

# ApsaraVideo Live

## User Guide

# User Guide

## 1. Live broadcasting domain name

You can create ten live video domain names under each account by default. If you have special requirements, please Submit a Ticket to contact us.

## 2. Concurrent live streams

Each live video domain name under each account can push ten live streams concurrently by default. If you have special requirements, please Submit a Ticket to contact us.

Before creating an ApsaraLive Video activity, you need to add an ApsaraLive Video domain name in the ApsaraLive Video console.

## Prerequisite

The domain name must have completed the ICP record filing formalities (if you choose the domain **China East 2 Shanghai**) to provide ApsaraLive Video services and organize ApsaraLive Video activities in China. If the domain name hasn't completed the record-filing process, first apply for website record-filing.

## Add new domain

Log on to the ApsaraLive Video console, and then click **Add New Domain**.



Enter **Live domain name**, and then click **Next step**.

Add New Domain

Base info    Audit    Done

Region: China East 2 (Shanghai)

\* Live domain name: document.aliyun.com

\* Accelerating Area: China

Next step    Cancel

Add New Domain

Base info    Audit    Done

! Accelerated domain name document.aliyun.com Information is submitted for auditing

Manual review will need 1-2 working days, please wait patiently

Add a new domain name is complete to your domain name resolver for CNAME binding, view [Binding tutorial](#)

To learn more, please click here [CDN manual](#)

OK

Configured successfully, the domain name will automatically configure the ApsaraLive Video feature for the live video. After the domain name completes **CNAME record**, the ApsaraLive Video acceleration service will be available.

- Get the CNAME address corresponding to the live video domain name of the Live console.

Domain Name	CNAME	Creation Time	Status	Actions
live.aliyunlive.com	live.aliyunlive.com.walikunlun.net	2017-02-14 11:54:08	Normal	<a href="#">Detail</a>   <a href="#">Disable</a>   <a href="#">Delete</a>

- Perform the CNAME binding for the domain name on the website where the domain name is

applied.

- Fill in the resolution parameters and save the input.
- The resolution normally will take effect very soon. If it is a newly created domain name, the resolution won't involve DNS refreshing. If the CNAME is changed, there will be cached data on different DNSs, and it may take a maximum of 48 hours to finish the updates.
- Run the ping command to the domain name after resolution after several minutes. If the connection is through, it indicates the CNAME configuration is successful. Otherwise, check for the problem following the previous steps.

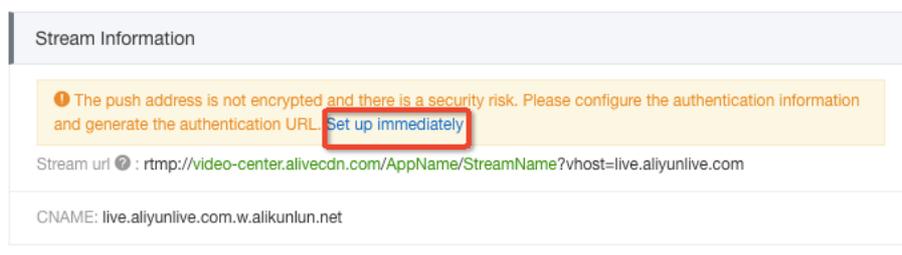
## Authentication of streaming address

☆ We strongly recommend that you perform encryption and authentication on the streaming address to reduce the risks of live video bootlegging and broadcasting without consent from the copyrighter.

### Step 1: Authentication configuration

- Enter the domain name management page.

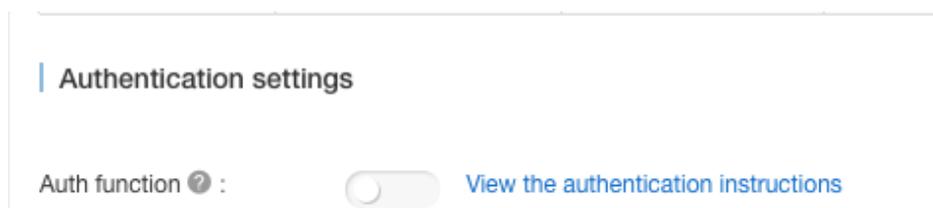
1. Users who haven't enabled authentication can go to Domain Name Management - Basic Information page - Streaming Address, click Configure Now to enter the Authentication Configuration page.



1. Users who have enabled authentication can enter the page from the tab page of the Domain Name Management.

### Step 2: Enable authentication

1. Switch on the authentication feature.



## 1. Enter the primary key and the backup key for authentication.

The primary key is a private key for calculating the encryption character string, and is mandatory.

If the primary key is changed, all the addresses that use the primary key will be invalidated immediately. When the backup key is changed to the primary key, the streaming or playback addresses that use the primary key will not go invalid immediately and the backup key will be used first as the transition for the change.

Domains

live.aliyunlive.com

Base Information | Transcoding settings | Snapshot settings | **Authenticate**

Authentication settings

Auth function  View the authentication instructions

Auth type:  Type A

Auth KEY:

\* Main KEY:

Standby KEY:

Note: Authentication KEY can only enter uppercase and lowercase letters, numbers, length 6 to 32

## Authentication URL Calculator [View the authentication instructions](#)

Stream URL:  **Step 1**

Auth type:  Type A

Auth KEY:

Expire time:  live.second: **Step 2**

Timestamp:

Auth URL:

**Step 3**

Prompt: The authentication feature is configured at the domain name level. If the domain name has the authentication feature enabled, all the streaming addresses under the domain name must implement the authentication encryption. At the same time, the playback address corresponding to the streaming address should also implement authentication encryption. Please use the encrypted address for playback.

A complete live video process includes collection, processing, encoding, packaging, streaming, transmission, transcoding, distribution, decoding and playing steps. Streaming refers to the process of transmitting live content to the server using streaming tools and other content capturing software.

## Streaming operations

### 1. Add a domain name

- Create a domain name in **Manage Domain Names**.

### 2. Get the streaming address

- Enter the domain name management page. Get the streaming address from Live Console > Manage Domain Names > Streaming Address.

Stream Information
<p><span style="color: orange;">●</span> The push address is not encrypted and there is a security risk. Please configure the authentication information and generate the authentication URL. <a href="#">Set up immediately</a></p>
Stream uri  : rtmp://video-center.alivecdn.com/AppName/StreamName?vhost=live.aliyunlive.com
CNAME: live.aliyunlive.com.w.alikunlun.net
Play Information
RTMP format: rtmp://live.aliyunlive.com/AppName/StreamName
FLV format: http://live.aliyunlive.com/AppName/StreamName.flv
M3U8 format: http://live.aliyunlive.com/AppName/StreamName.m3u8

### 3. Streaming operations

- Copy the streaming address to the streaming tool for the push operation.

We strongly recommend that you perform encryption and authentication on the streaming address to reduce the risks of live video bootlegging and broadcasting without consent from the copyrighter. For detailed operation procedures, see **Live Video Authentication**

## AppName and StreamName

- Live broadcasting address structure

A live video service address consists of three levels of live video management units, namely the domain name (Domain), app (APPName) and live stream (StreamName). You can create multiple apps (APPName) under each domain name (Domain), and multiple live streams (StreamName) under each app.

AppName and StreamName can be edited and customized. Different values will generate different streaming and playback addresses.

For example, an app is named live. You can create multiple live streams under live. The streaming address is:

```
rtmp://video-center.alivecdn.com/ {live} / {3}?vhost= {live video domain name}
rtmp://video-center.alivecdn.com/ {live} / {1}?vhost= {live video domain name}
rtmp://video-center.alivecdn.com/ {live} / {2}?vhost= {live video domain name}
```

You can also create multiple live streams for the app.

```
rtmp://video-center.alivecdn.com/ { live1} / {Stream}?vhost= {live video domain name}
rtmp://video-center.alivecdn.com/ { live2} / {Stream}?vhost= {live video domain name}
rtmp://video-center.alivecdn.com/ { live3} / {Stream}?vhost={live video domain name}
```

The ApsaraVideo Live play address is spliced by different parameters: play domain name+AppName+StreamName+\_+transcoding template name.

The SD transcoding template name is **sd** and the splicing rule of the ApsaraVideo Live play address is as follows:

```
RTMP format: rtmp:// live.aliyun.com/AppName/{StreamName} _sd
FLV format: http:// live.aliyun.com/AppName/{StreamName} _sd.flv
```

The HD transcoding template name is **hd** and the splicing rule of the ApsaraVideo Live play address is as follows:

```
RTMP format: rtmp:// live.aliyun.com/AppName/{StreamName} _hd
FLV format: http:// live.aliyun.com/AppName/{StreamName} _hd.flv
```

The original image is the original video stream without transcoding. The splicing rule of the ApsaraVideo Live play address is:

```
RTMP format: rtmp:// live.aliyun.com/AppName/{StreamName}
FLV format: http:// live.aliyun.com/AppName/{StreamName}.flv
M3U8 format: http: // live.aliyun.com/AppName/{StreamName}.m3u8
```

In a live video environment, choppy live video has the biggest impact on the live video effect. There are many causes for the live video to get choppy, one of which is poor bandwidth stability of the uplink transmission. Poor bandwidth stability of the uplink transmission has a very huge impact on the viewing experience and may cause the streams of all audience clients to get choppy.

The Live console provides the feature of monitoring the uplink traffic and you can easily view the uplink transmission status of the live stream.

## View data

Log on to the Live console,

Enter the **Stream management** interface, and click **History**.

live.aliyunlive.com ▾

Publish ▾ Refresh

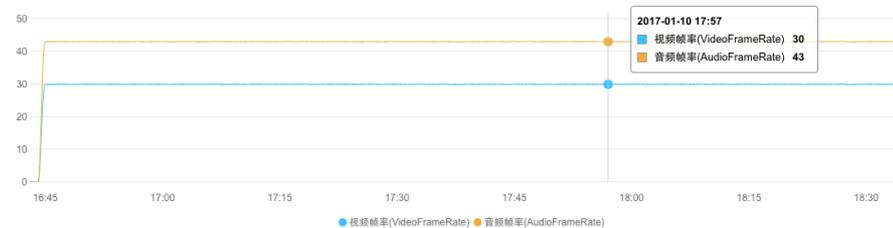
Address	App-Name	Quality	Time	Actions
rtmp://video-center.aliyuncdn.com/AppName	AppName	Original	From: 2017-04-30 13:37:47 To: 2017-04-30 13:40:13	<a href="#">History</a>   <a href="#">Add to black list</a>   <a href="#">Address</a>

View the stream management data.

- Streaming information section.

推流信息			
推流地址:	rtmp:// live.aliyun.com v/AppName/StreamName		
当前域名:	live.aliyun.com	AppName:	AppName
时长:	01:56:11	平均码率:	2604.27 Kbps
		平均帧率:	29.99 [video]   43.06 [audio]

- Frame rate display section.



- Bit rate display section.



The stream management data is updated once every minute on average. You can open the interface any time to view the uplink data transmission status.

When the data status is displayed as smooth and the peak and valley values are comparatively stable, it indicates the uplink transmission is comparatively stable. If sharp vibrations exist, you should try to find the problems in uplink transmission as soon as possible.

## Contributors of choppy streams

Most of the causes for a choppy stream are located in the streaming process. Several major contributors are listed below. When the stream gets choppy, you can troubleshoot the issue step by step.

Mobile phone configuration.

Some CPU will be consumed while streaming. Low-end mobile phones with poor hardware configuration may witness choppy videos or blurred images to varied degrees if the overall CPU usage exceeds 80% during the streaming process, which will influence the video collection and viewing experience on the user end.

Video collection parameter settings.

The video should be at least 15 frames per second to ensure that the video is identifiable and smooth in viewer's eyes. If the FPS is lower than ten frames per second, the video will become obviously choppy. We suggest you set the frame rate to more than 15 frames per second, as much as possible, if no special circumstances are involved.

Although the higher the video frame rate, the smoother the video, when the frame rate is over 30 FPS, viewer's eyes will not be able to identify the image content. Higher frame rate also increases the bandwidth cost for video transmission. We suggest you set the video parameters reasonably.

Network bandwidth.

The network is a major cause of choppy videos. Below are some common reasons.

Network bandwidth size: confirm the bandwidth size provided by the network operator and whether the bandwidth is enough for this live video transmission.

Downlink bandwidth usage: check whether there is any data downloading activity that occupies the network bandwidth.

System resource usage: check whether a large number of programs are running in the background. You can remove and terminate running programs reasonably to

spare some resources.

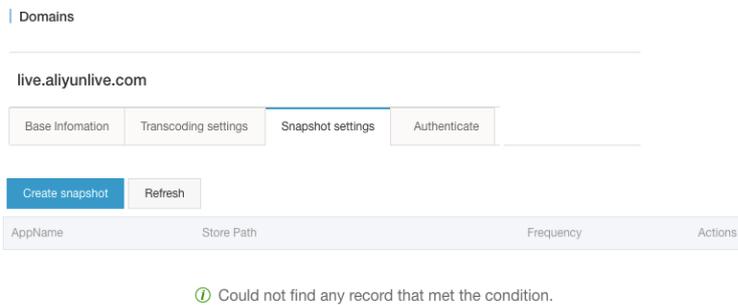
Video screenshot service supports taking screenshots on the live video being played at a set interval and saving the screenshots as .jpg files to a specified location in OSS.

Under a live video Live domain name, the live screenshot settings are differentiated by the App Name of the live video streaming. That is, streams under the same App Name all perform screenshot operations following the settings of this App Name. The App Name can be set to " \* " , indicating that all the streams under the live video Live domain name will follow the screenshot settings.

## Set screenshot

### 1. Log in to the Live console

- Enter the management page of the live video domain name that requires screenshots.



### 2. Enter the screenshot settings tab

### 3. Perform the settings for adding screenshots

3.1 Click 'New Screenshot' to pop up the screenshot settings window and perform the following steps:

## Create snapshot



AppName:

Frequency:  **Seconds** (between 5 ~ 3600 seconds)

Store Path:

ObjectName:  Overwrite:   
 oss://{AppName}/{StreamName}.jpg  
 No Overwrite:   
 oss://{AppName}/{StreamName}/{Sequence}.jpg

OK

Cancel

Enter the 'AppName' you want to enable the screenshot feature for.

Fill in the screenshot taking interval, between 5 to 3,600 seconds.

Select the bucket for storing the screenshot file.

Select whether to 'Overwrite' or 'Do Not Overwrite' the image screenshot type. Multiple types can be checked.

**Overwrite:** The video screenshots are taken in sequence based on the set interval, and the new screenshot will overwrite the older one.

**Do Not Overwrite:** The video screenshots are taken in sequence based on the set interval, and the new screenshots are stored in OSS in the order of N+1 (N≥0).

### 3.2 Specify the input OSS Bucket for the screenshot storage:

## OSS file management



videocloudlive 

 Refresh

Path:

File Name	Size	Type	Creation Time
<a href="#">livet-screenshot/</a>	-		-

pre

next

OK

Cancel

### 3.3 Confirm completing the screenshot settings

AppName	Store Path	Frequency	Actions
live-screenshot	Overwrite: oss://videocloudlive-01/live-screenshot/live-screenshot{StreamName}.jpg Overwrite: oss://videocloudlive-01/live-screenshot/live-screenshot{StreamName}{Sequence}.jpg	5s	<a href="#">Edit</a>   <a href="#">Delete</a>

Total: 1 item(s). Per Page: 20 item(s)

All the screenshot settings under the domain name are listed on the screenshot settings tab. For example, all the live streams with live as the AppName under the domain name will output screenshots following this rule.

## 4. View and operation screenshot files

4.1 Enter the screenshot management interface and select the domain name you want to view the screenshot

4.2 Select the screenshot time range and select the AppName and StreamName. The screenshot list will be displayed based on your selections.

4.3 Move the cursor over a screenshot in the list and the buttons for enlarging the image and copying the URL will be displayed. You can perform the operations as needed.

Live console currently provides **SD** and **HD** transcoding templates to choose from as needed.

Log on to the Live Console and enter the domain name management page.

Domain Name	CNAME	Creation Time	Status	Actions
live.aliyunlive.com	live.aliyunlive.com.w.alikuntun.net	2017-02-14 11:54:08	Normal	<a href="#">Detail</a>   <a href="#">Disable</a>   <a href="#">Delete</a>

Select the **Transcoding settings** tab and click **Create transcoding** button.

## Domains

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live.aliyunlive.com

Base Information

Transcoding settings

Create transcoding

Refresh

AppName

Enter the AppName in the newly created transcoding template. The AppName should match that in the streaming address for the transcoding template to work properly.

### Create transcoding ✕

AppName:

Templates ?: **High quality templates**

<input type="checkbox"/>	Name	ID <span>?</span>
<input type="checkbox"/>	LD	ld
<input type="checkbox"/>	SD	sd
<input type="checkbox"/>	HD	hd
<input type="checkbox"/>	UD	ud

You can select multiple transcoding templates at the same time.

The transcoding template is created successfully.

<input type="button" value="Create transcoding"/>	<input type="button" value="Refresh"/>			
AppName	Templates			
livetest	High-quality-HD	High-quality-LD	High-quality-SD	High-quality-UD