

# **StreamLink**

## **Best Practices**

### **Product Documentation**



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# Best Practices

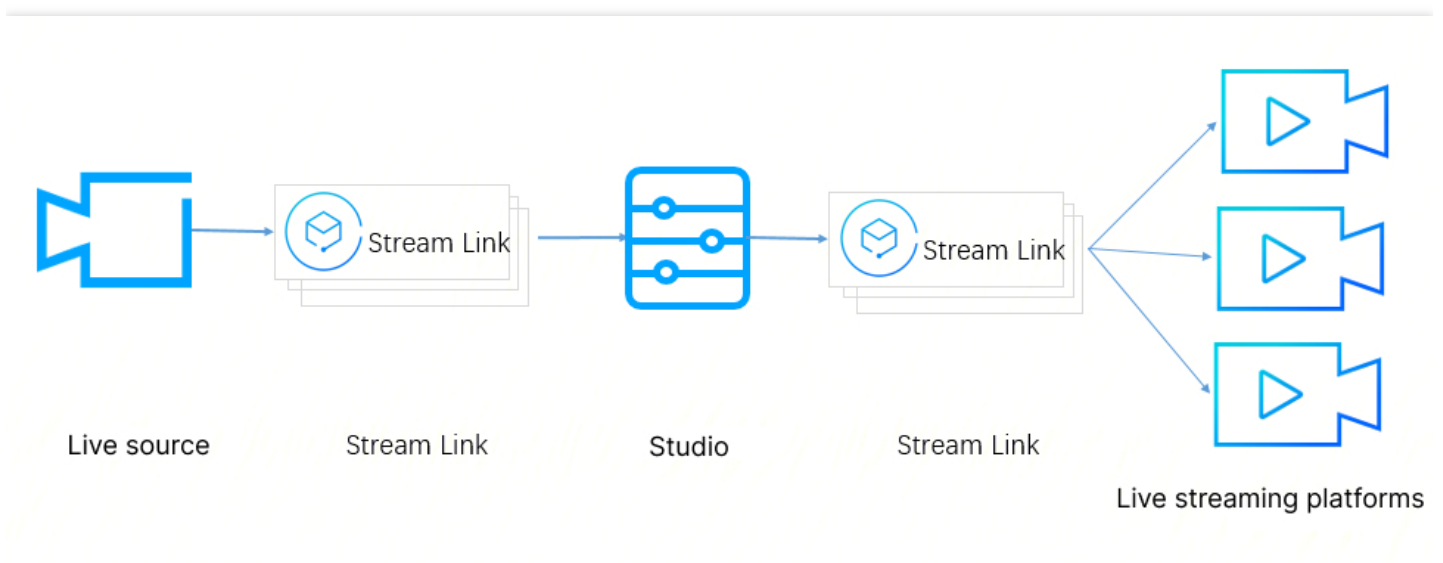
Last updated : 2022-10-17 12:04:34

## 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.

## **1. 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.

Flow Management

Tokyo

Eastern China

Shanghai

Southwest China

Chengdu

Asia

Bangkok

Mumbai

Seoul

Singapore

Tokyo

Hong Kong/Macau/Taiwan (China)

Hong Kong, China

Western US

Silicon Valley

Eastern US

Ashburn

South America

Sao Paulo, Brazil

<input type="checkbox"/>	rtp	017bce4faf4b09df731058d50445	IDLE	RTP
<input type="checkbox"/>	rtmp	017bce4f7c9d09df731058d50443	IDLE	RTMP

Total: 4, Selected: 0.

[←](#) **Create Flow**

**Basic information**

Name \*

chengdu\_main\_ori\_stream

✓

Max bandwidth \*

20Mbps

✓

**Input Source**

Source Name \*

chengdu\_main\_ori\_stream

✓

Protocol type \*

SRT

✓

Mode \*

Listener

✓

Latency Setting ⓘ \*

60

ms

✓

Decryption Settings ⓘ

☐

Failover ⓘ

☐

CIDR IP allowlist ⓘ

202.119.23.5/28

✓

Input source description

Add input source description to distinguish it from other input sources.

Create

Cancel

- **Name:** The flow is named `chengdu_main_ori_stream`.
- **Max Bandwidth:** Because the bitrate of the source video is high, **20Mbps** is selected.
- **Protocol:** Select **SRT**.
- **Mode:** Select **Listener**. The live video will be sent to StreamLink directly.
- **Latency:** 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 **Create**.

## 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.

The screenshot shows the 'Create Output' dialog box in the Tencent Cloud StreamLink console. The dialog is titled 'Create Output' and has a close button (X) in the top right corner. It contains the following fields and values:

- Output Name \***: shanghai\_main\_output (with a green checkmark)
- Output Region \***: Shanghai, China (with a green checkmark)
- Output Protocol \***: SRT (with a green checkmark)
- Mode \***: Listener (with a green checkmark)
- Latency Setting (i) \***: 60 ms (with a green checkmark)
- Enable Encryption (i)**: Disabled (toggle switch)
- CIDR IP allowlist (i)**: 100.25.36.9/28 (with a green checkmark)
- Output Description**: Add output description to distinguish it from other outputs. (text area)

At the bottom of the dialog, there is a link: [Contact us](#) for more output regions. Below the link are two buttons: **Confirm** (highlighted in blue) and **Cancel**.

- **Output Name:** The output is named `shanghai_main_output`.
- **Output Region:** To keep the latency low, Shanghai is selected.
- **Output Protocol:** 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 **Confirm**.

### Creating an SRT backup flow

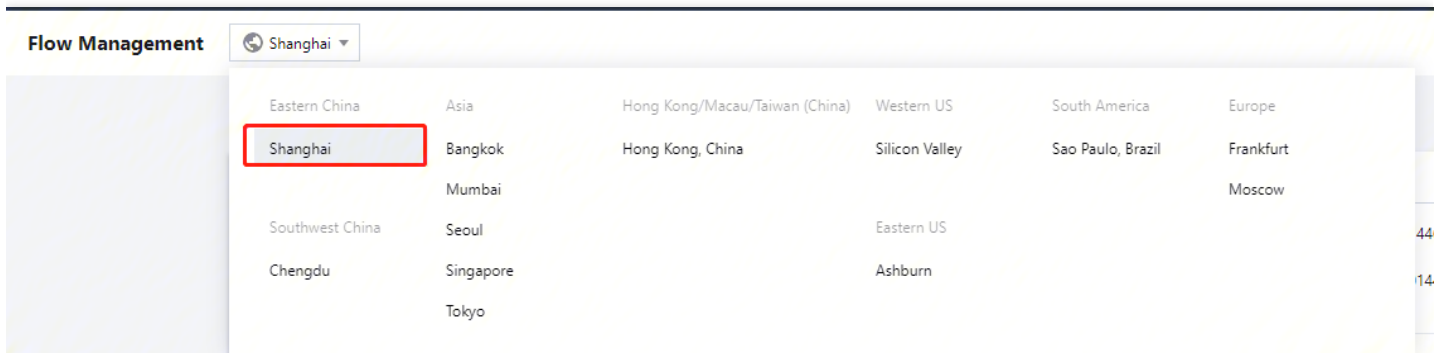
The steps of creating a backup flow are the same as those for the main flow.

## 2. 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.





 **Create Flow**

**Basic information**

Name \*

pgm\_main

✓

Max bandwidth \*

10Mbps

▼

✓

**Input Source**

Source Name \*

pgm\_main


✓

Protocol type \*


RTMP

▼

✓

Failover 

☒

CIDR IP allowlist 

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

Input source description

Add input source description to distinguish it from other input sources.

Create

Cancel

- **Name:** The flow is named `pgm_main`.
- **Max Bandwidth:** Because the bitrate of the processed video is lower, **10Mbps** is selected.
- **Protocol:** 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 **Create**.

### 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.

The screenshot shows the 'Create Output' dialog box in the Tencent Cloud console. The dialog is titled 'Create Output' and has a close button (X) in the top right corner. It contains the following fields and values:

- Output Name \***: eu\_pgm\_platform\_a (with a green checkmark icon)
- Output Region \***: Frankfurt, Germany (with a green checkmark icon)
- Output Protocol \***: RTMP\_PULL (with a green checkmark icon)
- CIDR IP allowlist ⓘ**: 153.23.6.9/28 (with a green checkmark icon)
- Output Description**: Add output description to distinguish it from other outputs. (with a green checkmark icon)

At the bottom of the dialog, there is a link: [Contact us](#) for more output regions. Below the link are two buttons: **Confirm** and **Cancel**.

- **Output Name:** The output is named `eu_pgm_platform_a`.
- **Output Region:** Select **Frankfurt, Germany**.
- **Output Protocol:** 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.

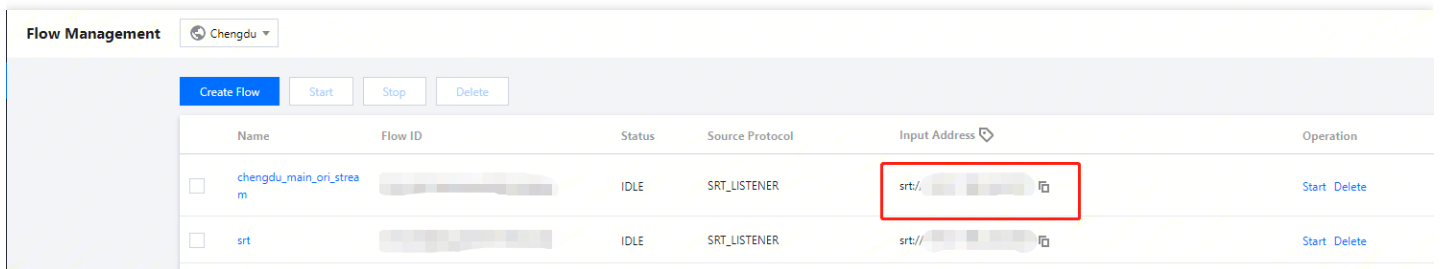
Click **Confirm**.

### 3. Obtaining the playback URL

#### Push URL

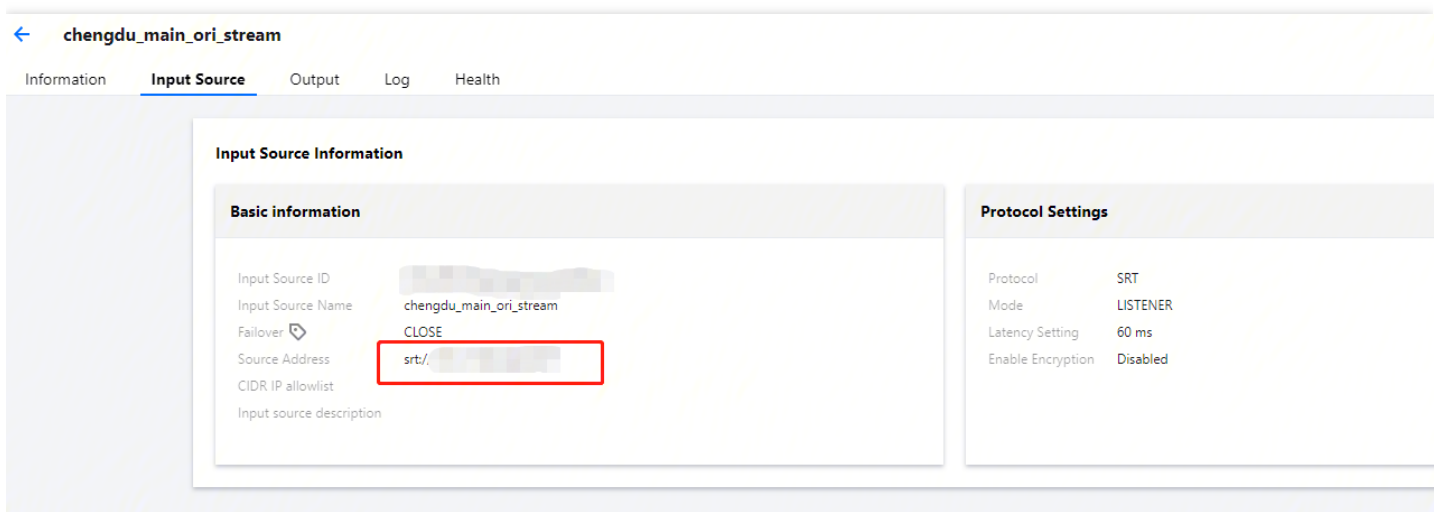
You can view the URL for pushing the stream to live streaming platforms on the **Flow Management** page or the **Input Source Information** page.

From **Flow Management**:



Flow Management						
Chengdu						
<a href="#">Create Flow</a> <a href="#">Start</a> <a href="#">Stop</a> <a href="#">Delete</a>						
	Name	Flow ID	Status	Source Protocol	Input Address	Operation
<input type="checkbox"/>	chengdu_main_ori_stream		IDLE	SRT_LISTENER	srt:// [redacted]	<a href="#">Start</a> <a href="#">Delete</a>
<input type="checkbox"/>	srt		IDLE	SRT_LISTENER	srt:// [redacted]	<a href="#">Start</a> <a href="#">Delete</a>

From **Input Source Information**:



← chengdu\_main\_ori\_stream

Information **Input Source** Output Log Health

### Input Source Information

#### Basic information

Input Source ID: [redacted]

Input Source Name: chengdu\_main\_ori\_stream

Failover: CLOSE

Source Address: srt:// [redacted]

CIDR IP allowlist: [redacted]

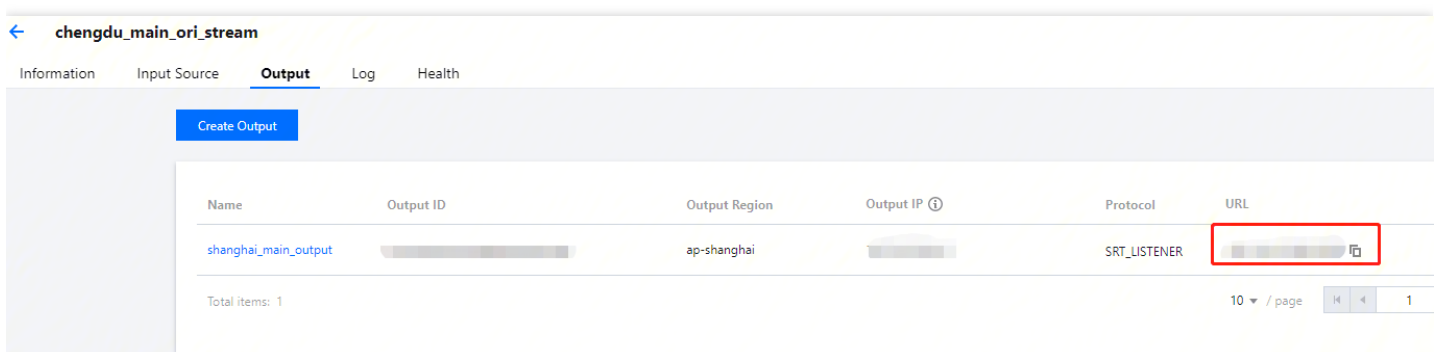
Input source description: [redacted]

#### Protocol Settings

Protocol	SRT
Mode	LISTENER
Latency Setting	60 ms
Enable Encryption	Disabled

## Playback URL

You can view the playback URL in the output list:



chengdu_main_ori_stream					
Information Input Source <b>Output</b> Log Health					
<a href="#">Create Output</a>					
	Name	Output ID	Output Region	Output IP	URL
	shanghai_main_output		ap-shanghai	[redacted]	[redacted]

Total items: 1

10 / page

## 4. Starting the flows

Chengdu

Create Flow Start Stop Delete

Name	Flow ID	Status	Source Protocol	Input Address	Operation
<input type="checkbox"/> chengdu_main_ori_stream		IDLE	SRT_LISTENER	srt://	<div>Start Delete</div>
<input type="checkbox"/> srt		IDLE	SRT_LISTENER	srt://	<div>Start Delete</div>

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

## 5. Dynamically changing the flow settings

During live streaming, you can change the settings of a flow without stopping the flow.

Modifying the input CIDR allowlist:

chengdu\_main\_ori\_stream

Information Input Source Output Log Health

Input Source Information

Basic information

Input Source ID

0182c568

Input Source Name

chengdu

Fallover

CLOSE

Source Address

srt://119.28.11.11

CIDR IP allowlist

Input source description

Edit Input Information

Source Name \*

chengdu\_main\_ori\_stream

Fallover

Protocol type \*

SRT

Mode \*

Listener

Latency Setting \*

60ms

Enable Encryption

CIDR IP allowlist

118.23.56.32/28

Input source description

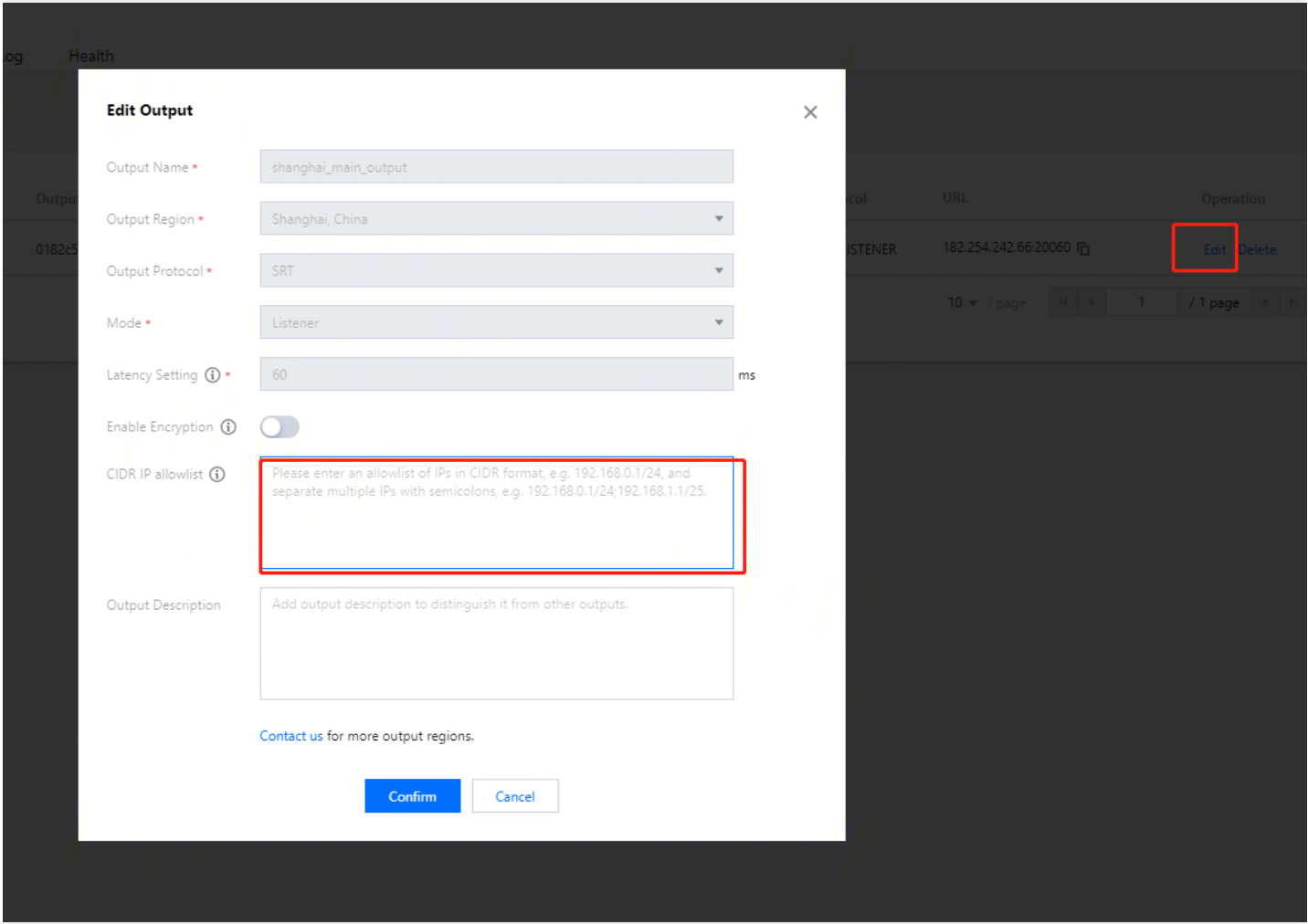
Add input source description to distinguish it from other input sources.

Confirm

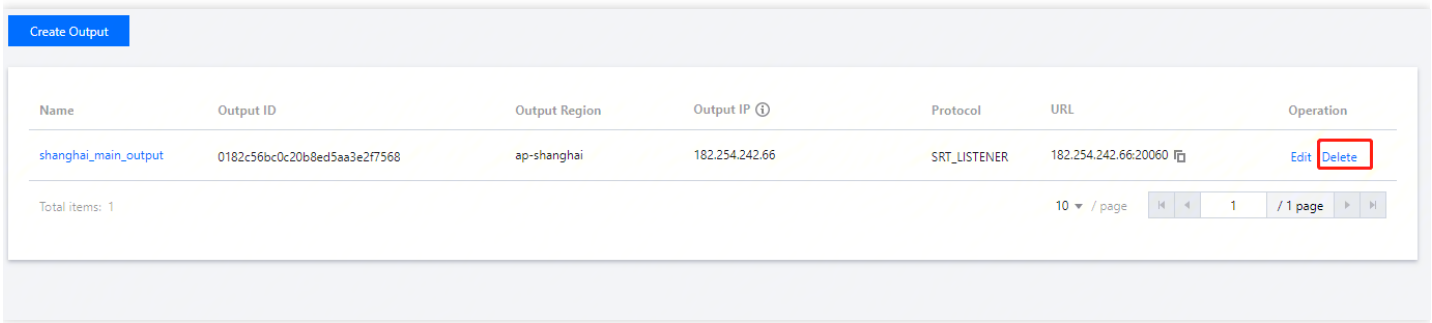
Cancel

Edit

Modifying the output CIDR allowlist:



Deleting an output:



Adding an output:

