Monitor stream health in Wowza Streaming Cloud

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About stream health metrics

The Wowza Streaming Cloud™ service monitors resources continually and offers multiple ways for you to stay apprised of the health of active streams. First, you can use the Statistics panel to see details of a stream’s connection, transcoding, and delivery metrics. Or you can use the stream health monitor, which graphs metrics about connection and transcoding processes for any live stream or transcoder, whether it’s currently running or it ran in the past. Both methods help you to understand how efficiently and successfully a stream is received and processed.

View statistics for an active stream

When a live stream or transcoder is active, you can get a quick view of how the stream is connecting and transcoding on the Overview tab of the live stream or transcoder detail page.

1. Do one of the following:

   - On the Live Streams page, find and select any started stream.
   - On the Transcoders page, find and select any started transcoder.

2. Look at the Statistics panel on the Overview tab of the stream or transcoder detail page.
Inbound: Connected – Yes indicates that the video source or encoder is connected to Wowza Streaming Cloud.

Inbound Bitrate: Actual – The rate of the stream traveling from the encoder to Wowza Streaming Cloud, in kilobits per second (Kbps).

Outbound Bitrate: Actual – The total actual bitrate of all outbound video renditions, in kilobits per second (Kbps).

Outbound Bitrate: Configured – The total configured bitrate of all outbound video streams, in kilobits per second (Kbps). Not shown for passthrough transcoders.

Frame Size – The configured frame size of the source video, in pixels. A warning appears if the configured frame size differs from the actual frame size being received from the source by Wowza Streaming Cloud.

Frame Rate – The frame rate of the video, in frames per second, at the transcoder. A warning appears if the frame rate is too low, which might indicate a problem at the stream source, or if it's too high, which might overload the transcoder's CPU.

Keyframe Interval – The number of video frames compressed in a group of pictures (GOP) between keyframes at the transcoder. A warning appears if the keyframe interval varies from the recommended rate of being equal to or twice the frame rate.

Total Unique Viewers – The total number of times the live stream or transcoder has been viewed. A single unique view is one IP address receiving at least one segment of the stream on any player or device in a 24-hour period.

Current Unique Viewers – The number of unique viewers in the last 90 seconds. A single unique view is one IP address receiving at least one segment of the stream on any player or device.

Notes:
- All times appear in the user’s local time.
- The Video Thumbnail updates every 5 seconds.
- Metrics refresh every 10 seconds.
- For streams using Wowza CDN on Fastly targets, Total Unique Viewers updates in near real-time.
- For streams using Wowza CDN on Akamai stream targets, Total Unique Viewers begins to update approximately 2 hours after the stream starts and then updates approximately hourly. It may take up to 48 hours to finalize this metric after the stream ends.

View statistics for all active streams

1. Click Monitor on the menu bar to view a reversible tile for each started stream.
2. Do either of the following:
   - Click Statistics in the lower-right corner of a tile to view connection, transcoding, and delivery metrics for the stream.
   - Click Thumbnail in the lower-right corner of a tile to see a frame thumbnail for the stream.
<table>
<thead>
<tr>
<th><strong>Inbound: Connected</strong></th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inbound Bitrate: Actual</strong></td>
<td>1136.6 Kbps</td>
</tr>
<tr>
<td><strong>Outbound Bitrate: Actual</strong></td>
<td>4015.7 Kbps</td>
</tr>
<tr>
<td><strong>Outbound Bitrate: Configured</strong></td>
<td>9168.0 Kbps</td>
</tr>
<tr>
<td><strong>CPU Usage</strong></td>
<td>28 %</td>
</tr>
<tr>
<td><strong>Frame Size</strong></td>
<td>1280x720</td>
</tr>
<tr>
<td><strong>Frame Rate</strong></td>
<td>30.1 FPS</td>
</tr>
<tr>
<td><strong>Keyframe Interval</strong></td>
<td>30 GOP</td>
</tr>
<tr>
<td><strong>Total Unique Viewers</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Current Unique Viewers</strong></td>
<td>0</td>
</tr>
</tbody>
</table>

- Click the go-to icon in the upper-right corner of a tile to go to the hosted page for the stream, if there is one.
- Click the live stream name in the upper-left of a tile to go to the **Overview** tab of the stream's detail page.
- Click **Health** in the lower-left corner of a tile to go to the **Health** tab of the stream's detail page.

**View graphical health metrics for a live stream or transcoder**
For a graphical representation of a stream’s connection and transcoding metrics, go to the **Health** tab of the stream’s detail page.

1. Do one of the following:
   - On the **Live Streams** page, find and select any live stream.
   - On the **Transcoders** page, find and select any transcoder.

2. Click the **Health** tab.
3. Choose a stream session from the **Select a streaming session** menu.

   Sessions are listed by their start date and time and show how long the stream ran.

   **Important:**
   - If no metrics appear for an active stream or transcoder, refresh the browser page.
   - Health metrics for live streams that started before June 6, 2017, may be incomplete or missing.

4. (Optional) Narrow the date/time range by using the **From** and **To** fields.
5. Click **Show**.

The **Stream Health Monitor** displays the following metrics about the stream:

- **Inbound Bitrate** – The actual rate of the stream traveling from the source encoder to Wowza Streaming Cloud, in kilobits per second (Kbps). This may differ from the configured inbound bitrate.
- **Outbound Bitrate** – The actual bitrate of all outbound video renditions, in kilobits per second (Kbps). This may differ from the configured outbound bitrate.
- **Frame Rate** – The rate of the video, in frames per second, at the transcoder.
- **Keyframe Interval** – The number of video frames compressed in a group of pictures (GOP) between keyframes at the transcoder.

Metrics update every 20 seconds. Brief irregularities might not register or be tracked and visualized.