

Live

FAQs

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1 Product Consulting

1.1 Do I Need to Buy the CDN Service Before Using Live?

No. The Live service provides live streaming acceleration. After the ingest domain name and streaming domain name are configured, Live automatically enables acceleration.

1.2 How Do I Use Live? Do I Need to Create a Channel?

Conventional live streaming requires the encoder to push streams. Each live stream has a unique ingest URL, that is, the channel. Live does not need to create a channel in advance. In RTMP push, the **StreamName** field is added to **LiveID**. When a user requests to play a live video in a channel, **LiveID** is used as the unique identifier to meet different viewing requirements.

1.3 In Which Regions Is Live Available?

Currently, Live is available in AP-Bangkok, AP-Singapore, and CN North-Beijing4.

1.4 Can I Use a Camera to Stream Live Video?

If a camera has an HDMI or SDI interface, the camera can connect to the encoder and push live streams to our Live center using RTMP push. You need to set the RTMP publish URL of the encoder to the ingest URL.

1.5 Do I Need to Have a Domain Name?

Yes. Before using Live, you need to prepare a licensed ingest domain name and streaming domain name. The two domain names must be different. You can register a level-1 domain name (for example, example.com), have it licensed, and then use two different level-2 domain names (for example, live-play.example.com

and live-push.example.com) as the ingest domain name and streaming domain name. For details about how to add domain names, see [Adding Domain Names](#).

1.6 Can I Send HTTP Requests After Configuring an HTTPS Certificate?

Yes. You can send both HTTP and HTTPS requests after configuring an HTTPS certificate.

1.7 How Do I Select a Live Origin Server and Acceleration Area?

How Do I Select a Live Origin Server?

⚠ CAUTION

- The associated ingest domain name and streaming domain name must belong to the same Live origin server.
- The origin server of the ingest domain name must be in the region where the streamer is. Streamers cannot push streams across regions. For example, if a streamer needs to livestream in both the Chinese mainland and Malaysia, two sets of streaming and ingest domain names need to be configured. The origin servers of each set of domain names are the Chinese mainland and Singapore, respectively.

Select a Live origin server based on the actual livestreaming scenario. The details are as follows:

- If live streams are pushed and played in the Chinese mainland and media processing operations (such as live recording, transcoding, and snapshot capturing) are not required:
When adding a domain name, you can select any area in the Chinese mainland. If the streamer is not in the selected area, the streamer can still be connected to the access node in the area. Streams are scheduled based on the area where the audience is, which is independent of the location of the media processing center.
- If media processing operations (such as live recording, transcoding, and snapshot capturing) are required on live streams:
Live recording files and snapshots need to be stored in OBS buckets. Therefore, you need to create an OBS bucket in the region of the Live service.
- If both the streamer and audience are outside the Chinese mainland:
You are advised to push video streams to a Live origin server that is close to the streamer.
 - Edge stream push

Live CDN nodes are deployed around the world. Edge stream push is used to push video streams to the edge node closest to the streamer and then to the Live origin server.

- Real-time network status monitoring

To observe the network status of a domain name in real time, you can log in to the Live console. On the **Usage Statistics** page, view the usage trends of bandwidth, traffic, transcoding, live recording, and snapshot capturing of the current domain name in real time to maintain stable and smooth livestreaming. For details, see [Usage Statistics](#).

How Do I Select an Acceleration Area?

When creating a domain name, you can specify areas where streaming domain names can be accelerated. This function is not available for ingest domain names. If the video is not played in the selected acceleration area, the livestreaming quality may be compromised.

You can select one of the following acceleration areas as required:

- **Chinese mainland**

Select this option when the audience is in the Chinese mainland. The domain name must be licensed by the Ministry of Industry and Information Technology (MIIT).

- **Outside Chinese mainland**

Select this option when the audience is outside the Chinese mainland (including in Hong Kong, Macao, and Taiwan).

- **Global**

Select this option when there is audience in and outside the Chinese mainland (including in Hong Kong, Macao, and Taiwan). The domain name must be licensed by the Ministry of Industry and Information Technology (MIIT).

NOTICE

The Live CDN bandwidth or traffic unit prices vary with acceleration areas. For details, see [Product Pricing Details](#).

2 Billing

2.1 What Do I Need to Pay?

Live prices consist of two parts: basic service fee and value-added service fee. For details, see [Product Pricing Details](#).

- Basic service fee refers to the traffic or bandwidth fee generated when livestreaming acceleration is enabled. You can choose to be billed by traffic or bandwidth on the Live console.
- Value-added services include recording, transcoding, and snapshot capturing. You pay only for what you use.

2.2 How Do I View the Usage and Expenditure of Pay-per-Use Live Resources?

Log in to the Huawei Cloud [Billing Center](#), choose **Billing > Bills > Bill Details**, and set **Bill Type** to **Pay-per-Use** to view the usage and expenditure of pay-per-use resources.

2.3 How Do I Change the Billing Option?

Live provides the following billing options (post payment): **by traffic**, **by peak bandwidth**, and **by 95th percentile bandwidth**. To be billed by **95th percentile bandwidth**, submit a service ticket.

You can change the CDN billing mode on the **Dashboard** page of Live console.

2.4 Do I Need to Delete Resources If I Don't Want to Use Live Any More?

No. If you do not use Live, you will not be billed by Live. However, if you have recorded live videos to Object Storage Service (OBS), you will be billed by OBS.

2.5 Is Downstream Traffic or Upstream Traffic Billed?

If the ratio between the number of live streams and number of viewers is equal to and less than 1:50, only downstream traffic is billed:

Downstream traffic = Live video bitrate/8 x Length of a live video x Average number of viewers

If the ratio between the number of live streams and number of viewers is greater than 1:50, upstream traffic is also billed:

Upstream traffic = Live video bitrate/8 x Length of a live video x Number of channels

For details, see [Live Pricing Details](#).

2.6 Why Charges Are Still Debited to My Account Even Though My Account Is in Arrears?

If your account is in arrears, you cannot perform certain operations on the Live console. However, online live streaming will not be automatically stopped. Therefore, related fees will be generated.

2.7 Will I Be Billed for URL Validation?

No. You can use URL validation for free. However, if the authentication URL is used to play live videos, the downstream traffic or bandwidth fee will be generated. For details, see [Live Pricing Details](#).

2.8 How Is Transcoding Billed?

- If a transcoding template is configured, live streams are transcoded when being pushed, and the transcoding fee is generated. The fee is calculated based on the actual encoding standard, resolution, and duration of transcoding. The duration is rounded off to two decimal places.
- If multiple output specifications are configured, you will pay for multiple outputs. The transcoding duration is the time used to push a stream, not the total time the stream is played. The transcoding is billed once even when multiple users watch a same stream at the same bitrate. For details, see [Live Pricing Details](#).

2.9 How Do I Know Whether My Account Is in Arrears?

You can log in to the [Billing Center](#) to view the available quota on the [Overview](#) page.

To prevent resources from being frozen due to arrears, top up your account and back up your data promptly. It is recommended that you set **Balance Alert** in the Billing Center. Estimate the alert threshold according to your resource usage.

On the **Overview** page, turn on the **Balance Alert** switch to enable the function. Click **Modify** and you can set a desired threshold.

With the Balance Alert function, the system automatically sends an SMS message to you when the total amount of the available credit, cash coupons, and flexi-purchase coupons decreases to the threshold.

After receiving a balance alert, top up your account or disable unnecessary resources promptly to avoid affecting the normal use of cloud resources or stop unnecessary fees from being generated.

2.10 Does the Daily Peak Bandwidth Mean the Upstream Bandwidth or Downstream Bandwidth?

By default, downstream bandwidth is billed:

Daily peak bandwidth = Live video bitrate x Number of concurrent viewers during peak hours

If the ratio between the number of live streams and number of viewers is greater than 1:50, upstream bandwidth is also billed:

Daily peak bandwidth = Live video bitrate x Number of channels

For details, see [Live Pricing Details](#).

2.11 Why Is a Recording Fee Deducted on the First Day of Each Month?

This fee is the monthly fee for live stream recording, which is billed based on the peak number of concurrent recording channels in each month. If two live streams are recorded at the same time or a live stream is recorded in two formats (occupying two recording channels) in this month, \$10.58 USD (\$5.29 USD/channel/month x 2 channels x 1 month) will be deducted on the first day of the next month. You can log in to the [Billing Center](#), choose **Billing** > **Bills**, and click the **Bill Details** tab to view the bill details of live stream recording. Click **Details** in the **Operation** column to view the actual peak number of recording channels in the last month. For details, see [Live Pricing Details](#).

3 Domain Name Management

3.1 How Many Domain Names Can I Add?

By default, you can add up to 64 domain names in your account. If you have additional requirements, [submit a service ticket](#) to reach technical support.

3.2 Are There Any Requirements for the Streaming and Ingest Domain Names?

The following requirements must be met:

- The ingest domain name and streaming domain name must have been licensed by the Ministry of Industry and Information Technology (MIIT).
- A domain name contains a maximum of 42 characters and is case-insensitive.
- The ingest domain name cannot be the same as the streaming domain name. They can be different level-2 domain names under the same level-1 domain.

3.3 What Does CNAME Mean on the Domains Page?

After a domain name is added, the system automatically assigns a CNAME record to the domain name. You need to add this record to your domain's DNS records so that all requests for these domain names will be redirected to CDN nodes.

3.4 What Can I Do If a Message Is Displayed Indicating that the Domain Name Fails to Be Added and the User Is in the Deleted State?

This may be because your account is in arrears. Top up your account by referring to [How Does a Common HUAWEI CLOUD Customer Top Up an Account](#). After the account is topped up, log in to the Live console.

If the fault persists, [submit a service ticket](#) to reach technical support.

3.5 Why Does the Domain Status Change from Normal to Configuring?

We will periodically review your site content. If your site contains pornography-related or gambling-related information, the system will stop domain resolution according to national Internet laws and regulations and the domain status will be changed from **Normal** to **Configuring**. You are advised to correct the content, and then [submit a service ticket](#) to have your content reviewed. Once your application is approved, your domain status will be back to normal.

3.6 A Conflict Occurs When Adding a CNAME Record

It is possible that the CNAME record has been added to DNS. If the values of **Host Record** are the same and the resolution lines are the same, see [Why a Message Indicating Conflict with an Existing Record Set Is Displayed When I Add a Record Set?](#) to seek a solution.

3.7 Can the Ingest and Streaming Domain Names Be Second-level Domain Names?

Yes. For example, if **example.com** is the top-level domain, you can log in to the Live console to add two second-level domains: **player.example.com** as the streaming domain name and **push.example.com** as the ingest domain name.

3.8 Can a Domain Name Be Added to Live in Multiple Regions?

No. A domain name can be added only to one region.

3.9 How Do I Check Whether Acceleration Has Been Enabled for a Live Domain Name?

Open the command line interface that comes with Windows and run the following command:

```
nslookup -qt=cname Accelerated domain name
```

If the CNAME value is displayed in the command output, acceleration has been enabled for the domain name. See [Figure 3-1](#).

Figure 3-1 Command output

```
C:\Users\>nslookup -qt=cname   
Server: anycast-dns.huawei.com  
Address: 10.10.10.10  
  
Non-authoritative answer:  
videoinfo-push.hwcloudlive.com canonical name =   
c.cdnhwc3.com
```

3.10 Will My Domain Names Be Cleared If My Account Is in Arrears?

No. Your domain names will not be cleared. However, if your account is in arrears, you cannot perform operations on the Live console. You can [top up your account](#) to continue using Live.

3.11 How Long Should I Disconnect a Stream for the New Streaming Configuration to Take Effect?

It takes about 3 minutes for the system to detect a disconnected stream. After changing the streaming configuration, you are advised to disconnect a stream for more than 3 minutes. Then, you can push the stream again to check whether the new configuration takes effect.

4 Recording

4.1 Can Live Recordings Be Stored in OBS?

Yes. For details, see [Recording Live Video to OBS](#).

4.2 How Long Is the Maximum Recording Length?

Twelve hours if you choose to record live videos to OBS. If a live video has been recorded for 12 hours, the recording file will be saved, and a new file will be created based on the naming rule for the subsequent recording. For details, see [Recording Live Video to OBS](#).

4.3 Can I Configure a Recording Template for Each Live Stream?

Yes. When [configuring a recording template](#), configure a unique stream name for the template. When a live stream is pushed, only the recording template with the same **AppName** and **StreamName** as those in the ingest URL of the live stream is used.

4.4 Are Transcoded Streams Recorded During Live Recording?

Live records input live streams in M3U8 (with TS segment files), MP4, and FLV formats, but does not record transcoded live streams. For details, see [Configuring a Recording Template](#).

4.5 How Long Is the TS Segment Length Supported by Live?

30 seconds

4.6 How Many Recordings Are Created for a Live Recording Task?

When configuring a recording template, you need to set the recording length. During live streaming, recording files are generated based on the length of a live stream and recording length.

- If the length of a live stream is shorter than the recording length and the stream is not interrupted, only one recording file is created.
- If the length of a live stream is shorter than the recording length but the stream is interrupted, recording files are created as follows:
 - If **Maximum Stream Pause Length** is set to **Do not generate a new file after a stream is paused.** or the maximum stream pause length has not been reached, only one recording file is created.
 - If **Maximum Stream Pause Length** is set to **Generate a new file after a stream is paused.**, a new recording file is created upon each pause.
- If the length of a live stream is longer than the recording length, a new recording file is created every time when the recording length arrives.

4.7 Why Still Are Recording Files Created Even Though I Have Already Deleted the Recording Template?

This is because you deleted the recording template during stream pushing. Live recording cannot be stopped or started on demand. Recording is stopped only when stream pushing is complete or an exception occurs.

4.8 Why Are There Two Recording Files When A Live Stream Is Not Interrupted?

It is possible that network jitter during recording causes the reconnection between CDN and Live's origin server. As a result, a new recording file is created.

4.9 How Do I Obtain the URL of Recordings?

You can obtain the URL of recordings on the OBS console. If you have configured a recording callback before recording, you can obtain the URL of recordings through the callback message. For details, see [Managing Recordings](#).

4.10 Can I Call an API to Record a Live Video?

You can call a Live API for [creating a recording template](#) to record a live video to OBS. When a live stream is pushed, recording starts based on the configured template and recording files are stored in OBS.

4.11 Why Are No Recording Files Created After I Configured a Recording to OBS Template?

It is possible that:

- Live has not been authorized to access OBS. Log in to the Live console. In the navigation pane, choose **OBS Authorization** to grant the permissions for accessing an OBS bucket to [Live](#).

NOTE

Only the account administrator can authorize cloud resources. [IAM users](#) cannot grant authorizations.

- The codec is neither H.264 nor H.265. Live supports the two codecs only.

4.12 Can I Enter Wildcard Characters in Stream Name When I Configure Recording to OBS?

You can set **Stream Name** to a wildcard character (*) when configuring a recording template, so the template will be used for all live streams under the AppName. However, regular expressions, for example, `live_0*`, are not supported.

4.13 How Do I Delete a Recording?

You can delete the recording from the OBS bucket that stores the recording. For details, see [Deleting a File or Folder](#).

4.14 Can Live Stream Recording Be Started and Stopped at Any Time?

On-demand recording is supported. You can start or stop live video recording as required in either of the following ways:

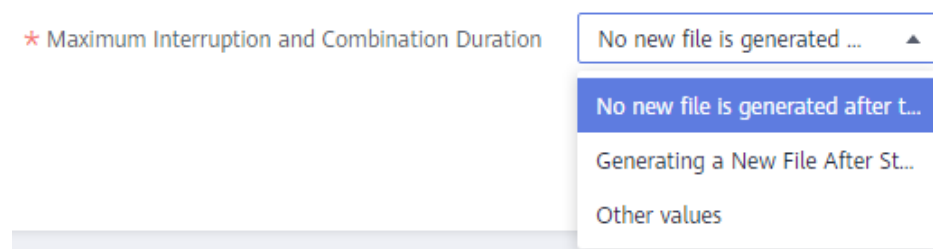
- Performing operations on the console
 - a. Log in to the Live console.
 - b. In the navigation pane, choose **Domains**.
 - c. Click **Settings** in the row containing the target ingest domain name.
 - d. In the navigation pane, choose **Template Settings > Recording (New Version)**.
 - e. Click **Create Recording Template** and set the recording type to **Manual**. For details about the parameters in the recording template, see [Configuring a Recording Template](#).
 - f. You can call the API for [submitting a recording command](#) to start or stop recording live streams.
- Calling an API

- a. Set the recording type parameter **record_type** to **COMMAND_RECORD** by calling the API for [creating a recording template](#).
- b. Set the **action** parameter to start or stop recording live streams by calling the API for [submitting a recording command](#).

4.15 Why Didn't I Receive a RECORD_FILE_COMPLETE Callback?

The generation of the **RECORD_FILE_COMPLETE** callback is determined by the value of **Maximum Stream Pause Length** in the [recording template](#).

Figure 4-1 Maximum Stream Pause Length configuration



- **No new file is generated after traffic is interrupted.:** When the recording duration reaches the configured recording length, a recording file is generated and the recording callback event is triggered.
- **Generating a New File After Stream Interruption:** Every time a stream is paused, a new recording file is generated and the recording callback event is triggered.
- **Other values:** Every time the stream pause duration reaches the specified value, a new recording file is generated and the recording callback event is triggered. If the stream pause length does not reach the specified value and the recording duration reaches the configured recording length, a recording file is generated and the recording callback event is triggered.

If you set **Maximum Stream Pause Length** to **No new file is generated after traffic is interrupted.** or **Other values**, the **RECORD_FILE_COMPLETE** callback will not be generated when the recording duration does not reach the specified recording length or the stream pause length does not exceed the specified duration.

4.16 Do StreamNames Support Regular Expressions?

No.

4.17 Why Can't I Download Videos Using the download_url Generated During Recording?

The possible cause is that the OBS bucket is a private one and cannot be accessed by anonymous users. You can find the file in the OBS bucket and grant anonymous users the access permission.

4.18 Why Do the Modified Recording Rule and File Storage Path Not Take Effect?

During recording rule modification, if **Maximum Stream Pause Length** is set to **Do not generate a new file when a stream is paused**, that is, streams with the same name are pushed for multiple times after stream disconnection, the recordings are stored in the previously configured file path. As a result, the configuration of a stream remains unchanged after the stream is resumed even if the configuration has been modified. To make the new recording rule take effect, you need to change the stream name for stream pushing.

4.19 Can I Record and Store the Live Streams That Are Disconnected for Multiple Times in One File?

You can set the value of **Maximum Stream Pause Length** in the recording template to record and store the live streams that are disconnected for multiple times in one file. If the disconnection duration of a stream is within the specified time range, the stream is combined with the recorded files into one file. For details, see [Configuring a Recording Template](#).

5 Transcoding

5.1 How Do I Play a Transcoded Live Video?

[Create a transcoding template](#) on the Live console or call the API for [creating a transcoding template](#). [Assemble a streaming URL](#) and play the video via this URL.

5.2 Why Is the Live Video Resolution During Playback Inconsistent with That Configured In the Transcoding Template?

Possible causes:

- The transcoded streaming URL is not used for playback. You can obtain the transcoded streaming URL by following the instructions in [Assembling a Streaming URL](#).
- Huawei Cloud Live does not support upsampling transcoding. If the resolution set in the transcoding template is higher than the original resolution, the transcoded streaming URL can be used for playback, but the resolution of the played video is still the original resolution.

5.3 How Does the System Define the Effective Template If I Configure Multiple Transcoding Templates?

You can configure multiple [transcoding templates](#) for an ingest domain name, as long as the values of **AppName** in the transcoding templates are different. Only the transcoding template in which **AppName** is the same as that in the ingest URL takes effect. If the transcoding configuration is modified during livestreaming, the transcoding configuration will take effect only for live streams pushed after the modification. Live cannot transcode a video from a low resolution to a high resolution. If the resolution configured in a transcoding template is higher than

the original stream resolution, the original resolution is used for output. If the resolutions between the transcoding templates are different, you can add the template ID after **StreamName** in the streaming URL to play the live video with the corresponding resolution. For details, see [Assembling a Streaming URL](#).

5.4 How Is a Video Transcoded When Only the Width or Height Is Configured?

If only the width or height is configured, the other parameter will be automatically adaptive.

- If the width is configured and the height is set to **0**, the height is adaptive. That is, the video is transcoded based on the height and scaled in proportion to the width. For example, if the width is set to **720** and the height is set to **0** for transcoding, and the resolution is 1280 x 1920, the resolution after transcoding is 480 x 720. If the resolution is 1920 x 1280, the resolution after transcoding is 720 x 480.
- If the height is configured and the width is set to **0**, the width is adaptive. That is, the video is transcoded based on the width and scaled in proportion to the height. For example, if the height is set to **720** and the width is set to **0** for transcoding, and the resolution is 1280 x 1920, the resolution after transcoding is 720 x 1080. If the resolution is 1920 x 1280, the resolution after transcoding is 1080 x 720.

5.5 Why Is the BANDWIDTH Value in a Level-1 M3U8 File for Pulling a Transcoded Stream Not the Bitrate of the Transcoded Stream?

The possible cause is that the actual bitrate and encoding format of the transcoded stream have not been obtained when the M3U8 file is returned. In this case, Live returns the default value.

5.6 How Do I Configure Definitions of Video Streams?

The transcoding function of Live allows you to convert pushed live streams into video streams of different resolutions and bitrates, and provides you with system and custom transcoding templates. You can [create a transcoding template](#) as required.

6 Snapshot Capturing

6.1 How Does the System Define the Effective Template If I Configure Multiple Snapshot Templates?

You can configure multiple [snapshot templates](#) for an ingest domain name, as long as the values of **AppName** in snapshot templates are different. In this case, the snapshot template in which **AppName** is the same as that in the ingest URL takes effect.

6.2 Which Formats Can I Save Snapshots as?

You can save snapshots as JPG files.

6.3 How Do I Obtain the Snapshots?

If you have configured a [snapshot template](#), you can click the output path on the Live console to download snapshot files from the OBS console or directly go to the OBS console to download these files. If you have set a callback URL when configuring a snapshot template, you can find the download URL in the received message.

- Obtaining Snapshot Files Through the Live Console
 - a. Log in to the Live console.
 - b. In the navigation pane, choose **Domains**.
 - c. Click **Settings** in the row containing the target ingest domain name.
 - d. In the navigation pane, choose **Template Settings > Snapshot Capturing**.
 - e. Click the output path in the **Storage Location** column to go to the OBS bucket and download snapshot files.

Figure 6-1 Viewing snapshot details

AppName	Storage Location	Screenshot Frequency (s)	Storage Mode	Operation
live	Bucket Name: cs-backup-1577519623205 Output Path: /	30	Coverage screenshot	modifies Delete

- Obtaining Snapshot Files Through the OBS Console
 - a. In the navigation pane of the OBS console, choose **Object Storage**.
 - b. In the bucket list, click the bucket that stores snapshot files.
 - c. In the navigation pane, choose **Objects**.
 - d. Click **Download** on the right of the target snapshot file.
- Obtaining Snapshot Files Through a Callback Message
For details about the fields in a callback message, see [Message Body](#).

```
{
  "domain": "play.example.com",
  "app": "live",
  "stream_name": "test001",
  "snapshot_url": "https://xxx.obs.cn-north-4.myhuaweicloud.com:443...",
  "width": 720,
  "height": 1280,
  "obs_addr": {
    "bucket": "xxx",
    "location": "cn-north-4",
    "object": "xxx.jpg"
  }
}
```

6.4 How Are Snapshots Stored in OBS?

You can choose **Full storage** or **Instant storage** when configuring a [snapshot template](#).

- **Instant storage**: Only the latest snapshot is saved. A snapshot file is named as follows:
`{domain}/{app_name}/{stream_name}.jpg`
- **Full storage**: All snapshot files are stored. A snapshot file is named as follows:
`{domain}/{app_name}/{stream_name}/{UTCtimestamp}.jpg`

6.5 Can I Customize the Name of a Live Snapshot File?

No. The name is generated based on the preset format and cannot be customized.

- If the storage method is **Instant storage**, a snapshot file is named as follows:
`{domain}/{app_name}/{stream_name}.jpg`
- If the storage method is **Full storage**, a snapshot file is named as follows:
`{domain}/{app_name}/{stream_name}/{UTCtimestamp}.jpg`

7 Security

7.1 How Do I Protect Live Videos?

Live provides multiple access control functions, such as streaming authentication, playback authentication, and ACLs to protect your live streams against infringement. For details about authentication, see [Protecting Live Resources](#).

7.2 Are There Any Requirements for the Key and Timeout Interval in URL Validation?

A key must contain 32 characters. It consists of letters and digits, for example, GCTbw44s6MPLh4GqgDpnfuFHgy25Enly.

The timeout interval ranges from 1 minute to 30 days. You are advised to set this to the length of a live stream. If the timeout interval expires, you need to re-configure the key and create new ingest and streaming URLs. For details, see [Stream Authentication](#) and [Playback Authentication](#).

7.3 Why Does Referer Validation Not Take Effect?

Referer validation allows you to control access sources based on the referer field carried in an HTTP request. Therefore, this setting takes effect only when the HTTP-FLV protocol is used. If RTMP or HLS is used, referer validation does not take effect.

7.4 Do I Need to Use the Same Key for Streaming Authentication and Playback Authentication?

No. You can configure different URL validation settings for ingest and streaming domain names on the Live console to obtain the authentication keys. The key value can be customized or automatically generated. The method of configuring URL validation for ingest domain names is the same as that for streaming domain names. For details, see [URL Validation](#).

7.5 How Do I Set the Validity Period of a Signed Ingest URL to a Longer Period?

When **configuring URL validation**, set **Type** to **B** and set **Duration** to a longer period, for example, 0xf3854988 (2099.06.20 08:30:00).

7.6 Why Does HTTPS Access Fail When an HTTPS Certificate Has Been Configured for My Domain Name?

Check whether the certificate matches your domain name.

For example, a single-domain certificate **push.yourdomain.com** can match only the domain name **push.yourdomain.com**. A wildcard-domain certificate ***.yourdomain.com** can match subdomain names **www.yourdomain.com** and **push.yourdomain.com**.

7.7 Why Are Messages Indicating Insecurity Displayed During Video Playback After an HTTPS Certificate Is Configured?

The possible causes are as follows:

- If your SSL certificate has expired, a message indicating insecurity will be displayed during access. Check whether the SSL certificate has expired. If yes, purchase and use a new certificate.
- The accessed domain name is not the same as the one associated with the certificate. For example, if you access **https://live.huaweicloud.com/** but your certificate is associated with **huaweicloud.com**, the access will fail. You are advised to purchase an SSL certificate and associate it with the domain name you access.

For example, if your domain names are at the same level, such as **live.huaweicloud.com**, **test.huaweicloud.com** and **example.huaweicloud.com**, and are included in ***.huaweicloud.com**, you can purchase a wildcard-domain certificate and associate it with ***.huaweicloud.com**.

- Your certificate is a self-signed SSL certificate, which is not trusted by the browser or player and results in continuous security warnings. You are advised to use a secure SSL certificate issued by a trusted CA.

8 Streams Pushing

8.1 Which Ingest Protocols Are Supported?

RTMP only

8.2 How Do I Live Stream?

Choose a way to stream:

- PC or laptop, using a camera or desktop
Use third-party software to collect video recorded in the camera or desktop images and push the video or desktop to the RTMP ingest URL. Third-party streaming software includes OBS (recommended), FMLE, and XSplit.
- Android/iOS, using the mobile camera
Use third-party software or SDKs to collect video recorded in the camera and push the stream to the RTMP ingest URL.

8.3 How Do I Get the Ingest URL?

Assemble an ingest URL as follows:

Original ingest URL: `rtmp://Ingest domain name/AppName/StreamName`

The default value of **AppName** is **live**. You can also customize the value of **StreamName**, for example, huawei1. For details, see [Original Ingest URL](#).

If you have configured URL validation, you need to use the ingest URL to push streams. For details about how to generate an authentication URL, see [Stream Authentication](#).

- The authentication URL for authentication method A is: Original URL?auth_key={timestamp}-{rand}-{uid}-{md5hash}.
- The authentication URL for authentication method B is: Original URL?txSecret=md5(Key + StreamName + txTime)&txTime=hex(timestamp).
- The authentication URL for authentication method C is: Original URL?auth_info=Encrypted string.EncodedIV

8.4 Are There Any Requirements for StreamName in an Ingest URL?

The user-defined *{StreamName}* can be huawei1.

8.5 How Do I Obtain a StreamName?

A **StreamName** is defined by users during stream push. You can query a **StreamName** only when streams have been pushed or are being pushed to Live using the domain name of the **StreamName**.

- To query the name of a historical stream, log in to the Live console. In the navigation pane, choose **Stream Analytics** > **Pushes**. On the **Pushes** page, select the target domain name, enter the target app name, and click the refresh button. Then you can view the name of the target stream in the historical stream list.
- To query the name of an ongoing stream, log in to the Live console. In the navigation pane, choose **Streaming** > **Streams**. On the **Ongoing** tab of the **Streams** page, select the domain name that is pushing streams. Then you can view the name of the target stream in the ongoing stream list.

8.6 How Do I Set the Resolution and Bitrate?

You are advised to set the resolution and bitrate by referring to [Table 8-1](#).

Table 8-1 Live stream bitrates

Image Quality	Video Resolution	Bitrate Using H.264 Codec	Bitrate Using H.265 Codec (30% Lower Than H.264)
LD (360p)	640 x 360	400 kbit/s	280 kbit/s
SD (480p)	854 x 480	600 kbit/s	420 kbit/s
HD (720p)	1280 x 720	1000 kbit/s	700 kbit/s
UHD (1080p)	1920 x 1080	2000 kbit/s	1400 kbit/s
2K	2560 x 1440	7000 kbit/s	4900 kbit/s
4K	3840 x 2160	8000 kbit/s	5600 kbit/s

8.7 What Do I Do If Stream Pushing Failed?

This may occur because the network of the streaming device is inaccessible, the domain status is abnormal, the CNAME does not take effect, the ingest URL is incorrect or has been used, or the live stream has been disabled. Follow the instructions in [Failed to Push a Live Stream](#) to rectify the fault.

8.8 How Many Live Streams Can I Push Simultaneously?

There is no limit on the number of concurrent live streams. However, if you will have a large number of concurrent live streams, you are advised to [submit a service ticket](#).

8.9 How Long Is the Latency If a Live Video Resolution is 1080p?

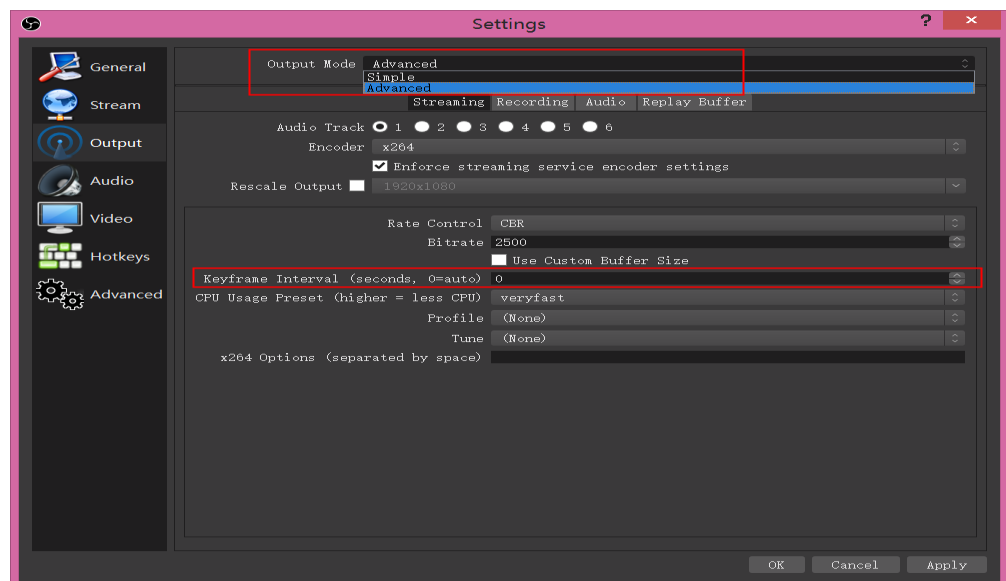
The stream latency is not related to the image quality. It depends on the used protocol and network conditions. Generally, the latency for RTMP and FLV streaming is about 2 to 3 seconds. Using HTTP-FLV as the streaming protocol will have a lower latency. However, HLS is compatible with browsers and supports cross-device access. Therefore, select a streaming protocol that best suits your needs. .

8.10 What Can I Do If I Use OBS to Push Streams but the Latency Is Too High?

Adjust the stream latency. The acceptable latency of HLS streaming ranges from 10 seconds to 35 seconds. If the latency exceeds 35 seconds, perform the following operations to check whether the value of **Keyframe Interval (seconds, 0=auto)** is appropriate. The recommended interval is 2 to 3 seconds.

1. Select **Advanced** for **Output Mode**.
2. Set **Keyframe Interval (seconds, 0=auto)** to 2.

Figure 8-1 OBS latency setting



8.11 Why Does Open Broadcaster Software Fail to Push Streams?

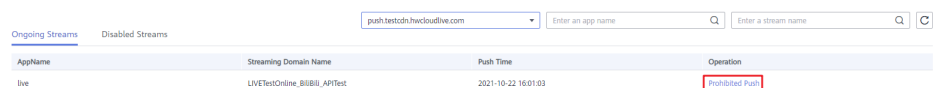
Check whether the ingest URL is correct or replace the value of **URL** with a complete ingest URL in Open Broadcaster Software (OBS). If the fault persists, locate the cause of the stream pushing failure by referring to [Failed to Push a Live Stream](#).

8.12 How Do I Disable a Live Stream?

Only a live stream that is being pushed can be disabled. After a live stream is disabled, the ingest URL cannot be used to push live streams. You can perform the following operations to disable a live stream:

- Disable a live stream on the Live console.
 - a. Log in to the Live console.
 - b. In the navigation pane, choose **Streaming > Streams**.
 - c. Locate the domain name for which stream push is to be disabled.
 - d. Click **Prohibited Push** in the **Operation** column.

Figure 8-2 Disabling a live stream

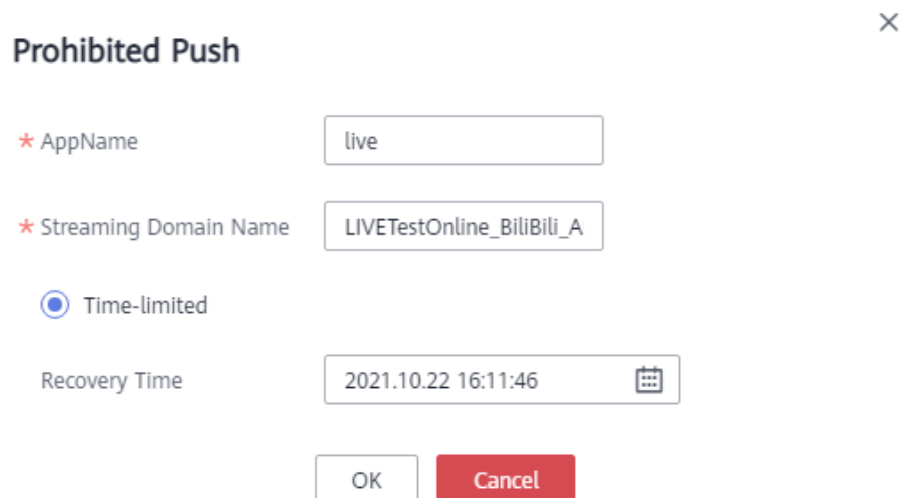


AppName	Streaming Domain Name	Push Time	Operation
live	LIVETestOnline_BiliBili_APITest	2021-10-22 16:01:03	Prohibited Push

- e. In the displayed **Prohibited Push** dialog box, set the time for disabling stream push.

Then you can view the disabled stream on the **Disabled Streams** tab page.

Figure 8-3 Disable Stream dialog box



Prohibited Push ✕

* AppName

* Streaming Domain Name

Time-limited

Recovery Time

Time-limited: The live stream cannot be pushed until the time indicated by **Recovery Time** arrives. Live streams can be disabled for up to 90 days.

- Call an API to disable a live stream.

Call the API for [Disabling a Push Stream](#), and set the request parameters **domain**, **app_name**, **stream_name**, and **resume_time** to disable a specific live stream.

```
POST /v1/{project_id}/stream/blocks
{
  "domain": "play.example.com",
  "app_name": "live",
  "stream_name": "huawei",
  "resume_time": "2018-05-19T21:10:15Z"
}
```

8.13 How Do I View Disabled Live Streams?

You can view disabled live streams using either of the following methods:

- View disabled live streams on the Live console.

Log in to the Live console. In the navigation pane, choose **Streaming > Streams**. Click the **Disabled** tab to view details about disabled live streams.

- Call an API to query disabled live streams.

Call the API for [Querying Disabled Streams](#) and set the request parameters **domain**, **app_name**, and **stream_name** to view details about disabled live streams.

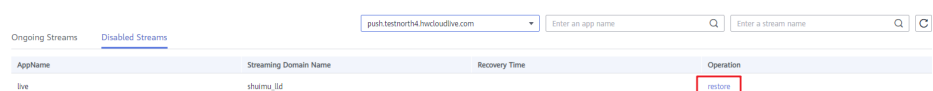
```
GET /v1/{project_id}/stream/blocks?domain=play.example.com&app_name=live&stream_name=live
```

8.14 How Do I Resume a Disabled Live Stream?

You can resume a live stream using either of the following methods:

- Resume a live stream on the Live console.
 - a. Log in to the Live console.
 - b. In the navigation pane, choose **Streaming > Streams**.
 - c. Select the domain name for which stream push needs to be resumed from the drop-down list.
 - d. Click the **Disabled Streams** tab.
 - e. Click **restore** in the **Operation** column.

Figure 8-4 Resuming a live stream



- Call an API to resume a live stream.

Call the API for [Resuming a Push Stream](#) and set the **domain**, **app_name**, and **stream_name** parameters to resume a specific live stream.

```
DELETE /v1/{project_id}/stream/blocks?
domain=play.example.com&app_name=live&stream_name=live
```

8.15 What Are the Differences Between Stream Disabled and Stream Interrupted?

- Stream interrupted is usually due to network faults. As a result, the audience cannot watch the live stream. After a live stream is interrupted, you are advised to push the stream again.
- Stream disabled is done by yourself. Once being disabled, the stream is interrupted and the audience cannot watch the live stream. The streamer cannot initiate stream pushing once a stream is being disabled, except you set the time of the stream being resumed. You can log in to the Live console. In the navigation pane, choose **Streaming > Streams**. Click the **Disabled** tab to view disabled live streams and click **Resume** in the **Operation** column of the target stream to set the time.

8.16 Can an Ingest URL Push Multiple Streams at the Same Time?

An ingest URL can have only one streaming device at a time. Therefore, a streaming device cannot use the same URL to push multiple streams. You can log in to the [Live console](#) and choose **Streams > Ongoing** to check whether the stream is being pushed.

9 Live Streaming

9.1 Which Streaming Protocols Are Supported?

HUAWEI CLOUD Live supports three streaming protocols: RTMP, HTTP-FLV, and HLS.

- RTMP can be used to push and play live streams. It splits large video frames and audio frames, encrypts them, and transmits them as small data packets. However, packet disassembly and assembly are complex. Therefore, unexpected problems may occur if there are a large number of concurrent requests. RTMP based on Flash does not support iOS browsers, but its real-time performance is better than HLS.
- HTTP-FLV works by adding some tag header information to large video frames and audio and video headers. Due to its simple working mode, HTTP-FLV is stable when there are a large number of concurrent requests and the latency is low. It works well on mobile apps, but may not well enough on mobile browsers.
- HLS works by breaking the overall stream into a sequence of small HTTP-based segments (5s to 10s) and uses the M3U8 index table to manage these segments. The videos downloaded by the client are complete segments. Therefore, videos play smoothly, but a high latency is introduced, usually about 10s to 30s. Compared with FLV, HLS is better compatible with browsers and supports cross-device sharing. Therefore, HLS is commonly used for URL sharing in social software.

Table 9-1 Comparison between RTMP, HTTP-FLV, and HLS

Streaming Protocol	Protocol	Principle	Latency	Advantage and Disadvantage
RTMP	Long-lived TCP connections	The data received at each moment is sent immediately.	Related to the GOP on the streaming device end: <ul style="list-style-type: none"> If the keyframe interval is 1s, the stream latency is 1s to 3s. If the keyframe interval is 2s, the stream latency is 2s to 4s. 	<ul style="list-style-type: none"> Advantage: low latency Disadvantage: unstable in high concurrency scenarios. It cannot be used on the iOS platform. A non-standard TCP port is used.
HTTP-FLV	Long-lived TCP connections	A flag is added to the data header, and the data packet is played after being decapsulated using HTML5.		<ul style="list-style-type: none"> Advantage: low latency Disadvantage: The SDK needs to be integrated for playback.
HLS	Non-persistent HTTP connections	Collect data of a period of time to generate TS segment files and update the M3U8 file.	10s to 30s	<ul style="list-style-type: none"> Advantage: cross-platform sharing is supported. Disadvantage: high latency

9.2 How Do I Get the Streaming URL?

The streaming URL varies depending on the streaming protocol:

- RTMP format: `rtmp://Streaming domain name/AppName/StreamName`
- FLV format: `http://Streaming domain name/AppName/StreamName.flv`
- M3U8 format: `http://Streaming domain name/AppName/StreamName.m3u8`

If a transcoding template is configured and the transcoded live stream needs to be played, add **_transcoding template ID** to the end of **StreamName**.

If URL validation is configured, you need to create an authentication URL for playback.

For details about how to create a streaming URL, see [Assembling a Streaming URL](#).

9.3 Are There Any Requirements for StreamName in a Streaming URL?

StreamName indicates a custom live stream name. For details, see [Assembling a Streaming URL](#).

9.4 What Can I Do If I Fail to Play a Live Video?

This may be because the network on the player side is inaccessible, the streaming URL is incorrect, and the CNAME record for the streaming domain does not take effect, and the streaming domain is not associated with the ingest domain. Follow the instructions in [Failed to Play a Live Video](#) to rectify the fault.

9.5 Is There Any Limit on the Daily Downstream Traffic?

No. However, Live charges you for downstream traffic. Before using Live, ensure that your account balance is sufficient.

9.6 Is There Any Limit on the Number of Concurrent Viewers?

No. You can have as many viewers as you want.

9.7 Can I Pull Live Streams from Other Platforms to Huawei Cloud Live?

Yes. You can [configure origin pull](#) to implement this function. However, you need to use different domain names for stream push and pull.

9.8 Why Do Black Bars Appear on the Video?

It is possible that the aspect ratio of the player does not match that of the video. If the video resolution is 1280 x 720, the player resolution can be set to 640 x 360 or 1280 x 720, as long as the aspect ratio is 16:9.

9.9 Why Does Playback Using the HTTPS Address Fail?

No HTTPS certificate is configured for the streaming domain name. Configure an HTTPS certificate by referring to [HTTPS Secure Acceleration](#) and try again.

10 Callback

10.1 Are There Requirements for the Format of a Callback URL?

A callback URL cannot contain message headers and parameters.

10.2 Can the Recording Callback URL Be Modified?

Yes. After a callback URL is changed, the callback message is sent to the new callback URL in real time.

10.3 Can I Receive Only Streaming Notifications of Input Streams?

By default, streaming notifications of both input and transcoded streams are sent to your servers. [Submit a service ticket](#) to disable streaming notifications of transcoded streams so that you will receive only streaming notifications of input streams.

11 API Usage

11.1 What Is the Token for Calling Live APIs?

A token is an access credential issued to a user to bear its identity and permissions. Live calls an IAM API to obtain a token and then use the token to authenticate the calling of Live APIs. For details about how to obtain a token, see [Calling APIs](#).

11.2 Why Does the System Display a Message Indicating that the API Does Not Exist When I Call an API?

It is possible that the token obtained is for a global service because **scope** was set to **domain**. Live is a project-level service, which is deployed in specific physical regions. Set **scope** to **project**. An example request for obtaining a user token is as follows:

Note: Set **username**, **domainname** (name of the account to which the user belongs, which can be obtained from the **My Credentials** page), **password**, and **projectname**.

```
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"
  }
}
}
```

11.3 Why Is "projectId in token is nil" Returned When I Call an API?

The possible cause is that the project used for [obtaining a user token](#) does not match the project used for calling a Live API. Live is a project-level service, which is deployed in specific physical regions.

For example, if the endpoint for obtaining the token is **CN North-Beijing4**, the token takes effect only in this region and can be used to authenticate the calling of Live APIs in the **CN North-Beijing4** region only. In addition, the value of **project_id** must be **cn-north-4**. For details about how to obtain a project ID, see [Obtaining a Project ID](#).

Project ID	Project Name	Region
	cn-north-1	CN North-Beijing1
	cn-north-4	CN North-Beijing4

11.4 Why Is "The token must be updated" Returned When I Call an API?

It is possible that:

- The token you obtained has expired. The validity period of a token is 24 hours.
- Your account was in arrears. After your account is topped up, the token is not obtained again.

If this message is displayed, you need to obtain a new token from the IAM service. For details, see [Obtaining a User Token](#).

11.5 Why Is a Message Stating "APIG.0301" Displayed When a VOD API Is Called?

It is possible that:

- "**error_msg**":"Incorrect IAM authentication information: decrypt token fail","**error_code**":"APIG.0301" indicates that the token fails to be decrypted. Check whether the token is complete, whether it has expired, whether the region where the token is obtained and the region where the service is invoked are different, and whether the account is restricted due to arrears. For details, see [Token-based Authentication](#).

- **"error_msg":"Incorrect IAM authentication information: verify aksk signature fail","error_code":"APIG.0301"** indicates that the AK/SK-based authentication fails. Check whether the AK/SK pair is correct and whether the account is restricted due to arrears. For details, see [AK/SK-based Authentication](#).

11.6 How Can I Query the Peak Number of Concurrent Recording Channels in a Month?

You can call the API for [Querying Recording Channels](#).

11.7 Why Do I Receive Only the Recording Completion Callback But Not the Recording Start Callback After Configuring Recording Callbacks?

The value of the **notify_event_subscription** parameter is not set when you call the API for [Creating a Recording Callback](#). As a result, the default value **RECORD_FILE_COMPLETE** of this parameter is used and only the recording completion callback is sent. To receive the recording start callback, call the API for [Modifying a Recording Callback](#) to modify the recording callback configuration, and set the **notify_event_subscription** parameter to **RECORD_NEW_FILE_START**.

12 Statistics Analysis

12.1 Which Data Statistics Can Be Viewed on the Live Console?

You can view the following statistics on the Live console:

- **Usage statistics:** You can view the downstream bandwidth/traffic statistics of all streaming domain names, and the total transcoding duration, maximum number of concurrent recording channels, and number of snapshots of all ingest domain names.
- **Service monitoring:** You can view the downstream bandwidth/traffic, playback profile, status codes returned in the request response of a streaming domain name, and the number of online viewers of the corresponding livestream. You can also view monitoring information such as the upstream bandwidth/traffic, total number of stream push channels, and stream push frame rate/bitrate of an ingest domain name.

12.2 Why Is the Number of Total Viewers Less Than the Number of Peak Viewers in Stream Playback Profiles?

The number of total viewers is calculated by IP address, and the number of peak viewers varies depending on the protocol.

- If the playback protocol is RTMP or FLV, the number of concurrent connections is calculated based on the number of sessions and is the same as that of online viewers.
- If the playback protocol is HLS, the number of concurrent connections is not necessarily the same as that of online viewers.

As a result, the number of total viewers may not be the same as that of peak viewers.

13 Third-Party Tools

13.1 OBS User Guide

Concepts

OBS

Open Broadcaster Software (OBS) is free and open source software for video recording and livestreaming.

Billing mode

OBS and its source code are free of charge.

How to Obtain

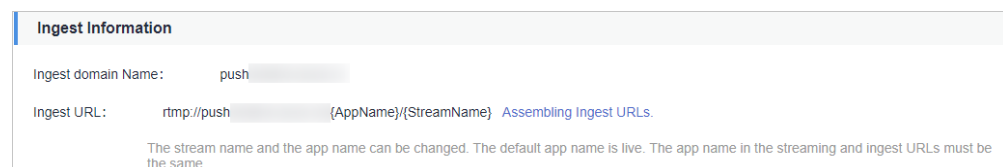
Download a version suitable for your OS from the OBS official website. Then install the software as prompted.

Operation Guide

Step 1 Obtain an ingest URL.

Click **Manage** in the domain name list to obtain an ingest URL, as shown in [Figure 13-1](#).

Figure 13-1 Ingest URL



NOTE

If the ingest domain name is not configured, you can only manually generate an ingest URL by referring to [Assembling an Ingest URL](#).

Step 2 Install OBS according to the installation wizard.

Step 3 Configure key parameters of OBS.

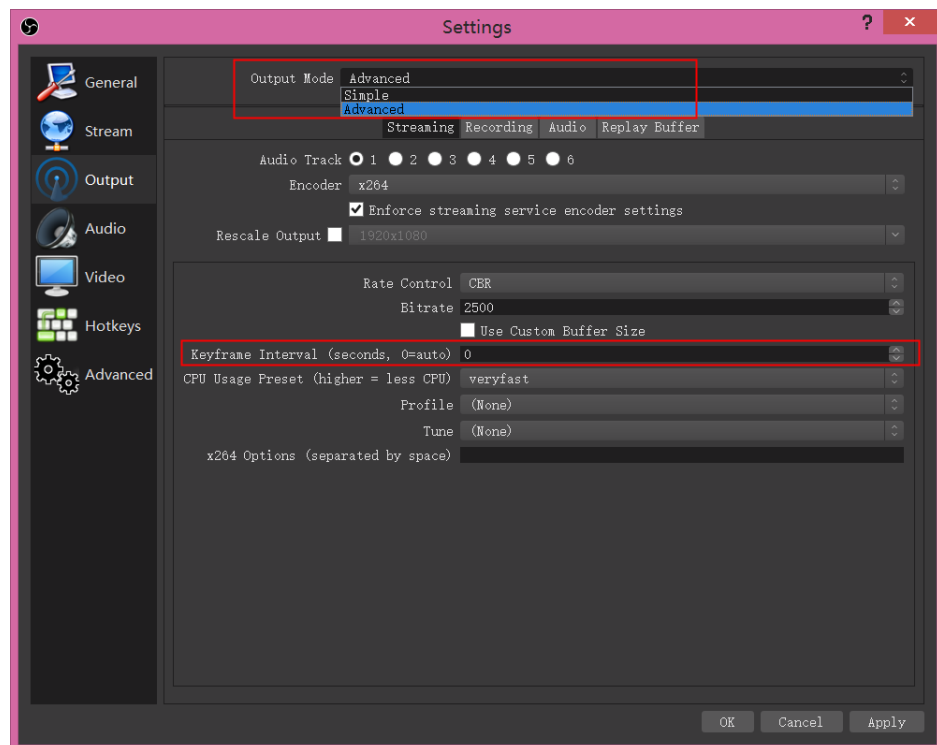
1. Click **Settings** in the lower right corner, as shown in [Figure 13-2](#).

Figure 13-2 Configuring OBS parameters



2. In the navigation pane on the left, choose **Output**. Set **Output Mode** to **Advanced** and **Keyframe Interval** to **2**, as shown in [Figure 13-3](#).

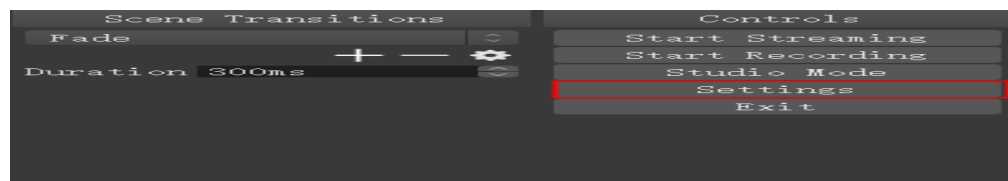
Figure 13-3 Configuring the keyframe interval



Step 4 Enter the ingest URL.

1. Click **Settings** in the lower right corner, as shown in [Figure 13-4](#).

Figure 13-4 Configuring OBS parameters



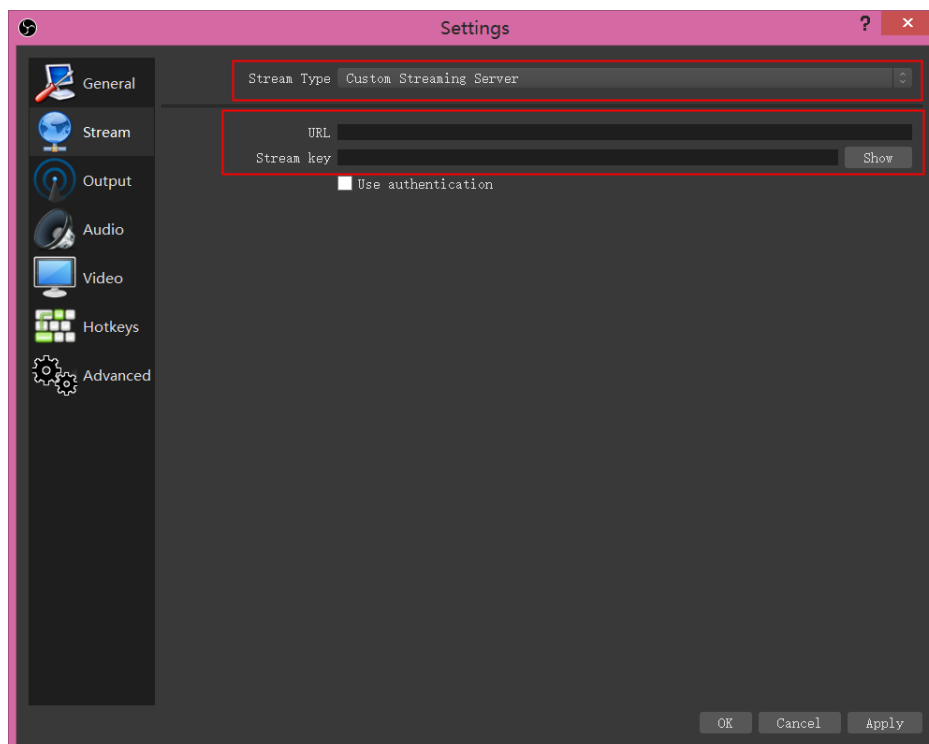
2. Select a stream and enter the ingest URL, as shown in [Figure 13-5](#).

NOTICE

The ingest URL consists of two parts: **URL** and **Stream Key**. For details, see [Assembling an Ingest URL](#).

- Enter the part from the beginning of the ingest URL to the **AppName** for **URL**.
- Enter the part from the **StreamName** to the end of the ingest URL for **Stream Key**.

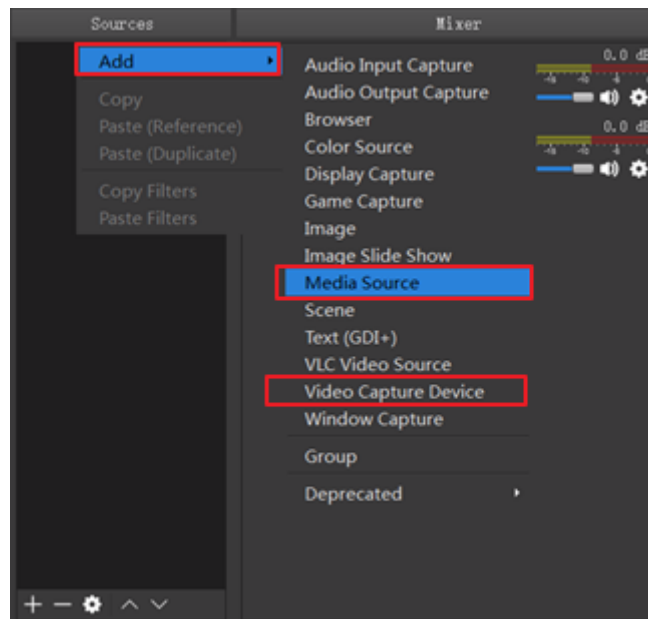
Figure 13-5 Configuring an ingest URL



3. Click **OK**.

Step 5 Start to push streams.

1. Right-click in the **Sources** area and select a stream source, as shown in [Figure 13-6](#).

Figure 13-6 Selecting a stream source

- **Media Source** indicates a local media file.
 - **Video Capture Device** indicates a camera.
2. Click **Start Streaming** to push streams.

----End

13.2 VLC User Guide

Concepts

VLC media player

VLC media player is a free and open source cross-platform multimedia player and framework that plays most multimedia files as well as DVDs, audio CDs, VCDs, and various streaming protocols.

Source code

You can download the source code of VLC media player from the VLC media player official website.

Supported platforms

Windows, Linux, macOS X, Unix, iOS, and Android, etc.

Billing mode

- Individuals are not charged as VLC and its source code are free.
- For enterprises, see the agreement on the VLC media player official website.

How to Obtain

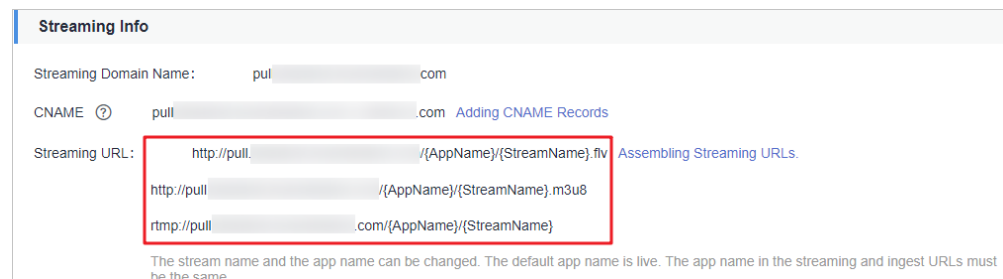
Obtain a proper version from the VLC media player official website. VLC 3.0.12 or later is recommended. Then install the software as prompted.

Operation Guide

Step 1 Obtain a streaming domain name.

Click **Manage** in the domain name list to obtain a streaming domain name, as shown in [Figure 13-7](#).

Figure 13-7 Streaming domain name

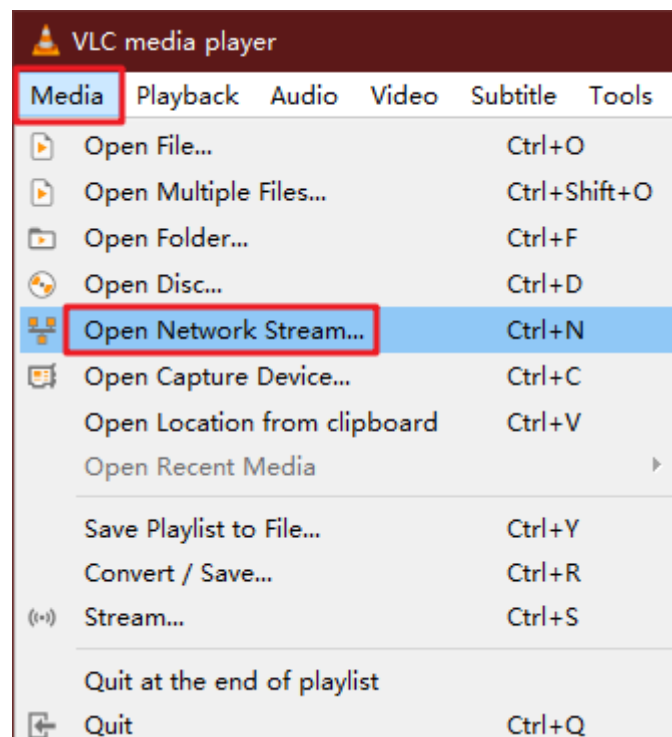


Step 2 Install VLC media player according to the installation wizard.

Step 3 Start VLC media player.

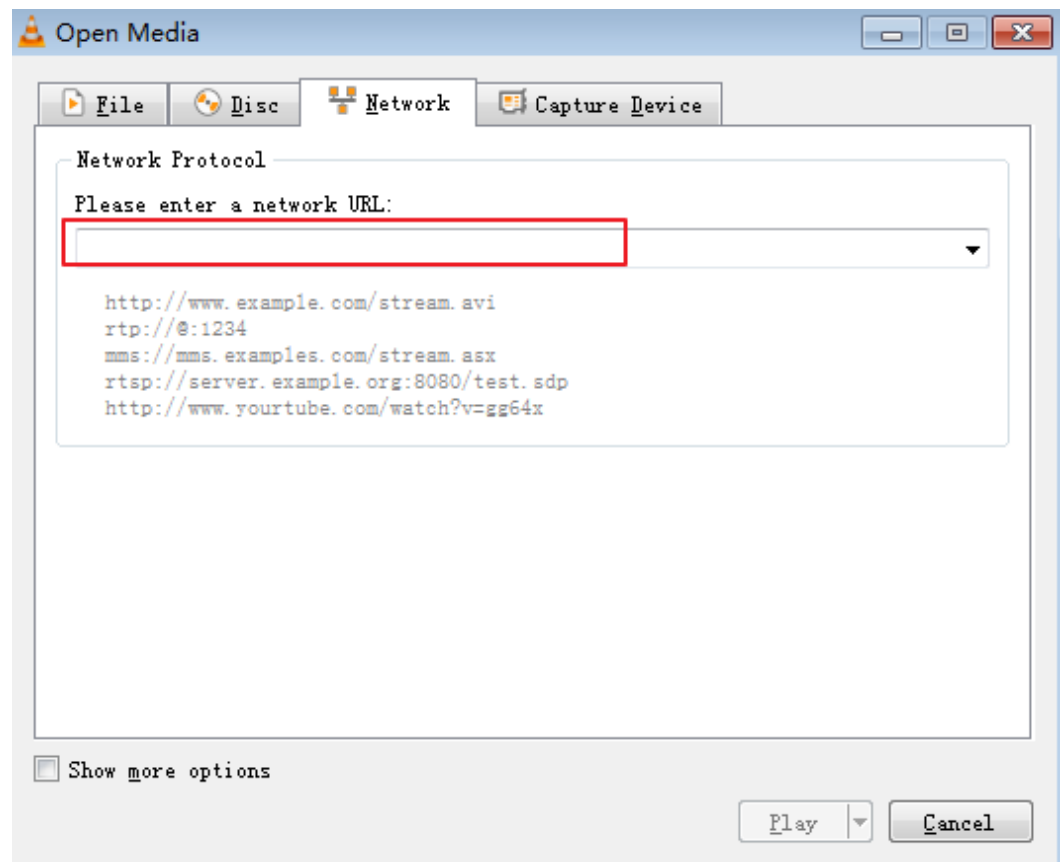
Step 4 Choose **Media > Open Network Stream**, as shown in [Figure 13-8](#).

Figure 13-8 Opening the network stream



Step 5 In the displayed dialog box, enter a streaming URL and click **Play**, as shown in [Figure 13-9](#).

Figure 13-9 Entering a streaming URL



----End