Send a stream from Wowza Streaming Engine to Wowza Streaming Cloud for transcoding

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The Stream Targets feature in Wowza Streaming Engine™ media server software allows you to send live streams to widely distributed destinations. You can, for example, send a live stream from a Wowza Streaming Engine instance to the Wowza Streaming Cloud™ service, which transcodes and delivers the stream to viewers.

This article explains how to send a live stream from Wowza Streaming Engine to Wowza Streaming Cloud for transcoding and delivery over the Wowza CDN on Akamai edge network to viewers.

Notes:

- Using stream targets requires Wowza Streaming Engine 4.2 or later and a Wowza Streaming Cloud subscription.
- Wowza Streaming Engine 4.7.4 has a known error that may break the stream target functionality for sending streams to Wowza Streaming Cloud for transcoding. We recommend updating to Wowza Streaming Engine 4.7.5 or later. For more information, see Wowza Streaming Engine 4.7.4 may experience problems sending streams to Wowza Streaming Cloud for transcoding.
- **Important**: For additional options for streaming to Wowza Streaming Cloud and delivering the stream to viewers over the Wowza CDN edge network, see Scaling Wowza Streaming Engine with Wowza CDN.
Configure Wowza Streaming Cloud to receive and distribute the stream

Start by creating a live stream in Wowza Streaming Cloud that uses Wowza Streaming Engine as the video source.

1. Sign in to Wowza Streaming Cloud.
2. Click the Live Streams tab, and then click Add Live Stream.
3. On the Live Stream Setup page, enter a Live Stream Name, choose a Broadcast Location, and then click Next.
4. On the Video Source and Transcoder Settings page, select Wowza Streaming Engine as the source you want to use to connect to Wowza Streaming Cloud.
5. Under Do you want to stream directly to Wowza Streaming Cloud CDN?, select No. By selecting No, you allow Wowza Streaming Cloud to transcode the stream and deliver the stream to one or more stream targets.
6. Specify other video source settings, click Next, and complete the steps to finish creating the live stream.

**Note:** For more information about live stream settings, see Add a live stream.

Wowza Streaming Cloud creates the live stream and displays the Overview tab of the live stream detail page. You’ll use the Connection Code that appears under the
**Video Snapshot** when you configure the live application in Wowza Streaming Engine. The **Connection Code** begins with a 0 when Wowza Streaming Cloud is configured to transcode and deliver your stream to viewers.

![Connection Code]

Create an application in Wowza Streaming Engine to ingest the live source video

Next, create a live application in Wowza Streaming Engine that will receive the live stream from an H.264 encoder or camera and send it to Wowza Streaming Cloud for distributed delivery.

1. Sign in to the Wowza Streaming Engine Manager, click the **Applications** tab at the top of the page, and then click **live** in the contents panel.

   **Note:** This article uses the **live** application that installs with Wowza Streaming Engine. If you want to use a different live application, select it instead from the contents panel.

2. In the contents panel, click **Sources (Live)**.
3. Select the camera or encoder that you want to use as your video source, and complete the process of connecting the source to Wowza Streaming Engine. For more information, see [Managing live source authentication settings](#).

   **Note:** By default, Wowza Streaming Engine requires RTMP and RTSP sources to provide a user name and password to connect to a live application. For information on how to turn off authentication, see [Managing live source authentication settings](#).

Create a stream target to send a single-bitrate stream to Wowza Streaming Cloud
After the live application is created in Wowza Streaming Engine, it must be configured to send the stream to Wowza Streaming Cloud.

1. In the contents panel, click Stream Targets and then click Add Stream Target.
2. On the Add Stream Target page under Wowza Target Destinations, select Wowza Streaming Cloud.
3. On the Wowza Streaming Cloud Configuration page, provide the following:
   - **Stream Target Name** - A descriptive name for this target setup in Wowza Streaming Engine. The name must be unique and can’t contain less-than (<), greater-than (>), colon (:), quotation (’ and “), forward slash (/), backslash (), pipe (|), question mark (?), asterisk (*), double-dot (..), or tilde (~) characters.
   - **Connection Code** - The six-digit code generated by Wowza Streaming Cloud that’s available on the Overview tab of the live stream detail page in Wowza Streaming Cloud.
4. After entering the Connection Code, click Check Code and then specify the following:
   - **Source Stream Name** - The name of the incoming stream that you specified in Wowza Streaming Engine when you set up the video source.
   - **Start Wowza Streaming Cloud service automatically** - If you want Wowza Streaming Engine to try to start the transcoder in Wowza Streaming Cloud immediately and publish the source stream, select the Start Wowza Streaming Cloud service automatically check box. If it isn’t selected, you must start the transcoder manually in the web-based Wowza Streaming Cloud manager before the source stream is published.
5. Click Add this target.

**Enable Stream Targets**

Before you stream, you must enable the Stream Targets feature for the Wowza Streaming Engine application and the stream target you created.

If you don’t see a checkmark next to Stream Targets in the contents panel of the application, click Stream Targets in the contents panel and then click Enable Stream Targets. When prompted, click Restart Now so your change takes effect.
When Stream Targets is enabled, a checkmark appears next to **Stream Targets** in the contents panel and the **Stream Targets** page shows **Status** is **Enabled**.

If the **Status** of an individual stream target is **Disabled**, click the **Enable** icon for the stream in the **Actions** column.

When a stream target is enabled, its status on the **Stream Targets** page is one of the following:

- **Starting**. Wowza Streaming Engine is trying to start the transcoder in Wowza Streaming Cloud and publish the source stream.
- **Waiting**. The target is enabled but is not yet pushing the stream to the Wowza Streaming Cloud destination because the target’s configured source stream is not connected to the Wowza Streaming Engine input, Wowza Streaming Engine has not completed initialization of the connection to the Wowza Streaming Cloud destination, or the transcoder needs to be manually started in the web-based Wowza Streaming Cloud manager.
- **Active**. The Wowza Streaming Cloud target configuration has been successfully retrieved and the stream is being pushed to the Wowza Streaming Cloud destination with the appropriate streaming protocol.
- **Error**. Wowza Streaming Engine unsuccessfully tried to retrieve the Wowza Streaming Cloud target configuration and initiate streaming to the target destination. Errors might be due to an issue with the Wowza Streaming Cloud
service, general connectivity issues, or an invalid target configuration such as an invalid **Connection Code**.

The status of each stream target updates automatically if your Wowza Streaming Engine application has fewer than 100 stream targets. If your application has more than 100 stream targets, you can click **Refresh** to update the status.

**Test the connection**

1. If you didn’t select the **Start Wowza Streaming Cloud service automatically** setting when configuring the stream target in Wowza Streaming Engine, start the live stream in the Wowza Streaming Cloud web manager.
2. Start the stream in the H.264 camera or encoder that’s sending the stream to the **live** application in Wowza Streaming Engine.

   The **live** application ingests the live stream and sends it to Wowza Streaming Cloud.

3. In Wowza Streaming Engine Manager, verify that the stream is published by clicking **Incoming Streams** for the **live** application, and then clicking the stream name.

   The stream detail page displays the **Status** of the stream (**Active**) as well as details about connections, uptime, and throughput for the published stream.

4. In the Wowza Streaming Cloud web manager, confirm that the live stream is playing by looking at the **Video Thumbnail** in the **Overview** tab of the live stream detail page.

   The video thumbnail displays a frame from the live stream every 5 seconds. The started date and time appear under the thumbnail. Source stream, transcoder, and delivery metrics begin to update.
5. In Wowza Streaming Cloud, click **Stop Stream** at the top of the live stream detail page to end your test stream, and then stop the stream in the source camera or encoder.

**More resources**

- Use CDNs and services to distribute live streams from Wowza Streaming Engine
- Sample map file entries for Stream Target destinations (push publishing)
- Wowza Streaming Cloud user guide
- Encoding best practices for Wowza Streaming Cloud
- Protect a Wowza CDN on Akamai stream target with token authorization in Wowza Streaming Cloud
- Geo-block Wowza CDN on Akamai stream targets in Wowza Streaming Cloud
- Manage HLS playback over SSL in Wowza Streaming Cloud
- View usage for a stream target
- See viewer data for a stream target