

# CS305 Lab6

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## 6.1 Using dash.js to load a dash resource

- Open “Network” view in ‘developer tools’ of browser(such as chrome) to observe
  - Is there any ‘mpd’ files, What’s its name, what is the description of ‘mpd’ in mime
  - Is there any ‘m4s’ files, what’s its related rate, will the files’ ‘rate’ change along with the changing of network condition(especially the bandwidth)
- Reference:
  - A html embedded a dash.js which maybe helpful for loading a ‘mpd’ file
    - <http://reference.dashif.org/dash.js/nightly/samples/dash-if-reference-player/index.html> or
    - [https://allen8101070.github.io/ITMAN\\_DASHjs/index.html](https://allen8101070.github.io/ITMAN_DASHjs/index.html)
  - A dataset of dash resources
    - <http://www-itec.uni-klu.ac.at/ftp/datasets/DASHDataset2014/>

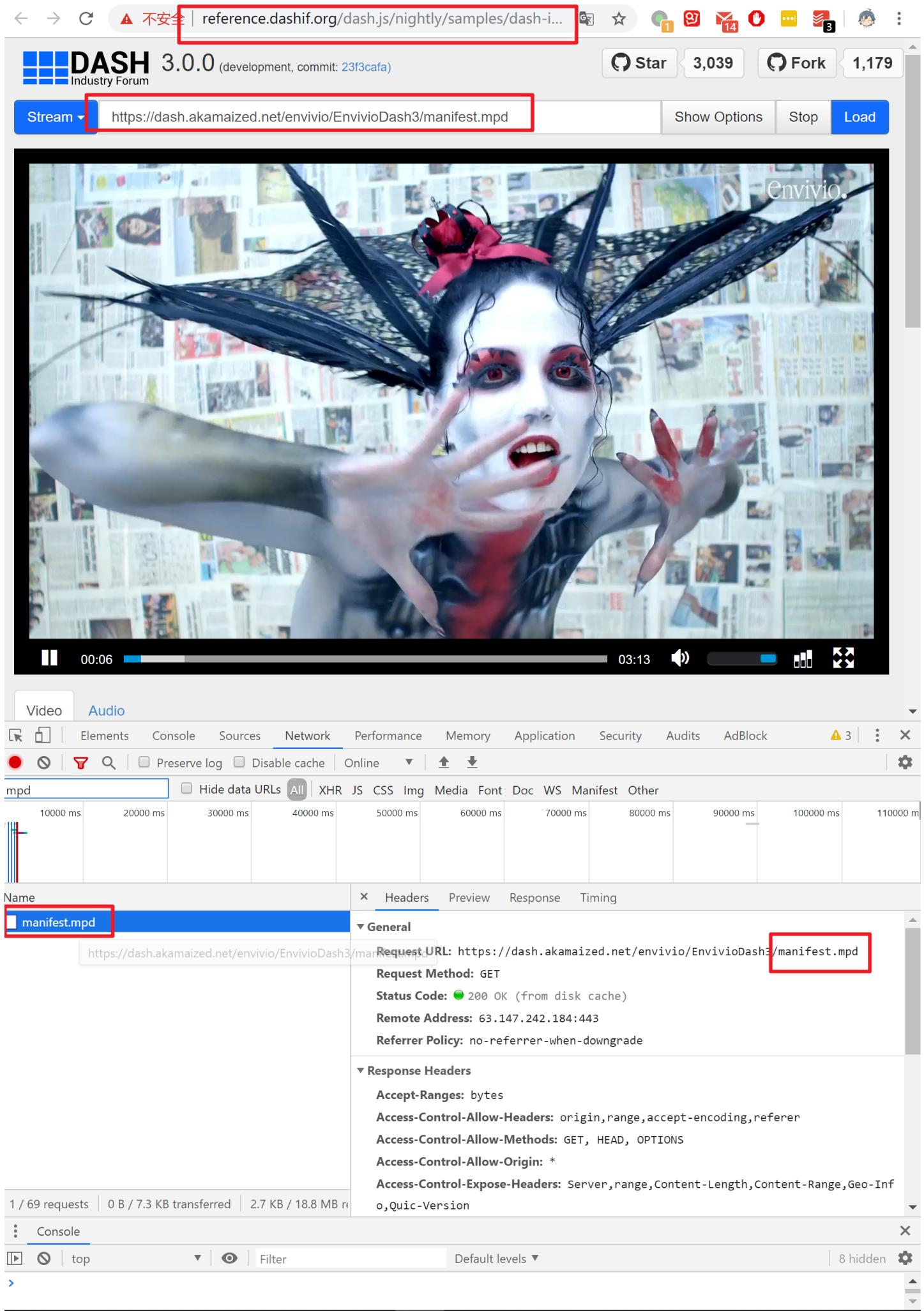
## Solution:

Refer to the

<http://reference.dashif.org/dash.js/nightly/samples/dash-if-reference-player/index.html> and  
load <https://dash.akamaized.net/envivio/EnvivioDash3/manifest.mpd> from  
[https://allen8101070.github.io/ITMAN\\_DASHjs/index.html](https://allen8101070.github.io/ITMAN_DASHjs/index.html) which is embedded a dash.js.

There is a `mpd` file.

Its name is `manifest.mpd`.



Its mine description(Content-Type) is application/dash+xml .

The screenshot shows the Chrome DevTools Network tab. A red box highlights the 'manifest.mpd' entry in the list of requests. The details panel on the right shows the following headers:

- Access-Control-Allow-Headers: origin,range,accept-encoding,referer
- Access-Control-Allow-Methods: GET, HEAD, OPTIONS
- Access-Control-Allow-Origin: \*
- Access-Control-Expose-Headers: Server,range,Content-Length,Content-Range,Geo-Info,Quic-Version
- Access-Control-Max-Age: 600
- Content-Length: 2726
- Content-Type: application/dash+xml** (highlighted with a red box)
- Date: Wed, 23 Oct 2019 11:53:58 GMT
- ETag: "5811c0891a02ba8177c4b735b5f0f853:1453345029"
- Last-Modified: Thu, 21 Jan 2016 02:57:09 GMT
- Server: AkamaiNetStorage

Below the headers, there is a section for Request Headers with a note: "⚠ Provisional headers are shown".

There are many m4s files.

The screenshot shows the Chrome DevTools Network tab. A red box highlights the 'm4s' entry in the list of requests. The details panel on the right shows the following information:

- Request URL: [https://dash.akamaized.net/envivio/EnvivioDash3/v7\\_257-270146-i-13.m4s](https://dash.akamaized.net/envivio/EnvivioDash3/v7_257-270146-i-13.m4s)
- Referrer Policy: no-referrer-when-downgrade
- ⚠ Provisional headers are shown**
- Origin: http://reference.dashif.org
- Referer: http://reference.dashif.org/dash.js/nightly/samples/dash-if-reference-player/index.html
- Sec-Fetch-Mode: cors
- User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3865.120 Safari/537.36

Below the headers, there is a list of m4s files with a red box around it:

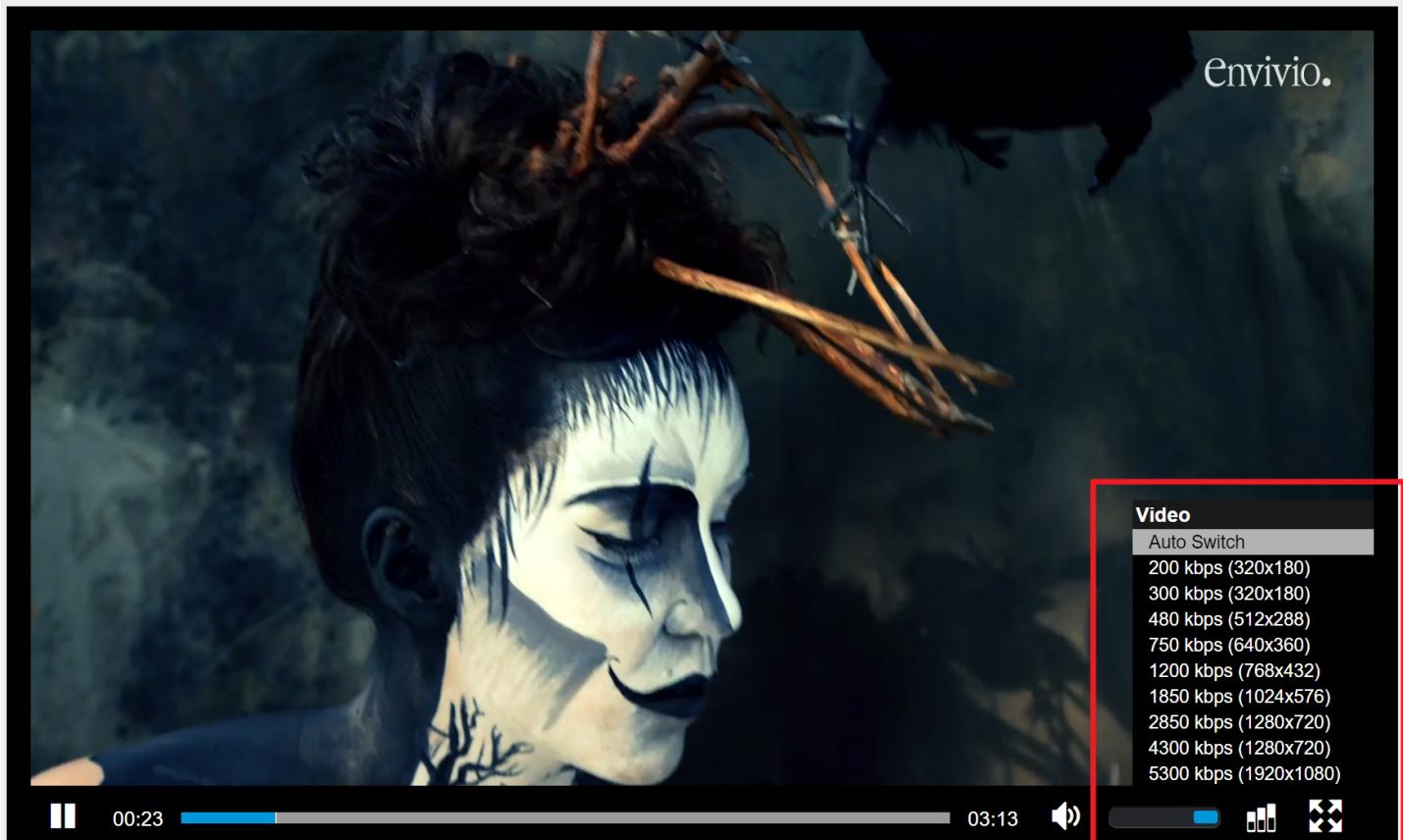
- v7\_257-Header.m4s
- v4\_258-Header.m4s
- v7\_257-270146-i-1.m4s
- v4\_258-270146-i-1.m4s
- v7\_257-270146-i-2.m4s
- v4\_258-270146-i-2.m4s
- v7\_257-270146-i-3.m4s
- v7\_257-270146-i-4.m4s
- v7\_257-270146-i-5.m4s
- v7\_257-270146-i-6.m4s
- v7\_257-270146-i-7.m4s
- v7\_257-270146-i-8.m4s
- v7\_257-270146-i-9.m4s

It has a `Bitrate list` , and it can auto switch the rate depends by bandwidth or we can choose the bitrate.

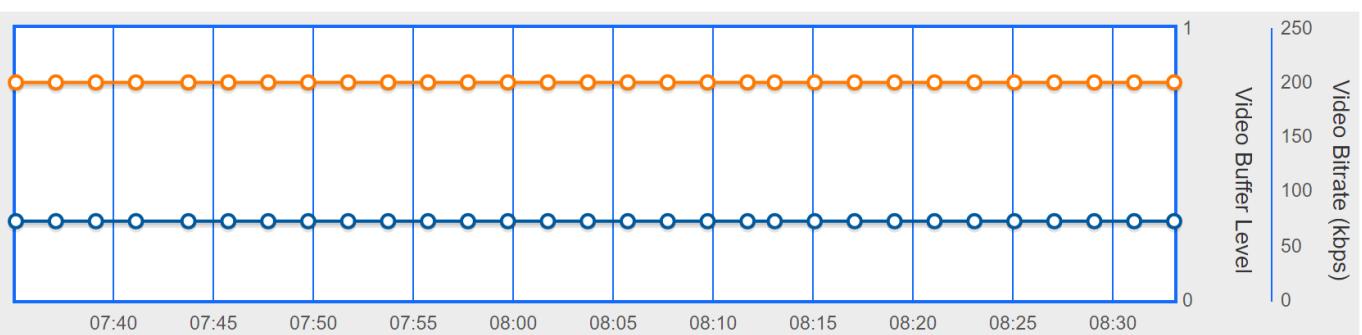
From `Biterate Downloading` , we know the related rate is `200 kbps`

[Stream ▾](#)

https://dash.akamaized.net/envivio/EnvivioDash3/manifest.mpd

[Show Options](#)[Stop](#)[Load](#)[Video](#)[Audio](#)[Bitrate List](#)

- Buffer Length : 0.29
- Bitrate Downloading : 200 kbps
- Index Downloading : 1
- Current Index / Max Index : 9 / 9
- Dropped Frames : 0
- Latency (min|avg|max) : 0.01 | 0.01 | 0.02
- Download (min|avg|max) : 0.01 | 0.01 | 0.03
- Ratio (min|avg|max) : 60.51 | 133.11 | 399.34

[Clear](#)[Disable](#)

When we choose Auto switch , we can see when the network is good, the rate is high and the network is bad, the rate is low. So that we think:

The larger the bandwidth, the faster the file 'rate'.

The smaller the bandwidth, the slower the file 'rate'.

When we change the bitrate, we get files with different prefixes, such as 'v2', 'v4', 'v7' which Represent different bitrates.

