Send a stream from Wowza Streaming Engine to an existing Wowza CDN target in Wowza Streaming Cloud

Originally Published on 12/14/2018 | Updated on 12/19/2019 9:19 am PST

With Wowza Streaming Engine™ media server software version 4.3 and later and a Wowza Streaming Cloud™ or Wowza CDN™ subscription, you can use the Stream Targets feature to send a single stream or a group of transcoded renditions of a live stream to an existing Wowza CDN on Akamai HLS target in Wowza Streaming Cloud. This allows you to bypass transcoding in Wowza Streaming Cloud and just use the service’s edge network to deliver the stream to viewers.

This article explains how to send a live stream or a group of transcoded live stream renditions from Wowza Streaming Engine to a Wowza CDN on Akamai stream target in Wowza Streaming Cloud over HLS.

Notes:

- Sending streams to Wowza CDN targets in Wowza Streaming Cloud requires Wowza Streaming Engine 4.3 or later and a Wowza Streaming Cloud or Wowza CDN subscription.
- To stream to Wowza CDN, we recommend using Wowza Streaming Engine 4.7 or later (see Stream to Wowza CDN from Wowza Streaming Engine). If you can’t update to 4.7 or later, you can use this article’s workflow with Wowza Streaming Engine versions 4.3 to 4.6 to send streams to a Wowza CDN target in Wowza Streaming Cloud for delivery over the edge network.
Configure an existing Wowza CDN on Akamai target in Wowza Streaming Cloud to receive and distribute the stream(s)

Start by signing into Wowza Streaming Cloud and viewing the details for the existing target.

1. Sign in to Wowza Streaming Cloud.
2. Click Advanced on the menu bar, click Stream Targets, and then select a Wowza CDN on Akamai - HLS target.

   **Note:** If you don't have an existing Wowza CDN target in Wowza Streaming Cloud, see Add a Wowza CDN on Akamai target for HLS playback.

3. On the target’s Setup tab, notice the six-digit Connection Code. The code, which begins with a 1, is used to connect the target to Wowza Streaming Engine and allow the stream to bypass the transcoder and go directly to the Wowza CDN target for delivery. If the connection code has been used, click Regenerate Connection Code.

   You’ll need the connection code when configuring Wowza Streaming Engine to send the stream to Wowza Streaming Cloud.
**Note:** For additional customization and configuration options for Wowza CDN on Akamai targets in Wowza Streaming Cloud, see:

- 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 for Wowza CDN on Akamai in Wowza Streaming Cloud
- View usage for a stream target
Create a live 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**.

(Optional) Configure Wowza Streaming Engine to transcode the source stream

Next, if you want to transcode the source stream in Wowza Streaming Engine and send a group of transcoded renditions to a Wowza Streaming Cloud CDN endpoint, enable the Transcoder and configure the transcoder templates.

**Note:** If you’re sending the source stream directly to Wowza Streaming Cloud CDN (without transcoding it in Wowza Streaming Engine), this isn’t necessary. Skip ahead to **Create a stream target to send a stream or group of renditions to Wowza Streaming Cloud CDN endpoints**.
To ensure that the stream renditions are sent as a group, append the same name to the beginning of each **Encoding Preset** in the transcoder template and then enter that prefix in the **Source Stream Name Prefix** field when creating the stream target.

For more information, see [Set up and run Transcoder in Wowza Streaming Engine](#).

Create a stream target to send a stream or group of renditions to the Wowza CDN target in Wowza Streaming Cloud

After creating an application (and optionally enabling the Transcoder feature in Wowza Streaming Engine), you must create a stream target to send the stream or group of transcoded stream renditions to the Wowza CDN target in Wowza Streaming Cloud.

1. In the contents panel of Wowza Streaming Engine Manager, 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 information:

   - **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 on the **Setup** tab of the Wowza CDN target's detail page in Wowza Streaming Cloud.
4. After entering the connection code, click **Check Code** and then specify the following:

   - **Streaming Bitrates** - The number of bitrate renditions of the stream that will be sent to the destination. Select **Multiple adaptive-bitrate streams** to send a group of renditions for adaptive bitrate (ABR) playback or **Single bitrate stream** to send a single rendition of the stream.
   - **Source Stream Name** or **Source Stream Name Prefix** - For a single
stream, enter the name of the incoming stream that you specified in Wowza Streaming Engine when you set up the video source (the Stream Name from the Sources (Live) setup). For a multi-bitrate stream, enter the prefix appended to the beginning of each Encoding preset in the transcoder template used to create the group of renditions.

- **Destination Server** - The destination entry point that the stream will be sent to. You can send the stream to the primary entry point, the backup entry point, or to both the primary and backup (redundant) entry points.

5. Click **Add this target**.

Enable the Wowza Streaming Engine stream target

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:

- **Waiting.** The target is enabled but isn’t yet pushing any of the transcoded stream renditions to the Wowza Streaming Cloud destination for one of the following reasons:
  - The original source stream isn’t connected to the Wowza Streaming Engine input, so the transcoded renditions aren’t being generated.
  - The target’s configured **Source Stream Name Prefix** doesn’t match the beginning of any of the transcoded stream names.
  - Wowza Streaming Engine hasn’t completed initialization of the streaming connections to the Wowza Streaming Cloud destination.
- **Active.** The Wowza Streaming Cloud target configuration has been successfully retrieved and all of the transcoded stream renditions are 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

Streams sent directly to Wowza Streaming Cloud CDN endpoints for distributed delivery must be started and managed in the Wowza Streaming Engine Manager. Video thumbnails and real-time data aren’t available in Wowza Streaming Cloud, but you can test the stream using the target’s direct playback URL.
1. 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.

2. 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.

3. In Wowza Streaming Cloud, confirm that the stream is playing by copying the HLS Playback URL from the Setup tab of the Wowza CDN on Akamai - HLS target's detail page and pasting it into a test player such as the Wowza Test Players.

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