Media Live

API Reference

Issue 01

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Contents

1 Before You Start

Media Live is a broadcast-grade livestreaming service that supports features such as channel management and content encryption, making it an ideal option for media and broadcasting.

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

Before calling a Media Live API, ensure that you are familiar with concepts related to Media Live. For details, see *Media Live User Guide*.

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

Endpoints

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

Table 1-1 Endpoints

Region	Detail	Endpoint
EU-Dublin	eu-west-101	iam.myhuaweicloud.eu

Constraints

Media Live 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
OTT Channel Management	• Creating an OTT Channel • Querying Channel Information • Deleting Channel Information • Modifying Channel Packaging Information • Modifying Channel Input Information • Modifying Channel Recording Information • Modifying General Channel Information • Changing the Channel Status • Modifying Channel Transcoding Template Information	80 times/minute	80 times/minute

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.

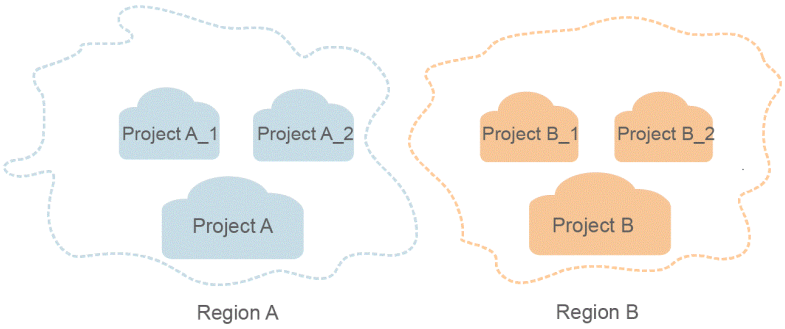
- AZ

  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 Media Live APIs. Before calling a Media 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 Media Live API, see **Example 1: Creating a Channel**.

OTT Channel Management

Table 2-1 OTT channel management APIs

API	Description
POST /v1/{project_id}/ott/channels	**Creating an OTT Channel**
GET /v1/{project_id}/ott/channels	**Querying Channel Information**
DELETE /v1/{project_id}/ott/channels	**Deleting Channel Information**
PUT /v1/{project_id}/ott/channels/endpoints	**Modifying Channel Packaging Information**
PUT /v1/{project_id}/ott/channels/input	**Modifying Channel Input Information**
PUT /v1/{project_id}/ott/channels/record-settings	**Modifying Channel Recording Information**
PUT /v1/{project_id}/ott/channels/general	**Modifying General Channel Information**
PUT /v1/{project_id}/ott/channels/state	**Changing the Channel Status**
PUT /v1/{project_id}/ott/channels/encorder-settings	**Modifying Channel Transcoding Template Information**

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.

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**.
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 This field is mandatory for AK/SK authentication.	code.test.com or 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 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. It is a response to the API for **obtaining a user token** (This is the only API that does not require authentication). After the request is processed, the value of **X-Subject-Token** in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQcCo...ggg1BBIINPXsidG9rZ

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.

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.
- The AK/SK can either be permanent or temporary. If it is temporary, the **X-Security-Token** field must be included in the request header. The value is the security token of the temporary AK/SK.

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 a 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 that the IAM user belongs to
                    }
                }
            }
        },
        "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 **ABCDEFG....**, **X-Auth-Token: ABCDEFG....** can be added to a request as follows:

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

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_[redacted]_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 shows 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 Channel

This section describes how to call Media Live APIs to create a channel.

Used 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 Media Live APIs.

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

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

NOTE

The region where an IAM API is called must be the same as the region where a Media 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 Media 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 Transfer the following parameters in the request body. For details about the parameters, see the API for **creating an OTT channel**.

```
{
   "domain": "push.domain.com",
   "app_name": "ott",
   "id": "testChannel",
   "name": "testChannel",
   "input": {
      "input_protocol": "FLV_PULL",
      "sources": [
         {
            "url": "http://push.domain.com/ott/testChannel/index.flv",
            "bitrate": 2048,
            "width": 2096,
            "height": 1024
         }
      ]
   },
   "record_settings": {
      "rollingbuffer_duration": 3600
   },
   "encoder_settings": [
      {
         "template_id": "hd"
      }
```

```
  ],
  "endpoints": [
    {
      "hls_package": [
        {
          "url": "pull.domain.com/ott/testChannel/index.m3u8",
          "stream_selection": [
            {
              "key": "bitrate=900000-1800000",
              "max_bandwidth": 1800000,
              "min_bandwidth": 900000
            }
          ],
          "segment_duration_seconds": 4,
          "encryption": {
                "level": "content",
                "resource_id": "test",
                "system_ids": [
                  "FairPlay"
                ],
                "url": "http://IP.Port/tkm/v1/owner/Data",
                "speke_version": "1.0",
                "request_mode": "direct_http",
                "http_headers": [
                  {
                    "key": "Authorization",
                    "value": "Basic aHVhd2VpY********************XM1Qjd6"
                  }
                ]
              }
        }
      ]
    }
  ],
  "state": "ON"
}
```

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:

```
"result_code": "LIVE.100011001",
"result_msg": "Request parameters is invalid"
```

----End

5 OTT Channel Management

5.1 Creating an OTT Channel

Function

Creates an OTT channel.

URI

POST /v1/{project_id}/ott/channels

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.

Parameter	Mandatory	Type	Description
Authorization	No	String	Authentication information. This parameter is mandatory for AK/SK authentication.
X-Sdk-Date	No	String	Request time. 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	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.
id	Yes	String	(Mandatory) Unique ID of a channel.
name	No	String	Channel name. This parameter is optional.
state	Yes	String	Channel status. • **ON**: After a channel is delivered, functions such as stream pull, transcoding, and recording are automatically enabled. • **OFF**: Only the channel information is saved but the channel is not started.
input	Yes	**InputStreamInfo** object	Channel input stream information.
encoder_settings	No	Array of **encoder_settings** objects	Transcoding template configuration.
record_settings	Yes	**record_settings** object	Catch-up TV configuration.
endpoints	Yes	Array of **EndpointItem** objects	Channel output stream information.

Parameter	Mandatory	Type	Description
encoder_settings_expand	No	**EncoderSettingsExpand** object	Audio output configuration

Table 5-4 InputStreamInfo

Parameter	Mandatory	Type	Description
input_protocol	Yes	String	Channel input protocol • **FLV_PULL** • **RTMP_PUSH** • **HLS_PULL** • **SRT_PULL** • **SRT_PUSH**
sources	No	Array of **SourcesInfo** objects	Information about the primary source stream of a channel. This parameter is optional when the stream input protocol is **RTMP_PUSH** or **SRT_PUSH**. In other cases, this parameter is mandatory.
secondary_sources	No	Array of **SecondarySourcesInfo** objects	Standby input stream array. This parameter is optional. If there is a standby input stream, ensure that the number of channels, codec, and resolution of the primary and standby input streams are the same. If the stream input protocol is **RTMP_PUSH**, you do not need to specify this parameter.
failover_conditions	No	**FailoverConditions** object	(Optional) Configuration provided by the channel supplier to switch between the primary and standby media stream URLs.

Parameter	Mandatory	Type	Description
max_bandwidth_limit	No	Integer	Maximum bandwidth required when the input protocol is **HLS_PULL**. A streaming URL provided by the user includes the parameter **BANDWIDTH** for audios/videos with different bitrates. • If the maximum bandwidth is specified, Media Live will pull the media stream that has the highest bitrate and a bandwidth lower than the maximum bandwidth from the URL, and push the stream to the origin server. • If the maximum bandwidth is not specified, Media Live will pull the media stream with the largest **BANDWIDTH** value from the URL, and push the stream to the origin server.
ip_port_mode	No	Boolean	When the stream push protocol is **SRT_PUSH** and streams are pushed to the origin server, the encoder does not support the input of **streamid**. In this case, set this parameter to **true**.
ip_whitelist	No	String	IP address whitelist for stream push by customers when the SRT_PUSH type is used
scte35_source	No	String	SCTE-35 signal source of an advertisement. Only **HLS_PULL** channels support this configuration. Currently, this field can only be set to **SEGMENTS**.

Parameter	Mandatory	Type	Description
ad_triggers	No	Array of strings	Configures an ad trigger. Options: • **Splice insert** • **Provider advertisement** • **Distributor advertisement** • **Provider placement opportunity** • **Distributor placement opportunity**
audio_selectors	No	Array of **InputAudioSelector** objects	Configures an audio selector (a maximum of 8).

Table 5-5 SourcesInfo

Parameter	Mandatory	Type	Description
url	No	String	Channel source stream URL, which is used for external stream pull.
bitrate	No	Integer	Bitrate. This parameter is mandatory when live transcoding is not required. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	No	Integer	Width corresponding to the resolution. This parameter is optional. Value range: 0–4096 (4K)
height	No	Integer	Height corresponding to the resolution. This parameter is optional. Value range: 0–2160 (4K)
enable_snapshot	No	Boolean	Whether to use the stream for snapshot capturing.
bitrate_for3u8	No	Boolean	Whether to use **bitrate** to fix the bitrate. Default value: **false**
passphrase	No	String	Encryption information when the protocol is **SRT_PUSH**.

Parameter	Mandatory	Type	Description
backup_urls	No	Array of strings	Standby streaming URL list
stream_id	No	String	Stream ID of the streaming URL in an **SRT_PULL** channel.
latency	No	Integer	Stream pull latency of an **SRT_PULL** channel.
pbkeylen	No	Integer	SRT encryption algorithm 16 = AES-128 24 = AES-192 32 = AES-256

Table 5-6 SecondarySourcesInfo

Parameter	Mandatory	Type	Description
url	No	String	Channel source stream URL, which is used for external stream pull.
bitrate	No	Integer	Bitrate. This parameter is mandatory when live transcoding is not required. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	No	Integer	Width corresponding to the resolution. This parameter is optional. Value range: 0–4096 (4K)
height	No	Integer	Height corresponding to the resolution. This parameter is optional. Value range: 0–2160 (4K)
bitrate_for3u8	No	Boolean	Whether to use **bitrate** to fix the bitrate. Default value: **false**
passphrase	No	String	Encryption information when the protocol is **SRT_PUSH**
backup_urls	No	Array of strings	Standby streaming URL list
stream_id	No	String	Stream ID of the streaming URL in an **SRT_PULL** channel.

Parameter	Mandatory	Type	Description
latency	No	Integer	Stream pull latency of an **SRT_PULL** channel.
pbkeylen	No	Integer	SRT encryption algorithm 16 = AES-128 24 = AES-192 32 = AES-256

Table 5-7 FailoverConditions

Parameter	Mandatory	Type	Description
input_loss_threshold_msec	No	Integer	Duration threshold for stopping input streams. When the threshold is reached, the primary/standby switchover is automatically triggered. Unit: millisecond. Value range: 0–3,600,000 (Optional) The default value is **2,000** ms.
input_preference	No	String	Whether the primary ingest URL has the highest priority (**PRIMARY**) or the primary and standby URLs are switched equally (**EQUAL**). In the equal switchover mode, the standby URL is used and will not be automatically switched to the primary URL. (Optional) The default value is **EQUAL**.

Table 5-8 InputAudioSelector

Parameter	Mandatory	Type	Description
name	Yes	String	Name of an audio selector. Enter only letters, digits, hyphens (-), and underscores (_). The name of each selector must be unique within the same channel.

Parameter	Mandatory	Type	Description
selector_settings	No	**AudioSelectorSettings** object	Configures an audio selector.

Table 5-9 AudioSelectorSettings

Parameter	Mandatory	Type	Description
audio_language_selection	No	**AudioSelectorLangSelection** object	Configures a language selector.
audio_pid_selection	No	**AudioSelectorPidSelection** object	Configures a PID selector.
audio_hls_selection	No	**AudioSelectorHlsSelection** object	Configures an HLS selector.

Table 5-10 AudioSelectorLangSelection

Parameter	Mandatory	Type	Description
language_code	Yes	String	Enter a language code of 2 or 3 lowercase letters.

Parameter	Mandatory	Type	Description
language_selection_policy	No	String	Language output policy. Options: • **LOOSE**: loose match. For example, if the language code **eng** is selected, an audio stream in English will be preferentially selected. If there is no audio stream in English, the audio stream with the lowest PID will be selected. • **STRICT**: strict match. For example, if the language code **eng** is selected, only an audio stream in English will be selected. If there is no audio stream in English, a muted segment will be automatically added. When this audio selector is used to play the video, the video is muted.

Table 5-11 AudioSelectorPidSelection

Parameter	Mandatory	Type	Description
pid	Yes	Integer	Sets the PID value.

Table 5-12 AudioSelectorHlsSelection

Parameter	Mandatory	Type	Description
name	Yes	String	HLS audio selector name
group_id	Yes	String	HLS audio selector GID

Table 5-13 encoder_settings

Parameter	Mandatory	Type	Description
template_id	No	String	Transcoding template ID.

Table 5-14 record_settings

Parameter	Mandatory	Type	Description
rollingbuffer_duration	Yes	Integer	Maximum catch-up TV recording duration. The recording is continuous in this period. This parameter is mandatory. Unit: second. The value **0** indicates that recording is not supported. The maximum recording duration is 14 days.

Table 5-15 EndpointItem

Parameter	Mandatory	Type	Description
hls_package	No	Array of **HlsPackageItem** objects	HLS packaging information.
dash_package	No	Array of **DashPackageItem** objects	DASH packaging information.
mss_package	No	Array of **MssPackageItem** objects	MSS packaging information.

Table 5-16 HlsPackageItem

Parameter	Mandatory	Type	Description
url	Yes	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	No	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
hls_version	No	String	HLS version number.

Parameter	Mandatory	Type	Description
segment_duration_seconds	Yes	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	No	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	No	**Encryption** object	Encryption information.
ads	No	Object	Advertising configuration
ext_args	No	Object	Other additional parameters
request_args	No	**PackageRequestArgs** object	Playback configuration
ad_marker	No	Array of strings	Advertisement ID. For HLS, the value is **["ENHANCED_SCTE35"]**.

Table 5-17 DashPackageItem

Parameter	Mandatory	Type	Description
url	Yes	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	No	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.

Parameter	Mandatory	Type	Description
segment_duration_seconds	Yes	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	No	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	No	**Encryption** object	Encryption information.
ads	No	Object	Advertising configuration
ext_args	No	Object	Other additional parameters
request_args	No	**PackageRequestArgs** object	Playback configuration
ad_marker	No	String	Advertisement ID. For DASH, the value is **xml+bin**.
suggested_presentation_delay	No	Integer	Recommended stream delay Unit: second. Value range: 1 to 120
minimum_update_period	No	Integer	Shortest index update period Unit: second. Value range: 1 to 120
min_buffer_time	No	Integer	Minimum buffer time Unit: second. Value range: 1 to 120

Table 5-18 MssPackageItem

Parameter	Mandatory	Type	Description
url	Yes	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	No	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
segment_duration_seconds	Yes	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	No	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	No	**Encryption** object	Encryption information.
ext_args	No	Object	Other additional parameters
delay_segment	No	Integer	Playback delay, in seconds.
request_args	No	**PackageRequestArgs** object	Playback configuration

Table 5-19 StreamSelectionItem

Parameter	Mandatory	Type	Description
key	No	String	Parameter used for bitrate filtering in a streaming URL.
max_bandwidth	No	Integer	Maximum bitrate, in bit/s. Value range: 0-104,857,600 (100 Mbit/s)
min_bandwidth	No	Integer	Minimum bitrate, in bit/s. Value range: 0-104,857,600 (100 Mbit/s)

Table 5-20 Encryption

Parameter	Mandatory	Type	Description
key_rotation_interval_seconds	No	Integer	Key cache time. If the key remains unchanged, the data is cached for seven days by default. This field is reserved and cannot be configured.
encryption_method	No	String	Encryption mode. This field is reserved and cannot be configured.
level	No	String	The options are as follows: • **content**: One channel corresponds to one key. • **profile**: One bitrate corresponds to one key. Default value: **content**
resource_id	Yes	String	DRM content ID generated by the customer
system_ids	Yes	Array of strings	Enumerated value of **system_id**. Options: **HLS**: FairPlay **DASH**: Widevine, PlayReady **MSS**: PlayReady
url	Yes	String	DRM address for obtaining a key

Parameter	Mandatory	Type	Description
speke_version	Yes	String	DRM SPEKE version. Currently, only version 1.0 is supported.
request_mode	Yes	String	Request mode. Options: **direct_http**: accessing the DRM using HTTP(S) **functiongraph_proxy**: accessing the DRM using a FunctionGraph proxy
http_headers	No	Array of **HttpHeader** objects	Authentication information to be added to the DRM request header. A maximum of five items can be added. Only the **direct_http** request mode allows configuring **http_headers**.
urn	No	String	The **functiongraph_proxy** request mode requires the URN of FunctionGraph.

Table 5-21 HttpHeader

Parameter	Mandatory	Type	Description
key	Yes	String	**key** field name in the request header
value	Yes	String	**value** corresponding to the **key** in the request header

Table 5-22 PackageRequestArgs

Parameter	Mandatory	Type	Description
record	No	Array of **RecordRequestArgs** objects	Recording configuration
timeshift	No	Array of **TimeshiftRequestArgs** objects	Time shifting configuration

Parameter	Mandatory	Type	Description
live	No	Array of **LiveRequestArgs** objects	Livestreaming configuration

Table 5-23 RecordRequestArgs

Parameter	Mandatory	Type	Description
start_time	No	String	Start time
end_time	No	String	End time
format	No	String	Format
unit	No	String	Unit

Table 5-24 TimeshiftRequestArgs

Parameter	Mandatory	Type	Description
back_time	No	String	Time shifting duration field name
unit	No	String	Unit

Table 5-25 LiveRequestArgs

Parameter	Mandatory	Type	Description
delay	No	String	Delay field
unit	No	String	Unit

Table 5-26 EncoderSettingsExpand

Parameter	Mandatory	Type	Description
audio_descriptions	No	Array of **audio_descriptions** objects	Description of an audio output setting
video_descriptions	No	**VideoDescriptions** object	

Table 5-27 audio_descriptions

Parameter	Mandatory	Type	Description
name	Yes	String	Name of an audio output setting. Enter only letters, digits, hyphens (-), and underscores (_). Names of audio output settings in the same channel must be different.
audio_selector_name	Yes	String	Audio selector name
language_code_control	No	String	Language code control. The setting will change only the audio's language displayed externally, not its actual language. Options: • **FOLLOW_INPUT**: If the output audio of the selected audio selector has a language, this language will be used. Otherwise, the language code and stream name specified here will be used. The default value is recommended. • **USE_CONFIGURED**: The language and stream name of the output audio can be customized.
language_code	No	String	Language code, which consists of 2 or 3 lowercase letters.
stream_name	No	String	Stream name

Table 5-28 VideoDescriptions

Parameter	Mandatory	Type	Description
gop_duration_seconds	No	Integer	Custom GOP duration, in seconds. The value ranges from 0 to 10. The default value is **0**, indicating that the GOP duration of the source stream is used. The value cannot be **7** or **9**. If the value is invalid, the default value is used.

Response Parameters

Status code: 201

Table 5-29 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.
sources	Array of **SourceRsp** objects	Ingest URL list. During channel creation, the ingest URL list is returned only when the input stream protocol is **RTMP_PUSH**.

Table 5-30 SourceRsp

Parameter	Type	Description
url	String	RTMP ingest URL.
bitrate	Integer	Bitrate. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. Value range: 0–4096 (4K)

Parameter	Type	Description
height	Integer	Height corresponding to the resolution. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.

Status code: 400

Table 5-31 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
POST https://{endpoint}/v1/{project_id}/ott/channels

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "name" : "testname",
  "input" : {
    "input_protocol" : "FLV_PULL",
    "sources" : [ {
      "url" : "http://192.168.0.1/ott/test.flv?vhost=pull.testott.hls.com",
      "bitrate" : 1024,
      "width" : 100,
      "height" : 100
    } ],
    "failover_conditions" : {
      "input_loss_threshold_msec" : 100,
      "input_preference" : "EQUAL"
    }
  },
  "record_settings" : {
    "rollingbuffer_duration" : 86400
  },
  "endpoints" : [ {
    "hls_package" : [ {
      "url" : "pull.testott.hls.com/ott/test/index.m3u8",
      "stream_selection" : [ {
        "key" : "sss",
        "max_bandwidth" : 100,
        "min_bandwidth" : 100
      } ],
```



```
    "hls_version" : "1",
    "segment_duration_seconds" : 4,
    "playlist_window_seconds" : 3600
   } ],
   "dash_package" : [ {
    "url" : "pull.testott.hls.com/ott/test/index.mpd",
    "stream_selection" : [ {
     "key" : "bitrate=900000-1800000",
     "max_bandwidth" : 1800000,
     "min_bandwidth" : 900000
    } ],
    "segment_duration_seconds" : 4,
    "playlist_window_seconds" : 3600
   } ],
   "mss_package" : [ {
    "url" : "pull.testott.hls.com/ott/channel/manifest",
    "stream_selection" : [ {
     "key" : "bitrate=900000-1800000",
     "max_bandwidth" : 1800000,
     "min_bandwidth" : 900000
    } ],
    "segment_duration_seconds" : 4,
    "playlist_window_seconds" : 3600
   } ]
  } ],
  "state" : "OFF"
}
```

Example Responses

Status code: 201

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "sources" : [ {
    "url" : "rtmp://push.testott.hls.com/ott/test_1024?request_source=ott&channel_id=test",
    "bitrate" : 1024,
    "width" : 100,
    "height" : 100
  } ]
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.100011001",
  "result_msg" : "output url pull.testott.hls.com/ott/test/index.m3u8 is exist",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status Codes

Status Code	Description
201	Demo Information

Status Code	Description
400	Error response

Error Codes

See **Error Codes**.

5.2 Querying Channel Information

Function

Queries channel information. Batch query is supported.

URI

GET /v1/{project_id}/ott/channels

Table 5-32 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 5-33 Query Parameters

Parameter	Mandatory	Type	Description
data_display	No	String	true
domain	No	String	Ingest domain name.
app_name	No	String	Group name or application name.
id	No	String	Channel ID.
limit	No	Integer	Number of records on each page. The value ranges from 1 to 100. The default value is **10**.
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 5-34 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.
Authorization	No	String	Authentication information. This parameter is mandatory for AK/SK authentication.
X-Sdk-Date	No	String	Request time. 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 5-35 Response body parameters

Parameter	Type	Description
total	Integer	Total number of channels.
channels	Array of **CreateOttChannelInfoReq** objects	Channel information.

Table 5-36 CreateOttChannelInfoReq

Parameter	Type	Description
domain	String	Ingest domain name of a channel.
app_name	String	Group name or application name.
id	String	(Mandatory) Unique ID of a channel.

Parameter	Type	Description
name	String	Channel name. This parameter is optional.
state	String	Channel status. • **ON**: After a channel is delivered, functions such as stream pull, transcoding, and recording are automatically enabled. • **OFF**: Only the channel information is saved but the channel is not started.
input	**InputStreamInfo** object	Channel input stream information.
encoder_settings	Array of **encoder_settings** objects	Transcoding template configuration.
record_settings	**record_settings** object	Catch-up TV configuration.
endpoints	Array of **EndpointItem** objects	Channel output stream information.
encoder_settings_expand	**EncoderSettingsExpand** object	Audio output configuration

Table 5-37 InputStreamInfo

Parameter	Type	Description
input_protocol	String	Channel input protocol • **FLV_PULL** • **RTMP_PUSH** • **HLS_PULL** • **SRT_PULL** • **SRT_PUSH**
sources	Array of **SourcesInfo** objects	Information about the primary source stream of a channel. This parameter is optional when the stream input protocol is **RTMP_PUSH** or **SRT_PUSH**. In other cases, this parameter is mandatory.

Parameter	Type	Description
secondary_sources	Array of **SecondarySourcesInfo** objects	Standby input stream array. This parameter is optional. If there is a standby input stream, ensure that the number of channels, codec, and resolution of the primary and standby input streams are the same. If the stream input protocol is **RTMP_PUSH**, you do not need to specify this parameter.
failover_conditions	**FailoverConditions** object	(Optional) Configuration provided by the channel supplier to switch between the primary and standby media stream URLs.
max_bandwidth_limit	Integer	Maximum bandwidth required when the input protocol is **HLS_PULL**. A streaming URL provided by the user includes the parameter **BANDWIDTH** for audios/videos with different bitrates. • If the maximum bandwidth is specified, Media Live will pull the media stream that has the highest bitrate and a bandwidth lower than the maximum bandwidth from the URL, and push the stream to the origin server. • If the maximum bandwidth is not specified, Media Live will pull the media stream with the largest **BANDWIDTH** value from the URL, and push the stream to the origin server.
ip_port_mode	Boolean	When the stream push protocol is **SRT_PUSH** and streams are pushed to the origin server, the encoder does not support the input of **streamid**. In this case, set this parameter to **true**.
ip_whitelist	String	IP address whitelist for stream push by customers when the SRT_PUSH type is used
scte35_source	String	SCTE-35 signal source of an advertisement. Only **HLS_PULL** channels support this configuration. Currently, this field can only be set to **SEGMENTS**.

Parameter	Type	Description
ad_triggers	Array of strings	Configures an ad trigger. Options: • **Splice insert** • **Provider advertisement** • **Distributor advertisement** • **Provider placement opportunity** • **Distributor placement opportunity**
audio_selectors	Array of **InputAudioSelector** objects	Configures an audio selector (a maximum of 8).

Table 5-38 SourcesInfo

Parameter	Type	Description
url	String	Channel source stream URL, which is used for external stream pull.
bitrate	Integer	Bitrate. This parameter is mandatory when live transcoding is not required. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. This parameter is optional. Value range: 0–4096 (4K)
height	Integer	Height corresponding to the resolution. This parameter is optional. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.
bitrate_for3u8	Boolean	Whether to use **bitrate** to fix the bitrate. Default value: **false**
passphrase	String	Encryption information when the protocol is **SRT_PUSH**.
backup_urls	Array of strings	Standby streaming URL list
stream_id	String	Stream ID of the streaming URL in an **SRT_PULL** channel.
latency	Integer	Stream pull latency of an **SRT_PULL** channel.

Parameter	Type	Description
pbkeylen	Integer	SRT encryption algorithm 16 = AES-128 24 = AES-192 32 = AES-256

Table 5-39 SecondarySourcesInfo

Parameter	Type	Description
url	String	Channel source stream URL, which is used for external stream pull.
bitrate	Integer	Bitrate. This parameter is mandatory when live transcoding is not required. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. This parameter is optional. Value range: 0–4096 (4K)
height	Integer	Height corresponding to the resolution. This parameter is optional. Value range: 0–2160 (4K)
bitrate_for3u8	Boolean	Whether to use **bitrate** to fix the bitrate. Default value: **false**
passphrase	String	Encryption information when the protocol is **SRT_PUSH**
backup_urls	Array of strings	Standby streaming URL list
stream_id	String	Stream ID of the streaming URL in an **SRT_PULL** channel.
latency	Integer	Stream pull latency of an **SRT_PULL** channel.
pbkeylen	Integer	SRT encryption algorithm 16 = AES-128 24 = AES-192 32 = AES-256

Table 5-40 FailoverConditions

Parameter	Type	Description
input_loss_threshold_msec	Integer	Duration threshold for stopping input streams. When the threshold is reached, the primary/standby switchover is automatically triggered. Unit: millisecond. Value range: 0–3,600,000 (Optional) The default value is **2,000** ms.
input_preference	String	Whether the primary ingest URL has the highest priority (**PRIMARY**) or the primary and standby URLs are switched equally (**EQUAL**). In the equal switchover mode, the standby URL is used and will not be automatically switched to the primary URL. (Optional) The default value is **EQUAL**.

Table 5-41 InputAudioSelector

Parameter	Type	Description
name	String	Name of an audio selector. Enter only letters, digits, hyphens (-), and underscores (_). The name of each selector must be unique within the same channel.
selector_settings	**AudioSelectorSettings** object	Configures an audio selector.

Table 5-42 AudioSelectorSettings

Parameter	Type	Description
audio_language_selection	**AudioSelectorLangSelection** object	Configures a language selector.
audio_pid_selection	**AudioSelectorPidSelection** object	Configures a PID selector.
audio_hls_selection	**AudioSelectorHlsSelection** object	Configures an HLS selector.

Table 5-43 AudioSelectorLangSelection

Parameter	Type	Description
language_code	String	Enter a language code of 2 or 3 lowercase letters.
language_selection_policy	String	Language output policy. Options: • **LOOSE**: loose match. For example, if the language code **eng** is selected, an audio stream in English will be preferentially selected. If there is no audio stream in English, the audio stream with the lowest PID will be selected. • **STRICT**: strict match. For example, if the language code **eng** is selected, only an audio stream in English will be selected. If there is no audio stream in English, a muted segment will be automatically added. When this audio selector is used to play the video, the video is muted.

Table 5-44 AudioSelectorPidSelection

Parameter	Type	Description
pid	Integer	Sets the PID value.

Table 5-45 AudioSelectorHlsSelection

Parameter	Type	Description
name	String	HLS audio selector name
group_id	String	HLS audio selector GID

Table 5-46 encoder_settings

Parameter	Type	Description
template_id	String	Transcoding template ID.

Table 5-47 record_settings

Parameter	Type	Description
rollingbuffer_duration	Integer	Maximum catch-up TV recording duration. The recording is continuous in this period. This parameter is mandatory. Unit: second. The value **0** indicates that recording is not supported. The maximum recording duration is 14 days.

Table 5-48 EndpointItem

Parameter	Type	Description
hls_package	Array of **HlsPackageItem** objects	HLS packaging information.
dash_package	Array of **DashPackageItem** objects	DASH packaging information.
mss_package	Array of **MssPackageItem** objects	MSS packaging information.

Table 5-49 HlsPackageItem

Parameter	Type	Description
url	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
hls_version	String	HLS version number.

Parameter	Type	Description
segment_duration_seconds	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	**Encryption** object	Encryption information.
ads	Object	Advertising configuration
ext_args	Object	Other additional parameters
request_args	**PackageRequestArgs** object	Playback configuration
ad_marker	Array of strings	Advertisement ID. For HLS, the value is **["ENHANCED_SCTE35"]**.

Table 5-50 DashPackageItem

Parameter	Type	Description
url	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.

Parameter	Type	Description
segment_duration_seconds	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	**Encryption** object	Encryption information.
ads	Object	Advertising configuration
ext_args	Object	Other additional parameters
request_args	**PackageRequestArgs** object	Playback configuration
ad_marker	String	Advertisement ID. For DASH, the value is **xml+bin**.
suggested_presentation_delay	Integer	Recommended stream delay Unit: second. Value range: 1 to 120
minimum_update_period	Integer	Shortest index update period Unit: second. Value range: 1 to 120
min_buffer_time	Integer	Minimum buffer time Unit: second. Value range: 1 to 120

Table 5-51 MssPackageItem

Parameter	Type	Description
url	String	A customized streaming URL, including the method, domain name, and path.

Parameter	Type	Description
stream_selection	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
segment_duration_seconds	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	**Encryption** object	Encryption information.
ext_args	Object	Other additional parameters
delay_segment	Integer	Playback delay, in seconds.
request_args	**PackageRequestArgs** object	Playback configuration

Table 5-52 StreamSelectionItem

Parameter	Type	Description
key	String	Parameter used for bitrate filtering in a streaming URL.
max_bandwidth	Integer	Maximum bitrate, in bit/s. Value range: 0-104,857,600 (100 Mbit/s)
min_bandwidth	Integer	Minimum bitrate, in bit/s. Value range: 0-104,857,600 (100 Mbit/s)

Table 5-53 Encryption

Parameter	Type	Description
key_rotation_interval_seconds	Integer	Key cache time. If the key remains unchanged, the data is cached for seven days by default. This field is reserved and cannot be configured.
encryption_method	String	Encryption mode. This field is reserved and cannot be configured.
level	String	The options are as follows: • **content**: One channel corresponds to one key. • **profile**: One bitrate corresponds to one key. Default value: **content**
resource_id	String	DRM content ID generated by the customer
system_ids	Array of strings	Enumerated value of **system_id**. Options: **HLS**: FairPlay **DASH**: Widevine, PlayReady **MSS**: PlayReady
url	String	DRM address for obtaining a key
speke_version	String	DRM SPEKE version. Currently, only version 1.0 is supported.
request_mode	String	Request mode. Options: **direct_http**: accessing the DRM using HTTP(S) **functiongraph_proxy**: accessing the DRM using a FunctionGraph proxy
http_headers	Array of **HttpHeader** objects	Authentication information to be added to the DRM request header. A maximum of five items can be added. Only the **direct_http** request mode allows configuring **http_headers**.
urn	String	The **functiongraph_proxy** request mode requires the URN of FunctionGraph.

Table 5-54 HttpHeader

Parameter	Type	Description
key	String	**key** field name in the request header
value	String	**value** corresponding to the **key** in the request header

Table 5-55 PackageRequestArgs

Parameter	Type	Description
record	Array of **RecordRequestArgs** objects	Recording configuration
timeshift	Array of **TimeshiftRequestArgs** objects	Time shifting configuration
live	Array of **LiveRequestArgs** objects	Livestreaming configuration

Table 5-56 RecordRequestArgs

Parameter	Type	Description
start_time	String	Start time
end_time	String	End time
format	String	Format
unit	String	Unit

Table 5-57 TimeshiftRequestArgs

Parameter	Type	Description
back_time	String	Time shifting duration field name
unit	String	Unit

Table 5-58 LiveRequestArgs

Parameter	Type	Description
delay	String	Delay field
unit	String	Unit

Table 5-59 EncoderSettingsExpand

Parameter	Type	Description
audio_descriptions	Array of **audio_descriptions** objects	Description of an audio output setting
video_descriptions	**VideoDescriptions** object	

Table 5-60 audio_descriptions

Parameter	Type	Description
name	String	Name of an audio output setting. Enter only letters, digits, hyphens (-), and underscores (_). Names of audio output settings in the same channel must be different.
audio_selector_name	String	Audio selector name
language_code_control	String	Language code control. The setting will change only the audio's language displayed externally, not its actual language. Options: • **FOLLOW_INPUT**: If the output audio of the selected audio selector has a language, this language will be used. Otherwise, the language code and stream name specified here will be used. The default value is recommended. • **USE_CONFIGURED**: The language and stream name of the output audio can be customized.
language_code	String	Language code, which consists of 2 or 3 lowercase letters.

Parameter	Type	Description
stream_name	String	Stream name

Table 5-61 VideoDescriptions

Parameter	Type	Description
gop_duration_seconds	Integer	Custom GOP duration, in seconds. The value ranges from 0 to 10. The default value is **0**, indicating that the GOP duration of the source stream is used. The value cannot be **7** or **9**. If the value is invalid, the default value is used.

Status code: 400

Table 5-62 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/ott/channels?app_name=ott&domain=push.testott.hls.com&id=test
```

Example Responses

Status code: 200

Demo Information

```
{
  "total" : 1,
  "channels" : [ {
    "domain" : "push.testott.hls.com",
    "app_name" : "ott",
    "id" : "test",
    "name" : "testname",
    "input" : {
```



```
  "input_protocol" : "RTMP_PUSH",
  "sources" : [ {
    "url" : "rtmp://push.testott.hls.com/ott/test_1024?request_source=ott&channel_id=test",
    "bitrate" : 1024,
    "width" : 100,
    "height" : 100
  } ],
  "failover_conditions" : {
    "input_loss_threshold_msec" : 100,
    "input_preference" : "EQUAL"
  }
},
"record_settings" : {
  "rollingbuffer_duration" : 86400
},
"endpoints" : [ {
  "hls_package" : [ {
    "url" : "pull.testott.hls.com/ott/test/index.m3u8",
    "stream_selection" : [ {
      "key" : "sss",
      "max_bandwidth" : 0,
      "min_bandwidth" : 0
    } ],
    "segment_duration_seconds" : 4,
    "playlist_window_seconds" : 3600,
    "request_args" : {
      "record" : [ {
        "start_time" : "begin",
        "end_time" : "end",
        "format" : "timestamp",
        "unit" : "second"
      } ],
      "timeshift" : [ {
        "back_time" : "begin",
        "unit" : "second"
      } ],
      "live" : null
    },
    "hls_version" : "1"
  } ],
  "dash_package" : [ {
    "url" : "pull.testott.hls.com/ott/test/index.mpd",
    "stream_selection" : [ {
      "key" : "bitrate=900000-1800000",
      "max_bandwidth" : 1800000,
      "min_bandwidth" : 900000
    } ],
    "segment_duration_seconds" : 4,
    "playlist_window_seconds" : 3600,
    "request_args" : {
      "record" : [ {
        "start_time" : "begin",
        "end_time" : "end",
        "format" : "timestamp",
        "unit" : "second"
      } ],
      "timeshift" : [ {
        "back_time" : "begin",
        "unit" : "second"
      } ],
      "live" : null
    }
  } ],
  "mss_package" : [ {
    "url" : "pull.testott.hls.com/ott/channel/manifest",
    "stream_selection" : [ {
      "key" : "bitrate=900000-1800000",
      "max_bandwidth" : 1800000,
      "min_bandwidth" : 900000
```



```
      } ],
      "segment_duration_seconds" : 4,
      "playlist_window_seconds" : 3600,
      "request_args" : {
        "record" : [ {
          "start_time" : "begin",
          "end_time" : "end",
          "format" : "timestamp",
          "unit" : "second"
        } ],
        "timeshift" : [ {
          "back_time" : "begin",
          "unit" : "second"
        } ],
        "live" : null
      }
    } ]
  } ],
  "state" : "OFF"
 } ]
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.103011019",
  "result_msg" : "The resource to access is not exists",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "agbc"
}
```

Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.3 Deleting Channel Information

Function

Deletes channel information.

URI

DELETE /v1/{project_id}/ott/channels

Table 5-63 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 5-64 Query Parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name.
app_name	Yes	String	Group name or application name.
id	Yes	String	Channel 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	Request time. 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 5-66 Response body parameters

Parameter	Type	Description
result_code	String	Error code
result_msg	String	Error message
domain	String	Ingest domain name
app_name	String	Group name or application name. This parameter is mandatory.
id	String	(Mandatory) Unique ID of a channel.

Status code: 400

Table 5-67 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/ott/channels?
app_name=ott&domain=push.testott.hls.com&id=test
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.103011019",
```



```
  "result_msg" : "The resource to access is not exists",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.4 Modifying Channel Packaging Information

Function

Modifies channel packaging information.

URI

PUT /v1/{project_id}/ott/channels/endpoints

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".

Request Parameters

Table 5-69 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-70 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.
id	Yes	String	Unique ID of a channel. This parameter is mandatory.
endpoints	No	Array of **EndpointItem** objects	Channel output stream information.

Table 5-71 EndpointItem

Parameter	Mandatory	Type	Description
hls_package	No	Array of **HlsPackageItem** objects	HLS packaging information.
dash_package	No	Array of **DashPackageItem** objects	DASH packaging information.
mss_package	No	Array of **MssPackageItem** objects	MSS packaging information.

Table 5-72 HlsPackageItem

Parameter	Mandatory	Type	Description
url	Yes	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	No	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
hls_version	No	String	HLS version number.
segment_duration_seconds	Yes	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.

Parameter	Mandatory	Type	Description
playlist_window_seconds	No	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	No	**Encryption** object	Encryption information.
ads	No	Object	Advertising configuration
ext_args	No	Object	Other additional parameters
request_args	No	**PackageRequestArgs** object	Playback configuration
ad_marker	No	Array of strings	Advertisement ID. For HLS, the value is **["ENHANCED_SCTE35"]**.

Table 5-73 DashPackageItem

Parameter	Mandatory	Type	Description
url	Yes	String	A customized streaming URL, including the method, domain name, and path.
stream_selection	No	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
segment_duration_seconds	Yes	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.

Parameter	Mandatory	Type	Description
playlist_window_seconds	No	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	No	**Encryption** object	Encryption information.
ads	No	Object	Advertising configuration
ext_args	No	Object	Other additional parameters
request_args	No	**PackageRequestArgs** object	Playback configuration
ad_marker	No	String	Advertisement ID. For DASH, the value is **xml+bin**.
suggested_presentation_delay	No	Integer	Recommended stream delay Unit: second. Value range: 1 to 120
minimum_update_period	No	Integer	Shortest index update period Unit: second. Value range: 1 to 120
min_buffer_time	No	Integer	Minimum buffer time Unit: second. Value range: 1 to 120

Table 5-74 MssPackageItem

Parameter	Mandatory	Type	Description
url	Yes	String	A customized streaming URL, including the method, domain name, and path.

Parameter	Mandatory	Type	Description
stream_selection	No	Array of **StreamSelectionItem** objects	Filters out a stream whose bitrate is in the range of [min, max] from all streams. If bitrate filtering is not required, you do not need to specify this parameter.
segment_duration_seconds	Yes	Integer	Output segment duration of a channel. This parameter is mandatory. Unit: second. Value range: 1 to 10 **NOTE** Changing the segment duration will affect time-shifted viewing and catch-up TV of the recorded content. Exercise caution when performing this operation.
playlist_window_seconds	No	Integer	Total output segment duration of a channel. The value is the output segment duration multiplied by the number of segments. There are at least three returned segments. Unit: second. Value range: 0–86,400 (value of converting 24 hours to seconds)
encryption	No	**Encryption** object	Encryption information.
ext_args	No	Object	Other additional parameters
delay_segment	No	Integer	Playback delay, in seconds.
request_args	No	**PackageRequestArgs** object	Playback configuration

Table 5-75 StreamSelectionItem

Parameter	Mandatory	Type	Description
key	No	String	Parameter used for bitrate filtering in a streaming URL.
max_bandwidth	No	Integer	Maximum bitrate, in bit/s. Value range: 0-104,857,600 (100 Mbit/s)

Parameter	Mandatory	Type	Description
min_bandwidth	No	Integer	Minimum bitrate, in bit/s. Value range: 0-104,857,600 (100 Mbit/s)

Table 5-76 Encryption

Parameter	Mandatory	Type	Description
key_rotation_interval_seconds	No	Integer	Key cache time. If the key remains unchanged, the data is cached for seven days by default. This field is reserved and cannot be configured.
encryption_method	No	String	Encryption mode. This field is reserved and cannot be configured.
level	No	String	The options are as follows: • **content**: One channel corresponds to one key. • **profile**: One bitrate corresponds to one key. Default value: **content**
resource_id	Yes	String	DRM content ID generated by the customer
system_ids	Yes	Array of strings	Enumerated value of **system_id**. Options: **HLS**: FairPlay **DASH**: Widevine, PlayReady **MSS**: PlayReady
url	Yes	String	DRM address for obtaining a key
speke_version	Yes	String	DRM SPEKE version. Currently, only version 1.0 is supported.

Parameter	Mandatory	Type	Description
request_mode	Yes	String	Request mode. Options: **direct_http**: accessing the DRM using HTTP(S) **functiongraph_proxy**: accessing the DRM using a FunctionGraph proxy
http_headers	No	Array of **HttpHeader** objects	Authentication information to be added to the DRM request header. A maximum of five items can be added. Only the **direct_http** request mode allows configuring **http_headers**.
urn	No	String	The **functiongraph_proxy** request mode requires the URN of FunctionGraph.

Table 5-77 HttpHeader

Parameter	Mandatory	Type	Description
key	Yes	String	**key** field name in the request header
value	Yes	String	**value** corresponding to the **key** in the request header

Table 5-78 PackageRequestArgs

Parameter	Mandatory	Type	Description
record	No	Array of **RecordRequestArgs** objects	Recording configuration
timeshift	No	Array of **TimeshiftRequestArgs** objects	Time shifting configuration
live	No	Array of **LiveRequestArgs** objects	Livestreaming configuration

Table 5-79 RecordRequestArgs

Parameter	Mandatory	Type	Description
start_time	No	String	Start time
end_time	No	String	End time
format	No	String	Format
unit	No	String	Unit

Table 5-80 TimeshiftRequestArgs

Parameter	Mandatory	Type	Description
back_time	No	String	Time shifting duration field name
unit	No	String	Unit

Table 5-81 LiveRequestArgs

Parameter	Mandatory	Type	Description
delay	No	String	Delay field
unit	No	String	Unit

Response Parameters

Status code: 200

Table 5-82 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Parameter	Type	Description
sources	Array of SourceRsp objects	Ingest URL list. During channel creation, the ingest URL list is returned only when the input stream protocol is **RTMP_PUSH**.

Table 5-83 SourceRsp

Parameter	Type	Description
url	String	RTMP ingest URL.
bitrate	Integer	Bitrate. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. Value range: 0–4096 (4K)
height	Integer	Height corresponding to the resolution. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.

Status code: 400

Table 5-84 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/ott/channels/endpoints

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
```



```
 "endpoints" : [ {
  "hls_package" : [ {
   "url" : "pull.testott.hls.com/ott/test/index.m3u8",
   "stream_selection" : [ {
    "key" : "sss",
    "max_bandwidth" : 1000,
    "min_bandwidth" : 100
   } ],
   "hls_version" : "1",
   "segment_duration_seconds" : 4,
   "playlist_window_seconds" : 3600
  } ],
  "dash_package" : [ {
   "url" : "pull.testott.hls.com/ott/test/index.mpd",
   "stream_selection" : [ {
    "key" : "bitrate=900000-1800000",
    "max_bandwidth" : 1800000,
    "min_bandwidth" : 900000
   } ],
   "segment_duration_seconds" : 4,
   "playlist_window_seconds" : 3600
  } ],
  "mss_package" : [ {
   "url" : "pull.testott.hls.com/ott/channel/manifest",
   "stream_selection" : [ {
    "key" : "bitrate=900000-1800000",
    "max_bandwidth" : 1800000,
    "min_bandwidth" : 900000
   } ],
   "segment_duration_seconds" : 4,
   "playlist_window_seconds" : 3600
  } ]
 } ]
}
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.100011001",
  "result_msg" : "param check failed",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : ""
}
```


Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.5 Modifying Channel Input Stream Information

Function

Modifies channel input stream information.

URI

PUT /v1/{project_id}/ott/channels/input

Table 5-85 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 5-86 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-87 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.
id	Yes	String	Unique ID of a channel. This parameter is mandatory.
input	No	**InputStreamInfo** object	Channel output stream information.
encoder_settings_expand	No	**EncoderSettingsExpand** object	Encoding extension

Table 5-88 InputStreamInfo

Parameter	Mandatory	Type	Description
input_protocol	Yes	String	Channel input protocol • **FLV_PULL** • **RTMP_PUSH** • **HLS_PULL** • **SRT_PULL** • **SRT_PUSH**

Parameter	Mandatory	Type	Description
sources	No	Array of **SourcesInfo** objects	Information about the primary source stream of a channel. This parameter is optional when the stream input protocol is **RTMP_PUSH** or **SRT_PUSH**. In other cases, this parameter is mandatory.
secondary_sources	No	Array of **SecondarySourcesInfo** objects	Standby input stream array. This parameter is optional. If there is a standby input stream, ensure that the number of channels, codec, and resolution of the primary and standby input streams are the same. If the stream input protocol is **RTMP_PUSH**, you do not need to specify this parameter.
failover_conditions	No	**FailoverConditions** object	(Optional) Configuration provided by the channel supplier to switch between the primary and standby media stream URLs.
max_bandwidth_limit	No	Integer	Maximum bandwidth required when the input protocol is **HLS_PULL**. A streaming URL provided by the user includes the parameter **BANDWIDTH** for audios/videos with different bitrates. • If the maximum bandwidth is specified, Media Live will pull the media stream that has the highest bitrate and a bandwidth lower than the maximum bandwidth from the URL, and push the stream to the origin server. • If the maximum bandwidth is not specified, Media Live will pull the media stream with the largest **BANDWIDTH** value from the URL, and push the stream to the origin server.

Parameter	Mandatory	Type	Description
ip_port_mode	No	Boolean	When the stream push protocol is **SRT_PUSH** and streams are pushed to the origin server, the encoder does not support the input of **streamid**. In this case, set this parameter to **true**.
ip_whitelist	No	String	IP address whitelist for stream push by customers when the SRT_PUSH type is used
scte35_source	No	String	SCTE-35 signal source of an advertisement. Only **HLS_PULL** channels support this configuration. Currently, this field can only be set to **SEGMENTS**.
ad_triggers	No	Array of strings	Configures an ad trigger. Options: • **Splice insert** • **Provider advertisement** • **Distributor advertisement** • **Provider placement opportunity** • **Distributor placement opportunity**
audio_selectors	No	Array of **InputAudioSelector** objects	Configures an audio selector (a maximum of 8).

Table 5-89 SourcesInfo

Parameter	Mandatory	Type	Description
url	No	String	Channel source stream URL, which is used for external stream pull.
bitrate	No	Integer	Bitrate. This parameter is mandatory when live transcoding is not required. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)

Parameter	Mandatory	Type	Description
width	No	Integer	Width corresponding to the resolution. This parameter is optional. Value range: 0–4096 (4K)
height	No	Integer	Height corresponding to the resolution. This parameter is optional. Value range: 0–2160 (4K)
enable_snapshot	No	Boolean	Whether to use the stream for snapshot capturing.
bitrate_for3u8	No	Boolean	Whether to use **bitrate** to fix the bitrate. Default value: **false**
passphrase	No	String	Encryption information when the protocol is **SRT_PUSH**.
backup_urls	No	Array of strings	Standby streaming URL list
stream_id	No	String	Stream ID of the streaming URL in an **SRT_PULL** channel.
latency	No	Integer	Stream pull latency of an **SRT_PULL** channel.
pbkeylen	No	Integer	SRT encryption algorithm 16 = AES-128 24 = AES-192 32 = AES-256

Table 5-90 SecondarySourcesInfo

Parameter	Mandatory	Type	Description
url	No	String	Channel source stream URL, which is used for external stream pull.
bitrate	No	Integer	Bitrate. This parameter is mandatory when live transcoding is not required. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)

Parameter	Mandatory	Type	Description
width	No	Integer	Width corresponding to the resolution. This parameter is optional. Value range: 0–4096 (4K)
height	No	Integer	Height corresponding to the resolution. This parameter is optional. Value range: 0–2160 (4K)
bitrate_for3u8	No	Boolean	Whether to use **bitrate** to fix the bitrate. Default value: **false**
passphrase	No	String	Encryption information when the protocol is **SRT_PUSH**
backup_urls	No	Array of strings	Standby streaming URL list
stream_id	No	String	Stream ID of the streaming URL in an **SRT_PULL** channel.
latency	No	Integer	Stream pull latency of an **SRT_PULL** channel.
pbkeylen	No	Integer	SRT encryption algorithm 16 = AES-128 24 = AES-192 32 = AES-256

Table 5-91 FailoverConditions

Parameter	Mandatory	Type	Description
input_loss_threshold_msec	No	Integer	Duration threshold for stopping input streams. When the threshold is reached, the primary/standby switchover is automatically triggered. Unit: millisecond. Value range: 0–3,600,000 (Optional) The default value is **2,000** ms.

Parameter	Mandatory	Type	Description
input_preference	No	String	Whether the primary ingest URL has the highest priority (**PRIMARY**) or the primary and standby URLs are switched equally (**EQUAL**). In the equal switchover mode, the standby URL is used and will not be automatically switched to the primary URL. (Optional) The default value is **EQUAL**.

Table 5-92 InputAudioSelector

Parameter	Mandatory	Type	Description
name	Yes	String	Name of an audio selector. Enter only letters, digits, hyphens (-), and underscores (_). The name of each selector must be unique within the same channel.
selector_settings	No	**AudioSelectorSettings** object	Configures an audio selector.

Table 5-93 AudioSelectorSettings

Parameter	Mandatory	Type	Description
audio_language_selection	No	**AudioSelectorLangSelection** object	Configures a language selector.
audio_pid_selection	No	**AudioSelectorPidSelection** object	Configures a PID selector.
audio_hls_selection	No	**AudioSelectorHlsSelection** object	Configures an HLS selector.

Table 5-94 AudioSelectorLangSelection

Parameter	Mandatory	Type	Description
language_code	Yes	String	Enter a language code of 2 or 3 lowercase letters.
language_selection_policy	No	String	Language output policy. Options: • **LOOSE**: loose match. For example, if the language code **eng** is selected, an audio stream in English will be preferentially selected. If there is no audio stream in English, the audio stream with the lowest PID will be selected. • **STRICT**: strict match. For example, if the language code **eng** is selected, only an audio stream in English will be selected. If there is no audio stream in English, a muted segment will be automatically added. When this audio selector is used to play the video, the video is muted.

Table 5-95 AudioSelectorPidSelection

Parameter	Mandatory	Type	Description
pid	Yes	Integer	Sets the PID value.

Table 5-96 AudioSelectorHlsSelection

Parameter	Mandatory	Type	Description
name	Yes	String	HLS audio selector name
group_id	Yes	String	HLS audio selector GID

Table 5-97 EncoderSettingsExpand

Parameter	Mandatory	Type	Description
audio_descriptions	No	Array of **audio_descriptions** objects	Description of an audio output setting
video_descriptions	No	**VideoDescriptions** object	

Table 5-98 audio_descriptions

Parameter	Mandatory	Type	Description
name	Yes	String	Name of an audio output setting. Enter only letters, digits, hyphens (-), and underscores (_). Names of audio output settings in the same channel must be different.
audio_selector_name	Yes	String	Audio selector name
language_code_control	No	String	Language code control. The setting will change only the audio's language displayed externally, not its actual language. Options: • **FOLLOW_INPUT**: If the output audio of the selected audio selector has a language, this language will be used. Otherwise, the language code and stream name specified here will be used. The default value is recommended. • **USE_CONFIGURED**: The language and stream name of the output audio can be customized.
language_code	No	String	Language code, which consists of 2 or 3 lowercase letters.
stream_name	No	String	Stream name

Table 5-99 VideoDescriptions

Parameter	Mandatory	Type	Description
gop_duration_seconds	No	Integer	Custom GOP duration, in seconds. The value ranges from 0 to 10. The default value is **0**, indicating that the GOP duration of the source stream is used. The value cannot be **7** or **9**. If the value is invalid, the default value is used.

Response Parameters

Status code: 200

Table 5-100 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.
sources	Array of **SourceRsp** objects	Ingest URL list. During channel creation, the ingest URL list is returned only when the input stream protocol is **RTMP_PUSH**.

Table 5-101 SourceRsp

Parameter	Type	Description
url	String	RTMP ingest URL.
bitrate	Integer	Bitrate. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. Value range: 0–4096 (4K)

Parameter	Type	Description
height	Integer	Height corresponding to the resolution. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.

Status code: 400

Table 5-102 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/ott/channels/input

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "input" : {
    "input_protocol" : "RTMP_PUSH",
    "sources" : [ {
      "width" : 100,
      "bitrate_for3u8" : false,
      "enable_snapshot" : false,
      "bitrate" : 1024,
      "passphrase" : "",
      "url" : "rtmp://192.168.8.158/ott/adtestdrm?vhost=pull.testott.hls.com",
      "height" : 100
    } ]
  }
}
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
```



```
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.103011019",
  "result_msg" : "The resource to access is not exists",
  "domain" : "push.testott.hls.com",
  "app_name" : "test",
  "id" : "test-abc"
}
```

Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.6 Modifying Channel Recording Information

Function

Modifies channel recording information.

URI

PUT /v1/{project_id}/ott/channels/record-settings

Table 5-103 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 5-104 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-105 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.
id	Yes	String	Unique ID of a channel. This parameter is mandatory.
record_settings	No	**record_settings** object	Catch-up TV configuration.

Table 5-106 record_settings

Parameter	Mandatory	Type	Description
rollingbuffer_duration	No	Integer	Maximum catch-up TV recording duration. The recording is continuous in this period. This parameter is mandatory. Unit: second. The value **0** indicates that recording is not supported. The maximum recording duration is 14 days.

Response Parameters

Status code: 200

Table 5-107 Response body parameters

Parameter	Type	Description
result_code	String	Error code
result_msg	String	Error message
domain	String	Ingest domain name
app_name	String	Group name or application name. This parameter is mandatory.
id	String	(Mandatory) Unique ID of a channel.

Status code: 400

Table 5-108 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/ott/channels/record-settings

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "record_settings" : {
    "rollingbuffer_duration" : 3600
  }
}
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.103011019",
  "result_msg" : "The resource to access is not exists",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test2"
}
```

Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.7 Modifying General Channel Information

Function

Modifies general channel information.

URI

PUT /v1/{project_id}/ott/channels/general

Table 5-109 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 5-110 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-111 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.

Parameter	Mandatory	Type	Description
id	Yes	String	Unique ID of a channel. This parameter is mandatory.
name	Yes	String	Channel name.

Response Parameters

Status code: 200

Table 5-112 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.
sources	Array of **SourceRsp** objects	Ingest URL list. During channel creation, the ingest URL list is returned only when the input stream protocol is **RTMP_PUSH**.

Table 5-113 SourceRsp

Parameter	Type	Description
url	String	RTMP ingest URL.
bitrate	Integer	Bitrate. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. Value range: 0–4096 (4K)
height	Integer	Height corresponding to the resolution. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.

Status code: 400

Table 5-114 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/ott/channels/general

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "name" : "modify_name"
}
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.103011019",
  "result_msg" : "The resource to access is not exists",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test22"
}
```


Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.8 Changing the Channel Status

Function

Changes the channel status.

URI

PUT /v1/{project_id}/ott/channels/state

Table 5-115 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 5-116 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-117 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.
id	Yes	String	(Mandatory) Unique ID of a channel.
state	Yes	String	Channel status. • **ON**: After a channel is delivered, functions such as stream pull, transcoding, and recording are automatically enabled. • **OFF**: Only the channel information is saved but the channel is not started.

Response Parameters

Status code: 200

Table 5-118 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.

Parameter	Type	Description
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.
sources	Array of **SourceRsp** objects	Ingest URL list. During channel creation, the ingest URL list is returned only when the input stream protocol is **RTMP_PUSH**.

Table 5-119 SourceRsp

Parameter	Type	Description
url	String	RTMP ingest URL.
bitrate	Integer	Bitrate. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)
width	Integer	Width corresponding to the resolution. Value range: 0–4096 (4K)
height	Integer	Height corresponding to the resolution. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.

Status code: 400

Table 5-120 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/ott/channels/state

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "state" : "ON"
}
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.100011001",
  "result_msg" : "Request parameters is invalid, channel state has been turned OFF",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.9 Modifying Channel Transcoding Template Information

Function

Modifies channel transcoding template information.

URI

PUT /v1/{project_id}/ott/channels/encorder-settings

Table 5-121 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 5-122 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-123 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel.
app_name	Yes	String	Group name or application name.

Parameter	Mandatory	Type	Description
id	Yes	String	Unique ID of a channel. This parameter is mandatory.
encoder_settings	No	Array of **encoder_settings** objects	Transcoding template configuration.

Table 5-124 encoder_settings

Parameter	Mandatory	Type	Description
template_id	No	String	Transcoding template ID.

Response Parameters

Status code: 200

Table 5-125 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.
sources	Array of **SourceRsp** objects	Ingest URL list. During channel creation, the ingest URL list is returned only when the input stream protocol is **RTMP_PUSH**.

Table 5-126 SourceRsp

Parameter	Type	Description
url	String	RTMP ingest URL.
bitrate	Integer	Bitrate. Unit: bit/s. Value range: (0, 104,857,600] (100 Mbit/s)

Parameter	Type	Description
width	Integer	Width corresponding to the resolution. Value range: 0–4096 (4K)
height	Integer	Height corresponding to the resolution. Value range: 0–2160 (4K)
enable_snapshot	Boolean	Whether to use the stream for snapshot capturing.

Status code: 400

Table 5-127 Response body parameters

Parameter	Type	Description
result_code	String	Error code.
result_msg	String	Error description.
domain	String	Ingest domain name.
app_name	String	Group name or application name. This parameter is mandatory.
id	String	Unique ID of a channel. This parameter is mandatory.

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/ott/channels/encorder-settings

{
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test",
  "encoder_settings" : [ {
    "template_id" : "ld"
  } ]
}
```

Example Responses

Status code: 200

Demo Information

```
{
  "result_code" : "LIVE.100000000",
  "result_msg" : "SUCCESS",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test"
}
```

Status code: 400

Error response

```
{
  "result_code" : "LIVE.103011019",
  "result_msg" : "The resource to access is not exists",
  "domain" : "push.testott.hls.com",
  "app_name" : "ott",
  "id" : "test2"
}
```

Status Codes

Status Code	Description
200	Demo Information
400	Error response

Error Codes

See **Error Codes**.

5.10 Querying Channel Statistics

Function

Queries channel statistics (input SCTE-35 signal).

URI

POST /v1/{project_id}/ott/channels/statistic

Table 5-128 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 5-129 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. The value ranges from 1 to 100 and defaults to **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 5-130 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	Request time. This parameter is mandatory for AK/SK authentication.
X-Project-Id	No	String	Project ID. This parameter is mandatory for AK/SK authentication.

Table 5-131 Request body parameters

Parameter	Mandatory	Type	Description
domain	Yes	String	Ingest domain name of a channel
app_name	Yes	String	Group name or application name
id	Yes	String	Channel ID. (Mandatory) Unique ID of a channel.
type	Yes	String	Statistics type. The value can be **scte35**.

Parameter	Mandatory	Type	Description
scte35	No	SCTE35StatisticReq object	Field for requesting the SCTE-35 signal of a channel

Table 5-132 SCTE35StatisticReq

Parameter	Mandatory	Type	Description
type	Yes	String	Signal type. The value can be **all**, **splice_insert**, or **time_signal**.
start_time	Yes	Long	Start time for querying signals. The value is a Unix time, in seconds.
end_time	Yes	Long	End time for querying signals. The value is a Unix time, in seconds. The end time must be later than the start time.

Response Parameters

Status code: 200

Table 5-133 Response body parameters

Parameter	Type	Description
domain	String	Ingest domain name of a channel
app_name	String	Group name or application name
id	String	Channel ID. (Mandatory) Unique ID of a channel.
type	String	Statistics type. The value can be **scte35**.
scte35	SCTE35StatisticRsp object	Response body for obtaining the SCTE-35 signal

Table 5-134 SCTE35StatisticRsp

Parameter	Type	Description
total	Integer	Total number of SCTE-35 signals found

Parameter	Type	Description
scte35_info	Array of **SCTE35InfoItem** objects	Array of detailed SCTE-35 signals

Table 5-135 SCTE35InfoItem

Parameter	Type	Description
type	String	Signal type. The value can be **splice_insert** or **time_signal**.
event_id	Integer	Event ID of the ad signal. For time signal, the first element in the array is printed.
start_date	Long	Execution time of the ad signal. The value is a Unix time, in seconds. The value is translated into the UTC time on the console.
duration	Integer	Duration of the ad signal, in seconds. If the value is **-1**, the signal duration is not carried and - is displayed on the console.

segmentation_type	String	// Splice Insert. Enter a hyphen (-).
		// Time signal. The value can be **0x30**, **0x31**, **0x32**, **0x33**, **0x34**, **0x35**, **0x36**, or **0x37**.
		// 0x30: ProviderAdvertisementStart
		// 0x31: ProviderAdvertisementEnd
		// 0x32: DistributorAdvertisementStart
		// 0x33: DistributorAdvertisementEnd
		// 0x34: ProviderPlacementOpportunityStart
		// 0x35: ProviderPlacementOpportunityEnd
		// 0x36: DistributorPlacementOpportunityStart
		// 0x37: DistributorPlacementOpportunityEnd

base64_data	String	Base64 value of the raw data of an ad signal
raw_splice	String	All information about an ad signal

Status code: 404

Table 5-136 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

Example Requests

```
POST https://{endpoint}/v1/{project_id}/ott/channels/statistic?limit=50&offset=10

{
  "domain" : "www.huaweiott.pushdomain.com",
  "app_name" : "live",
  "id" : "channelId",
  "type" : "scte35",
  "scte35" : {
    "type" : "all",
    "start_time" : 1741650609,
    "end_time" : 1741658609
  }
}
```

Example Responses

Status code: 200

Query success response

```
{
  "domain" : "www.huaweiott.pushdomain.com",
  "app_name" : "live",
  "id" : "channelId",
  "type" : "scte35",
  "scte35" : {
    "total" : 50,
    "scte35_info" : [ {
      "type" : "Splice Insert",
      "event_id" : 100,
      "start_date" : 1741594376,
      "duration" : 120,
      "segmentation_type" : "Provider advertisement Start",
      "base64_data" : "/DAlAAAAAAAAAP/wFAUAAAABf+/+AGAhYP4AKTLgAAEAAAAAjhdvmA==",
      "raw_splice" : "{\"table_id\":252,\"section_syntax_indicator\":false,\"private_indicator
\":false,\"section_length\":32,\"protocol_version\":0,\"encrypted_packet\":false,\"encryption_algorithm
\":0,\"pts_adjustment\":0,\"cw_index\":0,\"tier\":0,\"splice_command_length\":15,\"splice_command_type
\":\"Splice Insert\",\"splice_command\":{\"splice_event_id\":9,\"splice_event_cancel_indicator
\":false,\"out_of_network_indicator\":false,\"program_splice_flag\":true,\"duration_flag
\":false,\"splice_immediate_flag\":false,\"splice_time\":{\"time_specified_flag\":true,\"pts_time
\":429850800},\"unique_program_id\":0,\"avail_num\":0,\"avails_expected\":0},\"descriptor_loop_length
\":0,\"descriptors\":[],\"crc32\":2510451559}"
    }, {
      "type" : "Splice Insert",
      "event_id" : 101,
      "start_date" : 1741594378,
      "duration" : 120,
      "segmentation_type" : "Provider advertisement Start",
      "base64_data" : "/DAlAAAAAAAAAP/wFAUAAAABf+/+AGAhYP4AKTLgAAEAAAAAjhdvmA==",
      "raw_splice" : "{\"table_id\":252,\"section_syntax_indicator\":false,\"private_indicator
\":false,\"section_length\":32,\"protocol_version\":0,\"encrypted_packet\":false,\"encryption_algorithm
\":0,\"pts_adjustment\":0,\"cw_index\":0,\"tier\":0,\"splice_command_length\":15,\"splice_command_type
```


\":\"Splice Insert\",\"splice_command\":{\"splice_event_id\":9,\"splice_event_cancel_indicator
\":false,\"out_of_network_indicator\":false,\"program_splice_flag\":true,\"duration_flag
\":false,\"splice_immediate_flag\":false,\"splice_time\":{\"time_specified_flag\":true,\"pts_time
\":429850800},\"unique_program_id\":0,\"avail_num\":0,\"avails_expected\":0},\"descriptor_loop_length
\":0,\"descriptors\":[],\"crc32\":2510451559}"
    }]
  }
}

Status code: 404

Query failed response

{
  "error_code" : "LIVE.103011099",
  "error_msg" : "query channel statistic failed"
}

Status Codes

Status Code	Description
200	Query success response
404	Query failed response

Error Codes

See **Error Codes**.

6 Appendix

6.1 Status Codes

Table 6-1 lists the status codes that may be returned when you call Live APIs.

Table 6-1 Status codes

Status Code	Description
200 OK	The request has succeeded.
201 Created	The request for creating a resource has been fulfilled.
202 Accepted	The request has been accepted for handling, but the handling 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 is invalid. Do not retry the request before modifying it.
401 Unauthorized	The status code is returned after the client provides the authentication information, indicating that the authentication information is incorrect or invalid.
403 Forbidden	The request has been rejected. The server has received and understood the request but it refused to respond, because the request is set to deny access. Do not retry the request before modifying it.
404 Not Found	The requested resource cannot be found. Do not retry the request before modifying it.
405 Method Not Allowed	The request contains one or more methods not allowed for the resource. Do not retry the request before modifying it.

Status Code	Description
406 Not Acceptable	The server cannot fulfill the request sent by the client according to its content characteristics.
407 Proxy Authentication Required	This status code is similar to 401, but the client must first authenticate itself with the proxy.
408 Request Timeout	The client failed to send a request to the server within the time limit. The client may repeat the request without modifying it at any time later.
409 Conflict	The request cannot be handled due to a conflict with the status of the resource. This status code indicates that the resource that the client is attempting to create already exists, or that the requested update cannot be fulfilled due to the conflict.
500 Internal Server Error	The server is able to receive but unable to understand the request.
501 Not Implemented	The server does not support the requested function.
502 Bad Gateway	The server that acts as a gateway or proxy received an invalid request from a remote server.
503 Service Unavailable	The requested service is invalid. Do not retry the request before modifying it.
504 Gateway Timeout	A gateway timeout error occurred.

6.2 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.103011018	The resource already exists.	The resource already exists.	Check whether the requested resource exists.
400	LIVE.103011020	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.103011021	Failed to access the database.	Failed to access the database.	Submit a service ticket to reach technical support.
400	LIVE.103011022	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.103011024	The ICP number does not exist.	The ICP number does not exist.	Check whether the ICP number is correct.
400	LIVE.103011025	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.103011026	The domain name is in the blacklist.	The domain name is in the blacklist.	Use a licensed domain name.
400	LIVE.103011027	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.103011029	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.103011030	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.100011002	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.100011003	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.100011014	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.100011015	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.

6.3 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:

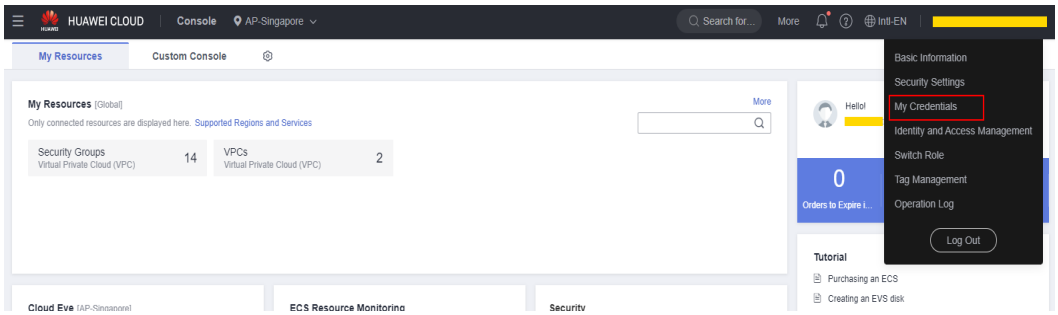
- **Obtaining a Project ID from the Console**
- **Obtaining a Project ID by Calling an API**

Obtaining a Project ID from the Console

Step 1 Log in to the console.

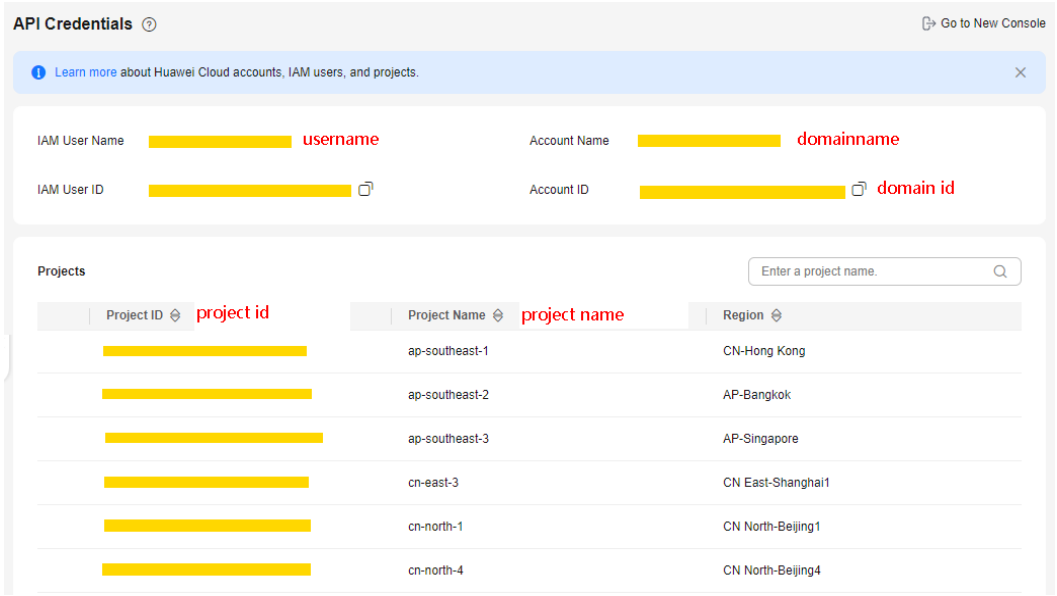
Step 2 Hover over the username in the upper right corner and select **My Credentials** from the drop-down list.

Figure 6-1 Console



Step 3 On the **API Credentials** page, view project IDs in the project list.

Figure 6-2 Obtaining a project ID



----End

Obtaining a Project ID by Calling an API

You can obtain a project ID by calling the API for **querying project information**.

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"
    }
}
```

6.4 Obtaining an Account ID

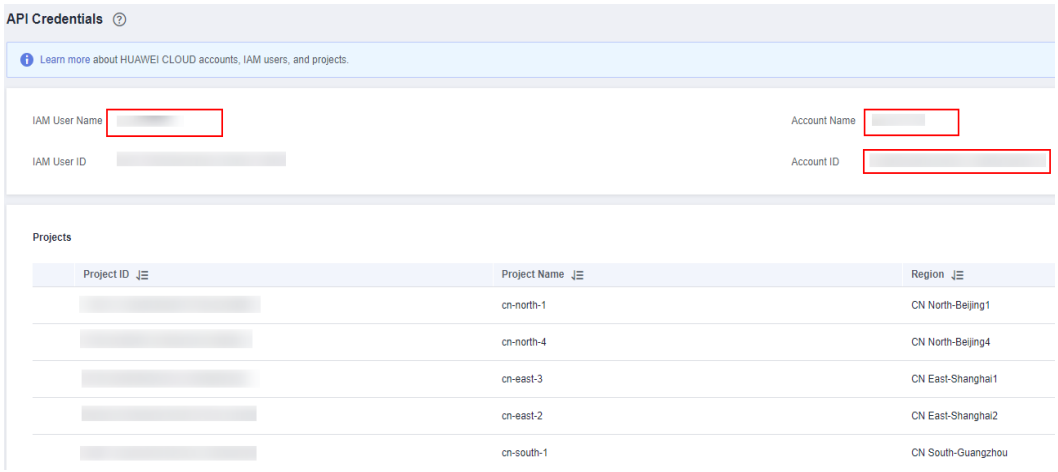
An account ID is required for some URLs when an API is called. To obtain an account ID, perform the following steps:

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 6-3 Obtaining an account ID



----End

7 Change History

Table 7-1 Change history

Released On	Description
2025-01-30	This issue is the first official release.

