
  "app_name" : "live",
  "stream_name" : "huawei",
  "resume_time" : "2018-05-19T21:10:15Z"
}
```

## Example Responses

### Status code: 400

Failed to modify the attribute of the disabled stream.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 204 | Attribute of the disabled stream modified successfully. |
| 400 | Failed to modify the attribute of the disabled stream. |

## Error Codes

See **Error Codes**.

# 14.5 Querying an Ongoing Stream

## Function

This API is used to query an ongoing stream.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v1/{project_id}/realtime/streams

**Table 14-19** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 14-20** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| publish_domain | Yes | String | Ingest domain name. |
| app | No | String | Application name. |
| offset | No | Integer | Offset, which is the position where the query starts. The value must be greater than or equal to 0. |
| limit | No | Integer | Number of records on each page. The value ranges from 1 to 100. The default value is **10**. |
| stream | No | String | Stream name. If the **stream** parameter is carried, the **app** parameter cannot be set to the default value. |

## Request Parameters

**Table 14-21** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. The token can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 14-22** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| total_page | Long | Total number of pages. |
| total_num | Long | Total number of records. |
| offset | Long | Offset. |
| limit | Long | Number of records per page. |
| request_id | String | Unique ID of the request. |
| streams | Array of **OnlineInfo** objects | Stream statistics. |

**Table 14-23** OnlineInfo

| Parameter | Type | Description |
|---|---|---|
| publish_domain | String | Domain name. |
| app | String | Application name. |
| stream | String | Stream name. |
| video_codec | String | Video encoding format<br>● H264<br>● H265 |
| audio_codec | String | Audio coding format. Value: **AAC**. |
| video_frame_rate | Long | Video frame rate, in fps. |
| audio_frame_rate | Long | Audio frame rate, in fps. |
| video_bitrate | Long | Video bitrate, in kbit/s. |
| audio_bitrate | Long | Audio bitrate, in kbit/s. |
| resolution | String | Video resolution. |
| client_ip | String | IP address of the device that pushes streams. |
| start_time | String | Time when stream pushing starts. The value is in UTC format, for example, 2006-01-02T15:04:05Z. |

**Status code: 400**

**Table 14-24** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error Code |
| error_msg | String | Error description |

## Example Requests

GET https://{endpoint}/v1/{project_id}/realtime/streams?
publish_domain=push.example.com&app=live&offset=0&limit=10

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "total_page" : 1,
  "total_num" : 10,
  "offset" : 0,
  "limit" : 10,
  "request_id" : "56b9f4dc-b282-48e0-a1a9-c50ffb06b687",
  "streams" : [ {
    "publish_domain" : "push.example.com",
    "app" : "live",
    "stream" : "test",
    "video_codec" : "H264",
    "audio_codec" : "AAC",
    "video_frame_rate" : 15,
    "audio_frame_rate" : 43,
    "video_bitrate" : 588,
    "audio_bitrate" : 68,
    "resolution" : "640x360",
    "client_ip" : "192.168.0.100",
    "start_time" : "2006-01-02T15:04:05Z"
  } ]
}
```

**Status code: 400**

Query failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Request Illegal"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | Query succeeded. |
| 400 | Query failed. |

## Error Codes

See **Error Codes**.

# 15 Statistics Analysis

## 15.1 Querying Peak Bandwidth

### Function

Queries the peak bandwidth within a specific time span.

If no domain name is specified, the peak bandwidth of all streaming domain names of the tenant is queried.

When tenant-level bandwidth data is queried, the **app** and **stream** parameters do not take effect.

The maximum query time span is 31 days. You can query data over the past one year.

### Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

### Calling Method

For details, see **Calling APIs**.

### URI

GET /v2/{project_id}/stats/bandwidth/peak

**Table 15-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-2** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| play_domains | No | Array | Streaming domain name list. Up to 100 domain names can be queried. Separate domain names with commas (,). <br><br> If no domain name is specified, the peak bandwidth of all streaming domain names of the tenant is queried. |
| app | No | String | Application name. |
| stream | No | String | Stream name. |
| isp | No | Array | Carrier list. Possible values: <br><br> ● CMCC: China Mobile <br> ● CTCC: China Telecom <br> ● CUCC: China Unicom <br> ● OTHER: other carriers <br><br> If this parameter is not specified, information about all carriers is queried. |
| protocol | No | String | Request protocol. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time). <br><br> The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is 31 days. You can query data over the past one year. <br><br> If this parameter is left empty, data over the past seven days is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. <br><br> If this parameter is left blank, the current time is used by default. The end time must be later than the start time. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| service_type | No | String | Service type. The options are as follows:<br><br>● Live: Huawei Cloud Live<br><br>● LLL: Low Latency Live (LLL)<br><br>● ALL: All service types<br><br>If this parameter is not specified, data of all service types is queried by default.<br>**NOTE**<br>This parameter takes effect only for data generated after December 15, 2022. |

## Request Parameters

**Table 15-3** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-4** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-5** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| bandwidth_list | Array of **PeakBandwidthData** objects | Peak bandwidth values by domain name |

**Table 15-6** PeakBandwidthData

| Parameter | Type | Description |
|---|---|---|
| value | Long | Peak bandwidth, in bit/s |
| domain | String | Streaming domain name. |

**Status code: 400**

**Table 15-7** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-8** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries the peak bandwidth of streaming domain names.

GET /v2/{project_id}/stats/bandwidth/peak?play_domains=livepull-test.huaweicloud.com

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "bandwidth_list" : [ {
    "value" : 50,
    "domain" : "livepull-test.huaweicloud.com"
  } ]
}
```

**Status code: 400**

This code is returned if the request failed to be fulfilled.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: play_domains"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | This code is returned if the request failed to be fulfilled. |

## Error Codes

See **Error Codes**.

# 15.2 Querying Total Traffic

## Function

Queries the total traffic within a specific time span.

If no domain name is specified, the total traffic volume of all streaming domain names of the tenant is queried.

When tenant-level traffic data is queried, the **app** and **stream** parameters do not take effect.

The maximum query time span is 31 days. You can query data over the past one year.

Data query is delayed for about 10 minutes.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/traffic/summary

**Table 15-9** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-10** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domains | No | Array | Streaming domain name list. Up to 100 domain names can be queried. Separate domain names with commas (,). If no domain name is specified, the total traffic volume of all streaming domain names of the tenant is queried. |
| app | No | String | Application name. |
| stream | No | String | Stream name. |
| isp | No | Array | Carrier list. Possible values: <br>• CMCC: China Mobile <br>• CTCC: China Telecom <br>• CUCC: China Unicom <br>• OTHER: other carriers <br>If this parameter is not specified, information about all carriers is queried. |
| protocol | No | String | Request protocol. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is 31 days. You can query data over the past one year. If this parameter is left empty, data over the past seven days is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. If this parameter is left blank, the current time is used by default. The end time must be later than the start time. |
| service_type | No | String | Service type. The options are as follows: <br><br> ● Live: Huawei Cloud Live <br> ● LLL: Low Latency Live (LLL) <br> ● ALL: All service types <br><br> If this parameter is not specified, data of all service types is queried by default. <br><br> **NOTE** <br> This parameter takes effect only for data generated after December 15, 2022. |

## Request Parameters

**Table 15-11** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-12** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-13** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| traffic_list | Array of **TrafficSummaryData** objects | Total traffic by domain name |

**Table 15-14** TrafficSummaryData

| Parameter | Type | Description |
|-----------|------|-------------|
| value | Long | Traffic, in bytes |
| domain | String | Domain name. |

**Status code: 400**

**Table 15-15** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-16** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries the traffic summary of streaming domain names.

```
GET /v2/{project_id}/stats/traffic/summary?play_domains=livepull-
test.huaweicloud.com&start_time=2020-06-04T07:00:00Z&end_time=2020-06-05T07:00:00Z
```

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
 "traffic_list" : [ {
   "value" : 2300,
   "domain" : "livepull-test.huaweicloud.com"
 } ]
}
```

**Status code: 400**

This code is returned if the request failed to be fulfilled.

```
{
 "error_code" : "LIVE.100011001",
 "error_msg" : "Invalid request parameter: play_domains"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | This code is returned if the request failed to be fulfilled. |

## Error Codes

See **Error Codes**.

# 15.3 Querying HTTP Status Codes for Pulling Live Streams

## Function

Queries HTTP status codes for pulling live streams.

HTTP status codes of a domain name in 1 minute will be returned.

The maximum query time span is 24 hours. You can query data over the past seven days.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/httpcodes

**Table 15-17** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-18** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domains | Yes | Array | Streaming domain name list. Up to 100 domain names can be queried. Separate domain names with commas (,). |
| code | No | Array | Status code |
| isp | No | Array | Carrier list. Possible values:<br><br>● CMCC: China Mobile<br><br>● CTCC: China Telecom<br><br>● CUCC: China Unicom<br><br>● OTHER: other carriers<br><br>If this parameter is not specified, information about all carriers is queried. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time).<br><br>The format is YYYY-MM-DDThh:mm:ssZ. If this parameter is left blank, data of the last hour is queried by default.<br><br>The maximum query time span is one day. You can query data over the past seven days. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ.<br><br>If this parameter is left blank, the current time is used by default. The end time must be later than the start time.<br><br>The maximum query time span is one day. You can query data over the past seven days. |

## Request Parameters

**Table 15-19** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-20** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-21** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| data_series | Array of **HttpCodeSummary** objects | Time-based status code statistics. |

**Table 15-22** HttpCodeSummary

| Parameter | Type | Description |
|---|---|---|
| http_codes | Array of **HttpCode** objects | Status code information |
| time | String | Sampling time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

**Table 15-23** HttpCode

| Parameter | Type | Description |
|---|---|---|
| code | Integer | Status code |
| count | Integer | Number of times a status code is displayed |
| proportion | Double | Percentage of the status code at the corresponding time point. A maximum of four decimal places are allowed. |

**Status code: 400**

**Table 15-24** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-25** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

# Example Requests

Queries streaming status codes of a streaming domain name.

```
GET /v2/{project_id}/stats/httpcodes?play_domains=livepull-
test.huaweicloud.com&start_time=2020-07-23T07:00:00Z&end_time=2020-07-23T08:00:00Z
```

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "data_series" : [ {
    "time" : "2020-06-04T07:00:00Z",
    "http_codes" : [ {
      "code" : 200,
      "count" : 750,
      "proportion" : 0.5211
    }, {
      "code" : 400,
      "count" : 650,
      "proportion" : 0.4789
    } ]
  }, {
    "time" : "2020-06-04T07:01:00Z",
    "http_codes" : [ {
      "code" : 200,
      "count" : 1000,
      "proportion" : 1
    }, {
      "code" : 400,
      "count" : 0,
      "proportion" : 0
    } ]
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: play_domains"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.4 Querying the Duration of Transcoded Outputs

## Function

Queries the transcoded output duration per hour.

The maximum query time span is 31 days. You can query data over the past one year.

Data about the transcoded output duration is delayed for one hour.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/transcode

**Table 15-26** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-27** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | No | String | Ingest domain name. |
| stream | No | String | Stream name. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. The value will be rounded to the nearest hour. For example, if this parameter is set to 2020-08-18T07:20:40Z, the actual query start time will be 2020-08-18T07:00:00Z. If this parameter is left empty, data over the past 24 hours is queried by default. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ.<br><br>The value will be rounded to the nearest hour. For example, if this parameter is set to 2020-08-18T08:20:40Z, the actual query start time will be 2020-08-18T08:00:00Z.<br><br>If this parameter is not specified, the current time is used by default. The end time must be later than the start time.<br><br>**NOTE**<br>If the expenditures of a pay-per-use resource are charged by hour or day, the resource usage for the final settlement period of one month is deducted on the first day of the next month and settled in the next month.<br><br>Example: The expenditures of pay-per-use resources are charged by hour.<br><br>The transcoding usage from 2021/11/30 23:00:00 to 2021/12/01 00:00:00 started to be reported to the billing system at 2021/12/01 00:00:00.<br><br>The billing system deducted the fee at 2021/12/01 00:36:00.<br><br>The usage duration was from 2021/11/30 23:00:00 to 2021/12/01 00:00:00, and the transaction time was 2021/12/01 00:00. Therefore, the corresponding expenditures were included in the bill for the billing cycle of December 2021. |

## Request Parameters

**Table 15-28** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-29** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-30** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| transcode_data_list | Array of **TranscodeData** objects | Sampled data list. |

| Parameter | Type | Description |
|-----------|------|-------------|
| summary_list | Array of **TranscodeSummary** objects | Total duration of all transcoded outputs in a specified time range |

**Table 15-31** TranscodeData

| Parameter | Type | Description |
|-----------|------|-------------|
| spec_list | Array of **TranscodeSpec** objects | Transcoding duration in each sampling period |
| time | String | Sampling time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

**Table 15-32** TranscodeSpec

| Parameter | Type | Description |
|-----------|------|-------------|
| type | String | Output specifications. The format is *codec_resolution* (low-bitrate HD disabled) or *codecPVCresolution* (low-bitrate HD enabled). The codec format can be H.264 or H.265. The resolution can be 4K (3840 x 2160) and lower, 2K (2560 x 1440) and lower, FHD (1920 x 1080) and lower, HD (1280 x 720) and lower, or SD (640 x 480) and lower. |
| value | Double | Duration of transcoded outputs collected at each sampling time, in minutes. A maximum of two decimal places are allowed. |

**Table 15-33** TranscodeSummary

| Parameter | Type | Description |
|-----------|------|-------------|
| type | String | Output specifications. The format is *codec_resolution* (low-bitrate HD disabled) or *codecPVCresolution* (low-bitrate HD enabled). The codec format can be H.264 or H.265. The resolution can be 4K (3840 x 2160) and lower, 2K (2560 x 1440) and lower, FHD (1920 x 1080) and lower, HD (1280 x 720) and lower, or SD (640 x 480) and lower. |

| Parameter | Type | Description |
|---|---|---|
| value | Double | Output specifications. The format is codec_resolution (low bitrate HD disabled) or codec_PVC_resolution (low bitrate HD enabled).<br>Codecs include H.264 and H.265. Resolution levels include:<br><br>4K (3840 x 2160) or lower, 2K (2560 x 1440) or lower, FHD (1920 x 1080) or lower, HD (1280 x 720) or lower, and SD (640 x 480) or lower. |

**Status code: 400**

**Table 15-34** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-35** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

# Example Requests

Queries the transcoding usage of an ingest domain name.

```
GET /v2/{project_id}/stats/transcode?publish_domain=livepull-
test.huaweicloud.com&start_time=2020-08-18T07:00:00Z&end_time=2020-08-18T08:00:00Z
```

# Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
 "transcode_data_list" : [ {
   "time" : "2020-08-18T07:00:00Z",
   "spec_list" : [ {
     "type" : "H265_PVC_SD",
     "value" : 256.23
   }, {
     "type" : "H265_PVC_HD",
     "value" : 128.41
   } ]
 }, {
   "time" : "2020-08-18T08:00:00Z",
   "spec_list" : [ {
```

```
    "type" : "H265_PVC_SD",
    "value" : 52.35
  }, {
    "type" : "H265_PVC_HD",
    "value" : 136.32
  } ]
} ],
"summary_list" : [ {
  "type" : "H265_PVC_SD",
  "value" : 308.58
}, {
  "type" : "H265_PVC_HD",
  "value" : 264.73
} ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
 "error_code" : "LIVE.100011001",
 "error_msg" : "Invalid request parameter: publish_domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.5 Querying Recording Channels

## Function

Queries the maximum number of recording channels per hour. The total number of recording channels in every minute of an hour is collected, and the maximum value is used as the statistical value.

The maximum query time span is 31 days. You can query data over the past one year.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/record

**Table 15-36** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |


**Table 15-37** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | No | String | Ingest domain name. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. The value will be rounded to the nearest hour. For example, if this parameter is set to 2020-08-18T07:20:40Z, the actual query start time will be 2020-08-18T07:00:00Z. If this parameter is left empty, data over the past 24 hours is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. The value will be rounded to the nearest hour. For example, if this parameter is set to 2020-08-18T08:20:40Z, the actual query end time will be 2020-08-18T08:00:00Z. If this parameter is left empty, the current time will be used by default. The end time must be later than the start time. |

## Request Parameters

**Table 15-38** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-39** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-40** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| record_data_list | Array of **RecordData** objects | Sampled data list. |

**Table 15-41** RecordData

| Parameter | Type | Description |
|---|---|---|
| concurrent_count | Integer | Maximum number of recording channels |
| time | String | Sampling time, that is, the time point when the maximum number of recording channels is reached in an hour. The date format is ISO 8601 compliant and is YYYY-MM-DDThh:mm:ssZ (UTC time). |

**Status code: 400**

**Table 15-42** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-43** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

# Example Requests

Queries the duration of live recordings.

```
GET /v2/{project_id}/stats/record?start_time=2020-08-18T07:00:00Z&end_time=2020-08-18T08:00:00Z
```

# Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "record_data_list" : [ {
    "time" : "2020-08-18T07:00:00Z",
    "concurrent_count" : 20
  }, {
    "time" : "2020-08-18T08:00:00Z",
    "concurrent_count" : 15
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: publish_domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.6 Querying the Number of Snapshots

## Function

Queries the number of snapshots per hour.

The maximum query time span is 31 days. You can query data over the past one year.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/snapshot

**Table 15-44** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-45** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| publish_doma in | No | String | Ingest domain name. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. The value will be rounded to the nearest hour. For example, if this parameter is set to 2020-08-18T07:20:40Z, the actual query start time will be 2020-08-18T07:00:00Z. If this parameter is left empty, data over the past 24 hours is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. The value will be rounded to the nearest hour. For example, if this parameter is set to 2020-08-18T08:20:40Z, the actual query end time will be 2020-08-18T08:00:00Z. If this parameter is left empty, the current time will be used by default. The end time must be later than the start time. |

## Request Parameters

**Table 15-46** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-47** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-48** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| snapshot_list | Array of **SnapshotData** objects | Sampled data list. |
| total | Long | Total number of snapshots in a specified time range |

**Table 15-49** SnapshotData

| Parameter | Type | Description |
|---|---|---|
| count | Long | Total number of snapshots per hour |
| time | String | Sampling time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

**Status code: 400**

**Table 15-50** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-51** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries the number of snapshots.

```
GET /v2/{project_id}/stats/snapshot?publish_domain=livepull-
test.huaweicloud.com&start_time=2020-08-18T07:00:00Z&end_time=2020-08-18T08:00:00Z
```

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "snapshot_list" : [ {
    "time" : "2020-08-18T07:00:00Z",
    "count" : 25
  }, {
    "time" : "2020-08-18T08:00:00Z",
    "count" : 50
  } ],
  "total" : 75
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: publish_domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |

| Status Code | Description |
|---|---|
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.7 Querying Upstream Bandwidth

## Function

Queries the upstream bandwidth.

The maximum query time span is 31 days. You can query data over the past one year.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/up-bandwidth/detail

**Table 15-52** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-53** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domains | Yes | Array | Ingest domain name list. Up to 100 domain names can be queried. Separate domain names with commas (,). If multiple domain names are queried, the combined data of multiple domain names will be returned. |
| app | No | String | Application name. |
| stream | No | String | Stream name. |
| isp | No | Array | Carrier list. Possible values:<br>● CMCC: China Mobile<br>● CTCC: China Telecom<br>● CUCC: China Unicom<br>● OTHER: other carriers<br>If this parameter is not specified, information about all carriers is queried. |
| interval | No | Integer | Interval for querying data. The value can be 300s (default value), 3,600s, or 86,400s. If this parameter is not set, the default value 300s is used. |
| type | No | String | Type of the bandwidth to be queried. The options are as follows:<br>● RELAY: Forwarding<br>If this parameter is not specified, stream push bandwidth is queried by default. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time).<br>The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is 31 days. You can query data over the past one year.<br>If this parameter is left empty, data over the past seven days is queried by default. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ.<br><br>If this parameter is left empty, the current time is used by default. The maximum query time span is 31 days. You can query data over the past one year. The end time must be later than the start time. |

## Request Parameters

**Table 15-54** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-55** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-56** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| data_list | Array of **V2Bandwidth Data** objects | Sampled data list |

**Table 15-57** V2BandwidthData

| Parameter | Type | Description |
|-----------|------|-------------|
| value | Long | Bandwidth, in bit/s |
| time | String | Sampling time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

**Status code: 400**

**Table 15-58** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-59** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries the bandwidth of an ingest domain name.

```
GET /v2/{project_id}/stats/up-bandwidth/detail?publish_domains=livepull-
test.huaweicloud.com&start_time=2020-06-04T07:00:00Z&end_time=2020-06-05T07:00:00Z
```

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "data_list" : [ {
    "time" : "2020-06-04T07:00:00Z",
    "value" : 0
  }, {
    "time" : "2020-06-04T07:05:00Z",
    "value" : 325
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.8 Querying the Number of Stream Channels

## Function

Queries the number of pushed streams by domain name and returns statistics every five minutes.

The maximum query time span is 31 days. You can query data over the past one year.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/stream-count

**Table 15-60** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-61** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domains | Yes | Array | Ingest domain name list. Up to 100 domain names can be queried. Separate domain names with commas (,). If multiple domain names are queried, the combined data of multiple domain names will be returned. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is 31 days. You can query data over the past one year. If this parameter is left empty, data over the past seven days is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. If this parameter is left empty, the current time is used by default. The maximum query time span is 31 days. You can query data over the past one year. |

## Request Parameters

**Table 15-62** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-63** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-64** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| data_list | Array of **StreamCount Data** objects | Sampled data list. |

**Table 15-65** StreamCountData

| Parameter | Type | Description |
|-----------|------|-------------|
| value | Integer | Number of channels collected at each sampling time |
| time | String | Sampling time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

**Status code: 400**

**Table 15-66** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-67** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error code |
| error_msg | String | Error description |

# Example Requests

Queries the number of streams of an ingest domain name.

```
GET /v2/{project_id}/stats/stream-count?publish_domains=livepull-
test.huaweicloud.com&start_time=2020-06-04T07:00:00Z&end_time=2020-06-05T07:00:00Z
```

# Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "data_list" : [ {
    "time" : "2020-06-04T07:00:00Z",
    "value" : 0
  }, {
    "time" : "2020-06-04T07:05:00Z",
    "value" : 325
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
 "error_code" : "LIVE.100011001",
 "error_msg" : "Invalid request parameter: domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.9 Querying the Historical Stream List

## Function

Queries the historical stream list.

Ongoing streams cannot be queried.

The maximum query time span is one day.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/history/streams

**Table 15-68** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-69** Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| domain | Yes | String | Ingest domain name. |
| app | No | String | Application name. |
| stream | No | String | Stream name. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. If this parameter is left empty, data over the past one day is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. If this parameter is left empty, the current time is used by default. The maximum query time span is one day. The end time must be later than the start time. |
| offset | No | Integer | Page number. The default value is 0. |
| limit | No | Integer | Number of records on each page. Value range: 1 to 100. Default value: **10** |

## Request Parameters

**Table 15-70** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-71** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-72** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| history_stream_list | Array of **HistoryStreamInfo** objects | Historical stream list |
| total | Integer | Total number of records |

**Table 15-73** HistoryStreamInfo

| Parameter | Type | Description |
|---|---|---|
| domain | String | Ingest domain name<br>• If the value of **type** is **0**, the value of this parameter is the streamer's ingest domain name.<br>• If the value of **type** is **1**, the value of this parameter is a third-party ingest domain name. |
| app | String | Application name. |
| stream | String | Stream name. |
| type | Integer | Stream push type. Possible values:<br>• 0: stream push by the streamer<br>• 1: stream push by a third party |
| video_codec | String | Video codec |
| audio_codec | String | Audio codec |
| client_ip | String | IP address of the streamer |
| start_time | String | Time when sampling starts. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |
| end_time | String | Time when sampling ends. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

**Status code: 400**

**Table 15-74** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-75** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries historical pushed streams of a domain name.

```
GET /v2/{project_id}/stats/history/streams?domain=livepull-test.huaweicloud.com&limit=10&offset=1
```

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "history_stream_list" : [ {
    "domain" : "livepull-test.huaweicloud.com",
    "app" : "live",
    "stream" : "pull",
    "type" : 0,
    "video_codec" : "H264",
    "audio_codec" : "AAC",
    "client_ip" : "127.0.0.1",
    "start_time" : "2020-06-04T07:00:00Z",
    "end_time" : "2020-06-05T07:00:00Z"
  } ],
  "total" : 100
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: domain"
}
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.10 Querying the Playback Profile

## Function

Queries the playback profile of a stream.

The maximum query time span is one day. You can query data over the past 31 days.

This API can be used to query only the number of online users of FLV and RTMP streams.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/stream-portraits

**Table 15-76** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 15-77** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| play_domain | Yes | String | Streaming domain name. |
| stream | No | String | Stream name. |
| time | Yes | String | Date of which the data you want to query. The format must comply with the ISO 8601 standard and is YYYYMMDD, for example, 20200904. You can query data over the last 31 days (excluding the current day). |

## Request Parameters

**Table 15-78** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-79** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-80** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| stream_portraits | Array of **StreamPortrait** objects | Playback profile details. |

**Table 15-81** StreamPortrait

| Parameter | Type | Description |
|---|---|---|
| time | String | Date of which the data you want to query. The format must comply with the ISO 8601 standard and is YYYYMMDD, for example, 20200904. Data of the playback profiles from 00:00 to 23:59 on this day will be collected. |
| flow | Long | Total traffic, in bytes. |
| play_duration | Long | Total playback duration, in seconds. |
| request_count | Long | Total number of requests. |
| user_count | Long | Total number of viewers calculated based on IP address. |
| peak_user_co unt | Long | Peak number of viewers, which is calculated based on session IDs for the FLV and RTMP protocols, or IP addresses for other protocols. The number of viewers is collected every minute, and the highest value in the statistical period is returned. |
| peak_bandwi dth | Long | Peak bandwidth. The unit is bit/s. The bandwidth usage is collected every 5 minutes, and the highest value in the statistical period is returned. |
| push_duration | Long | Total live stream pushing duration, in seconds. |

**Status code: 400**

**Table 15-82** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-83** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries the stream profile of a streaming domain name.

```
GET /v2/{project_id}/stats/stream-portraits?play_domain=livepull-
test.huaweicloud.com&stream=stream-000&time=20200904
```

## Example Responses

**Status code: 200**

Query succeeded.

```
{
  "stream_portraits" : [ {
    "time" : 20200812,
    "flow" : 10,
    "play_duration" : 10,
    "request_count" : 10,
    "user_count" : 10,
    "peak_user_count" : 10,
    "peak_bandwidth" : 10,
    "push_duration" : 10
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: play_domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Query succeeded. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 15.11 Querying the Distribution of Live Streaming Metrics by Region

## Function

Queries detailed livestreaming data by region.

If no domain name is specified, the detailed data of all streaming domain names of the tenant is queried.

When tenant-level data is queried, the **app** and **stream** parameters do not take effect.

The maximum query time span is one day. You can query data over the past 90 days.

When viewer data is queried, only the number of online users of FLV and RTMP streams can be queried.

Data of the current day can be queried. The data delay is less than five minutes.

If the data is used for reconciliation, query the data generated three hours ago.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/area/detail

**Table 15-84** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain a project ID, see **Obtaining a Project ID**. |

**Table 15-85** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| start_time | Yes | String | Queries start time. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. You can query data over the past 90 days. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| end_time | Yes | String | Queries end time. The format must comply with the ISO 8601 standard (UTC time).<br><br>The format is YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. You can query data over the past 90 days. |
| play_domains | No | Array | List of streaming domain names to be queried. A maximum of 100 domain names can be queried. |
| app | No | String | App to be queried. |
| stream | No | String | Stream name. |
| interval | No | Integer | Interval for querying data (in seconds). The value can be 300 (default value), 3600, or 86,400. If this parameter is left empty, the default value **300** is used.<br><br>Note: If the value of **metric** is **player** (number of viewers), the value of **interval** will be defaulted to 60 seconds. |
| isp | No | Array | Carrier list. Possible values:<br><br>● CMCC: China Mobile<br><br>● CTCC: China Telecom<br><br>● CUCC: China Unicom<br><br>● OTHER: other carriers<br><br>If this parameter is not specified, information about all carriers is queried. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| area | Yes | Array | Huawei Cloud billing region to be queried. Possible options:<br>● CN: Chinese mainland<br>● AP1: Asia-Pacific 1<br>● AP2: Asia-Pacific 2<br>● AP3: Asia Pacific 3<br>● MEAA: Middle East and Africa<br>● SA: Latin America<br>● EU: Europe<br>● ALL: All regions<br>The result of the Chinese mainland is the name of the province or municipality, for example, Guangdong and Shanghai.<br>For the mapping between Huawei Cloud regions outside China and regions/countries, see **Region/Country Code Mapping Table**. |
| metric | Yes | String | Metric. Possible values:<br>● bandwidth: bandwidth<br>● traffic: traffic<br>● player: number of viewers |
| protocol | No | String | Request protocol. Possible values:<br>● flv<br>● hls |

## Request Parameters

**Table 15-86** Request header parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory when AK/SK-based authentication is used. |

## Response Parameters

**Status code: 200**

**Table 15-87** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-88** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| data_list | Array of **AreaDetail** objects | Timestamp and metric value at the corresponding time. |

**Table 15-89** AreaDetail

| Parameter | Type | Description |
|---|---|---|
| area | String | Name of a charging region, for example, CN. |
| summary | Array of **TimeValue** objects | Timestamp and metric value at the corresponding time. |
| detail | Array of **AreaTimeVal ue** objects | Timestamps of provinces, regions, or countries in each charging region and metric values at the corresponding time. |

**Table 15-90** AreaTimeValue

| Parameter | Type | Description |
|---|---|---|
| name | String | Name of a province, region, or country in a Huawei Cloud region. The result of the Chinese mainland is the Chinese name of the province or municipality, for example, Guangdong and Shanghai. For the mapping between Huawei Cloud regions outside China and regions/countries, see **Region/Country Code Mapping Table**. |
| data | Array of **TimeValue** objects | Value of the specified metric at the time specified by the timestamp. |

**Table 15-91** TimeValue

| Parameter | Type | Description |
|---|---|---|
| time | String | Sampling time (UTC), which complies with the ISO 8601 standard. The format is YYYY-MM-DDThh:mm:ssZ. |
| value | Long | Value of the specified metric at the time specified by the timestamp. |

**Status code: 400**

**Table 15-92** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 15-93** Response body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries details about streaming domain name metrics in regional livestreaming.

```
GET /v2/{project_id}/stats/area/detail?
start_time=2021-12-20T07:00:00Z&end_time=2021-12-20T07:00:00Z&play_domains=livepull-
test.huaweicloud.com&area=CN&metric=traffic
```

## Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "data_list" : [ {
    "area" : "AP2",
    "summary" : [ {
      "time" : "2021-12-20T07:00:00Z",
      "value" : 323
    }, {
      "time" : "2021-12-20T09:05:00Z",
      "value" : 325
    } ],
    "detail" : [ {
      "name" : "TH",
      "data" : [ {
        "time" : "2021-12-20T07:00:00Z",
        "value" : 223
      }, {
        "time" : "2021-12-20T09:05:00Z",
        "value" : 123
      } ]
    }, {
      "name" : "PH",
      "data" : [ {
        "time" : "2021-12-20T07:00:00Z",
        "value" : 123
      }, {
        "time" : "2021-12-20T09:05:00Z",
        "value" : 223
      } ]
    } ]
  } ]
}
```

**Status code: 400**

Incorrect parameter.

```
{
  "error_code" : "LIVE.100011001",
```

```
        "error_msg" : "Invalid request parameter: play_domains"
    }
```

## Status Codes

| Status Code | Description |
| --- | --- |
| 200 | This code is returned if the request succeeds. |
| 400 | Incorrect parameter. |

## Error Codes

See **Error Codes**.

# 16 Stream Analytics

## 16.1 Querying the Stream Push Frame Rate

### Function

Queries the stream frame rate.

The maximum query time span is one day. You can query data over the past seven days.

The granularity of the returned frame rate data is one second.

### Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

### Calling Method

For details, see **Calling APIs**.

### URI

GET /v2/{project_id}/stats/stream/framerate

**Table 16-1** Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 16-2** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app | Yes | String | Application name. |
| stream | Yes | String | Stream name. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time).<br><br>Format: YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. You can query data over the past seven days.<br><br>If this parameter is not specified, data over the past hour is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ.<br><br>If this parameter is left blank, the current time is used by default. The end time must be later than the start time. |

## Request Parameters

**Table 16-3** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------|-------------|
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 16-4** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 16-5** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| framerate_info_list | Array of **V2FramerateInfo** objects | Usage details. |

**Table 16-6** V2FramerateInfo

| Parameter | Type | Description |
|-----------|------|-------------|
| publish_domain | String | Ingest domain name. |
| app | String | Application name. |
| stream | String | Stream name. |
| start_time | String | Time when sampling starts. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |
| end_time | String | Time when sampling ends. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

| Parameter | Type | Description |
|-----------|------|-------------|
| data_list | Array of longs | List of frame rates, in fps. |

**Status code: 400**

**Table 16-7** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 16-8** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error code |
| error_msg | String | Error description |

# Example Requests

Queries the frame rate of an ingest domain name.

```
GET /v2/{project_id}/stats/stream/framerate?app=live&stream=pull_stream&domain=livepush-test.huaweicloud.com
```

# Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "framerate_info_list" : [ {
    "publish_domain" : "livepush-test.huaweicloud.com",
    "app" : "live",
    "stream" : "pull",
    "start_time" : "2020-06-04T07:00:00Z",
    "end_time" : "2020-06-05T07:00:00Z",
    "data_list" : [ 10, 20 ]
  } ]
}
```

**Status code: 400**

This code is returned if the request failed to be fulfilled.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | This code is returned if the request failed to be fulfilled. |

## Error Codes

See **Error Codes**.

# 16.2 Querying the Stream Push Bitrate

## Function

Queries the stream bitrate.

The maximum query time span is one day. You can query data over the past seven days.

The granularity of the returned bitrate data is one second.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the HUAWEI CLOUD Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/stream/bitrate

**Table 16-9** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 16-10** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| domain | Yes | String | Ingest domain name. |
| app | Yes | String | Application name. |
| stream | Yes | String | Stream name. |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time).<br><br>Format: YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. You can query data over the past seven days.<br><br>If this parameter is not specified, data over the past hour is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ.<br><br>If this parameter is left blank, the current time is used by default. The end time must be later than the start time. |

## Request Parameters

**Table 16-11** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |
| Authorization | No | String | Authentication information. This parameter is mandatory when AK/SK-based authentication is used. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory when AK/SK-based authentication is used. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 16-12** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request. |

**Table 16-13** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| bitrate_info_list | Array of **V2BitrateInfo** objects | Usage details. |

**Table 16-14** V2BitrateInfo

| Parameter | Type | Description |
|---|---|---|
| publish_domain | String | Domain name. |
| app | String | Application name. |
| stream | String | Stream name. |
| start_time | String | Time when sampling starts. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |
| end_time | String | Time when sampling ends. The format must comply with the ISO 8601 standard (UTC time). The format is YYYY-MM-DDThh:mm:ssZ. |

| Parameter | Type | Description |
|-----------|------|-------------|
| data_list | Array of longs | List of bitrates, in kbit/s. |

**Status code: 400**

**Table 16-15** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request. |

**Table 16-16** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error code |
| error_msg | String | Error description |

# Example Requests

Queries the bitrate of an ingest domain name.

```
GET /v2/{project_id}/stats/stream/bitrate?app=live&stream=pull_stream&domain=livepush-
test.huaweicloud.com
```

# Example Responses

**Status code: 200**

This code is returned if the request succeeds.

```
{
  "bitrate_info_list" : [ {
    "publish_domain" : "livepush-test.huaweicloud.com",
    "app" : "app",
    "stream" : "pull_stream",
    "start_time" : "2020-06-04T07:00:00Z",
    "end_time" : "2020-06-05T07:00:00Z",
    "data_list" : [ 100, 200 ]
  } ]
}
```

**Status code: 400**

This code is returned if the request failed to be fulfilled.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | This code is returned if the request succeeds. |
| 400 | This code is returned if the request failed to be fulfilled. |

## Error Codes

See **Error Codes**.

# 16.3 Querying the Stream Push Monitoring Data

## Function

Queries stream push monitoring data, including the frame rate, bitrate, and stream interruption.

The maximum query time span is one day. You can query data over the past seven days.

The granularity of the returned bitrate data is one second.

## Constraints

Queries only the data of domain names deployed on the new Live service (excluding CN North-Beijing1). This constraint applies only to the Huawei Cloud Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/stream-detail

**Table 16-17** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**. |

**Table 16-18** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | Yes | String | Ingest domain name |
| app | Yes | String | App name |
| stream | Yes | String | Stream name |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. <br><br> The maximum query time span is one day. You can query data over the past seven days. <br><br> If this parameter is not specified, data over the past hour is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. <br><br> The maximum query time span is one day. You can query data over the past seven days. <br><br> If this parameter is not specified, the current time will be used by default. The end time must be later than the start time. |

## Request Parameters

**Table 16-19** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used. <br><br> It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. |

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 16-20** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique identifier of the request |

**Table 16-21** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| publish_doma in | String | Ingest domain name |
| app | String | App name |
| stream | String | Stream name |

| Parameter | Type | Description |
|-----------|------|-------------|
| video_framerate | Array of **StreamDetail** objects | Displays the frame rate of a video stream, in FPS.<br><br>If stream interruption occurs, stream information in multiple time segments is displayed. For example:<br><pre>"video_framerate": [<br>    {<br>      "start_time": "2022-02-04T07:00:00Z",<br>      "end_time": "2022-02-04T07:00:02Z",<br>      "data_list": [<br>        21,<br>        22<br>      ]<br>    },<br>    {<br>      "start_time": "2022-02-04T07:00:05Z",<br>      "end_time": "2022-02-04T07:00:07Z",<br>      "data_list": [<br>        13,<br>        34,<br>        21<br>      ]<br>    }<br>  ]</pre> |
| video_bitrate | Array of **StreamDetail** objects | Displays the bitrate of a video stream, in kbit/s.<br><br>If stream interruption occurs, stream information in multiple time segments is displayed. For example:<br><pre>"video_bitrate": [<br>    {<br>      "start_time": "2022-02-04T07:00:00Z",<br>      "end_time": "2022-02-04T07:00:02Z",<br>      "data_list": [<br>        1326,<br>        1268,<br>        775<br>      ]<br>    },<br>    {<br>      "start_time": "2022-02-04T07:00:05Z",<br>      "end_time": "2022-02-04T07:00:07Z",<br>      "data_list": [<br>        1021,<br>        2022<br>      ]<br>    }<br>  ]</pre> |

**Table 16-22** StreamDetail

| Parameter | Type | Description |
|-----------|------|-------------|
| start_time | String | Sampling start time. The date format complies with the ISO 8601 standard and the UTC time is used. The format is YYYY-MM-DDThh:mm:ssZ. |

| Parameter | Type | Description |
|-----------|------|-------------|
| end_time | String | Sampling end time. The date format complies with the ISO 8601 standard and the UTC time is used. The format is YYYY-MM-DDThh:mm:ssZ. |
| data_list | Array of longs | Stream monitoring data list |

**Status code: 400**

**Table 16-23** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique identifier of the request |

**Table 16-24** Response body parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries streaming data.

GET /v2/{project_id}/stats/stream-detail?app=live&stream=pull_stream&publish_domain=livepush-test.huaweicloud.com

## Example Responses

**Status code: 200**

Information is returned when the processing is successful.

```
{
 "publish_domain" : "livepull-test.huaweicloud.com",
 "app" : "app",
 "stream" : "pull_stream",
 "video_framerate" : [ {
   "start_time" : "2022-02-04T07:00:00Z",
   "end_time" : "2022-02-04T07:00:02Z",
   "data_list" : [ 21, 22 ]
 }, {
   "start_time" : "2022-02-04T07:00:05Z",
   "end_time" : "2022-02-04T07:00:07Z",
   "data_list" : [ 13, 34, 21 ]
 } ],
 "video_bitrate" : [ {
   "start_time" : "2022-02-04T07:00:00Z",
   "end_time" : "2022-02-04T07:00:02Z",
```

```
    "data_list" : [ 1326, 1268, 775 ]
  }, {
    "start_time" : "2022-02-04T07:00:05Z",
    "end_time" : "2022-02-04T07:00:07Z",
    "data_list" : [ 1021, 2022 ]
  } ]
}
```

**Status code: 400**

Information is returned when the processing fails.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: publish_domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | Information is returned when the processing is successful. |
| 400 | Information is returned when the processing fails. |

## Error Codes

See **Error Codes**.

# 16.4 Queries CDN upstream streaming quality data

## Function

Queries CDN upstream streaming quality data

The maximum query time span is one day. You can query data over the past seven days.

The returned CDN upstream streaming quality data is accurate to one minute.

## Constraints

Only the data of domain names added to the new Live console in regions excluding CN North-Beijing1 can be queried. This restriction applies only to the Huawei Cloud Chinese Mainland website.

## Calling Method

For details, see **Calling APIs**.

## URI

GET /v2/{project_id}/stats/up-stream/detail

**Table 16-25** Path Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| project_id | Yes | String | Project ID. For details about how to obtain a project ID, see **Obtaining a Project ID**. |

**Table 16-26** Query Parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| publish_domain | Yes | String | Ingest domain name |
| app | Yes | String | App name |
| stream | Yes | String | Stream name |
| start_time | No | String | Start time. The format must comply with the ISO 8601 standard (UTC time). Format: YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. You can query data over the past seven days. If this parameter is not specified, data over the past hour is queried by default. |
| end_time | No | String | End time. The format must comply with the ISO 8601 standard (UTC time). Format: YYYY-MM-DDThh:mm:ssZ. The maximum query time span is one day. You can query data over the past seven days. If this parameter is not specified, the current time will be used by default. The end time must be later than the start time. |

## Request Parameters

**Table 16-27** Request header parameters

| Parameter | Mandatory | Type | Description |
|---|---|---|---|
| X-Auth-Token | No | String | User token. This parameter is mandatory when token authentication is used.<br><br>It can be obtained by calling the IAM API that is used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. |
| Authorization | No | String | Authentication information. This parameter is mandatory for AK/SK authentication. |
| X-Sdk-Date | No | String | Time when the request is sent. This parameter is mandatory for AK/SK authentication. |
| X-Project-Id | No | String | Project ID, which is the same as that used in the URI. This parameter is mandatory for AK/SK authentication. |

## Response Parameters

**Status code: 200**

**Table 16-28** Response header parameters

| Parameter | Type | Description |
|---|---|---|
| X-Request-Id | String | Unique ID of the request |

**Table 16-29** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| publish_domain | String | Ingest domain name |
| app | String | App name |
| stream | String | Stream name |

| Parameter | Type | Description |
|-----------|------|-------------|
| data | Array of **UpStreamDetail** objects | Streaming quality data |

**Table 16-30** UpStreamDetail

| Parameter | Type | Description |
|-----------|------|-------------|
| time | String | Sampling time. The format must comply with the ISO 8601 standard (UTC time) and is YYYY-MM-DDThh:mm:ssZ. |
| fps | Long | Frame rate<br>Unit: FPS |
| rate | Long | Bitrate<br>Unit: kbit/s |
| delay | Long | Latency<br>Unit: ms |
| gop_duration | Long | Duration of the latest GOP<br>Unit: ms |
| last_video_pts | Long | Video PTS<br>Unit: ms |
| last_audio_pts | Long | Audio PTS<br>Unit: ms |
| last_video_audio_pts_diff | Long | Audio/Video PTS difference<br>Unit: ms |

**Status code: 400**

**Table 16-31** Response header parameters

| Parameter | Type | Description |
|-----------|------|-------------|
| X-Request-Id | String | Unique ID of the request |

**Table 16-32** Response body parameters

| Parameter | Type | Description |
|---|---|---|
| error_code | String | Error code |
| error_msg | String | Error description |

## Example Requests

Queries details about an ingest domain name.

```
GET /v2/{project_id}/stats/up-stream/detail?
app=stage&stream=stream-7159441965564594945&publish_domain=livepush-test.huaweicloud.com
```

## Example Responses

**Status code: 200**

The information is returned when the request succeeded.

```
{
  "publish_domain" : "livepush-test.huaweicloud.com",
  "app" : "stage",
  "stream" : "stream-7159441965564594945",
  "data" : [ {
    "fps" : 29,
    "rate" : 8191,
    "delay" : 225,
    "gop_duration" : 1999,
    "last_video_pts" : 1224054,
    "last_audio_pts" : 1224054,
    "last_video_audio_pts_diff" : 0,
    "time" : "2020-04-23T07:00:00Z"
  }, {
    "fps" : 28,
    "rate" : 184,
    "delay" : 0,
    "gop_duration" : 0,
    "last_video_pts" : 10135133,
    "last_audio_pts" : 10135125,
    "last_video_audio_pts_diff" : 8,
    "time" : "2020-04-23T07:00:00Z"
  } ]
}
```

**Status code: 400**

The information is returned when the request failed.

```
{
  "error_code" : "LIVE.100011001",
  "error_msg" : "Invalid request parameter: publish_domain"
}
```

## Status Codes

| Status Code | Description |
|---|---|
| 200 | The information is returned when the request succeeded. |

| Status Code | Description |
|---|---|
| 400 | The information is returned when the request failed. |

## Error Codes

See **Error Codes**.

# 17 Appendix

## 17.1 Status Codes

Table 17-1 lists the status codes that may be returned when you call Live APIs.

**Table 17-1** Status codes

| Status Code | Description |
|---|---|
| 200 OK | The request has succeeded. |
| 201 Created | The request has been fulfilled and resulted in a new resource being created. |
| 202 Accepted | The request has been accepted for processing, but the processing has not been completed. |
| 204 No Content | The request has been fulfilled, but the HTTP response does not contain a response body. |
| 400 Bad Request | The request could not be understood by the server. The client should not repeat the request without modifications. |
| 401 Unauthorized | The authentication information provided by the client is incorrect or invalid. |
| 403 Forbidden | The server understood the request, but is refusing to fulfill it. The client should not repeat the request without modifications. |
| 404 Not Found | The requested resource could not be found. The client should not repeat the request without modifications. |
| 405 Method Not Allowed | The method specified in the request is not supported for the requested resource. The client should not repeat the request without modifications. |
| 406 Not Acceptable | The server could not fulfill the request according to the content characteristics of the request. |

| Status Code | Description |
|---|---|
| 407 Proxy Authentication Required | This code is similar to 401 (Unauthorized), but indicates that the client must first authenticate itself with the proxy. |
| 408 Request Timeout | The client did not produce a request within the time that the server was prepared to wait.<br><br>The client may repeat the request without modifications at any later time. |
| 409 Conflict | The request could not be completed due to a conflict with the current state of the resource.<br><br>This status code indicates that the resource that the client is attempting to create already exists, or that the request has failed to be processed because of the update of the conflict request. |
| 500 Internal Server Error | The server is able to receive the request but unable to understand it. |
| 501 Not Implemented | The server does not support the functionality required to fulfill the request. |
| 502 Bad Gateway | The server, while acting as a gateway or proxy, received an invalid response from the upstream server it accessed in attempting to fulfill the request. |
| 503 Service Unavailable | The server is currently unable to handle the request.<br><br>The client should not repeat the request without modifications. |
| 504 Gateway Timeout | A gateway timeout error occurred. |

# 17.2 Error Codes

| Status Code | Error Codes | Error Message | Description | Solution |
|---|---|---|---|---|
| 400 | LIVE.100011001 | Invalid request parameter. | Invalid request parameter. | Mandatory parameters are missing, or the parameter value format is incorrect. For details about the error, see the error_detail field in the error description. |

| Status Code | Error Codes | Error Message | Description | Solution |
|---|---|---|---|---|
| 400 | LIVE.100011004 | The protocol is not supported. The API only supports the HTTPS protocol. | The protocol is not supported. The API only supports the HTTPS protocol. | Use the HTTPS protocol. |
| 400 | LIVE.100011006 | This API is not supported in this version or is in the maintenance state. | This API is not supported in this version or is in the maintenance state. | Try again later or contact customer service. |
| 400 | LIVE.100011008 | The API is in the maintenance state. | The API is in the maintenance state. | Try again later or submit a service ticket to reach technical support. |
| 400 | LIVE.100011009 | The requested user does not exist. | The requested user does not exist. | Check whether input information is correct. |
| 400 | LIVE.100011011 | The method specified in the request is not supported. | The method specified in the request is not supported. | Check whether the HTTP method is correct. |
| 400 | LIVE.100011012 | Unsupported media type. | Unsupported media type. | Submit a service ticket to reach technical support. |
| 400 | LIVE.100011013 | You have not completed real-name authentication. | You have not completed real-name authentication. | Complete real-name authentication. |
| 400 | LIVE.100011022 | LIVE.Record task exist. | The recording task already exists. | After the command for stopping recording is run, run the command for starting recording for the same stream at an interval of more than 10 seconds. |

| Status Code | Error Codes | Error Message | Description | Solution |
|---|---|---|---|---|
| 400 | LIVE.1030110 18 | The resource already exists. | The resource already exists. | Check whether the requested resource exists. |
| 400 | LIVE.1030110 20 | The maximum number of domain names has been reached. | The maximum number of domain names has been reached. | Delete unnecessary domain names and add domain names again. If you have added the maximum number of domain names, but you want to add more, submit a service ticket. |
| 400 | LIVE.1030110 21 | Failed to access the database. | Failed to access the database. | Submit a service ticket to reach technical support. |
| 400 | LIVE.1030110 22 | This operation is not allowed in the current state. | This operation is not allowed in the current state. | Check the state of the domain name. Only domain names in the Disabled state can be modified or deleted. |
| 400 | LIVE.1030110 24 | The ICP number does not exist. | The ICP number does not exist. | Check whether the ICP number is correct. |
| 400 | LIVE.1030110 25 | The approved ICP number cannot be modified. | The approved ICP number cannot be modified. | The ICP number cannot be modified after being approved. If you need to change the ICP number, submit a service ticket. |
| 400 | LIVE.1030110 26 | The domain name is in the blacklist. | The domain name is in the blacklist. | Use a licensed domain name. |
| 400 | LIVE.1030110 27 | The domain name is in the blacklist. | The domain name is in the blacklist. | Use a licensed domain name. |

| Status Code | Error Codes | Error Message | Description | Solution |
|---|---|---|---|---|
| 400 | LIVE.1030110 29 | The domain name is in gray configuration. | This domain name has grayscale configuration, and the configuration failed to be delivered. | Submit a service ticket to reach technical support. |
| 400 | LIVE.1030110 30 | This domain name has customized configuration. | This domain name has customized configuration, and the configuration failed to be delivered. | Submit a service ticket to reach technical support. |
| 401 | LIVE.1000110 02 | Identity authenticatio n failed. | Identity authenticatio n failed. | This problem is generally caused by incorrect signature calculation. For details, see the signature method in the document. |
| 401 | LIVE.1000110 03 | You do not have permission to access the API. | You do not have permission to access the API. | Contact the master account administrator to obtain permission to access the API. |
| 401 | LIVE.1000110 14 | Your account is not allowed to access the service, because it is frozen, deleted, or has insufficient balance. | Your account is not allowed to access the service, because it is frozen, deleted, or has insufficient balance. | Check whether your account is frozen or suspended due to arrears. |
| 401 | LIVE.1000110 15 | Project ID verification failed. | Project ID verification failed. | Check the project ID and request header in the request. |

| Status Code | Error Codes | Error Message | Description | Solution |
|---|---|---|---|---|
| 403 | LIVE.103011016 | Invalid request content. | Invalid request content. | Change to a valid request parameter. |
| 404 | LIVE.103011019 | The resource does not exist. | The resource does not exist. | Check whether the requested resource exists or whether your account information is correct. |
| 500 | LIVE.100011000 | Internal communication error. | Internal communication error. | Submit a service ticket to reach technical support. |
| 500 | LIVE.100011005 | Internal server error. | Internal server error. | Try again later or contact customer service. |
| 500 | LIVE.100011007 | The number of concurrent API requests exceeds the upper limit. | The number of concurrent API requests exceeds the upper limit. | Submit a service ticket to reach technical support. |
| 500 | LIVE.103011017 | Failed to synchronize data to CDN. | Failed to synchronize data to CDN. | Check whether the domain name has been registered and ICP number is valid. If its ICP number is still invalid, submit a service ticket to reach technical support. |
| 500 | LIVE.103011023 | Failed to synchronize the domain name to GSLB. | Failed to synchronize the domain name to GSLB. | Submit a service ticket to reach technical support. |
| 500 | LIVE.103011028 | Failed to synchronize the domain name to DNS. | Failed to synchronize the domain name to DNS. | Submit a service ticket to reach technical support. |

# 17.3 Obtaining a Project ID

A project ID is required for some URLs when an API is called. You can obtain a project ID using either of the following methods:

- **Obtaining a Project ID from the Management Console**
- **Obtaining a Project ID by Calling an API**

## Obtaining a Project ID from the Management Console

**Step 1** Log in to the .

**----End**

## Obtaining a Project ID by Calling an API

You can obtain a project ID by calling the API for .

The API for obtaining a project ID is **GET https://{Endpoint}/v3/projects/**. **{Endpoint}** indicates the endpoint of IAM, which can be obtained from . For details about API authentication, see **Authentication**.

The following is an example response. The value of **id** under **projects** is the project ID.

```
{
    "projects": [
        {
            "domain_id": "65382450e8f64ac0870cd180d14e684b",
            "is_domain": false,
            "parent_id": "65382450e8f64ac0870cd180d14e684b",
            "name": "region01",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
            },
            "id": "a4a5d4098fb4474fa22cd05f897d6b99",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects"
    }
}
```

# 17.4 Obtaining an Account ID

An account ID is required for some URLs when an API is called. To obtain an account ID, perform the following steps:

**Step 1** Log in to the console.

**Step 2** Hover over the username in the upper right corner and select **My Credentials** from the drop-down list.

On the **API Credentials** page, obtain the account ID.

**Figure 17-1** Obtaining an account ID
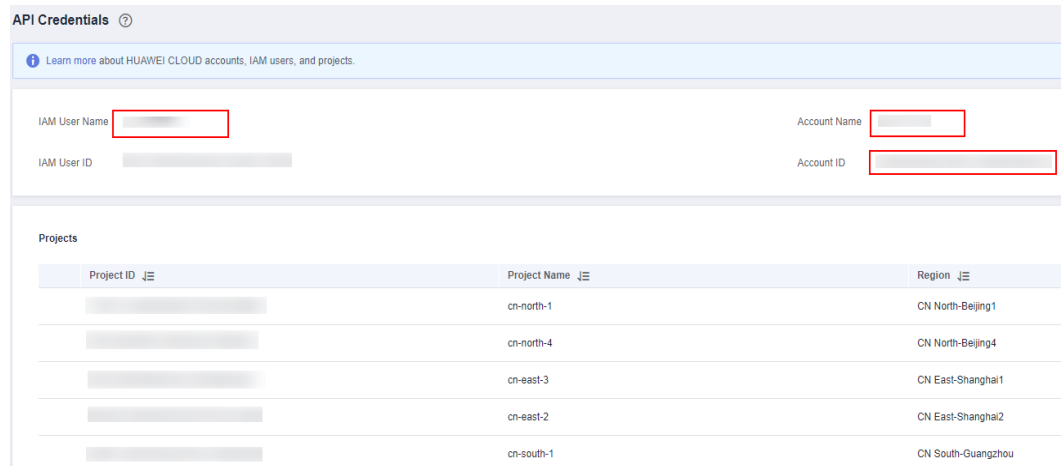


----**End**

# 17.5 Region Name Abbreviations

**Table 17-2** Region name abbreviations

| Region | Abbreviation |
| --- | --- |
| Others | OT |
| Beijing | BJ |
| Tianjin | TJ |
| Chongqing | CQ |
| Shanghai | SH |
| Guangdong | GD |
| Hainan | HI |
| Guangxi | GX |
| Yunnan | YN |
| Shanxi | SX |
| Hebei | HE |
| Inner Mongolia | NM |
| Ningxia | NX |
| Liaoning | LN |

| Region | Abbreviation |
|--------|--------------|
| Jilin | JL |
| Heilongjiang | HL |
| Jiangsu | JS |
| Zhejiang | ZJ |
| Jiangxi | JX |
| Shandong | SD |
| Fujian | FJ |
| Anhui | AH |
| Sichuan | SC |
| Tibet | XZ |
| Shannxi | SN |
| Qinghai | QH |
| Xinjiang | XJ |
| Gansu | GS |
| Guizhou | GZ |
| Hubei | HB |
| Hunan | HN |
| Henan | HA |
| Hong Kong | HK |
| Macao | MO |
| Taiwan | TW |

# 17.6 Country/Region Name Abbreviations

Table 17-3 Country/region name abbreviations

| Country/Region | Abbreviation |
|----------------|--------------|
| Afghanistan | AF |
| Åland Islands | AX |
| Albania | AL |
| Algeria | DZ |

| Country/Region | Abbreviation |
|---|---|
| American Samoa | AS |
| Andorra | AD |
| Angola | AO |
| Anguilla | AI |
| Antigua and Barbuda | AG |
| Argentina | AR |
| Armenia | AM |
| Aruba | AW |
| Australia | AU |
| Austria | AT |
| Azerbaijan | AZ |
| Bangladesh | BD |
| Bahrain | BH |
| Bahamas | BS |
| Barbados | BB |
| Belgium | BE |
| Belize | BZ |
| Benin | BJ |
| Bermuda | BM |
| Bhutan | BT |
| Bolivia | BO |
| Bosnia and Herzegovina | BA |
| Botswana | BW |
| Bouvet Island | BV |
| Brazil | BR |
| Brunei | BN |
| Bulgaria | BG |
| Burkina Faso | BF |
| Burundi | BI |
| Cambodia | KH |

| Country/Region | Abbreviation |
|---|---|
| Cameroon | CM |
| Canada | CA |
| Cape Verde | CV |
| Central African Republic | CF |
| Chad | TD |
| Chile | CL |
| Christmas Island | CX |
| Cocos (Keeling) Islands | CC |
| Colombia | CO |
| Comoros | KM |
| Congo - Kinshasa | CD |
| Congo - Brazzaville | CG |
| Cook Islands | CK |
| Costa Rica | CR |
| Côte d'Ivoire | CI |
| China | CN |
| Croatia | HR |
| Czech Republic | CZ |
| Cyprus | CY |
| Denmark | DK |
| Djibouti | DJ |
| Dominica | DM |
| Ecuador | EC |
| Egypt | EG |
| Equatorial Guinea | GQ |
| Eritrea | ER |
| Estonia | EE |
| Ethiopian | ET |
| Faroe Islands | FO |
| Fiji | FJ |

| Country/Region | Abbreviation |
|---|---|
| Finland | FI |
| France | FR |
| Metropolitan France | FX |
| French Guiana | GF |
| French Polynesia | PF |
| Gabon | GA |
| Gambia | GM |
| Georgia | GE |
| Germany | DE |
| Ghana | GH |
| Gibraltar | GI |
| Greece | GR |
| Grenada | GD |
| Guadeloupe | GP |
| Guam | GU |
| Guatemala | GT |
| Guernsey | GG |
| Guinea-Bissau | GW |
| Guinea | GN |
| Guyana | GY |
| Haiti | HT |
| Honduras | HN |
| Hungary | HU |
| Iceland | IS |
| India | IN |
| Indonesia | ID |
| Iraq | IQ |
| Ireland | IE |
| Isle of Man | IM |
| Italy | IT |

| Country/Region | Abbreviation |
|---|---|
| Jamaica | JM |
| Japan | JP |
| Jersey | JE |
| Jordan | JO |
| Kazakhstan | KZ |
| Kenya | KE |
| Kiribati | KI |
| South Korea | KR |
| Kuwait | KW |
| Kyrgyzstan | KG |
| Laos | LO |
| Latvia | LV |
| Lebanon | LB |
| Lesotho | LS |
| Liberia | LR |
| Libya | LY |
| Liechtenstein | LI |
| Lithuania | LT |
| Luxembourg | LU |
| North Macedonia | MK |
| Malawi | MW |
| Malaysia | MY |
| Madagascar | MG |
| Maldives | MV |
| Mali | ML |
| Malta | MT |
| Marshall Islands | MH |
| Martinique | MQ |
| Mauritania | MR |
| Mauritius | MU |

| Country/Region | Abbreviation |
|---|---|
| Mayotte | YT |
| Mexico | MX |
| Micronesia | MF |
| Moldova | MD |
| Monaco | MC |
| Mongolia | MN |
| Montenegro | ME |
| Montserrat | MS |
| Morocco | MA |
| Mozambique | MZ |
| Myanmar | MM |
| Namibia | NA |
| Nauru | NR |
| Nepal | NP |
| Netherlands | NL |
| New Caledonia | NC |
| New Zealand | NZ |
| Nicaragua | NI |
| Niger | NE |
| Nigeria | NG |
| Niue | NU |
| Norfolk Island | NF |
| Norway | NO |
| Oman | OM |
| Pakistan | PK |
| Palau | PW |
| Panama | PA |
| Papua New Guinea | PG |
| Peru | PE |
| Philippines | PH |

| Country/Region | Abbreviation |
|---|---|
| Pitcairn Islands | PN |
| Poland | PL |
| Portugal | PT |
| Puerto Rico | PR |
| Qatar | QA |
| Réunion | RE |
| Romania | RO |
| Rwanda | RW |
| Saint Helena | SH |
| Saint Kitts and Nevis | KN |
| Sant Lucia | LC |
| Saint Vincent and the Grenadines | VG |
| El Salvador | SV |
| Samoa | WS |
| San Marino | SM |
| São Tomé and Príncipe | ST |
| Saudi Arabia | SA |
| Senegal | SN |
| Seychelles | SC |
| Sierra Leone | SL |
| Singapore | SG |
| Serbia | RS |
| Slovakia | SK |
| Slovenia | SI |
| Solomon Islands | SB |
| Somalia | SO |
| South Africa | ZA |
| Spain | ES |
| Sri Lanka | LK |
| Suriname | SR |

| Country/Region | Abbreviation |
|---|---|
| Eswatini | SZ |
| Sweden | SE |
| Switzerland | CH |
| Tajikistan | TJ |
| Tanzania | TZ |
| Thailand | TH |
| Trinidad and Tobago | TT |
| Timor-Leste | TL |
| Togo | TG |
| Tokelau | TK |
| Tonga | TO |
| Tunisia | TN |
| Turkey | TR |
| Turkmenistan | TM |
| Tuvalu | TV |
| Uganda | UG |
| Ukraine | UA |
| United Arab Emirates | AE |
| United Kingdom | UK |
| United States | US |
| Uruguay | UY |
| Uzbekistan | UZ |
| Vanuatu | VU |
| Vatican City | VA |
| Venezuela | VE |
| Vietnam | VN |
| Wallis and Futuna | WF |
| Yemen | YE |
| Zambia | ZM |
| Zimbabwe | ZW |

# 17.7 Region/Country Codes

| Billing Area | Region/Country | Code |
|---|---|---|
| Asia Pacific 1 (AP1) | Hong Kong (China) | HK |
| | Macao (China) | MO |
| | Taiwan (China) | TW |
| | Japan | JP |
| | South Korea | KR |
| Asia Pacific 2 (AP2) | Thailand | TH |
| | Indonesia | ID |
| | Philippines | PH |
| | Malaysia | MY |
| | Singapore | SG |
| | Cambodia | KH |
| | Laos | LA |
| | Vietnam | VN |
| Asia Pacific 3 (AP3) | India | IN |
| | Australia | AU |
| | Bangladesh | BD |
| Middle East and Africa (MEAA) | Saudi Arabia | SA |
| | Iraq | IQ |
| | United Arab Emirates | AE |
| | Kuwait | KW |
| | Qatar | QA |
| | Oman | OM |
| | Bahrain | BH |
| | Azerbaijan | AZ |
| | Türkiye | TR |
| | South Africa | ZA |
| | Egypt | EG |

| Billing Area | Region/Country | Code |
|---|---|---|
| | Ghana | GH |
| | Kenya | KE |
| | Nigeria | NG |
| SA<br>South America | Argentina | AR |
| | Brazil | BR |
| | Chile | CL |
| | Colombia | CO |
| | Mexico | MX |
| | Peru | PE |
| EU<br>Europe | Kazakhstan | KZ |
| | Mongolia | MN |
| | Uzbekistan | UZ |
| | Bulgaria | BG |
| | Belarus | BY |
| | Spain | ES |
| | France | FR |
| | United Kingdom | GB |
| | Germany | DE |
| | Greece | GR |
| | Ireland | IE |
| | Italy | IT |
| | Netherlands | NL |
| | Poland | PL |
| | Romania | RO |
| | Russia | RU |
| | Sweden | SE |

# 18 Change History

**Table 18-1** Change history

| Released On | Description |
|---|---|
| 2024-07-30 | This issue is the first official release. |