Learn how to use the REST API to get health metrics for transcoders in the Wowza Streaming Cloud™ service. Health metrics include details about the source connection to the transcoder and transcoder processing data that can help you understand how a stream was received and processed.

To learn how to get health metrics for an ultra low latency stream target, see View ultra low latency stream metrics with the Wowza Streaming Cloud REST API.

Stream health parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>fields</td>
<td>string</td>
<td>The metrics or data you want to view. Omit from the request to return all available data, or include to limit what’s returned to the specified fields. For current metrics, you can specify audio_codec, bits_in_rate, bits_out_rate, bytes_in_rate, bytes_out_rate, configured_bytes_out_rate, connected, cpu, frame_rate, frame_size, gpu_decoder_usage, gpu_driver_version, gpu_encoder_usage, gpu_memory_usage, gpu_usage, height, keyframe_interval, video_codec, and width. For historic metrics, you can specify audio_codec, bits_in_rate, bits_out_rate, cpu_idle, frame_rate, height, keyframe_interval, video_codec, and width.</td>
</tr>
<tr>
<td>from</td>
<td>datetime</td>
<td>For historic metrics only. The start of the range of time you want to view. Express the value by using the ISO 8601 standard of YYYY-MM-DDTHH:MM:SSZ where HH is a 24-hour clock in UTC.</td>
</tr>
</tbody>
</table>
## Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>to</code></td>
<td>datetime</td>
<td>For historic metrics only. The end of the range of time you want to view. Express the value by using the ISO 8601 standard of <code>YYYY-MM-DDTHH:MM:SSZ</code> where <code>HH</code> is a 24-hour clock in UTC. The amount of time between the <code>from</code> and <code>to</code> parameters must be less than 48 hours.</td>
</tr>
<tr>
<td><code>transcoder_id</code></td>
<td>string</td>
<td>Required. The unique alphanumeric string that identifies the transcoder</td>
</tr>
<tr>
<td><code>uptime_id</code></td>
<td>string</td>
<td>Required. The unique alphanumeric string that identifies the uptime session</td>
</tr>
</tbody>
</table>

## View current stream health metrics for an active transcoder

Current metrics for an active transcoder include details about the connection between the source encoder and the transcoder as well as data about how the transcoder is processing the stream.

To view current stream health metrics for an active transcoder, call the resource:

```
https://api.cloud.wowza.com/api/[version]/transcoders/[transcoder_id]/uptimes/[uptime_id]/metrics/current
```

The request returns a snapshot of current metrics for the active stream at the time of the request.

### Example requests and responses

View the stream health details of an active transcoder:

```
curl -X GET \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/uptimes/[uptime_id]/metrics/current"
```

Metrics and data for the active session (`uptime_id`) of the transcoder (`transcoder_id`) are returned in the response, which should look something like this:

```
{
  "current": {
    "unique_views": 37
  }
}
```
"value": 37,
"status": "normal",
"text": "",
"units": ""
},

"connected": {
"value": "Yes",
"status": "normal",
"text": "",
"units": ""
},

"cpu": {
"value": 80,
"status": "normal",
"text": "",
"units": "%"
},

"bytes_in_rate": {
"value": 1142.7,
"status": "normal",
"text": "",
"units": "Kbps"
},

"bytes_out_rate": {
"value": 5707.8,
"status": "normal",
"text": "",
"units": "Kbps"
},

"configured_bytes_out_rate": {
"value": 6696000,
"status": "normal",
"text": "",
"units": "bps"
},

"width": {
"value": 720,
"status": "warning",
"text": "Configured width is different from what Wowza Streaming Cloud is receiving from the source: 720."
},

"height": {
"value": 480,
"status": "warning",
"text": "Configured height is different from what Wowza Streaming Cloud is receiving from the source: 480."
},

"frame_size": {
"value": "720x480",
"status": "warning",
"text": "Configured frame size is different from what Wowza Streaming Cloud is receiving from the source: 720x480."
},

"frame_rate": {
"frame_rate": { 
  "value": 30.2, 
  "status": "normal", 
  "text": "", 
  "units": "FPS" 
}, 
"keyframe_interval": { 
  "value": 30, 
  "status": "normal", 
  "text": "", 
  "units": "GOP" 
}, 
"video_codec": { 
  "value": "avc1", 
  "status": "normal", 
  "text": "", 
  "units": "" 
}, 
"audio_codec": { 
  "value": "AAC", 
  "status": "normal", 
  "text": "", 
  "units": "" 
}, 
"bits_in_rate": { 
  "value": 1142.7, 
  "status": "normal", 
  "text": "", 
  "units": "Kbps" 
}, 
"bits_out_rate": { 
  "value": 5707.8, 
  "status": "normal", 
  "text": "", 
  "units": "Kbps" 
}, 
"gpu_driver_version": { 
  "value": "not_installed", 
  "status": "normal", 
  "text": "", 
  "units": "" 
}, 
"gpu_usage": { 
  "value": null, 
  "status": "normal", 
  "text": "", 
  "units": "%" 
}, 
"gpu_memory_usage": { 
  "value": null, 
  "status": "normal", 
  "text": "", 
  "units": "%" 
}, 
"gpu_encoder_usage": { 
  "value": null, 
  "status": "normal", 
  "text": "", 
  "units": "" 
}
"text": "",
"units": "\%
",
"gpu_decoder_usage": {
  "value": null,
  "status": "normal",
  "text": "",
  "units": "\%
"
},
"stream_target_status_3ypwxt00_d1j8jfzs": {
  "value": "Active",
  "status": "normal",
  "text": "",
  "units": ""
},
"stream_target_status_fsfp9bqb_d1j8jfzs": {
  "value": "Active",
  "status": "normal",
  "text": "",
  "units": ""
},
"stream_target_status_ydbvnxkk_d1j8jfzs": {
  "value": "Active",
  "status": "normal",
  "text": "",
  "units": ""
}
},
"limits": {
  "fields": [
    "unique_views",
    "connected",
    "cpu",
    "bytes_in_rate",
    "bytes_out_rate",
    "configured_bytes_out_rate",
    "width",
    "height",
    "frame_size",
    "frame_rate",
    "keyframe_interval",
    "video_codec",
    "audio_codec",
    "bits_in_rate",
    "bits_out_rate",
    "gpu_driver_version",
    "gpu_usage",
    "gpu_memory_usage",
    "gpu_encoder_usage",
    "gpu_decoder_usage",
    "stream_target_status_3ypwxt00_d1j8jfzs",
    "stream_target_status_fsfp9bqb_d1j8jfzs",
    "stream_target_status_ydbvnxkk_d1j8jfzs"
  ]
}
}
View only specific metrics, such as the rate of bits into and out of the transcoder in this example, for a current uptime session:

```bash
curl -X GET \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/uptimes/[uptime_id]/metrics/current?fields=bits_in_rate,bits_out_rate
```

The command returns a response with the limits applied and looks something like this:

```json
{
   "current": {
      "bits_in_rate": {
         "value": 1149.3,
         "status": "normal",
         "text": "",
         "units": "Kbps"
      },
      "bits_out_rate": {
         "value": 4669.1,
         "status": "normal",
         "text": "",
         "units": "Kbps"
      }
   },
   "limits": {
      "fields": [
         "bits_in_rate",
         "bits_out_rate"
      ]
   }
}
```

View historic stream health metrics for a transcoder

Historic health metrics include the audio and video codec used, the rate of bits into and out of the transcoder, the frame rate and keyframe interval of the stream, and the width and height of the frame.

To view historic stream health metrics for a transcoder that's running or stopped, call the resource:

https://api.cloud.wowza.com/api/[version]/transcoders/[transcoder_id]/uptimes/[uptime_id]/metrics/historic

Historic metrics are recorded every 20 seconds. As a result, brief irregularities might not register or be tracked and visualized. If the uptime session was longer than two days, the
request returns data for only the most recent 48 hours of the uptime session.

**Example requests and responses**

View the historic stream health details for an uptime session (uptime_id) of a transcoder (transcoder_id):

```bash
curl -X GET \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/uptimes/[uptime_id]/metrics/historic"
```

The command returns a response that looks something like this:

```json
{
  "history": [
    {
      "cpu_idle": {
        "value": 88,
        "status": "ok",
        "text": "",
        "units": ""
      },
      "bits_in_rate": {
        "value": 1653232,
        "status": "ok",
        "text": "",
        "units": ""
      },
      "bits_out_rate": {
        "value": 6051976,
        "status": "ok",
        "text": "",
        "units": ""
      },
      "frame_rate": {
        "value": 30,
        "status": "ok",
        "text": "",
        "units": ""
      },
      "width": {
        "value": 1920,
        "status": "ok",
        "text": "",
        "units": ""
      },
      "height": {
        "value": 1080,
        "status": "ok",
        "text": "",
        "units": ""
      }
    }
  ]
}
```
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Status</th>
<th>Text</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>keyframe_interval</code></td>
<td>30</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>video_codec</code></td>
<td>avc1</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>audio_codec</code></td>
<td>AAC</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>created_at</code></td>
<td>2017-04-19T00:18:22.161Z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>bits_in_rate</code></td>
<td>1651880</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>bits_out_rate</code></td>
<td>6669056</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>frame_rate</code></td>
<td>29.885829415715246</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>width</code></td>
<td>1920</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>height</code></td>
<td>1080</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>keyframe_interval</code></td>
<td>30</td>
<td>ok</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
View only specific metrics, such as the frame rate and keyframe interval in this example, for an uptime session of a transcoder that ran in the past:

```
curl -X GET \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/uptimes/[uptime_id]/metrics/historic?fields=frame_rate,keyframe_interval"
```

The command returns a response with the limits applied and looks something like this:

```
{"history": [
{
  "frame_rate": {
    "value": 30.060120240480963,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "keyframe_interval": {
    "value": 30,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "created_at": "2017-04-19T00:23:22.161Z"
},
{"audio_codec": {
  "value": "aac",
  "status": "ok",
  "text": "",
  "units": ""
},
"created_at": "2017-04-19T00:23:22.161Z"
}
"
```
"frame_rate": {
  "value": 29.936091490077363,
  "status": "ok",
  "text": "",
  "units": ""
},
"keyframe_interval": {
  "value": 30,
  "status": "ok",
  "text": "",
  "units": ""
},
"created_at": "2017-04-19T00:18:42.161Z"
},
{
  "frame_rate": {
    "value": 30.13056578506863,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "keyframe_interval": {
    "value": 30,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "created_at": "2017-04-19T00:19:02.162Z"
},
{
  "frame_rate": {
    "value": 30,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "keyframe_interval": {
    "value": 30,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "created_at": "2017-04-19T00:19:22.161Z"
},
...
{
  "frame_rate": {
    "value": 29.855753102985574,
    "status": "ok",
    "text": "",
    "units": ""
  },
  "keyframe_interval": {
    "value": 30,
    "status": "ok",
    "text": "",
    "units": ""
  }
}
Related requests

View an active transcoder’s uptime_id:

```bash
curl -X GET \
-H "wsc-api-key: \$(WSC_API_KEY)" \
-H "wsc-access-key: \$(WSC_ACCESS_KEY)" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/state"
```

The command should return a response that looks something like this:

```json
{
   "transcoder": {
      "ip_address": "1.2.3.4",
      "state": "started",
      "uptime_id": "f3p9bvb0"
   }
}
```

Get a list of uptime records for a transcoder:

```bash
curl -X GET \
-H "wsc-api-key: \$(WSC_API_KEY)" \
-H "wsc-access-key: \$(WSC_ACCESS_KEY)" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/uptimes"
```

The command should return a response that looks something like this:
Get the details of a specific uptime for a transcoder:

The command should return a response that looks something like this:

```
{
  "uptimes": [
    {
      "id": "nvg6mjy8",
      "transcoder_id": "fxtpd74j",
      "started_at": "2017-04-19T00:16:41.000Z",
      "ended_at": "2017-04-19T02:32:50.000Z",
      "running": false,
      "billed": true,
      ...
    },
    {
      "id": "6bmskgbc",
      "transcoder_id": "fxtpd74j",
      "started_at": "2017-04-19T12:29:37.000Z",
      "ended_at": "2017-04-19T23:23:27.000Z",
      "running": false,
      "billed": true,
      ...
    },
    {
      "id": "f3p9bvb0",
      "transcoder_id": "fxtpd74j",
      "started_at": "2017-04-24T22:27:17.000Z",
      "running": true,
      "billed": true,
      ...
    }
  ]
}
```

`curl` command example:

```
curl -X GET \
-H "wsc-api-key: ${WSC_API_KEY}" \
-H "wsc-access-key: ${WSC_ACCESS_KEY}" \
"${WSC_HOST}/api/${WSC_VERSION}/transcoders/[transcoder_id]/uptimes/[uptime_id]"
```

The command should return a response that looks something like this:

```
{
  "uptime": {
    "id": "f3p9bvb0",
    "transcoder_id": "fxtpd74j",
    "started_at": "2017-04-24T22:27:17.000Z",
    "running": true,
    "billed": true,
    ...
  }
}
```