Add and manage stream targets in Wowza Streaming Cloud

About stream targets

A stream target is a destination for a stream. Stream targets can be Wowza Streaming Cloud™ edge resources or custom, external destinations. Stream targets let you create more flexible, scalable streaming workflows. For example, you can use Wowza Streaming Cloud to transcode source video into adaptive bitrate output renditions, and then have an external CDN such as Limelight Networks deliver the stream rather than have Wowza Streaming Cloud deliver the content to viewers. You can also send source video from an encoder directly to a Wowza CDN target, bypassing the Wowza Streaming Cloud transcoder but using the Wowza CDN target to deliver the content. Or, broadcast a stream to Facebook with a Facebook Live target.

Wowza Streaming Cloud also offers LinkedIn Live stream targets in private preview release. See Stream to LinkedIn Live from Wowza Streaming Cloud.

**Note:** You can add up to 10 stream targets in a three-hour period.

Add a Wowza CDN on Fastly target for HLS playback

A Wowza CDN on Fastly target receives and delivers the stream through a Wowza CDN resource over HLS. This type of target allows playback over iOS, Android, smart TVs, and HTML5-based players.

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Click **Add Target**, select **Wowza CDN on Fastly**, and then click **Add**.
3. Specify the **Target Name**.

   The **Target Name** is required but doesn't have to be unique, and it can't be longer than 255 characters.

   Wowza Streaming Cloud generates a target and displays the target detail page, which shows the target's HLS Playback URL.

Add an ultra low latency target

An ultra low latency target receives the source stream at an origin server and delivers the stream through a Wowza CDN resource using WOWZ over WebSockets. It includes an optional HLS stream for fallback. This type of target has latency of under three seconds and allows playback on iOS and Android using GoCoder SDK or browser-based playback with Wowza Player.

Ultra low latency stream targets are available through subscription to **Wowza Streaming Cloud with Ultra Low Latency**. For more information, see About ultra low latency streaming with Wowza Streaming Cloud.

To add an ultra low latency target, follow these steps:

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Click **Add Target**, select **Wowza CDN - Ultra Low Latency**, and then click **Add**.
3. On the **Add a Wowza CDN - ULL target** page, specify the following:
   - **Target Name** – A short, descriptive identifier for the target that differentiates it from other targets in Wowza Streaming Cloud. A **Target Name** is required, doesn't have to be unique, and can't exceed 255 characters.
   - **Source Delivery Method** – Select **Push** for the source to push the stream to the target. Select **Pull** for the target to pull the stream from the source.
• **Source URL** – Only for ultra low latency stream targets whose **Source Delivery Method** is **Pull**. The URL of the source IP camera or encoder connecting to the stream target. The hostname or IP address used in the **Source URL** must be publicly accessible, and the **Source URL** must include a valid protocol prefix: `rtmp://`, `rtmps://`, `rtsp://`, `wowz://`, or `wowzs://`. For help determining the correct **Source URL**, see the encoder or IP camera’s documentation.

• **Apple HLS Playback Stream** – (Optional) Select **Enable HLS Fallback Stream** to create an Apple HLS playback URL that can be used to view the stream on mobile devices or to provide redundancy in the event that WebSocket connection attempts fail.

• **Enabled?** – Select **Enable this target** to allow the source stream to be immediately ingested by the target’s origin server. Select **Do NOT enable** if you prefer to set up the target and encoder first, then enable ingest at a later time.

4. Click **Add**.

Wowza Streaming Cloud generates a target and displays the target detail page, which shows the target’s **Primary URL**, which you can use to connect the source to the target. It also shows **Playback URLs**, including a WebSocket playback URL for ultra low latency playback, an HLS playback URL for fallback to HLS (if enabled), and a WOWZ playback URL for use with GoCoder SDK.

### Add a Wowza CDN on Akamai target for HLS playback

A Wowza CDN on Akamai target for HLS playback receives and delivers the stream through a Wowza CDN resource over HLS. This type of target has lower latency than a Wowza CDN HDS/HLS target and allows playback over iOS, Android, smart TVs, and HTML5-based players.

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Click **Add Target**, select **Wowza CDN on Akamai - HLS**, and then click **Add**.
3. Specify the following:
   - **Target Name** – A name is required but it doesn’t have to be unique, and it can’t be longer than 255 characters.
   - **Target Location** – The geographic region where you’re capturing the video that Wowza Streaming Cloud will transcode and deliver.

4. (Optional) Select **Yes, ingest the stream securely** to send the stream securely from the Wowza Streaming Cloud transcoder to the Wowza CDN target. If selected, Wowza Streaming Cloud generates a key that secures the stream between the transcoder and the target.

5. (Optional) To send the stream to a grid-delivery provider, select **Yes, enable CORS** (cross origin resource sharing). CORS streams are compatible with providers such as Peer5, Viblast, and Streamroot, which implement a decentralized, peer-to-peer transport layer to manage and optimize globally distributed, high-capacity streaming. You can’t change the CORS delivery option after the target is created. Viewer data in Wowza Streaming Cloud doesn’t reflect viewership at grid-delivery destinations.

Wowza Streaming Cloud generates a target and displays the target detail page, which shows the target’s **HLS Playback URL**.

### Add a Wowza CDN on Akamai target for HDS/HLS playback

A Wowza CDN on Akamai target for HDS/HLS playback receives the stream over RTMP at a Wowza CDN resource and makes it available for playback over HDS and HLS. This type of target offers higher latency than a Wowza CDN HLS target but the broadest compatibility with players and devices.

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Click **Add Target**, select **Wowza CDN on Akamai - HDS/HLS**, and then click **Add**.
3. Specify the following:
   - **Target Name** – A name is required but it doesn’t have to be unique, and it can’t be longer than 255 characters.
   - **Target Location** – The geographic region where you’re capturing the video that Wowza Streaming Cloud will transcode and deliver.
4. Click Add.

Wowza Streaming Cloud generates a target and displays the target detail page, which shows the target’s HDS Playback URL and HLS Playback URL.

Add a custom target

Wowza Streaming Cloud can use the RTMP protocol to deliver streams to custom targets. The custom target can be a third-party CDN such as Akamai or Limelight Networks, or any RTMP destination or host, such as YouTube.

Note: Look for the information you need to create a custom target in the ingestion settings provided by the target’s software or documentation.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Click Add Target, select Custom, and then click Add.
3. On the Create a custom target page, specify the following:
   - **Target Name** – A short, descriptive identifier for the target that differentiates it from other targets in Wowza Streaming Cloud. A Target Name is required, doesn't have to be unique, and can't exceed 255 characters.
   - **Provider** – If the third-party CDN that you’re using is listed, choose it from the pop-up menu. Otherwise, choose RTMP or RTMPS.
   - **Primary URL** – The RTMP address, without the preceding protocol and without a trailing slash (/), that the target uses to ingest a stream. For example, [target-domain-or-ip-address]/[EntryPoint]. Hostnames can’t contain underscores (_). For help determining the correct RTMP URL, see the destination's help or user guide.
   - **Backup URL** – (Optional) The backup RTMP address, without the preceding protocol and without a trailing slash (/), that the target uses to ingest a stream.
   - **Stream Name** – The name of the stream as defined in your target’s ingestion settings. The protocol, host name, and path components of the stream name URL must be 255 characters or less. The query strings and parameter components of the stream name URL must be 1024 characters or less.
     
     **Note:** When adding a custom Akamai target, the Stream Name must be in the format [stream_name]_[angle]_[bitrate]@[stream_id], for example, akamaistream_1_[bitrate]@12345. For help determining the Stream Name for other custom target providers, see the provider’s documentation.
   - **Target Username** – Your username for RTMP authentication by the target.
   - **Target Password** – Your password for RTMP authentication by the target.
   - **HDS Playback URL** – (Optional) The web address that your target uses to playback Adobe HDS streams. You can include it here for informational purposes.
   - **HLS Playback URL** – (Optional) The web address that your target uses to playback HLS streams. You can include it here for informational purposes.
   - **RTMP Playback URL** – (Optional) The web address that your target uses to play RTMP streams. You can include it here for informational purposes.
4. Click Add.

Wowza Streaming Cloud generates the target and displays the target detail page, which shows all of the specified playback URLs.

Add a Facebook Live target

Note: The Target Location can't be changed after the target is created.
Wowza Streaming Cloud can send streams to Facebook to be broadcast with the Facebook Live Video publishing tool.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Click Add Target, select Facebook Live, and then click Add.
3. On the Create a Facebook Live target page, specify the following:
   
   - **Target Name** – A short, descriptive identifier for the target that differentiates it from other targets in Wowza Streaming Cloud. A Target Name is required, doesn't have to be unique, and can't exceed 255 characters.
   - **Video Destination** – The location where you want to post the stream on Facebook. Choose your Timeline, a Page you manage, a group you belong to, or an event that you're hosting.

   **Notes:**
   - The Video Destination can't be changed after the target is created.
   - You must have the appropriate permission on Facebook to post to a Page, group, or event. If the destination you want isn't in the menu, check the permissions for your Facebook account and Wowza Streaming Cloud app.
   - To enable a member to stream to a group, the Facebook group admin must add the Wowza Streaming Cloud app. For more information, see the Facebook Help Center article [How do I add or remove an app from a group I admin?](#).
   - **Title** – A title to appear with the stream on Facebook. It must be a UTF-8 string and can be up to 255 characters. Emojis are not supported.
   - **Description** – A description to appear with the stream on Facebook. It must be a UTF-8 string. Emojis are not supported.
   - **Privacy** – If you're streaming to a Timeline, you can specify the Facebook privacy setting that determines who can watch your stream on Facebook: just you (Only me), Friends, Friends of Friends, or all Facebook users (Public).
   - **Stream continuously to Facebook** – Enables Facebook's continuous live video streaming mode. Select Stream continuously to Facebook if your broadcast will be longer than 90 minutes.
   - **Stream 360** – Allows you to deliver a stream captured with a 360-degree camera system that adds Facebook's 360 metadata to the video file.

4. Click Add.

Wowza Streaming Cloud generates the target and displays the target detail page, which includes details about when the target expires.

Most Facebook Live targets expire 60 days from when you authorized your Facebook account to connect to the target. If the target has expired or become invalid, renew it by editing the target and saving your changes.

Find and sort stream targets

The five most recently used or edited stream targets appear in the Recent Stream Targets panel of the Stream Targets page. Use the Search field to find an older stream target to view or edit.

1. Enter a complete or partial Stream Target Name or ID in the Search field.

   **Note:** Wowza Streaming Cloud assigns a unique eight-character ID to every stream target. The ID appears under the stream target name in the search results table. If you don't know the ID, search by stream target name to find the ID. You can also get the ID by using the Wowza Streaming Cloud REST API.

2. Press Enter or Return, or click the magnifying glass icon.

   Searches return 15 results per page, sorted from the newest to the oldest items.

3. (Optional) Click the Stream Target or Last Updated table header to change the sort option or direction of the
**View target details**

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Select a target on the **Stream Targets** page.

**Note:** Targets that were created through the live stream workflow appear as `[Live stream name] / Stream Target`.

- The **Setup** tab of all target detail pages displays the details you need to configure Wowza Streaming Cloud to connect to the target and to play the stream from the target. The details that appear depend on the type of target you’re viewing.

  A **Connection Code** appears if the target uses a video source, such as Wowza Streaming Engine, that’s passing a stream or group of transcoded, adaptive bitrate streams through Wowza Streaming Cloud to the target. A **Connection Code** is also available for ultra low latency stream targets to use with the Wowza GoCoder app. Use the **Connection Code** to configure the encoder to send the video source to Wowza Streaming Cloud.

  Facebook Live stream targets display a target expiration date. Most Facebook Live targets expire 60 days from when you authorized your Facebook account to connect to the target. If the target expires or becomes invalid, renew it by editing the target and saving your changes.

  **Transcoders Using This Target** indicates which transcoders are configured to use this target. If the transcoder was created through the live stream workflow, **(Live Stream)** appears after the transcoder name. Click a transcoder name to view or edit it. To add a transcoder or change which transcoders use this target, add or edit a transcoder. See the user guide topic **Add a transcoder** or **Edit a transcoder’s settings, outputs, or targets**.

  For ultra low latency stream targets, you can go to the Wowza Player Builder for Ultra Low Latency to preview the stream and generate an embed code.

- The **Properties** tab shows any advanced properties that can be set for the stream target. See the topic **Edit properties for a stream target**.

- **Geo-blocking** and **Authentication** tabs appear for Wowza CDN on Akamai stream targets. They let you apply geo-blocking and token authentication, respectively. See **Configure geo-blocking for a Wowza CDN on Akamai target** and **Configure token authentication for a Wowza CDN on Akamai target**.

- A **Security** tab appears for Wowza CDN on Fastly stream targets. You can apply playback over SSL, geo-blocking, or token authentication from this tab. See **Configure security for a Wowza CDN on Fastly target**.

**Edit a target’s setup**

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Select a target on the **Stream Targets** page, and then click **Edit**.
3. On the **Setup** tab, click **Edit**.
4. Depending on the type of target you selected, do the following:

   - **Wowza CDN – Ultra low latency target** – Change the **Target Name**, whether the target is enabled, the **Source URL** (for pull connections), or which IP addresses are in the **IP Whitelist**.
   - **Wowza CDN on Fastly** – Change the **Target Name**.
   - **Wowza CDN on Akamai – HDS/HLS target** – Change the **Target Name**.
   - **Wowza CDN on Akamai – HLS** – Change the **Target Name**.
   - **Custom stream target** – Change the **Target Name**, **Provider**, **Primary URL**, **Backup URL**, or other options.
   - **Facebook Live stream target** – Change the **Target Name**, **Title**, **Description**, or **Privacy** option.
5. Click **Save**.
Edit properties for a stream target

Wowza Streaming Cloud provides advanced properties that you can use to customize and optimize Wowza CDN on Fastly targets, Wowza CDN on Akamai - HLS targets, and custom targets. For Wowza CDN on Akamai - HLS targets and for custom targets, you can set properties when the stream target has a Provider of Akamai HLS Push. There aren't any advanced properties for Wowza ultra low latency, HDS / HLS, or Facebook stream targets.

By default, these properties are enabled and configured to use their default values. You can, however, change them.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Select a stream target on the Stream Targets page.
3. Click the Properties tab and then click Edit.
4. Select Enabled for any property and then specify the value you want to use for it.

- **HLS segment duration** – Specifies the duration of the time-based audio and video chunks that Wowza Streaming Cloud delivers to the target. The HLS segment duration can be 2, 4, 6, 8, or 10 seconds. The default is 10 seconds. A lower (shorter) duration can reduce latency but may affect playback on some older devices.

  **Caution:** For most HLS stream targets, the segment duration doesn’t need to be changed. Edit it only if viewers experience unacceptably long latency.

- **Convert AMF data** – Determines whether Wowza Streaming Cloud converts AMF data into ID3 tags. ID3 tags allow you to include metadata in your HLS stream. If set to True, Wowza Streaming Cloud listens for AMF data events coming from the source encoder or camera, parses the data events, maps the events to ID3 tags, and sends the ID3 tags in the HLS stream. The default is False.

- **Send stream to target over SSL** – Determines whether Wowza Streaming Cloud sends the stream from the transcoder to the target by using SSL (HTTPS). By default, Send stream to target over SSL is False and the stream is sent from the transcoder to the target over HTTP. This property isn’t available for Wowza CDN on Fastly targets.

- **Play over SSL** – If True, Wowza Streaming Cloud sends the stream from the target to the player using SSL. By default, Play over SSL is False. To require playback over SSL only, set **Play over SSL** to True and set Relative playlists to False. For Wowza CDN on Fastly target play over SSL functionality, see **Configure security for a Wowza CDN on Fastly target**.

- **Playlist seconds** – Determines the maximum allowable duration of the playlist. The default, 100, results in a chunklist of 10, because the default chunk size (**HLS segment duration**) is 10 seconds. You can specify any number of seconds between 6 and 200.

- **Redundant chunklists** – Determines whether Wowza Streaming Cloud creates and sends redundant chunklists within a playlist. If playback falters, a player that supports redundancy can switch to the redundant chunklists. By default, Redundant chunklists is False.

Wowza Player supports redundant streams. To learn more, see **Configure a redundant stream**. Refer to a third-party player’s documentation to see if it supports redundant streams or chunklists. This property isn’t available for Wowza CDN on Fastly targets.

**Note:** Enabling the **Redundant chunklists** property increases playback reliability but doubles egress data usage and associated charges.

- **Relative playlists** – Determines whether a stream’s playlist contains relative or absolute paths. Relative playlists allow the viewer to play the stream over HTTP or HTTPS, whichever way their browser connects to the stream target. The default, **True**, means that relative playlists are used.

5. Click Save.
6. If you have started a live stream or transcoder at any point before updating a property associated with its stream target, you must reset the live stream or transcoder for the property to take effect. If you haven’t started a live stream or transcoder, skip this step.

  - To reset a live stream, go to the live stream details page, start the live stream, and then click **Reset Live Stream**.
Configure security for a Wowza CDN on Fastly target

Wowza Streaming Cloud allows you to control three different aspects of security for Wowza CDN on Fastly: Playback over SSL, geo-blocking, and token authentication. You can manage all three options from the Security tab.

Playback over SSL

If enabled, this setting requires viewers to play the stream over HTTPS. If disabled, the default, viewers can play the stream over HTTPS or HTTP.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Select a Wowza CDN on Fastly target on the Stream Targets page.
3. Click the Security tab of the target’s detail page and then click Edit.
4. Select Force SSL Playback and click Save.
5. Click the Properties tab, and then click Edit.
7. Click Save.

Geo-blocking

Geo-blocking allows you to specify where Wowza CDN on Fastly targets can be accessed so that you can control where your stream can be watched. By default, geo-blocking is disabled—your stream can be viewed anywhere and everywhere.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Select a Wowza CDN on Fastly target on the Stream Targets page.
3. Click the Security tab of the target’s detail page and then click Edit.
4. Select Geo-blocking, then specify the type of location-based geo-blocking you’d like to enable:
   - Allow streaming only to the following locations
   - Do not allow streaming to the following locations
5. Specify affected Locations:
   - Click a location in the left list box to select it, and then click the right-pointing arrow to add it to the list of affected locations on the right.
   - Click a location in the right list box to select it, and then click the left-pointing arrow to remove it from the list of affected locations.
6. (Optional) To allow streaming at IP addresses even if they’re within a blocked location select Allow playback from the following IP addresses. To deny streaming to IP addresses even if they’re in an allowed location, select Deny playback from the following IP addresses. Enter one or more IP addresses separated by commas.
7. Click Save.

Token authentication

Token authentication for Wowza CDN on Fastly targets protects streams by ensuring that they are accessed only by viewers who have the token. It prevents playback URLs from being shared by unauthorized links or player hijacking attacks.

Token authentication is disabled by default. To use it, enable it and create a trusted shared secret, sometimes called a secret key or a password, to share with Wowza Streaming Cloud.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Select a Wowza CDN on Fastly target on the Stream Targets page.
3. Click the Security tab of the target’s detail page and then click Edit.
4. Select Token Authentication.
5. Enter a Shared Secret or click Generate Random Shared Secret.
The shared secret must contain only hexadecimal characters (the digits 0 through 9 and/or the letters a through f), and its length must be an even number of characters between 2 and 32.

6. (Optional) Select Protect Playlist Only to protect the master playlist only and leave individual media playlists and media segments unprotected. This feature enables playback compatibility with media players that don’t support the withCredentials property. It may also be useful when addressing token auth compatibility issues with specific browsers.

7. Click Save.

After authentication is enabled, generate sample query parameters to test it.

8. Click Generate Query Parameters.

9. Copy the generated string that begins with ?hdnts and append it to the stream target’s playback URL for testing. The generated query parameters expire 10 minutes after they’re created.

For example:
https://[subdomain].wowza.com/[stream_id]/[stream_name]/hls/live/playlist.m3u8?
hdnts=exp=1578424041~hmac=0428782df32a8a8b91823889756d8084997cf45c58375d526dc9852808b35721

To learn more about programmatically generating tokens for your Wowza CDN on Fastly stream targets, see Protect a Wowza CDN on Fastly stream target with token authentication in Wowza Streaming Cloud.

Configure geo-blocking for a Wowza CDN on Akamai target

Wowza Streaming Cloud allows you to restrict where Wowza CDN on Akamai targets can be accessed so that you can control where your stream can be watched. By default, geo-blocking is disabled—your stream can be viewed anywhere and everywhere. When you add a Wowza CDN on Akamai target, Wowza Streaming Cloud automatically creates a Geo-blocking tab of the target’s detail page where you can see and configure geo-blocking settings.

1. Click Advanced on the menu bar, and then click Stream Targets.
2. Select a Wowza CDN on Akamai target on the Stream Targets page.
3. Click the Geo-blocking tab of the target’s detail page and then click Edit.
4. Specify the type of geo-blocking you’d like to enable:
   - Allow streaming only to the following locations
   - Do not allow streaming to the following locations
5. Specify affected Locations:
   - Click a location in the left list box to select it, and then click the right-pointing arrow to add it to the list of affected locations on the right.
   - Click a location in the right list box to select it, and then click the left-pointing arrow to remove it from the list of affected locations.
6. (Optional) To allow streaming at IP addresses even if they’re within a geo-blocked location, enter one or more IP addresses in the Geo-blocking Override Whitelist field. Separate addresses using commas; don’t include any spaces. The Geo-blocking Override Whitelist field supports Classless Inter-Domain Routing (CIDR) notation for defining subnet masks.
7. Click Save.
8. Contact Support in order for your changes to take effect.

Note: You can block or whitelist a combination of up to about 22 locations and IP addresses.

Configure token authentication for a Wowza CDN on Akamai target

Wowza Streaming Cloud can secure Wowza CDN on Akamai targets with token authentication. Token authentication protects streams by ensuring that they are accessed only by viewers who have the token. It prevents playback URLs from being shared by unauthorized links or player hijacking attacks.

Token authentication is disabled by default. To use it, enable it and create a trusted shared secret, sometimes called a
secret key or a password, to share with Wowza Streaming Cloud. Then, generate temporary query parameters to test the authentication.

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Select a Wowza CDN on Akamai target on the **Stream Targets** page.
3. Click the **Authentication** tab of the target’s detail page and then click **Edit**.
4. Select **Enabled**.
5. Enter a **Trusted Shared Secret** or click **Generate Random Password**.
   
   Trusted shared secrets must be composed of hexadecimal characters (the digits 0 through 9 and/or the letters a through f). The length of the secret must be an even number of characters between 2 and 32.
6. Click **Save**.
7. **Contact Support** in order for your changes to take effect.

   After authentication is enabled, generate sample query parameters to test it.

8. On the **Authentication** tab of the stream target detail page, click **Generate Query Parameters**.

   Wowza Streaming Cloud generates a string of parameters that temporarily grant access to the protected stream target’s playback URLs. The parameters are active for 10 minutes.

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**Copy a custom target**

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Select a custom target on the **Stream Targets** page.
3. Click **Copy**, and then click **OK** in the confirmation dialog.

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**Delete a target**

1. Click **Advanced** on the menu bar, and then click **Stream Targets**.
2. Select a target on the **Stream Targets** page.
3. Click **Delete Target**, and then click **OK** in the confirmation dialog.

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**Note:** You can only delete a target that isn’t associated with a transcoder or live stream.