Get ultra low latency viewer data with the Wowza Streaming Cloud REST API

Learn how to use the REST API to get viewer data for an ultra low latency stream target in the Wowza Streaming Cloud™ service. Viewer data includes the number and percentage of requests for streaming content from an edge server by country and by protocol.

Notes:

- The workflow described in this article is only valid for v1.3 of the Wowza Streaming Cloud REST API. The /usage/viewer_data/stream_targets endpoint was sunset in v1.4 and is no longer available.
- Ultra low latency streaming is available through Wowza Streaming Cloud with Ultra Low Latency. For more information see About ultra low latency streaming with Wowza Streaming Cloud.

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Viewer data parameters

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<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>from</td>
<td>datetime</td>
<td>The start of the range of time you want to view. Specify <code>YYYY-MM-DD HH:MM:SS</code> where <code>HH</code> is a 24-hour clock in UTC. The default time range is from the last billing date to the end of the current day.</td>
</tr>
<tr>
<td>stream_target_id</td>
<td>string</td>
<td>The unique alphanumeric string that identifies the ultra low latency stream target.</td>
</tr>
<tr>
<td>to</td>
<td>datetime</td>
<td>The end of the range of time you want to view. Specify <code>YYYY-MM-DD HH:MM:SS</code> where <code>HH</code> is a 24-hour clock in UTC. The default time range is from the last billing date to the end of the current day.</td>
</tr>
</tbody>
</table>

Get viewer data for an ultra low latency stream target

To see viewer data for an ultra low latency stream target, call the resource

https://api.cloud.wowza.com/api/[version]/usage/viewer_data/stream_targets/[stream_target_id]

Notes:

- To authenticate API requests, use HMAC authentication for production environments. For testing or proof of concept purposes only, use API key and access key authentication.
- The curl example below uses environment variables. See Using cURL for more information on how to set these up.
- The `--data-urlencode` option in the example curl command replaces unprintable and special characters, such as spaces, curly brackets, forward slashes, and semicolons, with ASCII-safe, unambiguous characters that are understood across the Internet.
- Viewer data for ultra low latency streams is available without delay but viewer data for Apple HLS streams isn’t available until two hours after the stream ends. Then, it updates approximately hourly and may take up to 48 hours to finalize.
Example request and response

```bash
curl -X GET \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
--data-urlencode 'from=2017-09-01 12:00:00' \
--data-urlencode 'to=2017-09-16 12:00:00' \
"${WSC_HOST}/api/${WSC_VERSION}/usage/viewer_data/stream_targets/[stream_target_id]"
```

The query returns the viewer data for all streams delivered to the ultra low latency stream target in the specified timeframe. If the stream target uses a backup Apple HLS stream, viewer data for both ultra low latency (`ull`) and Apple HLS (`hls`) streams is returned. Otherwise, only ultra low latency viewer data is returned. The `renditions` and `rendition_list` arrays are empty because Wowza ultra low latency targets don't support adaptive bitrate streams.

```
{
    "stream_target": {
        "total_unique_viewers": 5,
        "percentage_viewers": 100,
        "seconds_total_viewing_time": 18250,
        "seconds_avg_viewing_time": 3650,
        "percentage_viewing_time": 100,
        "protocols": [
            "ull": {
                "name": "Ultra Low Latency",
                "total_unique_viewers": 5,
                "percentage_viewers": 100,
                "seconds_total_viewing_time": 18250,
                "seconds_avg_viewing_time": 3650,
                "percentage_viewing_time": 100
            }
        ],
        "countries": [
            "US": {
                "name": "United States of America",
                "total_unique_viewers": 2,
                "percentage_viewers": 40,
                "seconds_total_viewing_time": 9340,
                "seconds_avg_viewing_time": 4670,
                "percentage_viewing_time": 51,
                "protocols": [
                    "ull": {
                        "name": "Ultra Low Latency",
                        "total_unique_viewers": 2,
                        "percentage_viewers": 100,
                        "seconds_total_viewing_time": 9340,
                        "seconds_avg_viewing_time": 4670,
                        "percentage_viewing_time": 100
                    }
                ]
            },
            "MX": {
                "name": "Mexico",
                "total_unique_viewers": 1,
                "percentage_viewers": 20,
                "seconds_total_viewing_time": 620,
                "seconds_avg_viewing_time": 620,
                "percentage_viewing_time": 100,
                "protocols": [
                    "ull": {
                        "name": "Ultra Low Latency",
                        "total_unique_viewers": 1,
                        "percentage_viewers": 100,
                        "seconds_total_viewing_time": 620,
                        "seconds_avg_viewing_time": 620,
                    }
                ]
            }
        ]
    }
}
```
"percentage_viewing_time": 100
]
]  
],
"renditions": [],
"rendition_list": [],
"country_list": [
  "US",
  "MX",
  "BR",
  "--"
]  
]  
]  
}
}