

StreamLink

Feature Practice

Product Documentation



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Feature Practice

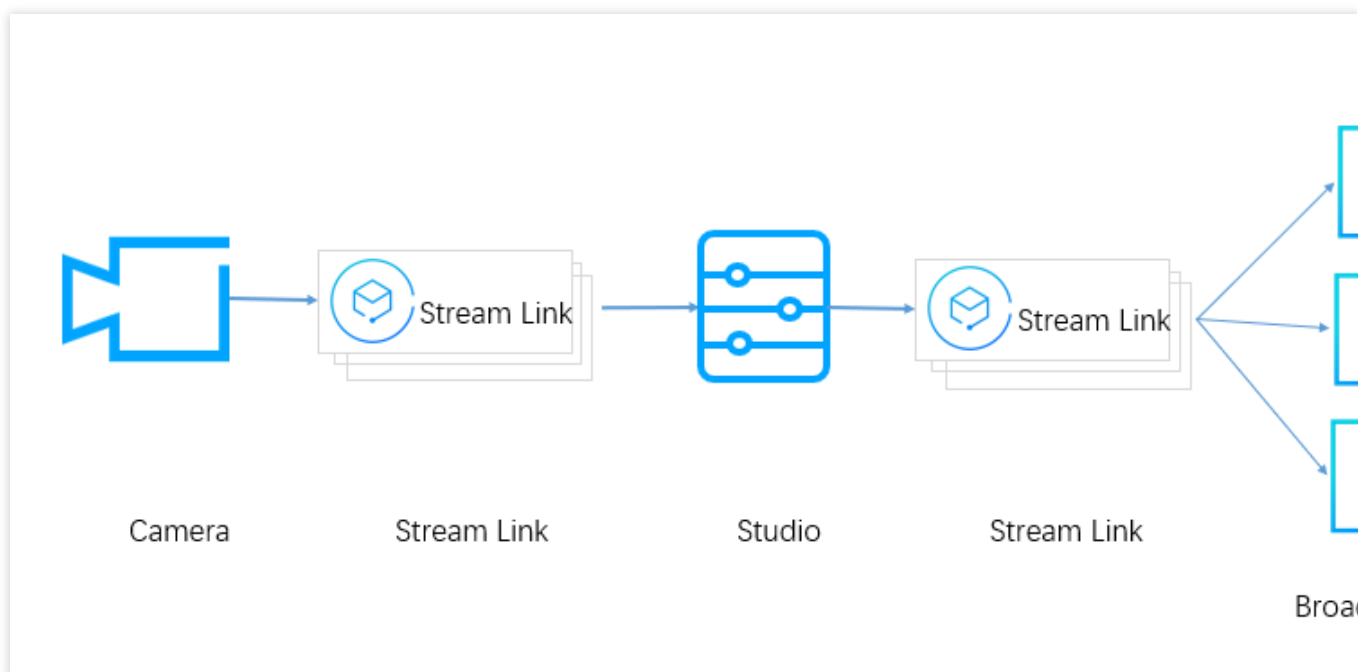
Last updated : 2023-12-23 17:14:52

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.

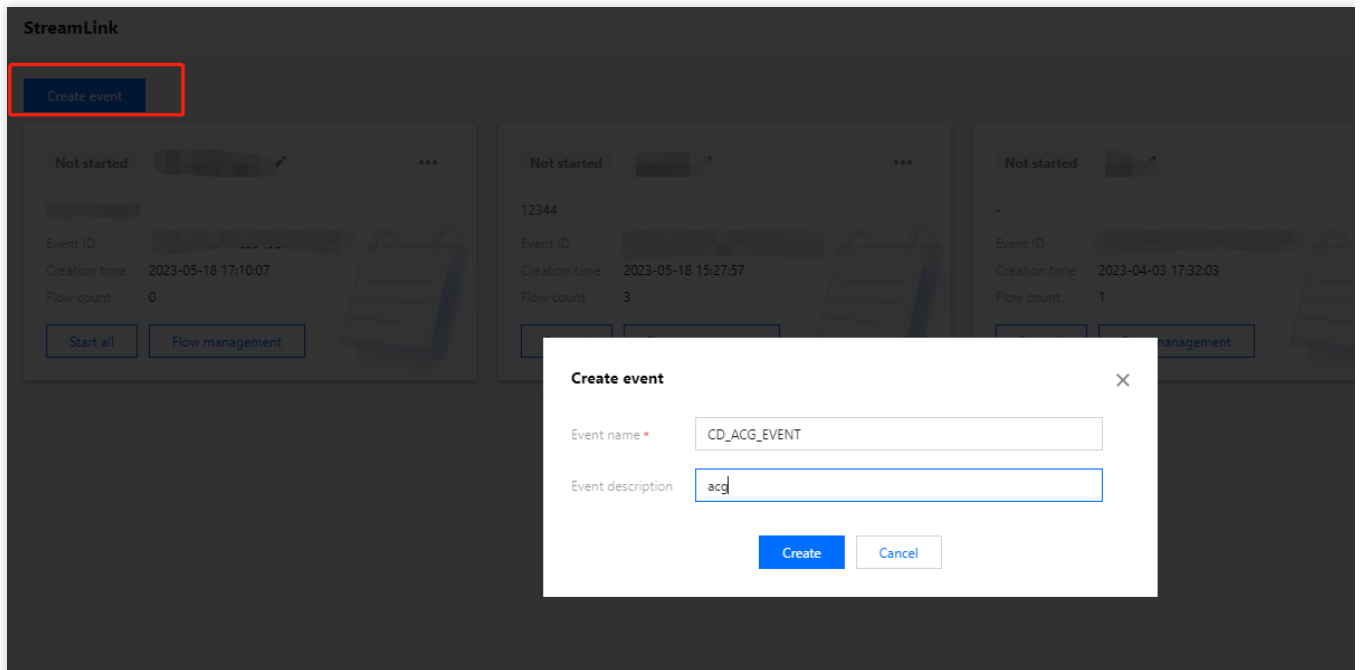
The studio processes the video and distributes the video to live streaming platforms using the SRT protocol.

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

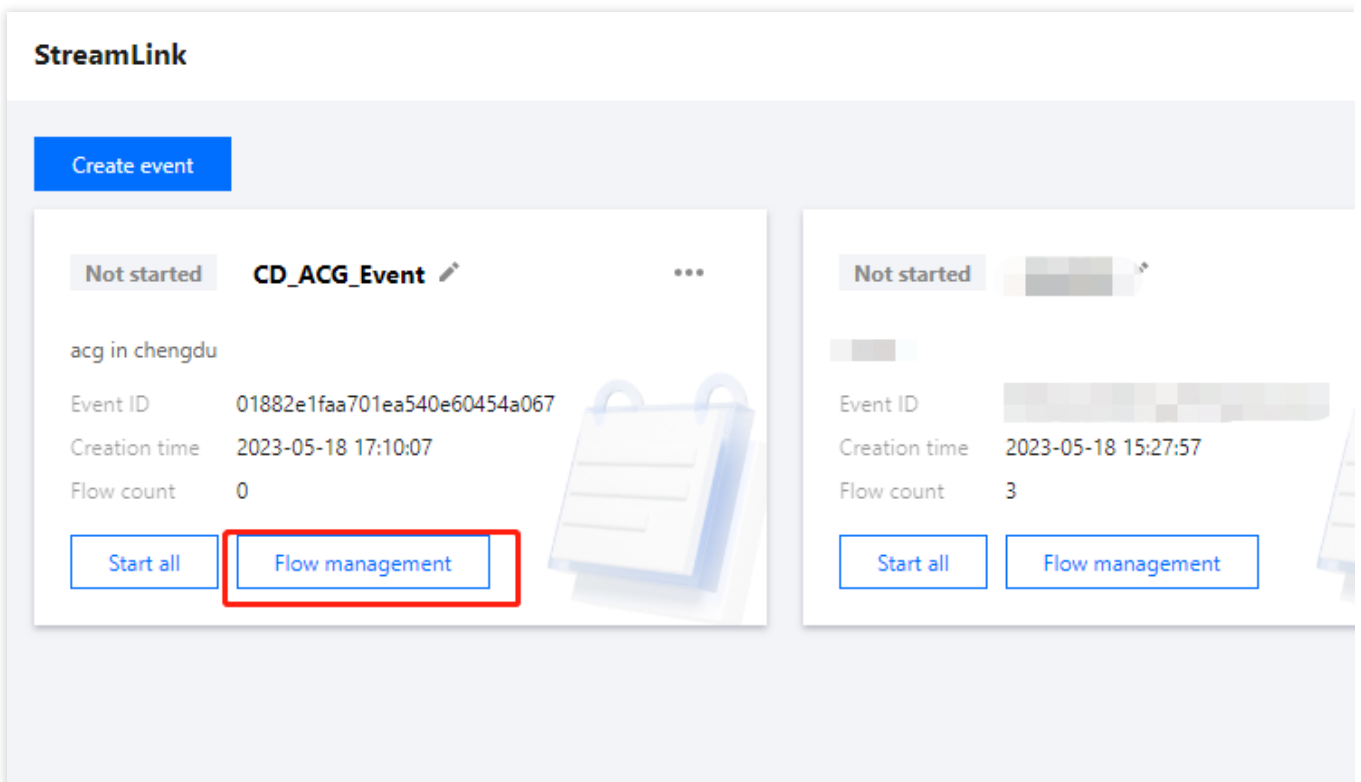
StreamLink Configuration

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.

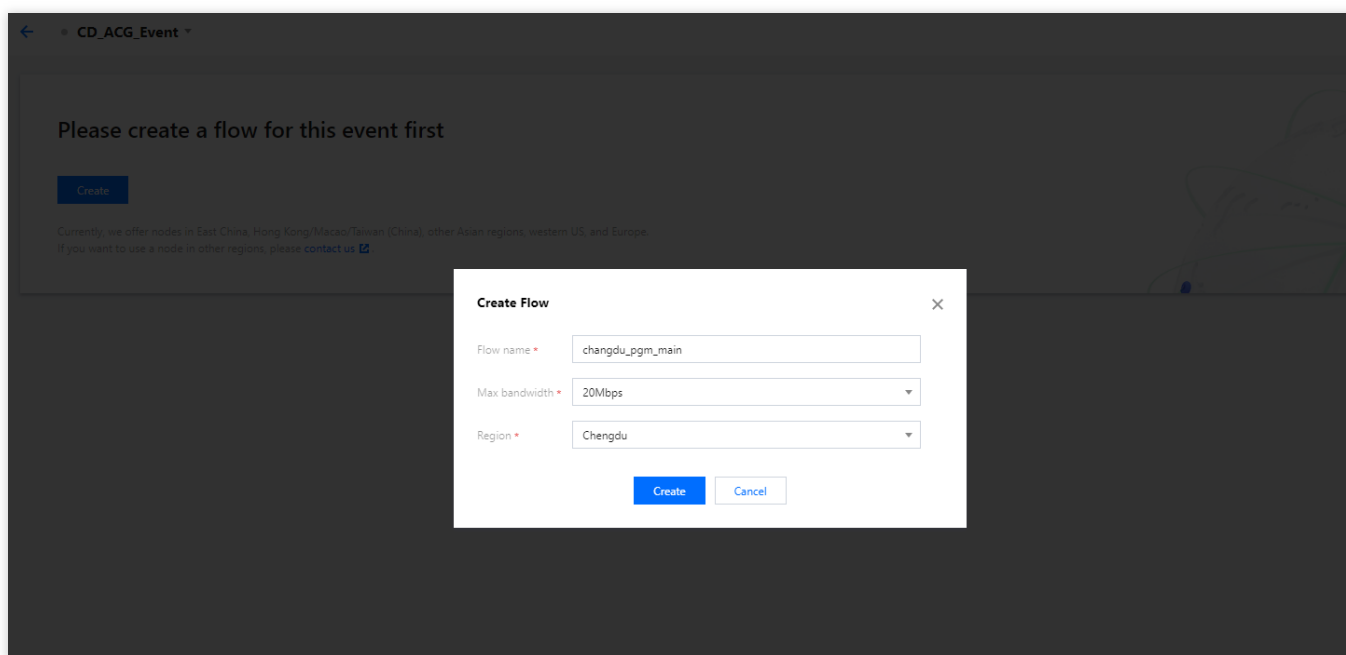


Click **Flow management** to configure the flows.

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 StreamLink interface. On the left, a 'Flows' sidebar contains a search bar for 'Flow ID/name', 'Create' and 'Bulk operations' buttons, and a table listing flows. The table has one entry: 'changdu_pgm_main' with Node 'Chengdu' and Flow ID '01882e281a2409831f170496f0ea'. On the right, the main area shows the details for 'changdu_pgm_main', including its Flow ID, Node, Status ('Not started'), and Max bandwidth ('20 Mbps'). Below this is a world map with various locations marked, and an 'Input/Output' section with a '+ Add input' button.

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

changdu_pgm_main
Flow ID: 01882e281a2409831f170496f0ea Node: ap-chengdu Status: Not started

Create input

Input name *

Input region

Latency setting

Failover

CIDR IP allowlist

Input source description

Protocol type *

Mode *

Decryption settings

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

Input/Output

cd_src (SRT_LISTENER)

Create Output

Output Name *

Output region *

Latency setting ⓘ *

CIDR IP allowlist ⓘ

Protocol type *

Mode *

Enable encryption ⓘ

Output Description

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**.

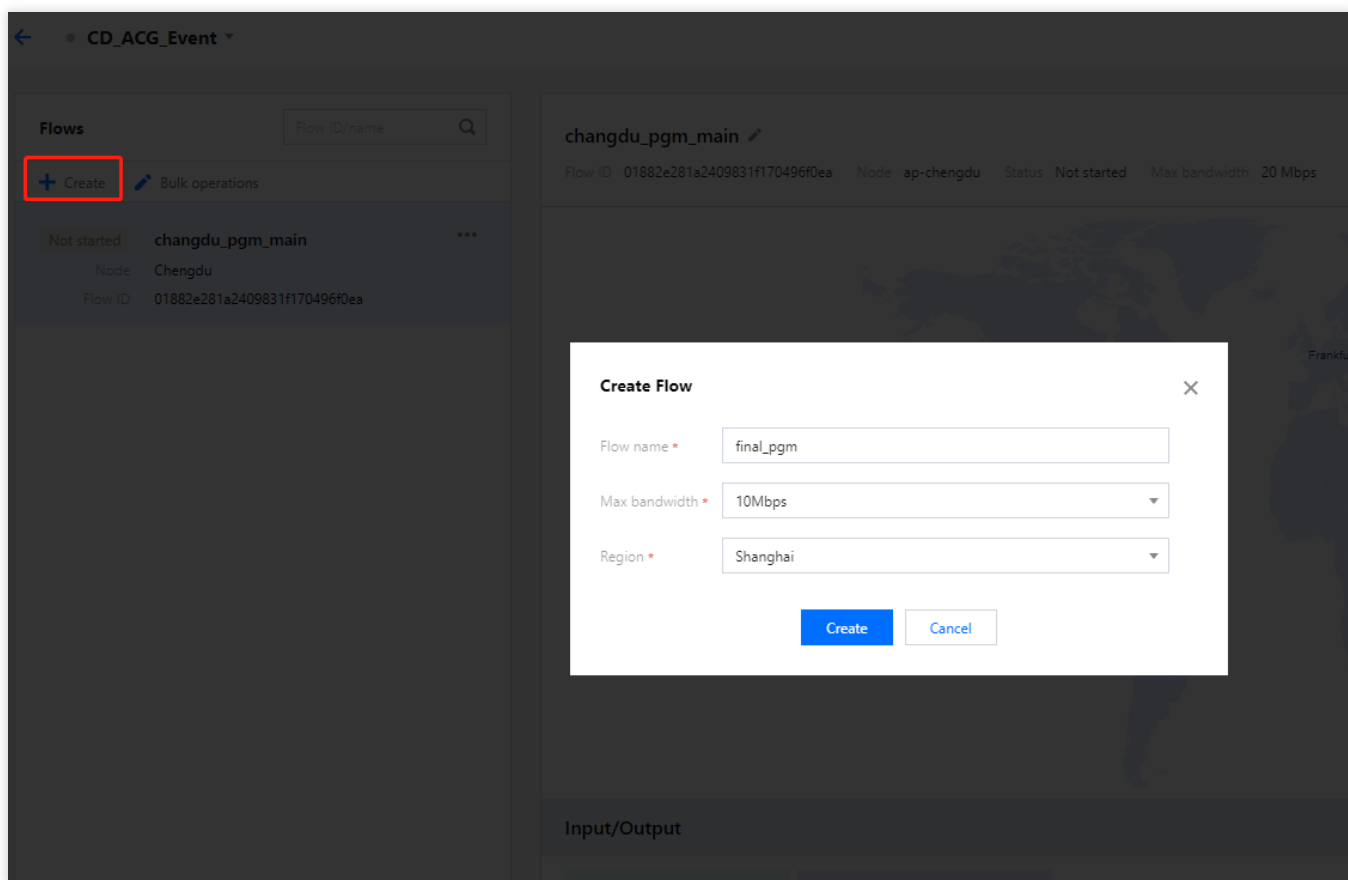
Creating an SRT backup flow

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.

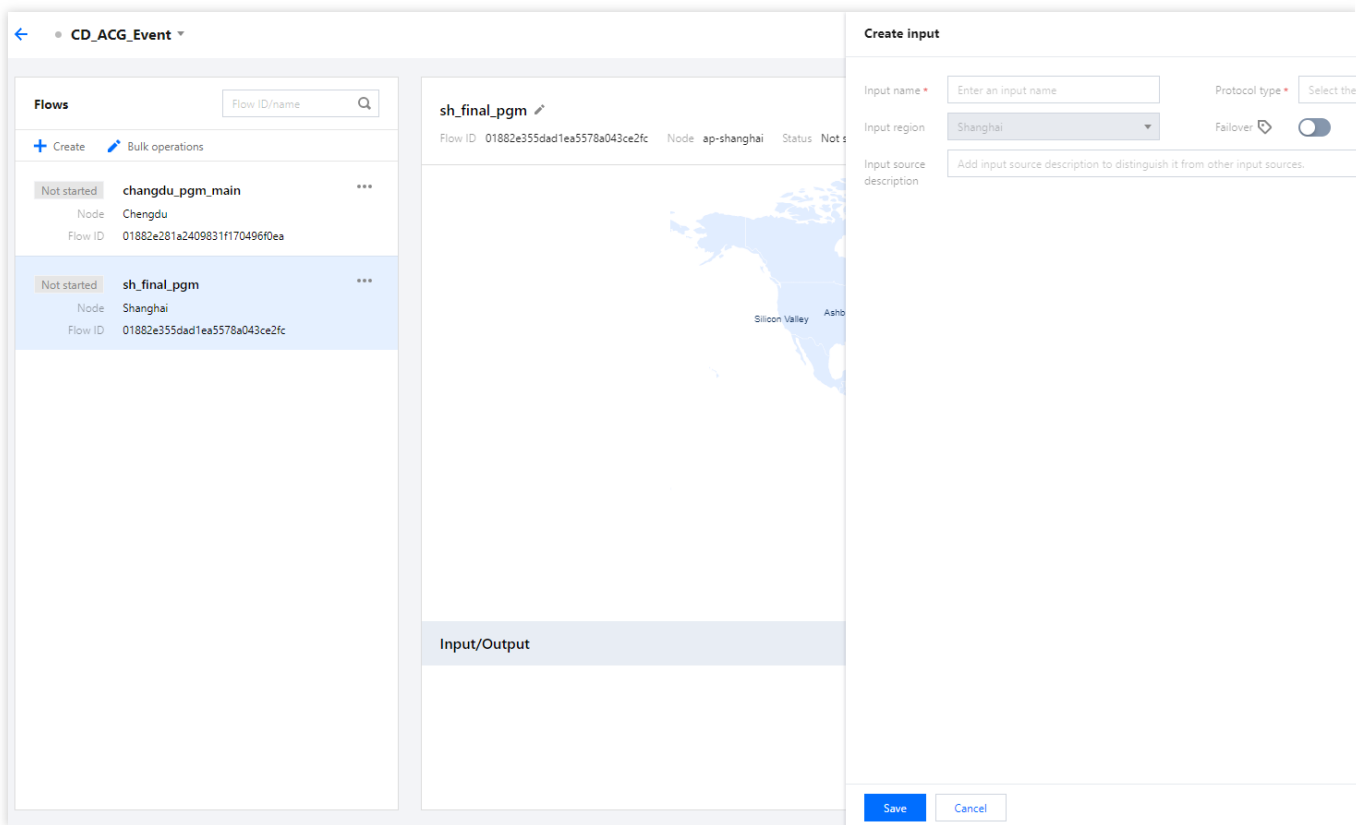
Creating an RTMP failover flow



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.



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.

sh_final_pgm
Flow ID: 01882e355dad1ea5578a043ce2fc Node: ap-shanghai Status: Not started

Create Output

Output Name * Protocol type *

Output region * Max concurrent pulls

CIDR IP allowlist

Output Description

Input/Output

sh_pgm_in (RTMP)

Output Name: The output is named `eu_pgm_platform_a`.

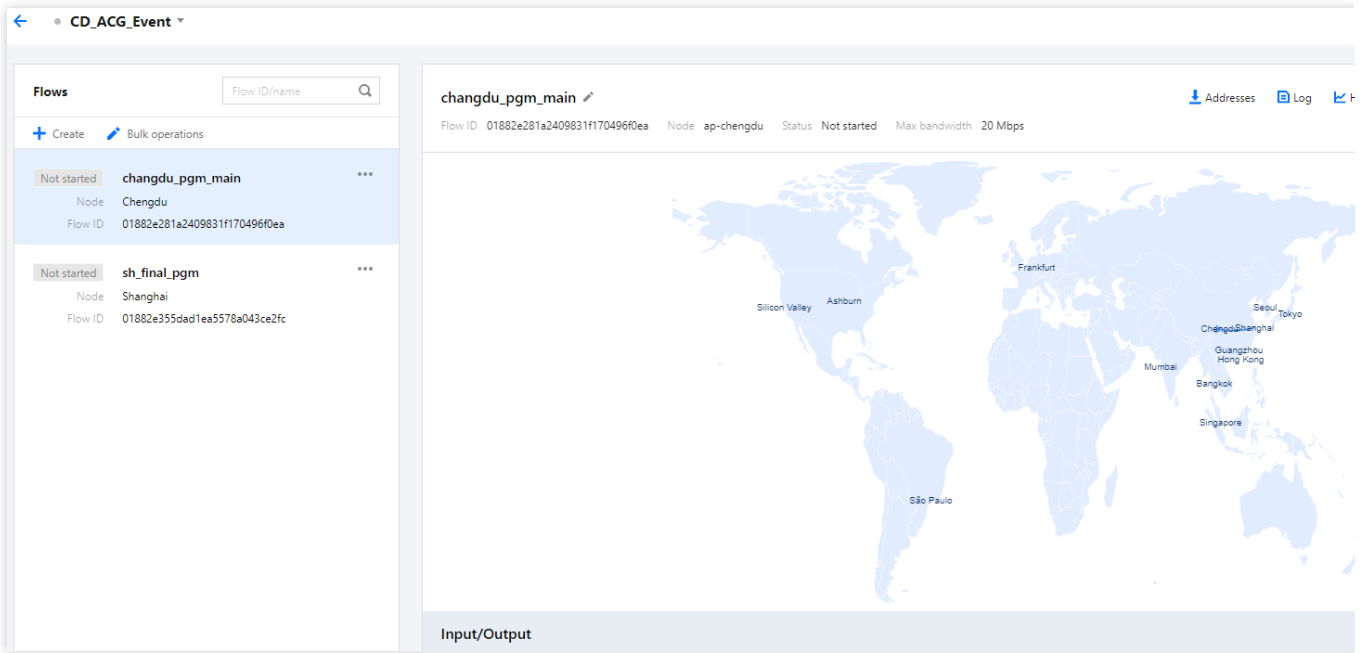
Output region: Select **Frankfurt, Germany**.

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

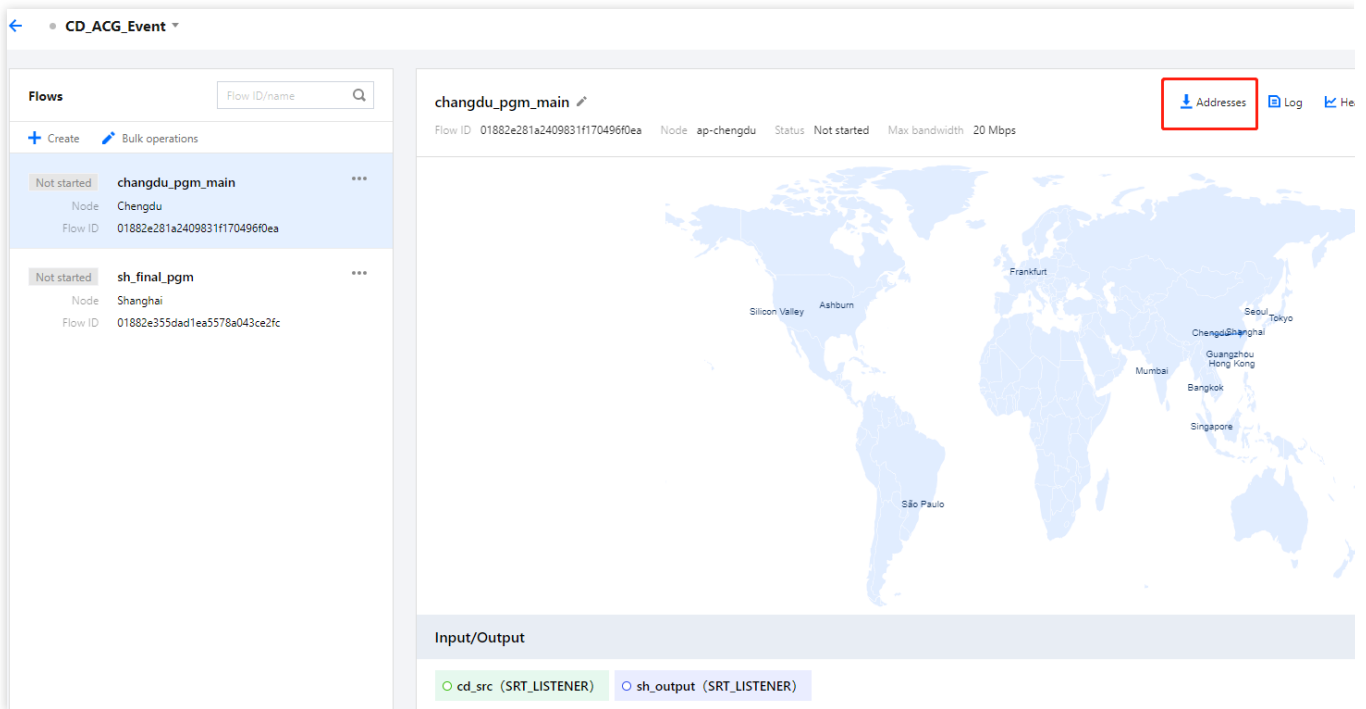


When the event begins, start the flows in the StreamLink console.

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:

The screenshot displays the configuration page for a StreamLink instance named 'changdu_pgm_main'. The left sidebar shows a map of China with 'Silicon Valley' and 'Ashb' highlighted. The main configuration area is titled 'cd_src' and includes the following fields:

- Input name:
- Input region:
- Latency setting:
- Failover:
- CIDR IP allowlist:
- Input source description:

On the right side, there are additional settings:

- Protocol type:
- Mode:
- Decryption settings:

At the bottom, the 'Input/Output' section shows two items:

- cd_src (SRT_LISTENER)
- sh_output (SRT_LISTENER)

Deleting an output:

The screenshot displays the configuration interface for a StreamLink output. On the left, a map shows the location of the output in Shanghai. The main configuration panel on the right includes the following fields:

- Output Name:** sh_output
- Output region:** Shanghai
- Latency setting:** 120
- Max concurrent pulls:** 2
- 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 commas, e.g. 192.168.0.1/24;192.168.1.1/25."
- Output Description:** A text area with a placeholder: "Add output description to distinguish it from other outputs."
- Protocol type:** SRT
- Mode:** Listener
- Enable encryption:** A toggle switch that is currently turned off.

At the bottom left, the "Input/Output" section shows two items: "cd_src (SRT_LISTENER)" and "sh_output (SRT_LISTENER)". The "sh_output" item is highlighted with a red box. At the bottom right, there are three buttons: "Save", "Delete", and "Cancel". The "Delete" button is also highlighted with a red box.

Adding an output:

← • CD_ACG_Event ▾


Flows 🔍

+ 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 [Addresses](#) [Log](#) [↗](#)

Flow ID: 01882e281a2409831f170496f0ea Node: ap-chengdu Status: Running Max bandwidth: 20 Mbps



Input/Output

- cd_src (SRT_LISTENER)
- sh_output (SRT_LISTENER)