DotDash Meredith - Priority Findings

Joseph Freeman - Principal Engineer, Performance Engineering
Tyron Goldschmidt - Software Engineer, Performance Engineering

Dotdash meredith

Dotdash Meredith

America’s Largest Print / Digital Publisher


People


Investopedia


BYRDIE


health


allrecipes

Dotdash Meredith Playbook

Best Content, **Fastest Sites,** Fewest Ads

Prioritizing Performance

Why Speed Matters

Why Performance Matters

Metrics and experience improve with performance optimization

- **Engagement**
- **SEO**
- **Revenue**

Dotdash meredith

Down to the Milliseconds

- **Where performance is already super*duper*fast, milliseconds matter**
- **Experiment with cutting-edge performance optimizations at every level of the stack**
  - Some wins
  - Some… surprises

Dotdash meredith

Link Headers

Your Treasure Map for the Sea of Information

Resource Loading

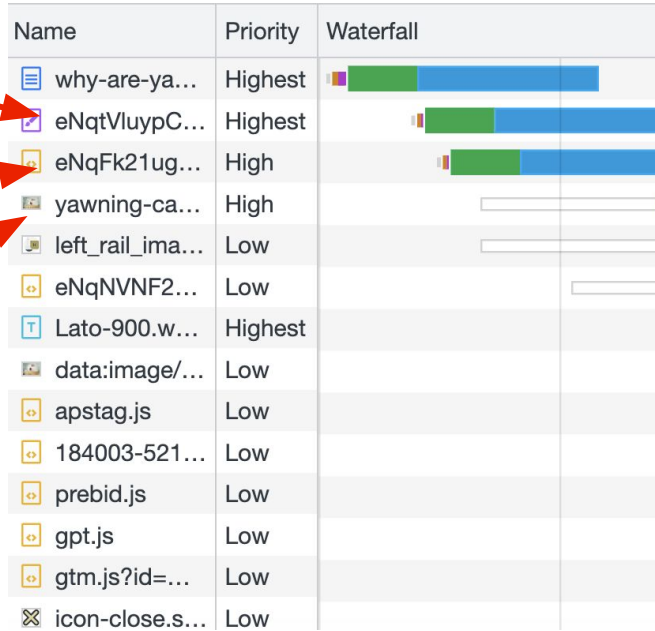
- **Standard resource fetching:**

```
<link href="style.css" rel="stylesheet" type="text/css" />

<script src=”script.js” type=”text/javascript” />

<img src=”yawning-cat.jpg” />

@font-face: url(font.woff2)
```



- **Prefetching**

```
<link rel="preload" href="footer-script.js" as="script"  />
```

- **Problem:** html payload must be downloaded and p|a|r|s|e|d

Dotdash meredith

Link Header - Maximizing Bandwidth

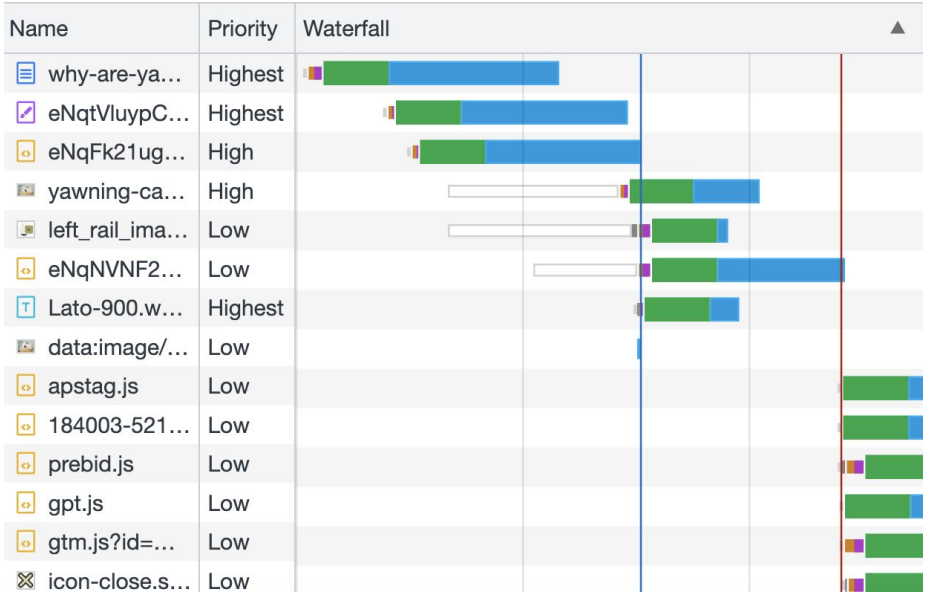
Response Header:

```
...
Link: <//style.css>; rel=preload; as=style; nopush,
<//script.js>; rel=preload; as=script; nopush,
<//yawning-cat.jpg; rel=preload; as=image; nopush,
<//font.woff2; rel=preload; as=font; nopush
...
```

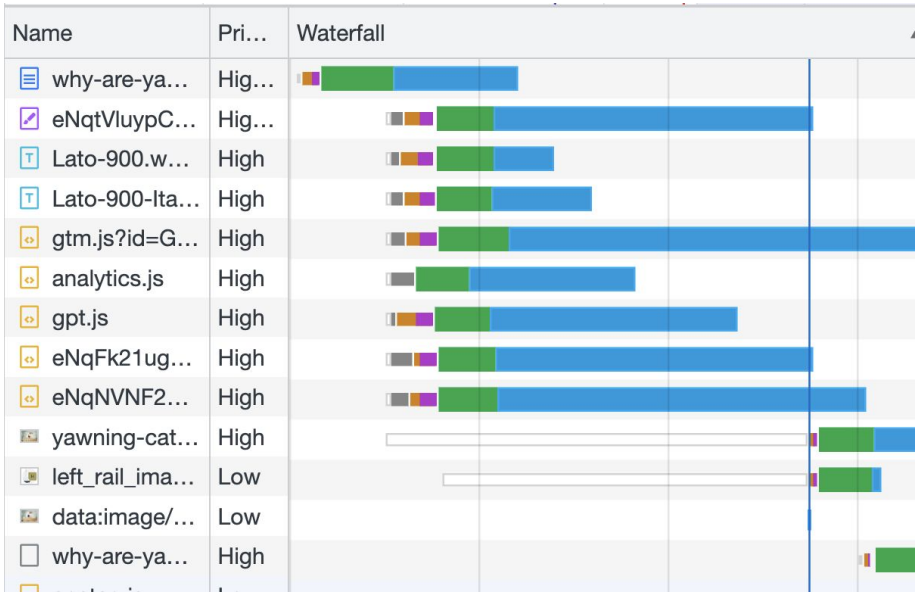
```
<link href="style.css" rel="styles...
<script src=”script.js” type=”text...
<img src=”yawning-cat.jpg” />
@font-face: url(font.woff2)
```

Dotdash meredith

Example: Link Header



No link header



With link header

Dotdash meredith

Results

- Improved **FCP - First Contentful Paint**

- Improved **LCP - Largest Contentful Paint**

Dotdash meredith

Fetch Priority

The Artist Formerly Known as Priority Hints

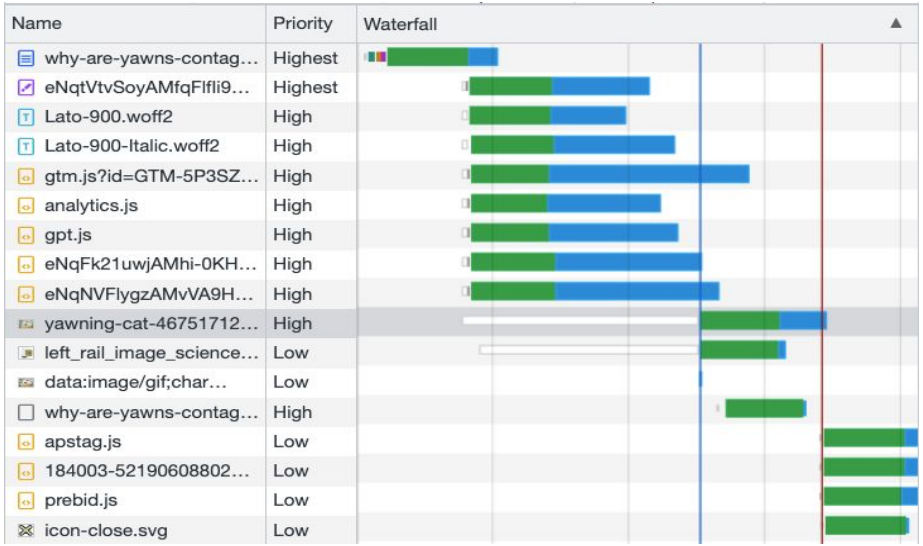
What Does Fetch Priority Do?

- **Browser has defaults and calculations for priority of resources for download**
- **Fetch priority provides *hints* for treatment of priority**

- **Limitations:**
  - not supported on all browsers

Dotdash meredith

What Does It Do *for Us*?



Before fetch priority

After fetch priority

Dotdash meredith

Surprises

- Best performance with *no* preload in link header + *inline* fetch priority on image
- Browser parses (some) <body> before/as render blocking resources are loaded
- Explicit `fetchpriority=”high”` performed *better* than default high for image in view

Dotdash meredith

Early Hints

Catch A Hint?

What Can (103) Early Hints Do?

- During server “think” - sends “103” resource hints *before* the “200” status
- Reduces page load time
- Limitations:
  - Not supported on all browsers
  - Not very helpful when the server response is very fast

Dotdash meredith

Example: Early Hints 103

Response Header:

103 Early Hint

Link: <//style.css>; rel=preload; as=style; nopush,
Link: <//script.js>; rel=preload; as=script; nopush,
Link: <//yawning-cat.jpg; rel=preload; as=image; nopush
…

200 OK

Link: …..

…

<link href="style.css" rel="styles…

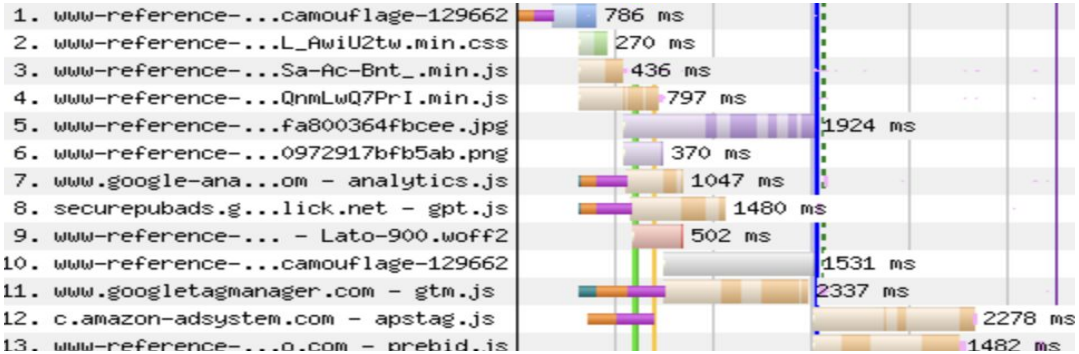
<script src=”script.js” type=”text…

****

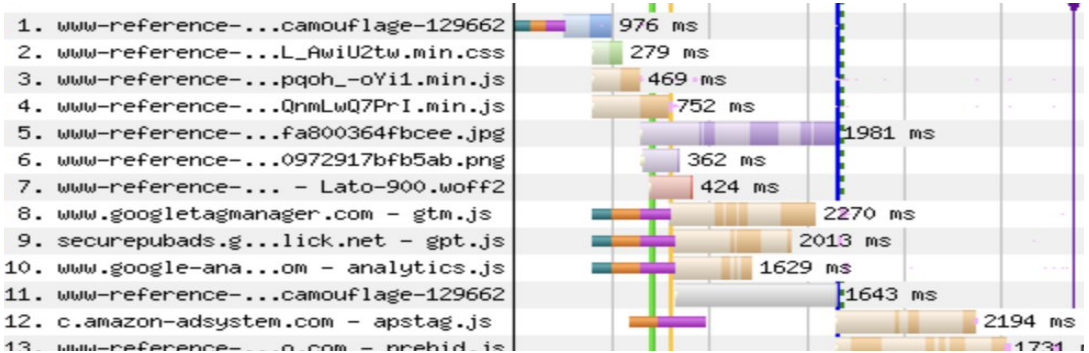
Dotdash meredith

What Do Early Hints Do *for Us*?

Before early hints



After early hints



Dotdash meredith

Surprises

- **Early Hints do not appear in the Networks tab ‘response headers’**
- **Can be seen with Chrome’s net-export tool:** *chrome://net-export*
- **Inline fonts as** *<style>...@font-face: url(...)...</style>* **in <*head*> rather than in stylesheet** *@font-face: url(...)* **to avoid duplication (disregards local cache)**
- **Early Hint(ed) Resource should to be loaded within the first few seconds**

Dotdash meredith

Q&A

Dotdash meredith

Closing Words