

Profile

Send Letter

Respond to Letter

Recipient

Did you find this lesson helpful?

No Yes

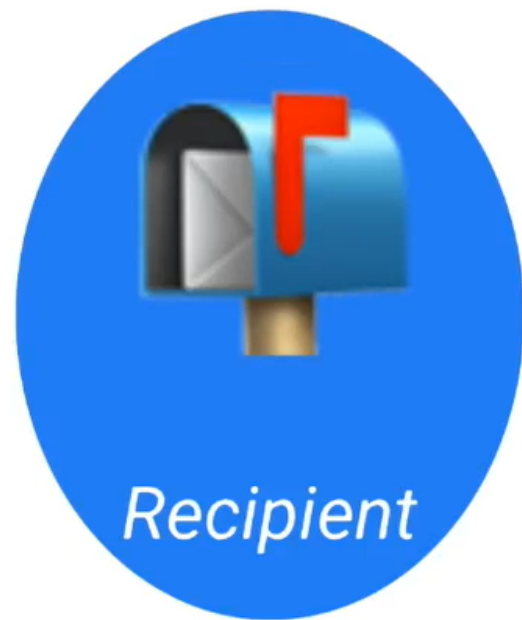
Elements Console Sources Network Performance







Filter Hide data URLs

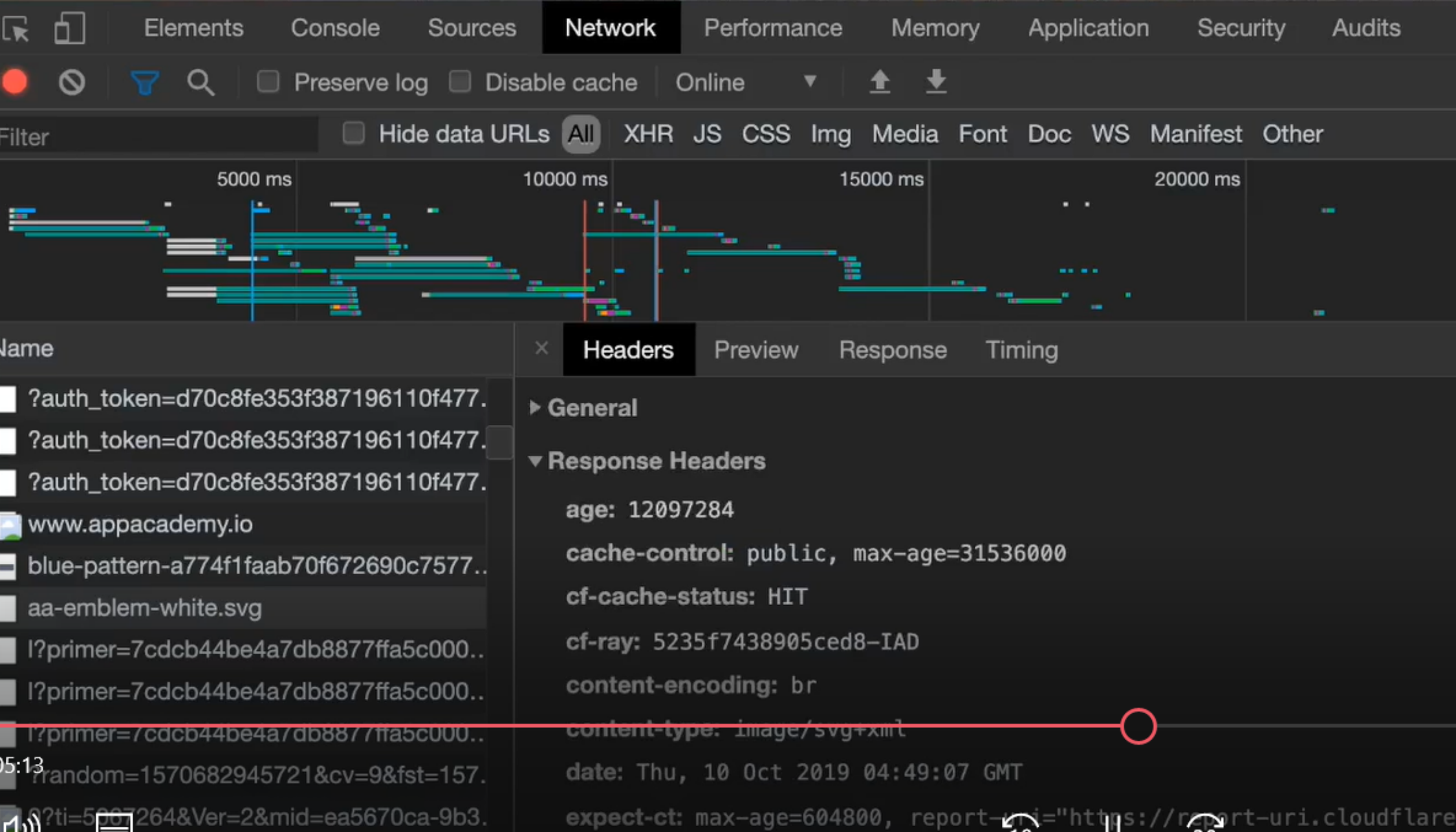
All XHR JS CSS Img Media Font Doc WS Manifest Other Has blocked cookies Blocked Requests

Name	Status	Type	Initiator	Size	Time	Waterfall
collect?v=1&_v=j85&a...	200	gif	analytics.js:25	62 B	11 ms	
segment-13.m4s	200	xhr	player.js:10	47.9 kB	24 ms	
segment-13.m4s	200	xhr	player.js:10	293 kB	47 ms	
partial	200	text/...	player.js:10	41 B	30 ms	
player-stats?beacon=1...	200	text/...	player.js:10	40 B	31 ms	
t	200	xhr	analytics.mi...	143 B	68 ms	
api.amplitude.com	200	xhr	amplitude-...	167 B	123 ms	
collect?v=1&_v=j85&a...	200	gif	analytics.js:25	57 B	10 ms	
player-stats?beacon=1...	200	text/...	player.js:10	40 B	30 ms	
t	200	xhr	analytics.mi...	143 B	67 ms	
api.amplitude.com	200	xhr	amplitude-...	167 B	98 ms	
collect?v=1&_v=j85&a...	200	gif	analytics.js:25	62 B	12 ms	
partial	200	text/...	player.js:10	41 B	27 ms	
segment-14.m4s	200	xhr	player.js:10	48.3 kB	57 ms	
t	200	xhr	analytics.mi...	143 B	68 ms	
api.amplitude.com	200	xhr	amplitude-...	167 B	152 ms	
collect?v=1&_v=j85&a...	200	gif	analytics.js:25	62 B	10 ms	
segment-14.m4s	200	xhr	player.js:10	280 kB	58 ms	

74 requests 4.7 MB transferred 4.7 MB resources



Name	Method	Status	Type	Initiator	Size	Time	Waterfall	
 ?auth_token=d70c8fe353f387196110f477dcbbc3e...	OPTIONS	200	xhr	<u>site-d7c6a01....js:18964</u>	695 B	2.23 s		
 ?auth_token=d70c8fe353f387196110f477dcbbc3e...	OPTIONS	200	xhr	<u>site-d7c6a01....js:18964</u>	695 B	2.23 s		
 ?auth_token=d70c8fe353f387196110f477dcbbc3e...	OPTIONS	200	xhr	<u>site-d7c6a01....js:18964</u>	696 B	2.33 s		
 ?auth_token=d70c8fe353f387196110f477dcbbc3e...	GET	200	text/html	(index)	10.4 KB	6.00 s		



Body

When we need to send data that doesn't fit in a header & is too complex for the URI, we can place it in the *body* of our HTTP request. The body comes right after the headers and can be formatted a few different ways.

The most common way form data is formatted is *URL encoding*. This is the default for data from web forms and looks a little like this:

```
name=claire&age=29&iceCream=vanilla
```

Alternatively, you might format your request body using JSON or XML or some other standard. What's most important is that you remember to set the appropriate **Content-Type** header so the server knows how to interpret your body.

Host:: command not found

bryan@LAPTOP-F699FFV1:/mnt/c/Users/15512/Google Drive/App Academy August Cohort 2020/Weeks/Week 6/Days/Monday/Projects/build-your-own-server\$

bryan@LAPTOP-F699FFV1:/mnt/c/Users/15512/Google Drive/App Academy August Cohort 2020/Weeks/Week 6/Days/Monday/Projects/build-your-own-server\$ nc -v neverssl.com 80

Connection to neverssl.com 80 port [tcp/http] succeeded!

GET / HTTP/1.1

Host: neverssl.com

HTTP/1.1 200 OK

Content-Type: text/html

Content-Length: 1416

Connection: keep-alive

Last-Modified: Thu, 06 Jun 2019 04:19:28 GMT

Accept-Ranges: bytes

Server: AmazonS3

Date: Mon, 14 Sep 2020 11:14:02 GMT

ETag: "92b6819f6cf2865f6be341e02390d23bf"

Status

Like the request, an HTTP response's first line gives you a high-level overview of the server's intention. For the response, we refer to this as the *status-line*.

Here's the status line from our `appacademy.io` response:

```
HTTP/1.1 200 OK
```

We open with the HTTP version the server is responding with. `1.1` is still the most commonly used, though you may occasionally see `2` or even `1.0`. We follow this with a `Status-Code` and `Reason-Phrase`. These give us a quick way of understanding if our request was successful or not.

HTTP status codes are a numeric way of representing a server's response. Each code is a three-digit number accompanied by a short description. They're grouped by the first digit (so, for example, all "Informational" codes begin with a `1`: `100` - `199`).

Status codes 100 - 199: Informational

Informational codes let the client know that a request was received, and provide extra info from the server. There are very few informational codes defined by the HTTP specification and you're unlikely to see them, but it's good to know that they exist!

Status codes 200 - 299: Successful

Successful response codes indicate that the request has succeeded and the server is handling it. Here are a couple common examples:

- **200 OK:** Request received and fulfilled. These usually come with a `body` that contains the resource you requested.
- **201 Created:** Your request was received and a new record was created as a result. You'll often see this response to `POST` requests.

These responses let the client know that there has been a change. There are a few different ways for a server to note a redirect, but the two most common are also the most important:

- **301 Moved Permanently:** The resource you requested is in a totally new location. This might be used if a webpage has changed domains, or if resources were reorganized on the server. Most clients will automatically process this redirect and send you to the new location, so you may not notice this response at all.
- **302 Found:** Similarly, to *301 Moved Permanently*, this indicates that a resource has moved. However, this code is used to indicate a temporary move. It's not often that you see temporary moves online, but this code may be used to indicate a permanent move where the old domain should still be valid too. Clients will usually follow this redirect automatically as well, but you shouldn't necessarily update your links until the server returns a `301`.

301 Moved Permanently and 302 Found often get confused. When might we want to use a 302 Found? The most common use case today is for the transition from HTTP to HTTPS. _HTTPS is secure HTTP messaging, where requests & responses are encrypted so they can't be read by prying eyes while en route to their destinations.

This is a much safer way of communicating online, so most websites require access via `https://` before the domain. However, we don't want to ignore folks still trying to access our content from the older `http://` approach!

In this case, we'll return a 302 Found response to the client, letting them know that it's okay to keep navigating to `http://our-website.com`, but we're going to redirect them to `https://our-website.com` for their protection.

Hypertext delivered

An HTTP response contains either the content we requested or an explanation of why that content couldn't be delivered. It's just like ordering at a restaurant: you place your order and receive either a plate of delicious food or an apology from the chef. In a good restaurant, the apology will include some extra help: "I'm sorry, we're out of broccoli. Can we get you something else? How can we make this right?"

When designing your own HTTP responses, remember that restaurant example. It's important to note that there's a problem, but it's equally important to provide reliable, helpful details. We'll look at some examples of this when we build our own HTTP server in a later lesson.

Structure of a Response

Responses are formatted similarly to requests: we'll have a *status-line* (instead of a request-line), headers that provide helpful metadata about the response, and the response body: a representation of the requested resource.

Here's what the HTTP response looks like when visiting `appacademy.io`:

```
HTTP/1.1 200 OK
Content-Type: text/html; charset=utf-8
Transfer-Encoding: chunked
Connection: close
X-Frame-Options: SAMEORIGIN
X-Xss-Protection: 1; mode=block
X-Content-Type-Options: nosniff
Cache-Control: max-age=0, private, must-revalidate
Set-Cookie: _rails-class-site_session=B4h7CEkiD3Nlc3Npb25fB4Q3OGZFU6EkiJTB944NSYTVlNTEyZDR
X-Request-Id: cf9f3add-9ed8-46d7-86d7-6fe57753b2ad
X-Runtime: 0.006884
Strict-Transport-Security: max-age=31536000
Vary: Origin
Via: 1.1 vegur
Expect-CT: max-age=904800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
Server: cloudflare
CF-RAY: 51d641d1cefd2d45-TXL

<!DOCTYPE html>
<html>
...
...
</html>
```

Oof! That's a lot of unfamiliar stuff. Let's walk through the important bits together.

Structure of a Response

Responses are formatted similarly to requests: we'll have a *status-line* (instead of a request-line), headers that provide helpful metadata about the response, and the response body: a representation of the requested resource.

Here's what the HTTP response looks like when visiting `appacademy.io`:

```
HTTP/1.1 200 OK
Content-Type: text/html; charset=utf-8
Transfer-Encoding: chunked
Connection: close
X-Frame-Options: SAMEORIGIN
X-Xss-Protection: 1; mode=block
X-Content-Type-Options: nosniff
Cache-Control: max-age=0, private, must-revalidate
Set-Cookie: _rails-class-site_session=BAh7CEkiD3Nlc3Npb25faWQGOgZFVEkiJTMsNWMM5YTV
X-Request-Id: cf5f30dd-99d0-46d7-86d7-6fe57753b20d
X-Runtime: 0.006894
Strict-Transport-Security: max-age=31536000
Vary: Origin
Via: 1.1 vegur
Expect-CT: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/r
Server: cloudflare
CF-RAY: 51d641d1ca7d2d45-TXL

<!DOCTYPE html>
<html>
```


Referrer Policy: no-referrer-when-downgrade

Response Headers

access-control-allow-credentials: true

access-control-allow-origin: https://player.vimeo.com

alt-svc: clear

content-length: 0

date: Mon, 14 Sep 2020 18:07:07 GMT

status: 200

via: 1.1 google

Request Headers

:authority: fresnel.vimeocdn.com

:method: POST

:path: /add/player-stats?beacon=1&session-id=85dedf15e1ce84e793d738a8830e935d80e5b3781600106644

:scheme: https

accept: */*

▼ Request Headers

:authority: fresnel.vimeocdn.com

:method: POST

:path: /add/player-stats?beacon=1&session-id=85dedf15e1ce84e793d738a8830e935d80e5b3781600106644

:scheme: https

accept: */*

accept-encoding: gzip, deflate, br

accept-language: en-US,en;q=0.9

content-length: 1815

content-type: text/plain; charset=UTF-8

origin: https://player.vimeo.com

referer: https://player.vimeo.com/video/365678426?rel=0

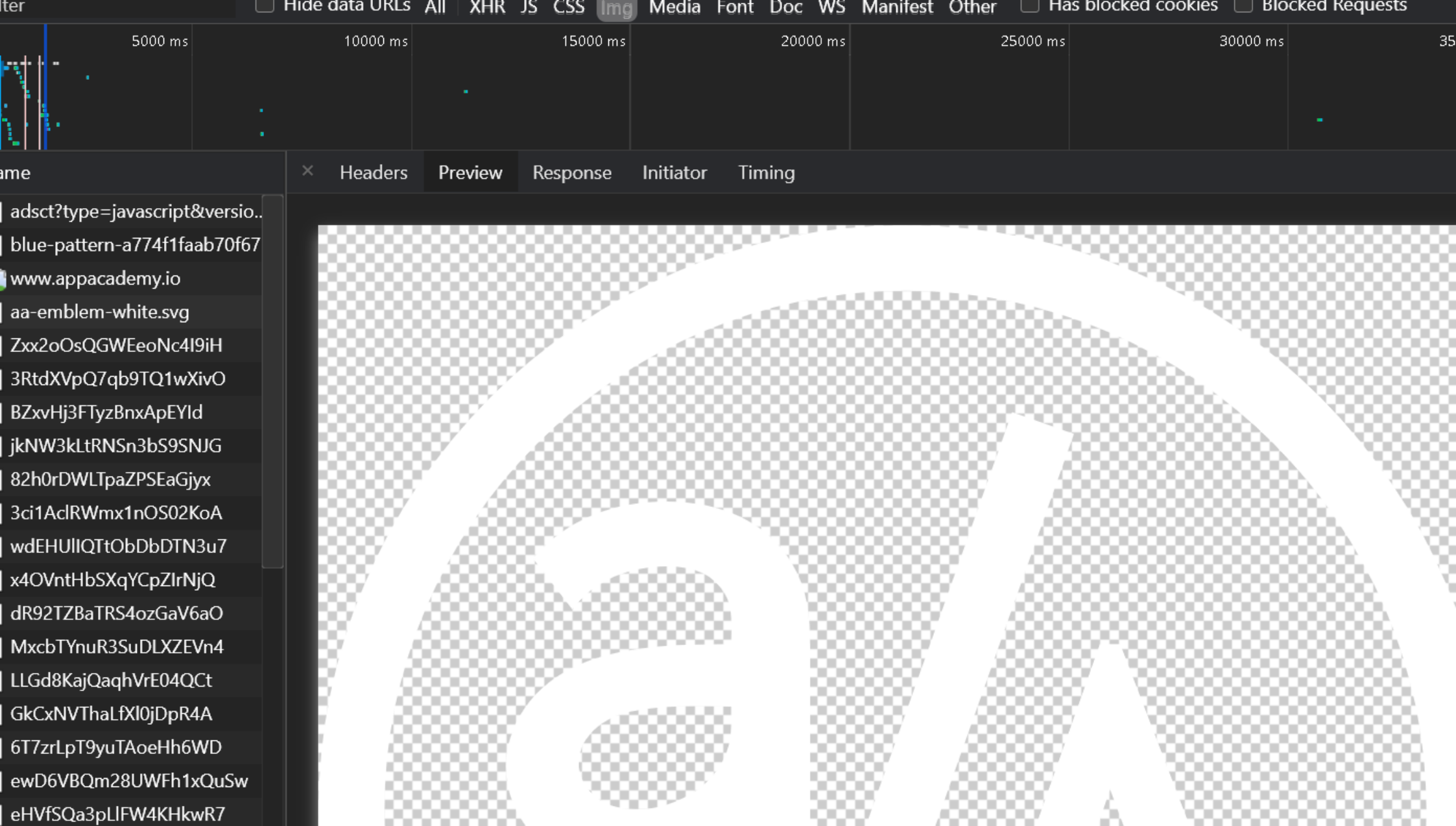
sec-fetch-dest: empty

sec-fetch-mode: no-cors

sec-fetch-site: cross-site

user-agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/85.0.4183.102 S

afari/537.36

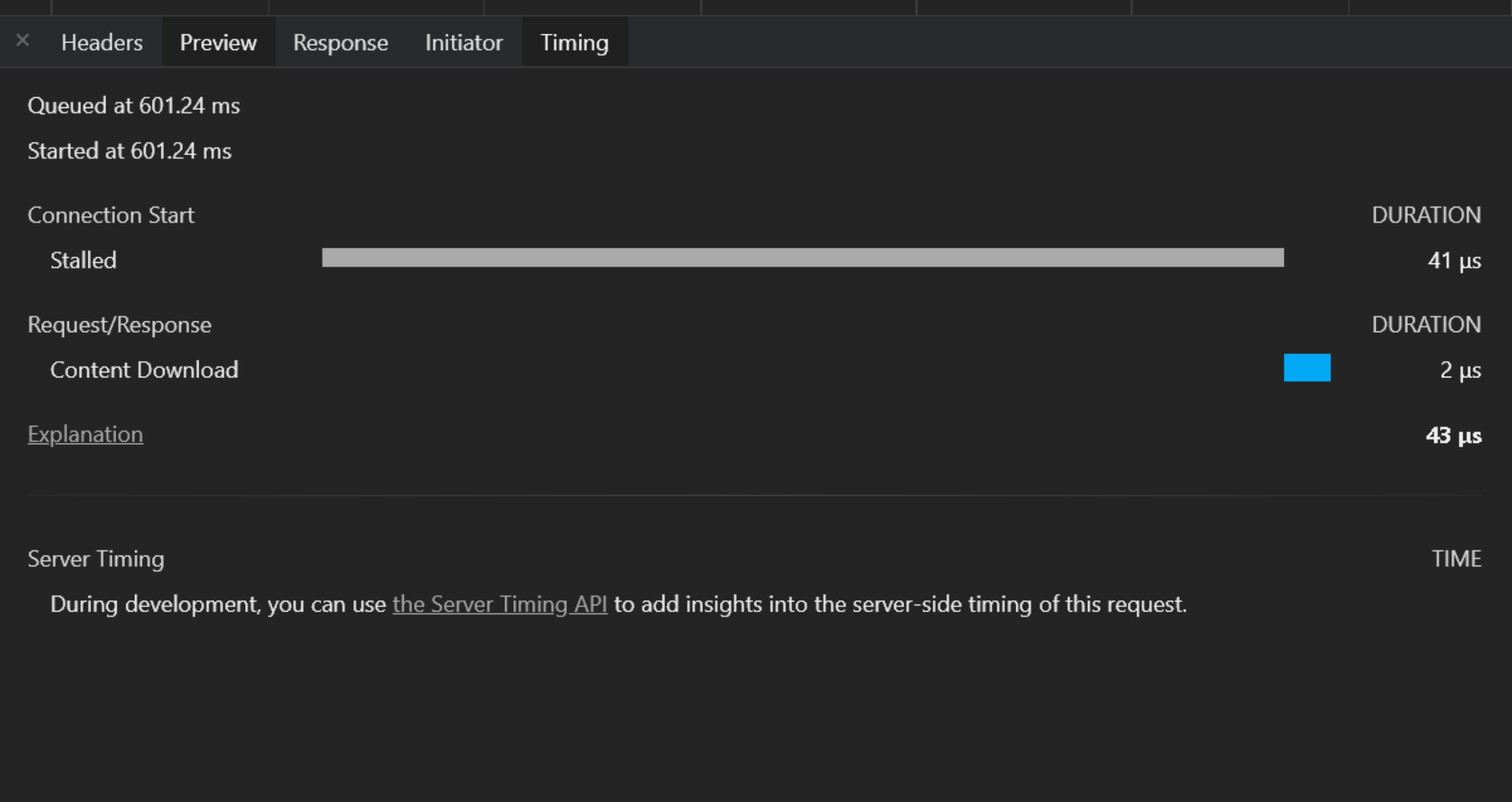


Response preview

```

1 <?xml version="1.0" encoding="utf-8"?>
2 <!-- Generator: Adobe Illustrator 18.1.1, SVG Export Plug-In . SVG Version: 6.00 Build 0) -->
3 <svg version="1.1" id="Layer_1" xmlns="http://www.w3.org/2000/svg" xmlns:xlink="http://www.w3.org/1999/xlink" x:
4   viewBox="0 0 193.4 193.4" enable-background="new 0 0 193.4 193.4" xml:space="preserve">
5   <g>
6     <g>
7       <path fill="#FFFFFF" d="M96.7,193.4C43.4,193.4,0,150,0,96.7S43.4,0,96.7,0s96.7,43.4,96.7,96.7S150,193.4
8       c-47.3,0-85.8,38.5-85.8,85.8c0,47.3,38.5,85.8,85.8,85.8s85.8-38.5,85.8-85.8C182.5,49.4,144,10.8,96.7
9     </g>
10    <path fill="#FFFFFF" d="M77.9,55.5c-3.9-6.4-11.2-10-20.6-10c-8.4,0-15.7,2.8-20.9,8.2l-1.1,1.1l6.5,8.4l1.4-1
11    c4.6-4.8,11-5.5,14.4-5.5c4.6,0,7.5,1.5,9.3,4.4c1.5,2.5,1.1,5.6,1.1,8.3V69h-0.6c-7,0-15.7,0.1-22.8,2.7
12    c-10.1,3.7-13.7,11.5-13.7,17.4c0,8.4,6.6,17.3,19.7,17.3c6.2,0,11.4-1.9,17.4-5.6v4.1h13V69.4C81,64.5,80.7
13    M52.4,96.2c-6.4,0-9.5-3.9-9.5-7.7c0-1.6,0.6-3.3,2-4.8c1.3-1.5,3.4-2.9,6.5-3.6c3.1-0.7,7.5-0.9,10.9-0.9
14    v3C68,91.8,58.9,96.2,52.4,96.2z"/>
15    <g>
16
17      <rect x="91.3" y="28.7" transform="matrix(0.9428 0.3333 -0.3333 0.9428 37.7561 -26.698)" fill="#FFFF
18    </g>
19    <path fill="#FFFFFF" d="M132.1,69h-3.4L103,142h11.5l6.7-21h19.3l7.6,21h11.9L132.1,69z M124,112l6.4-19.1l7.1
20  </g>
21  <g>
22  </g>
23  <g>
24  </g>
25  <g>
26  </g>
27  <g>
28  </g>

```

[Learn More](#)

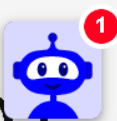
#1

ked Coding School

101K*

Graduate Salary (San Francisco)

questions
e're here



1,000+

Network

Filter: Hide data URLs All XHR JS CSS Img Media Font Doc WS Manifest Other Has blocked cookies Blocked Requests

Name	Size	Status	Type	Time
c3b62f43b2?&a=29338897&v=1177.96a4d39&to=Jl... m	327 B	200 OK	image/gif	70 ms

Headers

General

- Request URL: https://bam.nr-data.net/events/1/c3b62f43b2?&a=29338897&v=1177.96a4d39&to=JlheQ0ILDVhcE0sXQQVDWVRvFABTXBJLDFoJUg%3D%3D&rst=10867&ck=1&ref=https://www.appacademy.io/
- Request Method: POST
- Status Code: 200 OK
- Remote Address: 162.247.242.21:443
- Referrer Policy: no-referrer-when-downgrade

Response Headers

- Access-Control-Allow-Credentials: true
- Access-Control-Allow-Origin: https://www.appacademy.io
- Content-Length: 24
- Content-Type: image/gif

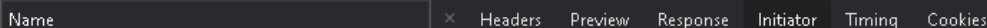
Request Headers

- Accept: */*
- Accept-Encoding: gzip, deflate, br
- Accept-Language: en-US,en;q=0.9
- Connection: keep-alive
- Content-Length: 192
- content-type: text/plain
- Cookie: JSESSIONID=774ff14fecb8d734
- Host: bam.nr-data.net
- Origin: https://www.appacademy.io
- Referer: https://www.appacademy.io/
- Sec-Fetch-Dest: empty
- Sec-Fetch-Mode: cors
- Sec-Fetch-Site: cross-site
- User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/85.0.4183.102 Safari/537.36

Query String Parameters

- a: 29338897
- v: 1177.96a4d39
- to: JlheQ0ILDVhcE0sXQQVDWVRvFABTXBJLDFoJUg%3D%3D
- rst: 10867
- ck: 1

2 requests 327 B transferred 45 B resources



```
(anonymous) @ heap-249456217.js:2
(anonymous) @ heap-249456217.js:2
At.o.onload @ heap-249456217.js:2
Load (async)
At @ heap-249456217.js:2
Tt @ heap-249456217.js:2
n @ heap-249456217.js:2
a @ heap-249456217.js:2
_ @ heap-249456217.js:2
h @ heap-249456217.js:2
Ct @ heap-249456217.js:2
Ue @ heap-249456217.js:2
(anonymous) @ heap-249456217.js:2
r @ heap-249456217.js:2
```

- ▼ <https://cdn.segment.com/analytics.js/v1/bwLT8nRiaqYdeRqiDZ77wAWHjirETEDTL/analytics.min.js>
- ▼ <https://cdn.heapanalytics.com/js/heap-2949456217.js>

▼ <https://use.typekit.net/thf1vxe.css>

- https://p.typekit.net/p.css?&s=1&k=thf1vxe&ntk=&f=14032.14033.14034.14035.14038.21514.26893.26894.26897.26898.26909.26910.26913.26914.29382.29383&a=4452828&app=typekit&...
https://use.typekit.net/af/affd5f/00000000000000003b9b032d/27/?primer=7cdbc44be4a7db8877ffa5c0007b8dd865b3bbcb383831fe2ea177f62257a9191&fvd=n4&v=3
- https://use.typekit.net/af/b5ce2a/00000000000000003b9b032d/27/?primer=7cdbc44be4a7db8877ffa5c0007b8dd865b3bbcb383831fe2ea177f62257a9191&fvd=n7&v=3
- https://use.typekit.net/af/67187a/0000000000000000003b9b032a/27/?primer=7cdbc44be4a7db8877ffa5c0007b8dd865b3bbcb383831fe2ea177f62257a9191&fvd=n5&v=3
- https://use.typekit.net/af/f0f4a0/000000000000000000017877/27/?primer=7cdbc44be4a7db8877ffa5c0007b8dd865b3bbcb383831fe2ea177f62257a9191&fvd=n9&v=3
- https://use.typekit.net/af/90ce96/0000000000000000003b9b0329/27/?subset_id=2&fvd=i4&v=3
- https://www.appacademy.io/assets/site-742abc3fb68596cc14b9efe9c8079328fa848361e76c81e6b3e7e1954a359ca3.css
- https://www.appacademy.io/assets/fontawesome-webfont-7dac8f3f5119de8d7980a513e67ab3a08f2c6272bb5946df8fd77c0d1763b73.woff2
- https://www.appacademy.io/assets/shared/logos/linkedin-small-4469a17a665eeb7312c29eef424e6ef5ae6cf31aa5995524c7b41c0120bcd91.png
- https://www.googleadservices.com/pagead/conversion.js
- https://googleads.g.doubleclick.net/pagead/viewthroughconversion/1001366846/?random=1600107827122&cv=98&fst=1600107827122&num=1&labeled=U3DrCOL4-AMQvsq-3QM&gu...
https://www.google.com/pagead/1p-user-list/1001366846/?random=1600107827122&cv=98&fst=1600106400000&num=1&labeled=U3DrCOL4-AMQvsq-3QM&guid=ON&_h=720&u...
- https://platform.twitter.com/oct.js
- https://static.ads-twitter.com/oct.js
- https://t.co/i/adsc?type=javascript&version=1.1.0&p_id=Twitter&p_user_id=0&tx_id=I5skd&tw_sale_amount=0&tw_order_quantity=0&tw_iframe_status=0&tw_document_href=htt...
https://analytics.twitter.com/i/adsc?type=javascript&version=1.1.0&p_id=Twitter&p_user_id=0&tx_id=I5skd&tw_sale_amount=0&tw_order_quantity=0&tw_iframe_status=0&tpx_cb...
- https://www.appacademy.io/assets/site-e533477c2693793b607063a3d3526d7271a4ca7ed845776476ee15c367f10c24.js
- https://www.appacademy.io/api/batches/full_time_batches
- https://api.buttercms.com/v2/pages/*fulltime_application_instructions/?auth_token=d70c8fe353f387196110f477dcbbc3ec2a4bf46f2
- https://cdn.segment.com/analytics.js/v1/twLT8nRiaqYdeRqjIDZ77wVWVhjrETEDTL/analytics.min.js