Live

FAQs

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Contents

1 Product Consulting

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

No. Live supports livestreaming 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 livestreaming requires an encoder to push streams. Each livestream has a unique ingest URL, but you do not need to create an ingest URL in advance when using Live. In RTMP push, the **StreamName** field is added to **LiveID**. When a user requests to play a live video in an ingest URL, **LiveID** is used as the unique identifier to meet different viewing requirements.

1.3 In Which Regions Is Live Available?

Live includes Cloud Live and Media Live. Currently, the origin servers are deployed only in the following regions:

- Cloud Live: CN North-Beijing4 and AP-Singapore
- Media Live: CN North-Beijing4, AP-Singapore, and ME-Riyadh

The origin server in CN North-Beijing1 is no longer available for new service functions and users due to limited resources. Support will be provided only for existing service functions and users. If you want to try the latest functions of Live or your service volume is large, you are advised to migrate your workloads to the primary origin server of Live (CN North-Beijing4 for users in the Chinese mainland and AP-Singapore for international users).

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 livestreams to Live using RTMP. You need to set the RTMP publish URL of the encoder to the ingest URL.

1.5 Do I Need to Prepare a Domain Name for Huawei Cloud Live?

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 in CN North-Beijing4 and AP-Singapore, respectively.

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

- If livestreams 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 livestreams:

  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 monitor 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 CDN bandwidth or traffic unit price varies depending on the acceleration area. For details, see **Live Pricing Details**.

2 Billing

2.1 How Do I Estimate the Traffic Consumption?

By default, downstream traffic is billed:

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

Traffic fee = Consumed traffic x Price per GB in the corresponding traffic tier

If 200 viewers have watched a livestream (bitrate: 1 Mbit/s) for one hour, the consumed traffic is:

1 (Mbit/s)/8 x 3600s x 200 = 90,000 MB = 87.89 GB

If you use 87.89 GB of traffic from 00:00:00 to 01:00:00 on January 15 and the accumulated traffic in this month is 1 TB, you need to pay USD2.64 = USD0.03/GB × 87.89 GB.

By default, only output is billed. If the ratio between the number of livestreams and number of viewers is greater than 1:50, input is also billed. The unit prices for input and output are the same. For example, if the input traffic is 10 GB and output traffic is 20 GB in a billing period, the traffic fee includes both the input and output: USD0.9 = USD0.03/GB × 10 GB + USD0.03/GB × 20 GB.

2.2 How Does Cloud Live Recording Charge?

Cloud Live recording is charged based on the peak number of concurrent recorded streams each month (see **Live Pricing Details**). If live videos are recorded and stored in OBS buckets, the storage fees are charged by OBS (see **OBS Pricing Details**).

2.3 What Do I Need to Pay?

The **billing items** of Live cover basic services and value-added services.

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

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

You can log in to Huawei Cloud **Billing Center** and choose **Billing** > **Expenditure Details** to view the usage and expenditure details of pay-per-use resources.

2.5 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 billing option on the **Overview** page of the **Live console**.

2.6 Do I Need to Disable or Delete Live Resources When I Do Not Use Live?

No. You will be charged only when you use Live. Suggestions:

1. You are advised to delete or disable your domain names to avoid unexpected livestreaming fees. For details, see **Managing Domain Names**.
2. Live video recordings stored in OBS will continue charging.

2.7 Is Downstream Traffic or Upstream Traffic Billed?

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

Downstream traffic = Livestream bitrate/8 x Livestream length x Average number of viewers

If the ratio between the number of livestreams and number of viewers is greater than 1:50, both downstream and upstream traffic is billed:

Billable traffic = Livestream bitrate/8 x Livestream length x Number of livestreams

For details, see **Live Pricing Details**.

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

After your account is in arrears, it enters the grace period, during which your Live services will remain active and incur fees.

After the grace period expires, the account enters the retention period. During this period, you cannot push new livestreams with your domain names, but existing livestreams will not be interrupted and will still incur fees.

2.9 Will I Be Billed for URL Validation?

No. You can use URL validation for free. However, if the signed URL is used to play live videos, you need to pay the downstream traffic or bandwidth fee. For details, see **Live Pricing Details**.

2.10 How Is Cloud Live Transcoding Billed?

- If a transcoding template is configured, livestreams 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**.

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

You can log in to Huawei Cloud **Billing Center** and 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 Billing Center. Estimate the alert threshold according to your resource usage.

On the **Overview** page, toggle 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.

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

If you choose to be billed by daily peak bandwidth, downstream bandwidth is billed by default: Daily peak bandwidth = Livestream bitrate x Peak number of concurrent viewers.

If the ratio between the number of livestreams and number of viewers is greater than 1:50, both downstream and upstream bandwidth is billed: Daily peak bandwidth = Livestream bitrate x Number of livestreams.

For details, see **Live Pricing Details**.

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

This fee is the monthly fee for Cloud Live recording, which is billed based on the peak number of concurrent recorded livestreams in each month. If two livestreams are recorded at the same time or a livestream is recorded in two formats (two billable streams in this case) in this month, USD10.58 (USD5.29/stream/month x 2 streams x 1 month) will be deducted on the first day of the next month. You can log in to Huawei Cloud **Billing Center** and choose **Billing** > **Transactions and Detailed Bills** > **Transaction Bills** to view the bill details of livestream recording. You can also click **Details** in the **Operation** column to view the actual peak number of recorded livestreams in the previous month on the **Usage Details** page. 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 any special requirements, **submit a service ticket** to contact Huawei Cloud 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 If a Message Is Displayed Indicating that Adding the Domain Name Failed and the User Is in the Deleted Status?

The possible cause is that your account is in arrears. You need to **top up your account**. Then log in to the **Live console** again.

If the fault persists, **submit a service ticket** to contact Huawei Cloud technical support.

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

Huawei Cloud Live periodically reviews domain names. If a domain name contains inappropriate content such as pornography or gambling, Live will stop resolving the domain name according to relevant laws and regulations. In this case, the domain name status changes from **Normal** to **Configuring**. You need to remove the inappropriate content and then **submit a service ticket** to Huawei Cloud for reviewing the domain name. After the domain name is approved, its status automatically changes to **Normal**.

3.6 What If a Conflict Occurs When I Add a CNAME Record?

The possible cause is 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 Is a Message Indicating Conflict with an Existing Record Set 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 primary domain name, you can log in to the **Live console** and add **push.example.com** as the ingest domain name and **player.example.com** as the streaming domain name on the **Domains** page.

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

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.

3.12 Why Can't I See My Domain Name in My Resources After I Created It on the Live Console?

It may take as long as 24 hours to update the information of a newly created domain name in **My Resources**. The same happens if you update or delete a domain name.

3.13 Why Is a Deleted Domain Name Still Displayed in My Resources?

It may take as long as 24 hours to update the information of a deleted domain name in **My Resources**. The same happens if you add or update a domain name.

3.14 How Do I View My Resources?

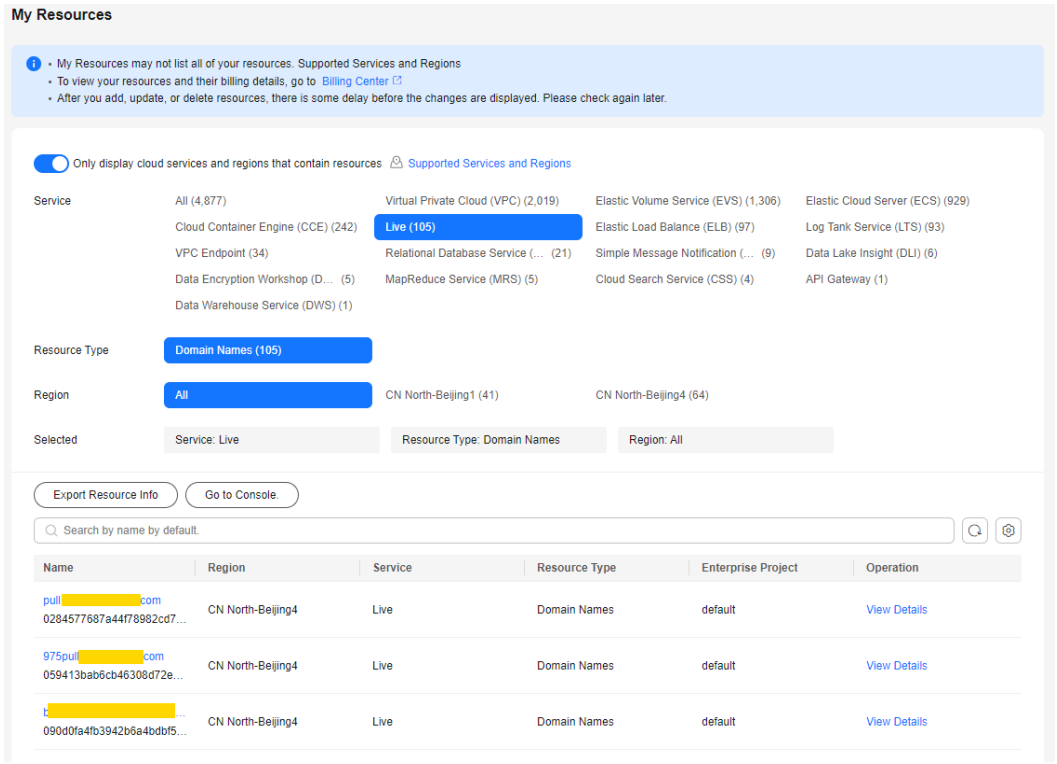
To view your Live resources, perform the following steps:

Step 1 Log in to the **Live console**.

Step 2 Click **Resources** in the upper right corner to go to the **My Resources** page.

Step 3 In the **Service** area, select **Live**. The list below displays all domain names of Live, as shown in **Figure 3-2**.

Figure 3-2 My resources



----End

4 Transcoding

4.1 How Do I Play a Transcoded Live Video?

You can create a transcoding template on the **Live console** or by **calling the API**. Then add *_transcoding template ID* to the end of *StreamName* in the original streaming URL to generate a new *StreamName*, and use the new URL to play the transcoded livestream. For details, see **Assembling a Streaming URL**.

4.2 Why Is the Live Video Resolution Inconsistent with That Set in the Transcoding Template?

Possible causes:

- You did not use the URL for playing a transcoded livestream. You can **assemble a streaming URL** and use it for livestreaming.
- Huawei Cloud Live does not support upsampling transcoding. If a transcoding template's resolution exceeds the source video's resolution, the output stream will still play at the source resolution, even though the streaming URL reflects the higher setting.

4.3 How Does the System Determine Which Transcoding Template Takes Effect When Multiple Are Configured?

You can configure multiple **transcoding templates** for an ingest domain name, but the **AppName** of each transcoding template must be unique. Only the transcoding template who **AppName** is the same as that in the ingest URL will take effect. If the transcoding configuration is modified during livestreaming, the transcoding configuration will take effect only for livestreams pushed after the modification. Live cannot transcode a video to a higher resolution than the source. If a transcoding template is set to a higher resolution, the transcoded output will default to the original stream's resolution. If multiple resolutions are set in transcoding templates, you can add the template ID after **StreamName** in the

streaming URL to play the live video with the resolution set in the template. For details, see **Assembling a Streaming URL**.

4.4 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.

4.5 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.

4.6 How Do I Set Different Resolutions for a Livestream?

Live allows you to transcode livestreams into video streams of different resolutions and bitrates, and provides you with preset and custom transcoding templates. You can **create a transcoding template** as required.

5 Security

5.1 How Does Live Protect Livestreams?

Live supports multiple security policies, such as stream authentication and playback authentication, to protect your live video copyright. For details, see **Protecting Live Resources**.

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

A key must contain 32 characters in 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 livestream. 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**.

5.3 Why Does Referer Validation Not Take Effect?

Referer validation allows you to control access sources based on the **Referer** field contained in an HTTP request. Referer validation takes effect only for HTTP-FLV and HLS streams, not for RTMP streams.

5.4 Do I Need to Use the Same Key for Stream Authentication and Playback Authentication?

No. You can log in to the **Live console** and configure different URL validation settings for the ingest and streaming domain names to obtain the signing 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**.

5.5 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 (08:30:00 on June 20, 2099).

5.6 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**.

5.7 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.

6 Streams Pushing

6.1 Which Ingest Protocols Are Supported?

RTMP only

6.2 How Do I Livestream?

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.

6.3 How Do I Get the Ingest URL?

Assemble an ingest URL as follows:

Original ingest URL:

- Format 1: rtmp://*Ingest domain name*/*AppName*/*StreamName*?args=*xxx*
- Format 2: rtmp://ip/*Ingest domain name*/*AppName*/*StreamName*?args=*xxx*
- Format 3: rtmp://ip/*AppName*/*StreamName*?vhost=*Ingest domain name*&args=*xxx*

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 a signed URL, see **Stream Authentication**.

- The signed URL for authentication method A is: Original URL?auth_key={timestamp}-{rand}-{uid}-{md5hash}

- The signed URL for authentication method B is: Original URL?txSecret=md5(Key + StreamName + txTime)&txTime=hex(timestamp)
- The signed URL for authentication method C is: Original URL?auth_info=Encrypted string.EncodedIV

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

StreamName is the name of a livestream. Multiple livestreams can be created for each application (**AppName**). You can customize the name, for example, huawei1. For details, see **Assembling an Ingest URL**.

A stream name can contain 1 to 512 characters. The recommended length is 12 to 256 characters. Only digits, letters, hyphens (-), underscores (_), asterisks (*), and slashes (/) are allowed. Digits and letters are recommended. If you set the stream name to an asterisk (*), all livestreams of the application will share one streaming URL.

6.5 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**.

- Querying historical **StreamName**s: Log in to the **Live console**, choose **Service Monitoring** in the navigation pane, and click the **Pushed Streams** tab. On the page displayed, select the desired ingest domain name and app name, and click the refresh icon. Then you can view the desired livestream name in the historical stream list.
- Querying ongoing **StreamName**s: Log in to the **Live console**. Choose **Streaming** > **Streams** in the navigation pane to go to the **Streams** page. On the **Ongoing** tab of the **Streams** page, select the domain name that is pushing streams. Then you can view the desired livestream name in the ongoing stream list.

6.6 How Do I Set the Resolution and Bitrate?

You are advised to set the resolution and bitrate by referring to **Table 6-1**.

Table 6-1 Livestream 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

Image Quality	Video Resolution	Bitrate Using H.264 Codec	Bitrate Using H.265 Codec (30% Lower Than H.264)
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

6.7 What If Stream Push Failed?

This may occur because the network of the stream push 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 livestream has been disabled. Follow the instructions in **Livestream Push Failed** to rectify the fault.

6.8 How Many Livestreams Can I Push Simultaneously?

Live does not limit the number of concurrent livestreams. However, if you will have a large number of concurrent livestreams, **submit a service ticket** for technical support.

6.9 What Is the Latency for a 1080p Live Video?

The livestream latency mainly depends on the used protocol and network conditions, instead of on the live video resolution.

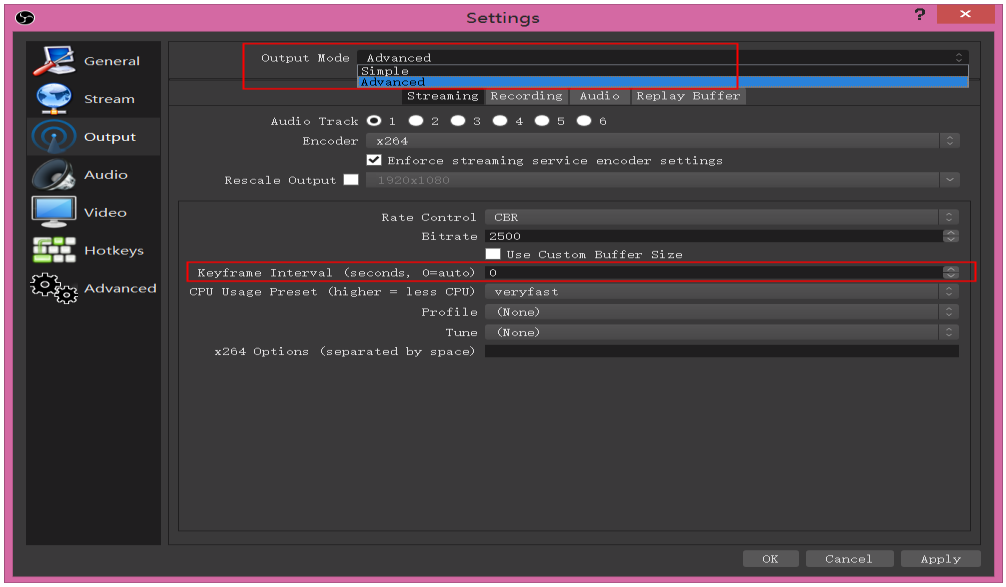
Generally, the latency of RTMP stream push + FLV playback is about 2 to 3 seconds. Using HTTP-FLV can reduce the latency, but HLS is more compatible with browsers and supports cross-device playback. You can select a streaming protocol that fits your needs. For details, see **Reducing Stream Latency**.

6.10 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 6-1 OBS latency setting



6.11 Why Does Stream Push Using Open Broadcaster Software Fail?

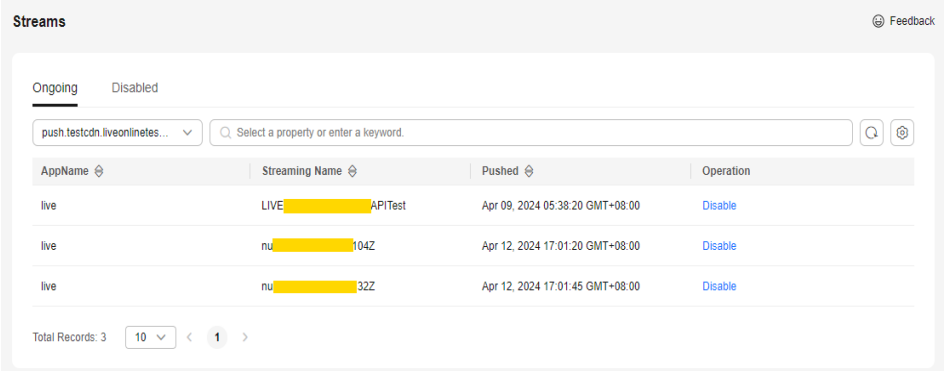
Check whether the ingest URL is correct or replace the value of **URL** with a complete ingest URL in Open Broadcaster Software (OBS). If the fault persists, locate the cause of the stream push failure by referring to **Livestream Push Failed**.

6.12 How Do I Disable a Livestream?

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

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

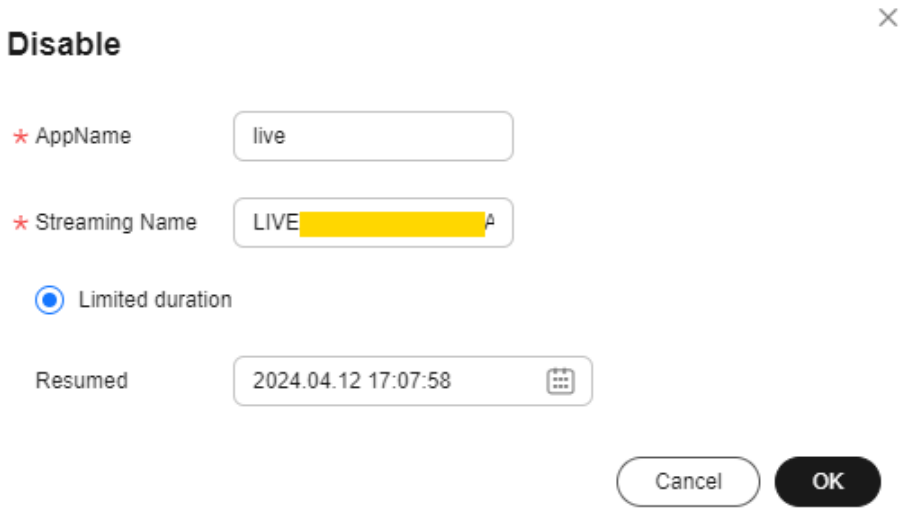
Figure 6-2 Disabling a livestream



e. In the displayed **Disable** dialog box, set the time for disabling stream push.

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

Figure 6-3 Disabling stream push



Limited duration: The livestream cannot be pushed until the time specified by **Resumed** arrives. A livestream can be disabled for up to 90 days.

- Calling the API for disabling a livestream

  Call the API for **disabling a livestream**, and configure the request parameters **domain**, **app_name**, **stream_name**, and **resume_time** to disable a specific livestream.

```
POST /v1/{project_id}/stream/blocks

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


6.13 How Do I View Disabled Livestreams?

You can view disabled livestreams using one of the following methods:

- Viewing disabled livestreams on the Live console

  Log in to the **Live console** and choose **Streaming** > **Streams** in the navigation pane. Click the **Disabled** tab to view information about disabled livestreams.

- Calling the API for querying disabled livestreams

  Call the API for **querying disabled livestreams**, and configure the request parameters **domain**, **app_name**, and **stream_name** to view information about the disabled livestreams.

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

6.14 How Do I Resume a Disabled Livestream?

You can resume a livestream using one of the following methods:

- Resuming a livestream on the Live console

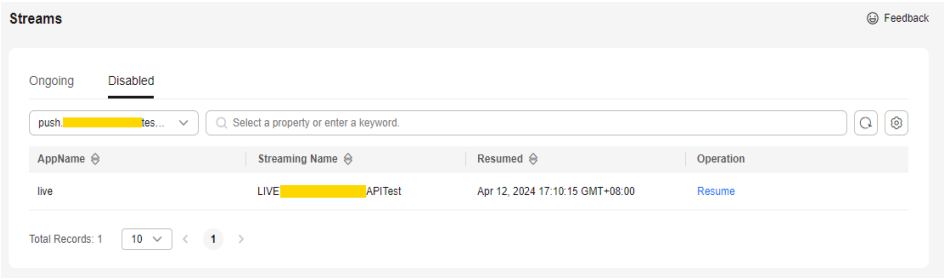
  a. Log in to the **Live console**.

  b. In the navigation pane, choose **Streaming** > **Streams** to go to the **Streams** page.

  c. Click the **Disabled** tab and select the domain name for which stream push needs to be resumed from the drop-down list.

  d. Click **Resume** in the **Operation** column.

  Figure 6-4 Resuming a livestream

- Calling the API for resuming a livestream

  Call the API for **resuming a livestream**, and configure the request parameters **domain**, **app_name**, and **stream_name** to resume the disabled livestream.

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


6.15 What Are the Differences Between Stream Disabling and Stream Interruption?

- Stream interruption is usually due to network faults. As a result, the audience cannot watch the livestream. After a livestream is interrupted, the streamer needs to push the stream again.
- Stream disabling is performed by yourself. Once being disabled, the stream is interrupted and the audience cannot watch the livestream. The streamer can re-initiate stream push only after the specified stream disabling period ends. You can configure stream disabling on the **Streams** page of the **Live console**. Click the **Disabled** tab to view disabled streams and click **Resume** in the **Operation** column of the desired stream to resume stream push.

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

An ingest URL can have only one stream push device at a time, so a stream push device cannot use the same URL to push multiple streams. You can log in to the **Live console**, choose **Streaming** > **Streams**, and click the **Ongoing** tab to check whether the stream is being pushed.

7 Livestreaming

7.1 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 livestream needs to play, add *_transcoding template ID* to the end of *StreamName*.

If URL validation is configured, you need to add the signed string to the end of the original streaming URL and use the assembled URL for playback.

For details about how to assemble a streaming URL, see **Assembling a Streaming URL**.

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

StreamName is the name of a livestream. Multiple livestreams can be created for each application (**AppName**). You can customize the name, for example, huawei1. For details, see **Assembling a Streaming URL**.

A stream name can contain 1 to 512 characters. The recommended length is 12 to 256 characters. Only digits, letters, hyphens (-), underscores (_), asterisks (*), and slashes (/) are allowed. Digits and letters are recommended. If you set the stream name to an asterisk (*), all livestreams of the application will share one streaming URL.

7.3 What If Live Video Playback Failed After Stream Push?

This may occur because the network of the player is inaccessible, the streaming URL is abnormal or not associated with the ingest domain name, or the CNAME

does not take effect. Follow the instructions in **Live Video Playback Failed** to rectify the fault.

7.4 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.

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

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

7.6 Can I Pull Livestreams from Other Platforms to Huawei Cloud?

Yes. You can do this by **configuring origin pull**. However, stream push and origin pull must use different domain names. That is, a separate streaming domain name must be used for origin pull.

7.7 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.

7.8 Why Does Playback Using an HTTPS Address Fail?

The possible cause is that you have not configured an HTTPS certificate for the streaming domain name. Configure an HTTPS certificate by referring to **Configuring HTTPS Secure Acceleration** and try again.

7.9 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 livestreams. 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 7-1 Comparison between RTMP, HTTP-FLV, and HLS

Streaming Protocol	Protocol	How It Works	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: • 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.	• 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.		• 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	• Advantage: cross-platform sharing is supported. • Disadvantage: high latency

8 API Usage

8.1 What Is the Token for Calling Live APIs?

A token is an access credential issued to a user to carry their identity and permissions. Live calls an IAM API to obtain a token and then uses the token to authenticate the calling of Live APIs. For details about how to obtain a token, see **Calling an API**.

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

The possible cause is that the project used to **obtain the token** is different from that used to call the Live API. Live is a project-level service, which is deployed in specific regions.

For example, if the endpoint of the token is **cn-north-4**, the token takes effect only in this region and can be used only to call Live APIs in this region. For details about how to obtain the project ID, see **Obtaining a Project ID**.

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

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

Possible causes:

- The token (valid for 24 hours) has expired.
- You did not obtain the token when you topped up your account in arrears.

If this message appears, you need to **obtain a new token** from IAM.

8.4 Why Is "APIG.0301" Displayed When I Call an API?

Possible causes:

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

9 Statistics Analysis

9.1 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 recorded streams, and number of snapshots of all ingest domain names.
- **Service Monitoring**: You can view the following information on the Live console:
  - **Downstream Bandwidth/Traffic**: downstream bandwidth or traffic usage of a streaming domain name, that is, the bandwidth or traffic used by the client to pull streams from Live
  - **Upstream Bandwidth/Traffic**: upstream bandwidth or traffic usage of an ingest domain name, that is, the bandwidth or traffic used by the device to push streams to Live
  - **Status Codes**: all status codes returned in response to the stream pull requests, and the change trends of these status codes
  - **Streams**: total number of streams pushed by the selected domain name to the origin server and its change trend
  - **Pushed Streams**: details about the historical streams of an ingest domain name, including the stream name, domain name, application name, stream push start time, stream push end time, stream push type, streamer IP address, and audio/video encoding
  - **Streaming Records**: pushed/pulled stream interruption records of the selected domain name
  - **Stream Playback Profiles**: information including the total traffic consumed for video playback, accumulated duration of video playback, number of video playback requests, total number of viewers, peak number of viewers, peak bandwidth for video playback, and accumulated duration of stream push

  - **Stream Push Monitoring**: frame rates and bitrates of the livestreams (of the selected domain name) pushed to the origin server and their change trends

9.2 Why Are There Fewer Total Viewers Than 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 streaming 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 streaming protocol is HLS, the media file will be split into multiple TS files during HLS stream pull. Requests initiated by the client significantly outnumber FLV stream pull requests. That is, a video played on one client will initiate multiple TS requests. As a result, the data is not necessarily the same as the actual number of online viewers.

This is why the number of total viewers may not be the same as that of peak viewers.

10 Third-Party Tools

10.1 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

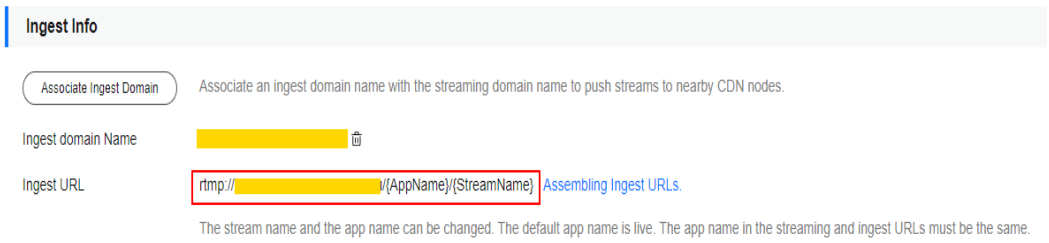
Download a version suitable for your OS from the OBS official website. Then install the software as prompted.

Operation Guide

Step 1 Obtain an ingest URL.

Click **Manage** in the domain name list to obtain an ingest URL, as shown in Figure 10-1.

Figure 10-1 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.

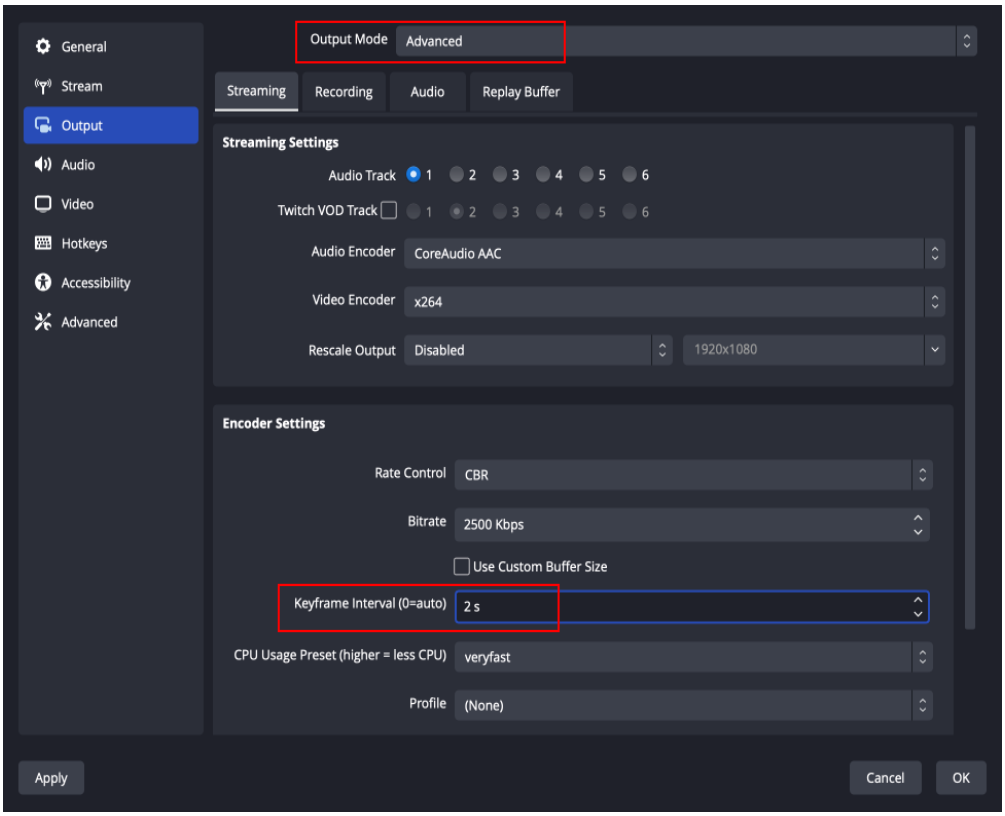
Step 3 Configure key parameters of OBS.

1. Click **Settings** in the lower right corner, as shown in **Figure 10-2**.

Figure 10-2 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 10-3**.

Figure 10-3 Configuring the keyframe interval



Step 4 Enter the ingest URL.

1. Click **Settings** in the lower right corner, as shown in **Figure 10-4**.

Figure 10-4 Configuring OBS parameters

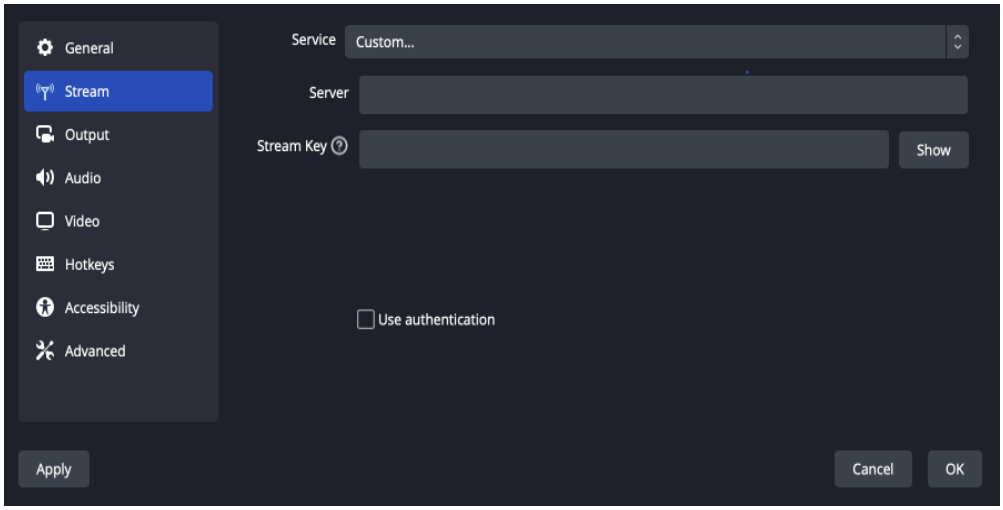
2. Choose **Stream** and enter the ingest URL, as shown in **Figure 10-5**.

NOTICE

The ingest URL consists of two parts: **Server** 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 10-5 Configuring an ingest URL

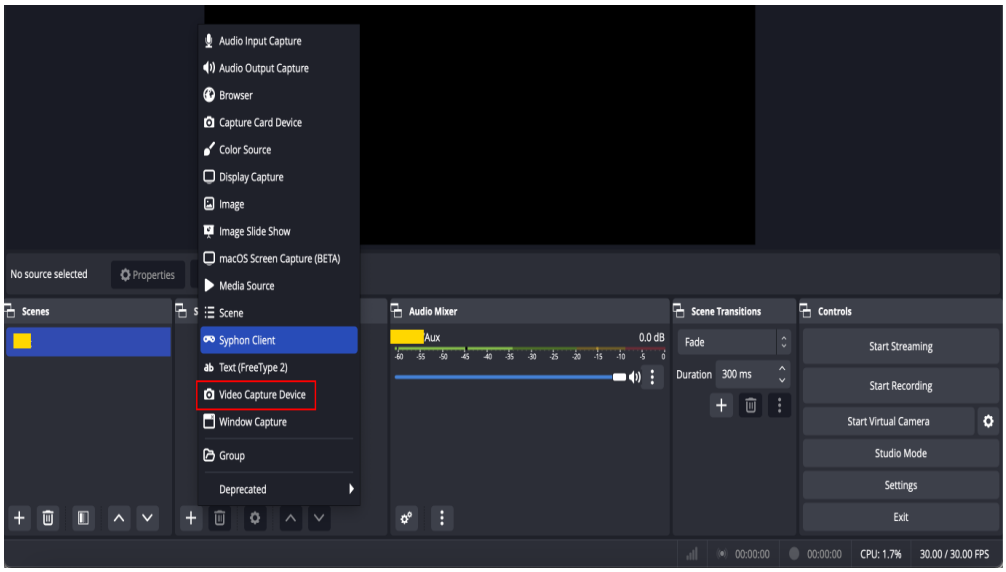


3. Click **OK**.

Step 5 Start to push streams.

1. Click **+** in the lower left corner of the **Sources** area and add a stream source, as shown in **Figure 10-6**.

Figure 10-6 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

10.2 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

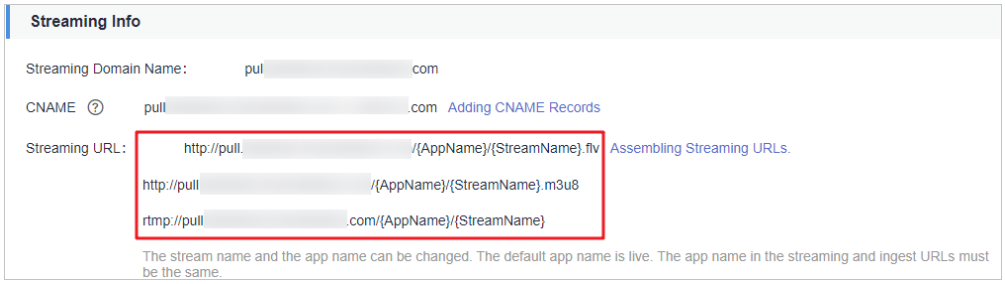
Obtain a suitable version from the VLC media player official website. VLC 3.0.12 or later is recommended. Then install the software as prompted.

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 10-7**.

Figure 10-7 Streaming domain name

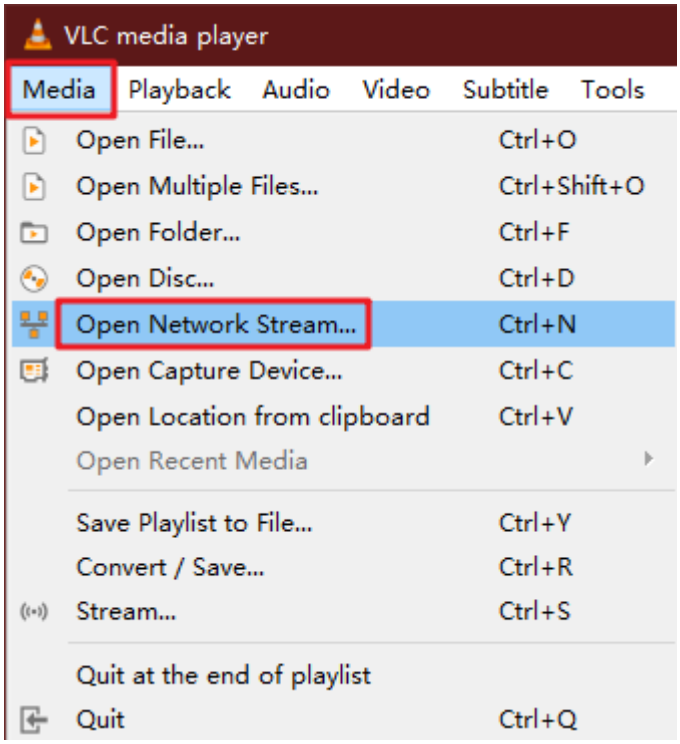


Step 2 Install VLC media player according to the installation wizard.

Step 3 Start VLC media player.

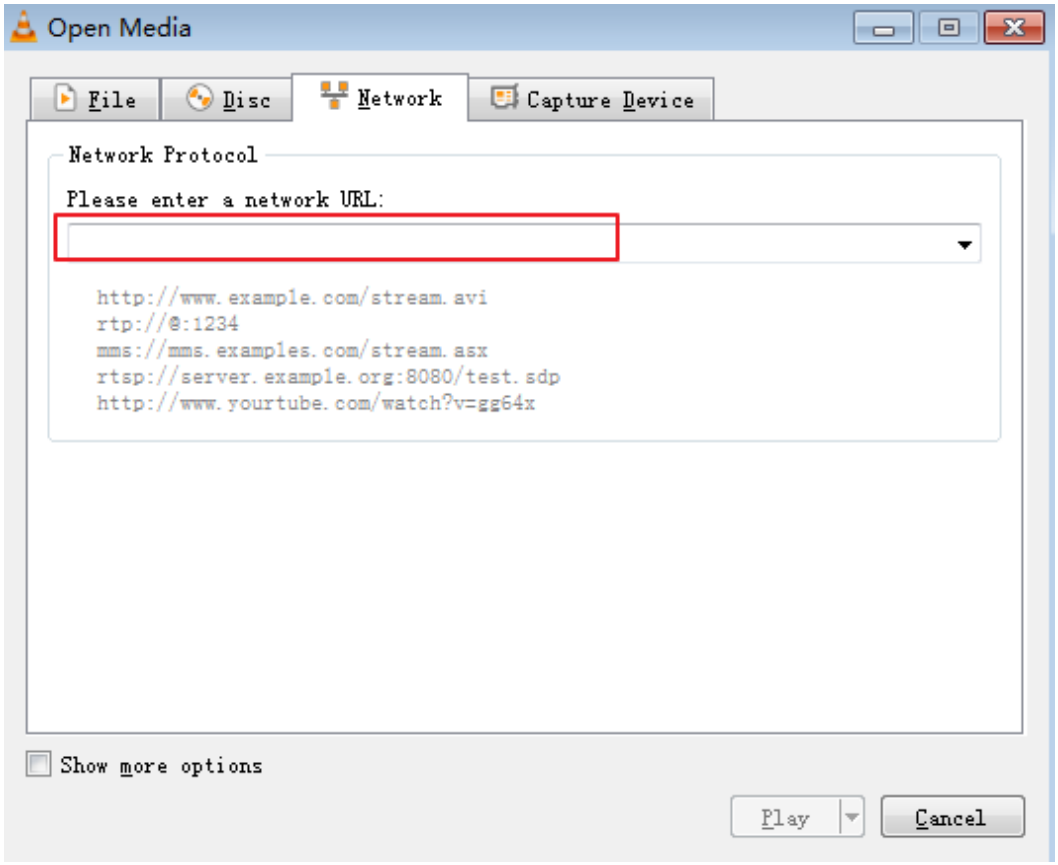
Step 4 Choose **Media** > **Open Network Stream**, as shown in **Figure 10-8**.

Figure 10-8 Opening the network stream



Step 5 In the displayed dialog box, enter a streaming URL and click **Play**, as shown in **Figure 10-9**.

Figure 10-9 Entering a streaming URL



----End

