

# **StreamLink**

## **Feature Practice**

### **Product Documentation**



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# Feature Practice

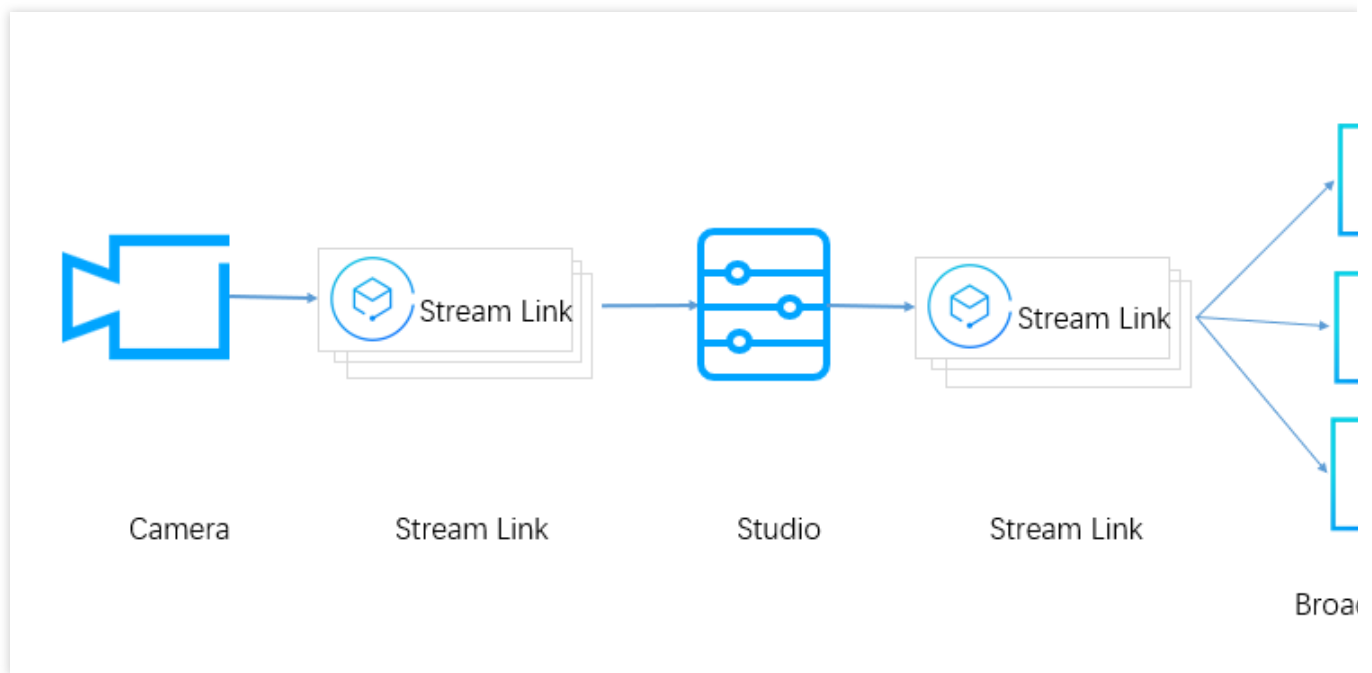
Last updated : 2023-12-23 17:14:52

## Cross-Region Transport

### Scenario

An event taking place in Chengdu, China, will be streamed live. The live stream is sent to Shanghai, China, where it will be processed. The processed video will then be sent to live streaming platforms in China, Europe, and North America.

### How It Works



The video captured live on-premises is sent to the studio in Shanghai using the SRT protocol.

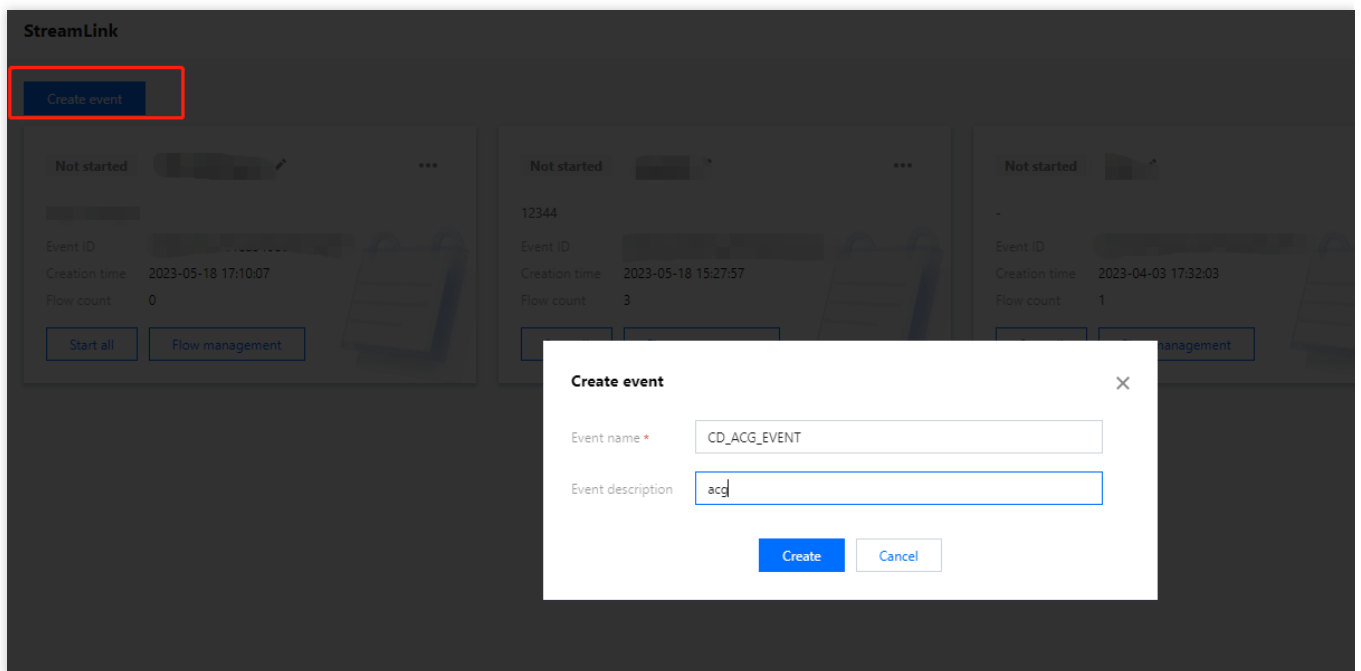
The studio processes the video and distributes the video to live streaming platforms using the SRT protocol.

Live streaming platforms pull streams from StreamLink, or StreamLink pushes the stream to live streaming platforms.

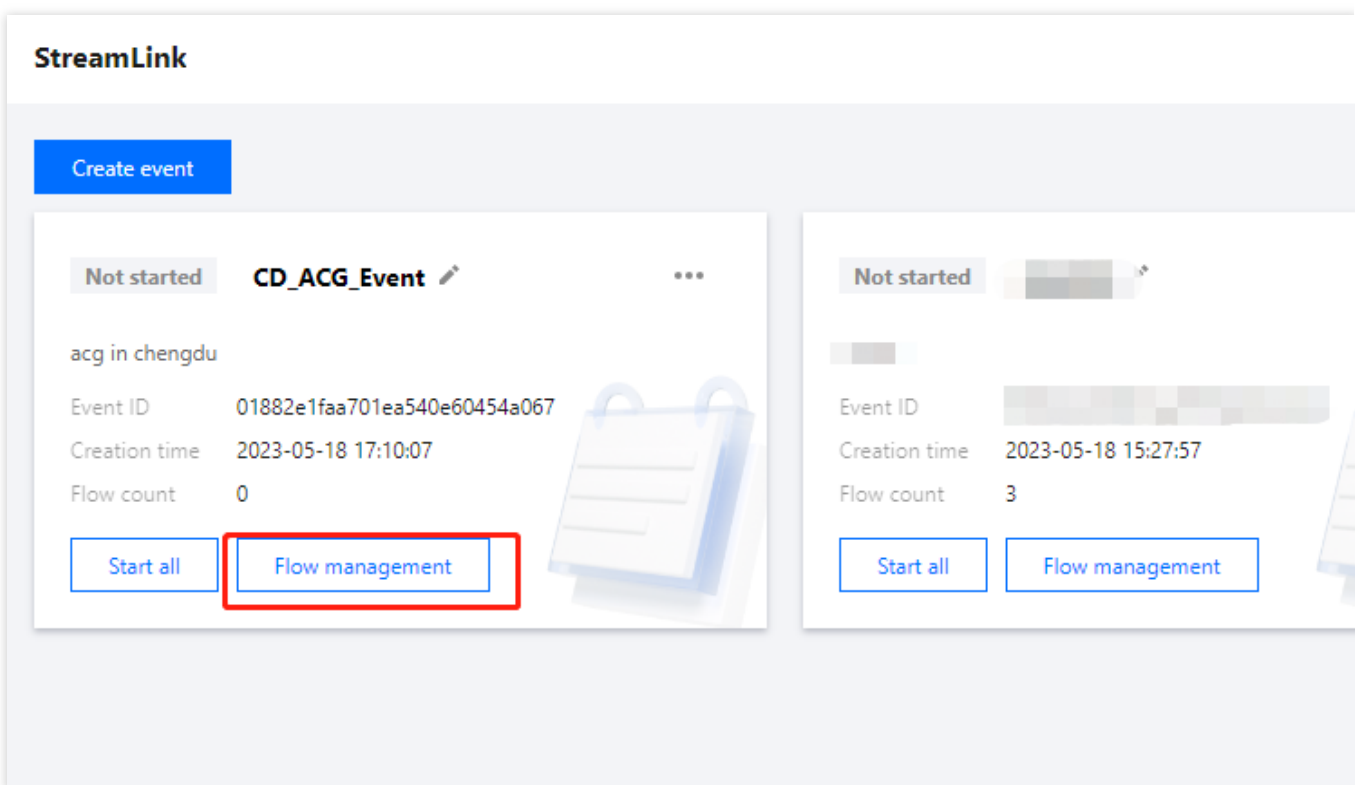
### StreamLink Configuration

The live stream needs to be sent to the studio in Shanghai. After processing the video, the studio needs to send the stream to different live streaming platforms.

### Creating an event



Create an event, so that all the flows used in this activity can be placed under this event for easy management and use.

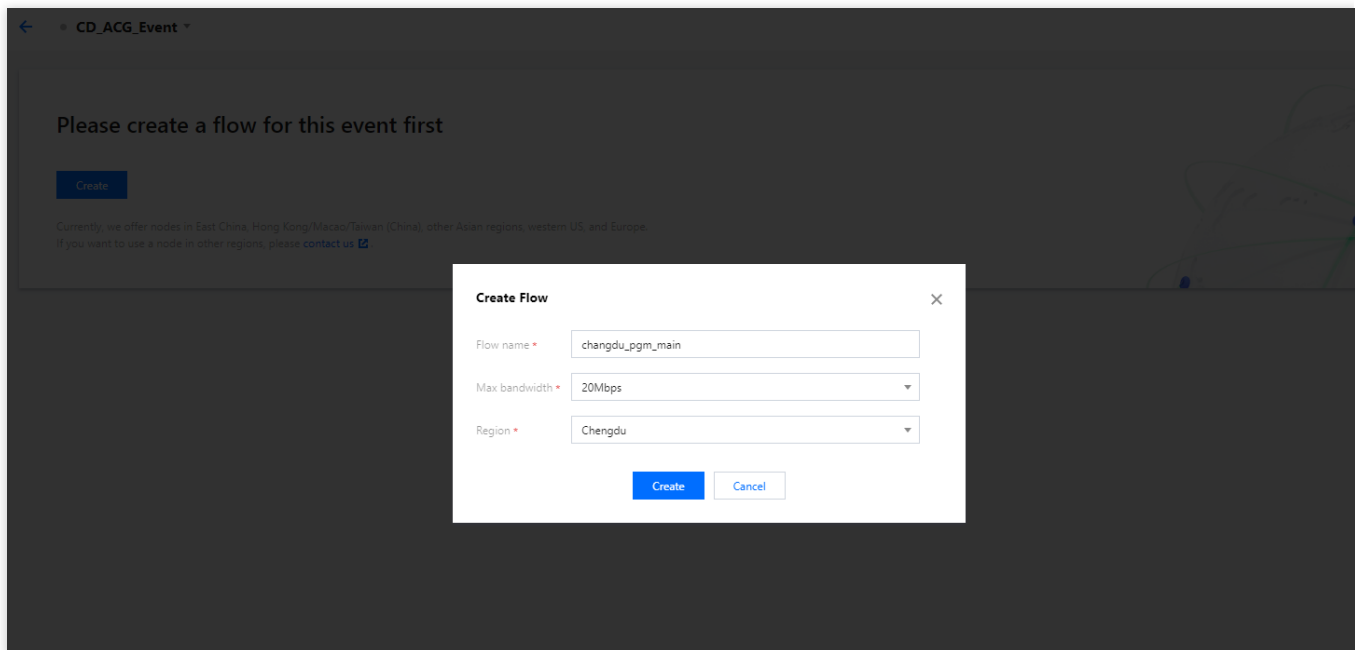


Click **Flow management** to configure the flows.

## Configuring flows to send the stream captured on-premises to the studio

Given the high latency requirements of live events, the SRT protocol is used. To ensure source availability, two flows are created to transport the live video to the studio.

### Creating an SRT main flow



Because the event is taking place in Chengdu, select Chengdu as the region so that the input address is in the same region.

**Region:** Select **Chengdu**, which is the Input region.

**Max bandwidth:** Because the bitrate of the source video is high, **20Mbps** is selected.

### Adding an input

The screenshot displays the Tencent Cloud StreamLink console interface. On the left, a sidebar titled 'Flows' contains a search bar and a list of flows. The flow 'changdu\_pgm\_main' is highlighted with a red box. The main panel shows the details for this flow, including its ID, node, status, and max bandwidth. Below this, a world map displays various global locations. At the bottom, an 'Input/Output' section shows 'No data yet' and an 'Add input' button, which is also highlighted with a red box.

**Flows**

Flow ID/name

+ Create Bulk operations

Not started changdu\_pgm\_main

Node Chengdu

Flow ID 01882e281a2409831f170496f0ea

**changdu\_pgm\_main**

Flow ID 01882e281a2409831f170496f0ea Node ap-chengdu Status Not started Max bandwidth 20 Mbps

Addresses Log

World map locations: Silicon Valley, Ashburn, Frankfurt, São Paulo, Mumbai, Bangkok, Singapore, ChangduShanghai, Guangzhou, Hong Kong, Seoul, Tokyo.

**Input/Output**

No data yet + Add input

Select a flow in the flow list, click **Add input** to add an input to the flow.

The screenshot shows the 'Create input' dialog in the Tencent Cloud StreamLink console. On the left, a sidebar displays the flow 'changdu\_pgm\_main' with its ID '01882e281a2409831f170496f0ea', node 'ap-chengdu', and status 'Not started'. Below this is a map of China with 'Silicon Valley' and 'Ashburn' marked. The main panel is titled 'Create input' and contains the following fields:

- Input name \***: A text input field with the placeholder 'Enter an input name'.
- Input region**: A dropdown menu currently set to 'Chengdu'.
- Latency setting**: A text input field with the value '120' and an information icon.
- Failover**: A toggle switch currently turned off.
- CIDR IP allowlist**: A text area with a placeholder: 'Please enter an allowlist of IPs in CIDR format, e.g. 192.168.0.1/24, and separate multiple IPs with e.g. 192.168.0.1/24;192.168.1.1/25.' and an information icon.
- Input source description**: A text area with a placeholder: 'Add input source description to distinguish it from other input sources.'
- Protocol type \***: A dropdown menu set to 'SRT'.
- Mode \***: A dropdown menu set to 'Listener'.
- Decryption settings**: A toggle switch currently turned on.

At the bottom right of the dialog are 'Save' and 'Cancel' buttons.

**Input name:** The input is named `src_chengdu`.

**Protocol type:** Select **SRT**.

**Mode:** Select **Listener**. The live video will be sent to StreamLink directly.

**Latency setting:** The push end is in the StreamLink AZ used. In China, the RTT for same-city transport is usually less than 10 ms. Therefore, Latency is set to 60 ms. If the actual RTT is higher than expected, you can increase the latency at the push end.

**Decryption settings:** Given that the push end uses a fixed IP address, instead of encryption, IP allowlist is used to ensure security.

**CIDR IP allowlist:** Enter the IP address used by the push end. This ensures that only the device of the event can push streams to the flow.

Click **Save**.

### Adding an output

Because the studio is in Shanghai, we need to create an output in Shanghai. To keep the latency low, SRT is used for the output as well.

**changdu\_pgm\_main**

Flow ID 01882e281a2409831f170496f0ea Node ap-chengdu Status Not started

**Create Output**

Output Name \*

Output region \*

Latency setting ⓘ \*

CIDR IP allowlist ⓘ

Protocol type \*

Mode \*

Enable encryption ⓘ ☐

Output Description

**Input/Output**

☐ cd\_src (SRT\_LISTENER)

**Output Name:** The output is named `shanghai_main_output` .

**Output region:** To keep the latency low, **Shanghai** is selected.

**Protocol type:** Select **SRT**.

**Mode:** Select **Listener**. The studio will pull the stream from StreamLink.

**Latency setting:** The studio is in the StreamLink AZ used. In China, the RTT for same-city transport is usually less than 10 ms. Therefore, Latency is set to 60 ms. If the actual RTT is higher than expected, you can increase the latency at the push end.

**Enable encryption:** Because the studio has a fixed IP address, instead of encryption, IP allowlist is used to ensure security.

**CIDR IP allowList:** Enter the IP address of the studio. This ensures that only the studio's device can pull streams from StreamLink.

Click **Save**.



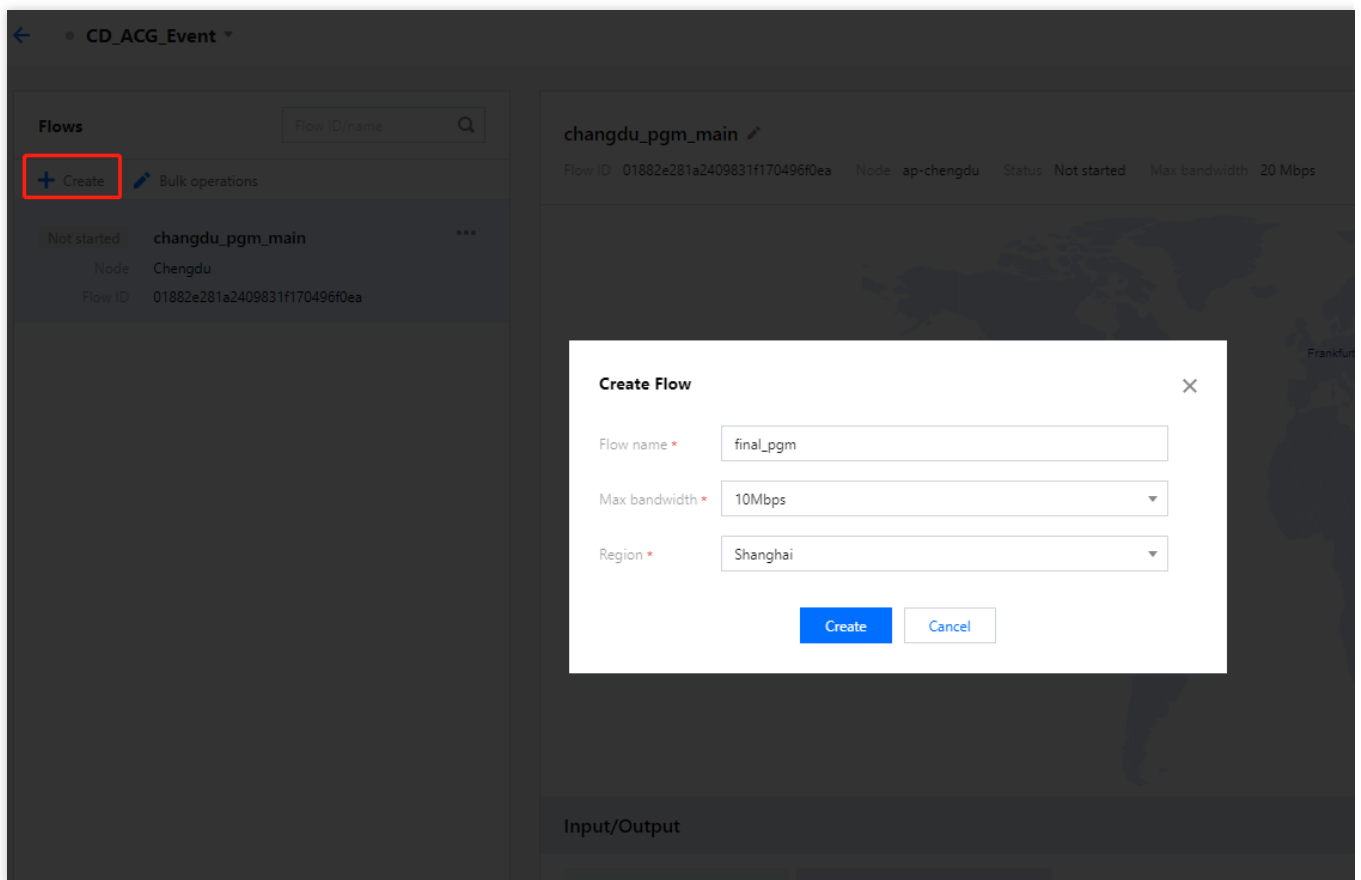
### Creating an SRT backup flow

The steps of creating a backup flow are the same as those for the main flow.

### Configuring a flow to send the stream from the studio to live streaming platforms

After processing the video, the studio needs to distribute it to live streaming platforms. Because live streaming platforms normally do not have high requirements for latency, RTMP is used for the transport.

### Creating an RTMP failover flow



Because the studio is in Shanghai, select Shanghai as the region so that the input address is in the same region.

**Region:** Select **Shanghai**, which is the input region.

**Max bandwidth:** Because the bitrate of the processed video is lower, **10Mbps** is selected.

The screenshot shows the StreamLink console interface. On the left, a sidebar displays a list of flows under the heading 'Flows'. Two flows are listed: 'changdu\_pgm\_main' (Node: Chengdu, Flow ID: 01882e281a2409831f170496f0ea) and 'sh\_final\_pgm' (Node: Shanghai, Flow ID: 01882e355dad1ea5578a043ce2fc). The 'sh\_final\_pgm' flow is selected. The main panel shows the details for 'sh\_final\_pgm', including its Flow ID, Node (ap-shanghai), and Status (Not started). A map of China is visible, highlighting the Shanghai region. On the right, the 'Create input' form is open. It includes fields for 'Input name' (with a placeholder 'Enter an input name'), 'Input region' (set to 'Shanghai'), 'Protocol type' (with a dropdown 'Select the'), and 'Failover' (a toggle switch). There is also a text area for 'Input source description' with a placeholder 'Add input source description to distinguish it from other input sources.' At the bottom right of the form are 'Save' and 'Cancel' buttons.

**Protocol type:** Select **RTMP**.

**Failover:** Toggle this on.

**CIDR IP allowlist:** Enter the IP address of the studio. This ensures that only the studio's device can push streams to the flow.

Click **Save**.

### Adding an output

Because the video will be distributed in the US, Europe, and China, we need to create at least one output for each of the three regions. Select **RTMP\_PULL** as the output protocol, which means live streaming platforms will need to pull the stream from StreamLink. Each output allows the pulling of four streams at the same time. If more than one platform in a region pull streams from StreamLink at the same time, we recommend you create multiple outputs. For example, if two live streaming platforms in Europe will pull the stream from StreamLink at the same time, create two outputs so that the two platforms can use separate URLs. The following shows how to create such outputs.

**Create Output**

Output Name \*

Output region \*

Protocol type \*

Max concurrent pulls

CIDR IP allowlist

Output Description

**Output Name:** The output is named `eu_pgm_platform_a`.

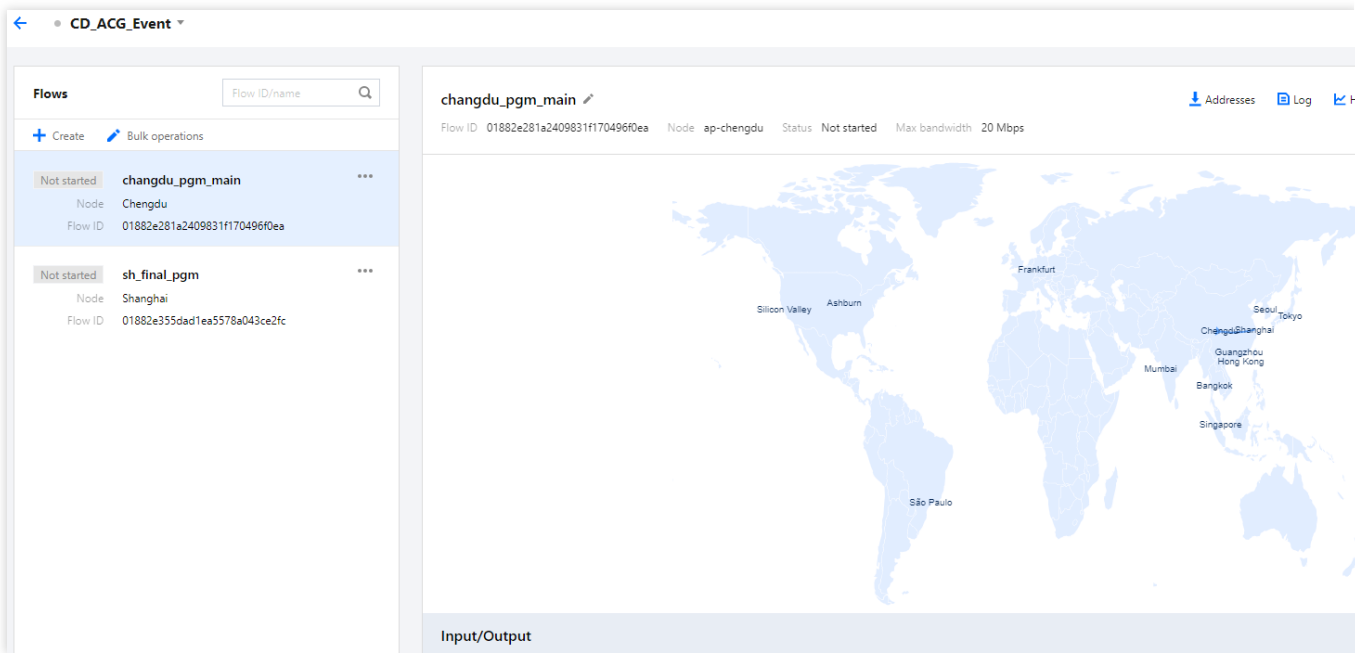
**Output region:** Select **Frankfurt, Germany**.

**Protocol type:** Select **RTMP\_PULL**. Live streaming platforms will need to pull the stream from StreamLink.

**CIDR IP allowlist:** Enter the IP address of the live streaming platform. This ensures that only the platform's device can pull streams from StreamLink.

Click **Save**.

### Starting a flow

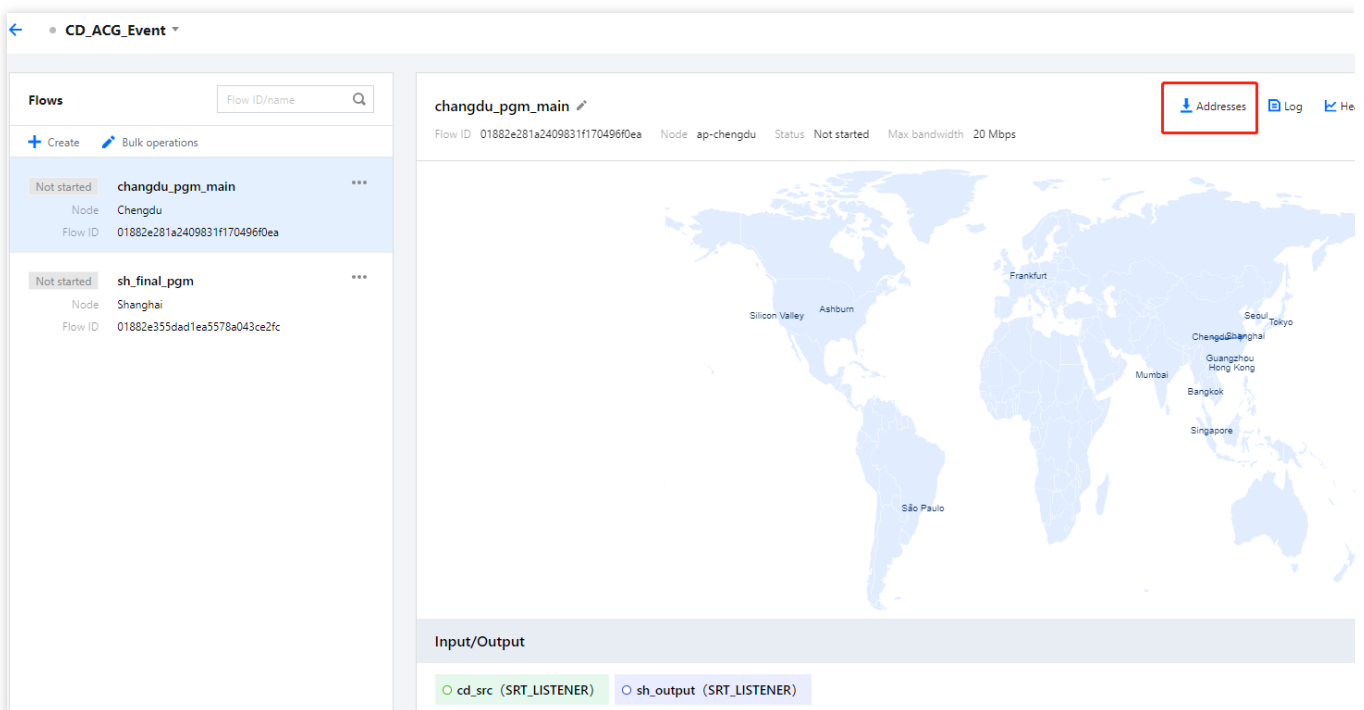


When the event begins, start the flows in the StreamLink console.

### Obtaining the push and playback URL

You can view the push URL on the flow page.

Click **Addresses**.



Obtain the push address from input source information.

changdu\_pgm\_main

Flow ID 01882e281a2409831f170496f0ea Node ap-chengdu Status Not s

Input/Output

cd\_src (SRT\_LISTENER)

sh\_output (SRT\_LISTENER)

Details

Addresses

Log

Health

Export

Name	Type	Input/Output ID	Protocol
cd_src	Input	01882e2f1b0d09831f170496f0eb	SRT_LISTENER
sh_output	Output	01882e3289ba09831f170496f0ec	SRT_LISTENER

Disabled

Dynamically changing the flow settings

During live streaming, you can change the settings of a flow without stopping the flow.  
Modifying the input/output configuration:

changdu\_pgm\_main

Flow ID 01882e281a2409831f170496f0ea Node ap-chengdu Status Not s

Input/Output

cd\_src (SRT\_LISTENER)

sh\_output (SRT\_LISTENER)

cd\_src

Input name \* cd\_src

Input region Chengdu

Latency setting 120

Failover

CIDR IP allowlist

Input source description

Protocol type \* SRT


Mode \* Listener

Decryption settings

Deleting an output:

changdu\_pgm\_main

Flow ID 01882e281a2409831f170496f0ea Node ap-chengdu Status Running



Input/Output

cd\_src (SRT\_LISTENER)

sh\_output (SRT\_LISTENER)

sh\_output

Output Name \* sh\_output

Output region \* Shanghai

Latency setting ⓘ \* 120

Max concurrent pulls ⓘ \* 2

CIDR IP allowlist ⓘ  
Please enter an allowlist of IPs in CIDR format, e.g. 192.168.0.1/24, and separate multiple IPs with commas, e.g. 192.168.0.1/24;192.168.1.1/25.

Output Description  
Add output description to distinguish it from other outputs.

Protocol type \* SRT

Mode \* Listener

Enable encryption ⓘ ☐

Save

Delete

Cancel

Adding an output:

←

CD\_ACG\_Event

Flows

Flow ID/name

Q

+ Create

Bulk operations

Running

changdu\_pgm\_main

\*\*\*

Node

Chengdu

Flow ID

01882e281a2409831f170496f0ea

Not started

sh\_final\_pgm

\*\*\*

Node

Shanghai

Flow ID

01882e355dad1ea5578a043ce2fc

changdu\_pgm\_main

Flow ID

01882e281a2409831f170496f0ea

Node

ap-chengdu

Status

Running

Max bandwidth

20 Mbps

Addresses

Log

Input/Output

cd\_src (SRT\_LISTENER)

sh\_output (SRT\_LISTENER)