ApsaraVideo Live

Console Operate

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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.

Step 1. Add a live video domain name

To create a live video activity, add a live video domain name in the Live console.

Step 2. Website record-filing

The domain name must have completed the ICP record filing formalities to provide live video services and organize live video activities in China. If the domain name hasn't completed the record-filing process, you should first [apply for website record-filing].

Step 3. Create a domain name

After the domain name is configured successfully, it will automatically configure the Live feature for the live video. After the domain name completes the **CNAME record**, you will be able to use the Live acceleration service.

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

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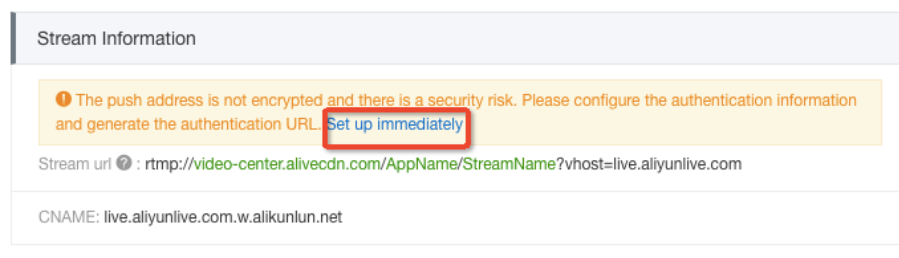
1. Users who have enabled authentication can enter the page from the tab page of the Domain Name Management.

Step 2: Enable authentication

1. Switch on the authentication feature.
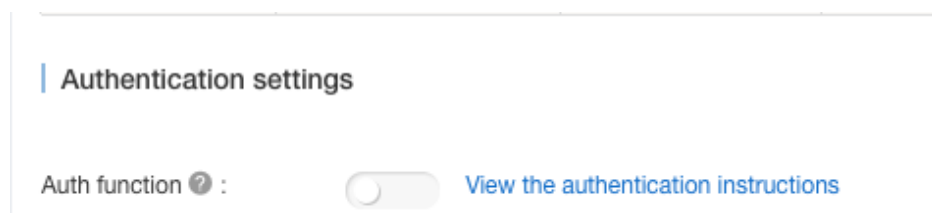
1. Enter the primary key and the backup key for authentication.

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.

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.

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 live playback address is spliced by different parameters: 'playback domain name` + 'AppName' + 'StreamName' + " '_' " + 'transcoding template name' .

The SD transcoding template name is **sd** and the splicing rule of the live playback 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 live playback 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 live playback 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 being 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.

Data view
1. Log in to the Live console and enter the stream management interface.

2. View the stream management data

- Streaming information section

- Frame rate display section
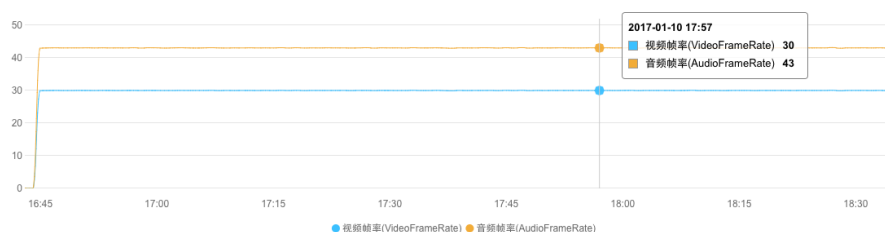
- Bit rate display section

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 there are sharp vibrations, 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.

1. 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.

2. 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.

3. 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.
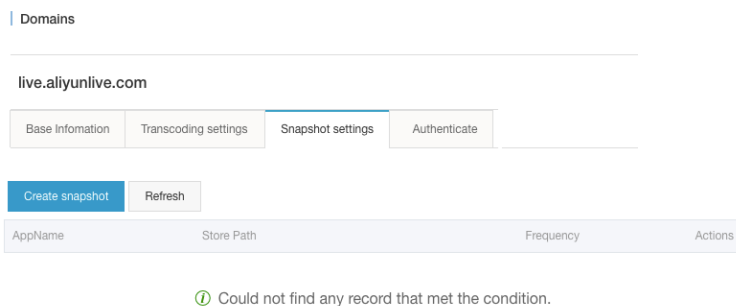
2. Enter the screenshot settings tab

3. Perform the settings for adding screenshots

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

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:

### 3.3 Confirm completing the screenshot settings

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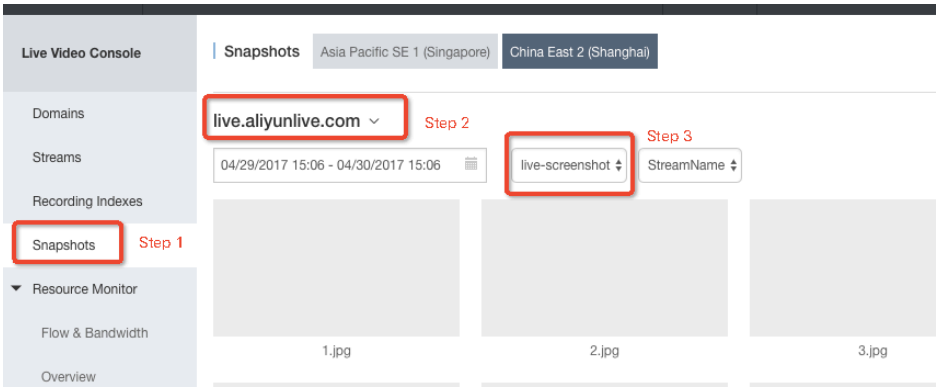
Live console currently provides **SD** and **HD** transcoding templates to choose from as needed.

1. Log in to **Live Console** and enter the domain name management page.
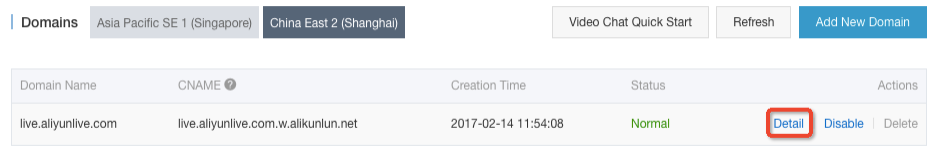
1. Select the Transcoding Settings tab and click the New Transcoding button.

Domains

live.aliyunlive.com

| Base Infomation | Transcoding settings | |

Create transcoding   Refresh

AppName

1. 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.

You can select multiple transcoding templates at the same time.

1. The transcoding template is created successfully.