



https://www.smashingmagazine.com/2019/01/front-end-performance-checklis

ANALYZE

MOBILE

DESKTOP



https://www.smashingmagazine.com/2019/01/front-end-performance-checklist-2019-pdf-pages/

The speed score is based on the lab data analyzed by Lighthouse.

Analysis time: 08/01/2019, 22:29:41

Scale: ● 90-100 (fast) ● 50-89 (average) ● 0-49 (slow)

## Field Data

The Chrome User Experience Report does not have sufficient real-world speed data for this page.

 [Hide Origin Summary](#)

## Origin Summary

All pages served from this origin have a **Slow** speed compared to other pages in the [Chrome User Experience Report](#) over the last 30 days. To view suggestions tailored to each page, analyze individual page URLs.



First Contentful Paint (FCP)

2.9 s

First Input Delay (FID)

197 ms

44%

42%

14%

89%

8%

3%

## Lab Data

Lighthouse analysis of the current page on an emulated mobile network. Values are estimated and may vary.

First Contentful Paint

1.2 s 

Speed Index

6.1 s 

Time to Interactive

23.1 s 

First Meaningful Paint

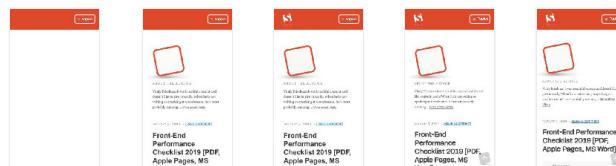
1.4 s 

First CPU Idle

14.8 s 

Estimated Input Latency

410 ms 



## Opportunities

These optimizations can speed up your page load.

Opportunity	Estimated Savings
1 Defer offscreen images	11.85  s

Consider lazy-loading offscreen and hidden images after all critical resources have finished loading to lower time to interactive.

[Learn more](#).

URL	Size (KB)	Potential Savings (KB)
 ...34f6f27f-88a9-425a-910e-39100034def3/devtools-priority-seg....gif (res.cloudinary.com)	1,472 KB	1,472 KB
 ...96fa3207-4fff-4b7b-bfa0-c115062d826a/demo-unit-perf-tests.gif (cloud.netlifyusercontent.com)	798 KB	798 KB
 ...8422076c-6eea-4b35-a98c-b15445cb2dff/viewport-percentage-m....jpg (res.cloudinary.com)	97 KB	97 KB

URL		Size (KB)	Potential Savings (KB)
 ...db62c469-bbfc-4959-839d-590abb41b64e/responsive-breakpoint....png (res.cloudinary.com)		73 KB	73 KB
 ...c987b182-0a0e-40e5-8f8d-dd81feb991f5/replace-animated-gifs.jpg (res.cloudinary.com)		72 KB	72 KB
 ...705ed9b1-cd4d-4231-b808-ce8c2e72e070/review-required-check....png (res.cloudinary.com)		56 KB	56 KB
 ...5fda8d85-1151-4d0b-b2f6-da354ebae345/redux-rest-apollo-gra....png (res.cloudinary.com)		48 KB	48 KB
 ...a85a91a7-fb37-4596-8658-a40c1900a0d6/lighthouse-screenshot.png (res.cloudinary.com)		47 KB	47 KB
 ...c2102708-944d-46ed-93d9-fa28cd76f232/is-tls-fast-yet-01.png (res.cloudinary.com)		47 KB	47 KB
 ...ab06acd3-833a-4634-abf9-fc8d91939250/fmp-and-tti-opt.jpeg (res.cloudinary.com)		42 KB	42 KB
 ...6423db84-4717-4aeb-9174-7ae96bf4f3aa/appshell-1-o0t8qd-c-s....jpg (res.cloudinary.com)		40 KB	40 KB
 ...b1e12dad-ea64-430e-b3db-b67fb76029d8/block-request-url-ima....png (res.cloudinary.com)		39 KB	39 KB
 ...53363a80-48ae-4f91-aed0-69d292e6d7a2/2018-js-processing-ti....png (res.cloudinary.com)		39 KB	39 KB
 ...e30c7d5b-ef8b-46ba-b0fc-b1d5a31cefff/webpack-comparison.png (res.cloudinary.com)		37 KB	37 KB
 ...949e5601-04e7-48ee-91a5-10bd7af19a0f/perf-budgets-network-....jpg (res.cloudinary.com)		35 KB	35 KB
 ...31237c37-d7db-4faa-9849-51657e122331/babel-preset-opt.png (res.cloudinary.com)		34 KB	34 KB
 ...24d7fcb0-40c3-4ada-abb3-22b8524f9b2d/progressive-css-loadi....png (res.cloudinary.com)		31 KB	31 KB
 ...f7f56052-6abb-4d18-a5aa-8d84102d812e/jmperez-composition-p....jpg (res.cloudinary.com)		29 KB	29 KB
 ...d46ddc8b-4bd7-4627-b738-baf62807b26f/inline-scripts-deferr....png (res.cloudinary.com)		29 KB	29 KB
 ...30dd1821-9800-4f01-91a8-1375d4812144/http-pages-chrome-opt.png (res.cloudinary.com)		29 KB	29 KB
 ...shop/smashing-book-6-product-image-opt.png (res.cloudinary.com)		27 KB	27 KB

URL		Size (KB)	Potential Savings (KB)
 ...3bb4ab9e-978a-4db0-83c3-57a93d70516d/file-size-budget-fast....png (res.cloudinary.com)	(res.cloudinary.com)	27 KB	27 KB
 ...bb4716e5-d25b-4b80-b468-f28d07bae685/app-build-components-....png (res.cloudinary.com)	(res.cloudinary.com)	25 KB	25 KB
 ...5d80f91c-9807-4565-b616-a4735fc4949/network-requests-firs....png (res.cloudinary.com)	(res.cloudinary.com)	22 KB	22 KB
 ...SmashingConf/brad-frost-sf.png (res.cloudinary.com)	(res.cloudinary.com)	21 KB	21 KB
 ...eb634666-55ab-4db3-aa40-4b146a859041/font-loading-strategi....png (res.cloudinary.com)	(res.cloudinary.com)	20 KB	20 KB
 ...39c247a9-223f-4a6c-ae3d-db54a696ffcb/tti-budget-opt.png (res.cloudinary.com)	(res.cloudinary.com)	19 KB	19 KB
 ...bbb2ea83-7674-47d8-9cad-89a2de009915/how-webassembly-works.png (res.cloudinary.com)	(res.cloudinary.com)	16 KB	16 KB
 ...b5a4354f-4a9b-420d-8979-bd7abb87aebc/av1-logo-2018-full.png (res.cloudinary.com)	(res.cloudinary.com)	16 KB	16 KB
 ...cf570272-840e-4cf8-92de-76808a12422c/casper-case-study-opt....png (res.cloudinary.com)	(res.cloudinary.com)	15 KB	15 KB
 ...7191d628-f0a1-490c-afca-c8abcd4823/brad-perf-budget-buil....png (res.cloudinary.com)	(res.cloudinary.com)	15 KB	15 KB
 ...c91c910d-e934-4610-9dc5-369ec9071b57/rail-perf-model-opt.png (res.cloudinary.com)	(res.cloudinary.com)	14 KB	14 KB
 ...smashing-cat/newsletter-fish-cat.svg (d33wubrfki0l68.cloudfront.net)		9 KB	9 KB
 ...smashing-cat/cat-rollerderby.svg (www.smashingmagazine.com)		5 KB	5 KB
 /avatar/d41d8cd....jpg?s=250&d=mm&r=g (www.gravatar.com)		3 KB	3 KB
 ...dfe1a4ec-2088-4e39-8a39-9f2010380a53/tuesday-2g-opt.png (res.cloudinary.com)	(res.cloudinary.com)	3 KB	3 KB
 ...logo/logo-red.png (www.smashingmagazine.com)		3 KB	3 KB
 ...nav-icons/jobs.svg (d33wubrfki0l68.cloudfront.net)		2 KB	2 KB
 ...drop-caps/character-15.svg (d33wubrfki0l68.cloudfront.net)		2 KB	2 KB

## 2 Use video formats for animated content

2.4 s ^

Large GIFs are inefficient for delivering animated content. Consider using MPEG4/WebM videos for animations and PNG/WebP for static images instead of GIF to save network bytes. [Learn more](#)

URL	Size (KB)	Potential Savings (KB)
...96fa3207-4fff-4b7b-bfa0-c115062d826a/demo-unit-perf-tests.gif (cloud.netlifyusercontent.com)	798 KB	567 KB

## 3 Defer unused CSS

0.9 s ^

Remove unused rules from stylesheets to reduce unnecessary bytes consumed by network activity. [Learn more](#).

URL	Size (KB)	Potential Savings (KB)
/css/main.css (www.smashingmagazine.com)	75 KB	68 KB
...cssbin/www-playe....css (www.youtube.com)	52 KB	51 KB
...css/player.css (f.vimeocdn.com)	15 KB	13 KB
@charset "UTF-8";/*! normalize.css v4.2.0   MIT License   github.com/necolas/normalize.css */@media ...	20 KB	10 KB
...css/print.css (d33wubrfki0l68.cloudfront.net)	4 KB	4 KB

## Diagnostics

More information about the performance of your application.

### 1 Ensure text remains visible during webfont load

▲ ^

Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading. [Learn more](#).

URL	Potential Savings (ms)

URL	Potential Savings (ms)
...elenawebregular/elenawebregular.woff2 (d33wubrfki0l68.cloudfront.net)	80 ms
...mijaregular/mija_regular-webfont.woff2 (d33wubrfki0l68.cloudfront.net)	80 ms
...mijaregular/mija_regular-webfont.woff2 (d33wubrfki0l68.cloudfront.net)	290 ms
...elenawebbold/elenawebbold.woff2 (d33wubrfki0l68.cloudfront.net)	450 ms
...elenawebregularitalic/elenawebregularitalic.woff2 (d33wubrfki0l68.cloudfront.net)	460 ms
...elenawebbolditalic/elenawebbolditalic.woff2 (d33wubrfki0l68.cloudfront.net)	460 ms
...mijabold/mija_bold-webfont.woff2 (d33wubrfki0l68.cloudfront.net)	460 ms
...v18/KFOICnqEu....ttf (fonts.gstatic.com)	30 ms
...v18/KFOmCnqEu....ttf (fonts.gstatic.com)	30 ms

## 2 Minimize main-thread work

15.7 s ▲ ^

Consider reducing the time spent parsing, compiling and executing JS. You may find delivering smaller JS payloads helps with this.

Category	Time Spent
Style & Layout	8,184 ms
Script Evaluation	2,839 ms
Other	1,581 ms
Rendering	1,525 ms
Script Parsing & Compilation	929 ms
Parse HTML & CSS	402 ms
Garbage Collection	230 ms

## 3 Avoid an excessive DOM size

2,798 nodes ▲ ^

Browser engineers recommend pages contain fewer than ~1,500 DOM nodes. The sweet spot is a tree depth < 32 elements and fewer than 60 children/parent element. A large DOM can increase memory usage, cause longer [style calculations](#), and produce costly [layout reflows](#). [Learn more](#).

Statistic	Element	Value
Total DOM Nodes		2,798
Maximum DOM Depth		17
Maximum Child Elements	<div class="c-garfield-the-cat">	91

#### 4 Serve static assets with an efficient cache policy

46 resources found ▲ ^

A long cache lifetime can speed up repeat visits to your page. [Learn more](#).

URL	Cache TTL	Size (KB)
/avatar/d41d8cd...jpg?s=250&d=mm&r=g (www.gravatar.com)	5 m	4 KB
/instream/ad_status.js (static.doubleclick.net)	15 m	0 KB
...477cf258-f4e3-42e2-811d-73547904d716/state.js (consentcdn.cookiebot.com)	30 m	0 KB
/analytics.js (www.google-analytics.com)	2 h	17 KB
...s68-c-k-no-mo-rj-c0xffffffff/photo.jpg (yt3.ggpht.com)	1 d	4 KB
/uc.js (consent.cookiebot.com)	1 d 1 s	8 KB
...34f6f27f-88a9-425a-910e-39100034def3/devtools-priority-seg....gif (res.cloudinary.com)	7 d	1,473 KB
...8422076c-6eea-4b35-a98c-b15445cb2dff/viewport-percentage-m....jpg (res.cloudinary.com)	7 d	98 KB
...db62c469-bbfc-4959-839d-590abb41b64e/responsive-breakpoint....png (res.cloudinary.com)	7 d	73 KB
...c987b182-0a0e-40e5-8f8d-dd81feb991f5/replace-animated-gifs.jpg (res.cloudinary.com)	7 d	72 KB
...705ed9b1-cd4d-4231-b808-ce8c2e72e070/review-required-check....png (res.cloudinary.com)	7 d	56 KB

URL	Cache TTL	Size (KB)
...5fda8d85-1151-4d0b-b2f6-da354ebae345/redux-rest-apollo-gra....png (res.cloudinary.com)	7 d	49 KB
...a85a91a7-fb37-4596-8658-a40c1900a0d6/lighthouse-screenshot.png (res.cloudinary.com)	7 d	48 KB
...c2102708-944d-46ed-93d9-fa28cd76f232/is-tls-fast-yet-01.png (res.cloudinary.com)	7 d	47 KB
...ab06acd3-833a-4634-abf9-fc8d91939250/fmp-and-tti-opt.jpeg (res.cloudinary.com)	7 d	43 KB
...6423db84-4717-4aeb-9174-7ae96bf4f3aa/appshell-1-o0t8qd-c-s....jpg (res.cloudinary.com)	7 d	41 KB
...b1e12dad-ea64-430e-b3db-b67fb76029d8/block-request-url-ima....png (res.cloudinary.com)	7 d	40 KB
...53363a80-48ae-4f91-aed0-69d292e6d7a2/2018-js-processing-ti....png (res.cloudinary.com)	7 d	39 KB
...e30c7d5b-ef8b-46ba-b0fc-b1d5a31ceff/webpack-comparison.png (res.cloudinary.com)	7 d	37 KB
...949e5601-04e7-48ee-91a5-10bd7af19a0f/perf-budgets-network-....jpg (res.cloudinary.com)	7 d	36 KB
...31237c37-d7db-4faa-9849-51657e122331/babel-preset-opt.png (res.cloudinary.com)	7 d	35 KB
...24d7fc0-40c3-4ada-abb3-22b8524f9b2d/progressive-css-loadi....png (res.cloudinary.com)	7 d	32 KB
...f7f56052-6abb-4d18-a5aa-8d84102d812e/jmperez-composition-p....jpg (res.cloudinary.com)	7 d	30 KB
...d46ddc8b-4bd7-4627-b738-baf62807b26f/inline-scripts-deferr....png (res.cloudinary.com)	7 d	29 KB
...30dd1821-9800-4f01-91a8-1375d4812144/http-pages-chrome-opt.png (res.cloudinary.com)	7 d	29 KB
...3bb4ab9e-978a-4db0-83c3-57a93d70516d/file-size-budget-fast....png (res.cloudinary.com)	7 d	27 KB
...bb4716e5-d25b-4b80-b468-f28d07bae685/app-build-components-....png (res.cloudinary.com)	7 d	25 KB
...5d80f91c-9807-4565-b616-a4735fc4949/network-requests-firs....png (res.cloudinary.com)	7 d	23 KB
...eb634666-55ab-4db3-aa40-4b146a859041/font-loading-strategi....png (res.cloudinary.com)	7 d	20 KB
...39c247a9-223f-4a6c-ae3d-db54a696ffcb/tti-budget-opt.png (res.cloudinary.com)	7 d	20 KB
...bbb2ea83-7674-47d8-9cad-89a2de009915/how-webassembly-works.png (res.cloudinary.com)	7 d	17 KB
...b5a4354f-4a9b-420d-8979-bd7abb87aebc/av1-logo-2018-full.png (res.cloudinary.com)	7 d	16 KB
...cf570272-840e-4cf8-92de-76808a12422c/casper-case-study-opt....png (res.cloudinary.com)	7 d	15 KB

URL	Cache TTL	Size (KB)
...7191d628-f0a1-490c-afca-c8abcd4823/brad-perf-budget-buil....png (res.cloudinary.com)	7 d	15 KB
...c91c910d-e934-4610-9dc5-369ec9071b57/rail-perf-model-opt.png (res.cloudinary.com)	7 d	15 KB
...dfe1a4ec-2088-4e39-8a39-9f2010380a53/tuesday-2g-opt.png (res.cloudinary.com)	7 d	4 KB
...en_US/base.js (www.youtube.com)	8 d	448 KB
...www-embed-player-vflMEG-ug/www-embed-player.js (www.youtube.com)	8 d	36 KB
...js/player.js (f.vimeocdn.com)	14 d	132 KB
...css/player.css (f.vimeocdn.com)	14 d	15 KB
/video/675....webp?mw=1000&mh=560&q=70 (i.vimeocdn.com)	30 d	33 KB
...shop/smashing-book-6-product-image-opt.png (res.cloudinary.com)	30 d	27 KB
...SmashingConf/brad-frost-sf.png (res.cloudinary.com)	30 d	21 KB
/portrait/20468470_120x120.jpg (i.vimeocdn.com)	30 d	4 KB
/video/675....jpg?mw=80&q=85 (i.vimeocdn.com)	30 d	2 KB
...v153.../bird_j6gn7w.svg (res.cloudinary.com)	30 d	1 KB

## 5 Avoid enormous network payloads

Total size was 4,963 KB ▲ ^

Large network payloads cost users real money and are highly correlated with long load times. [Learn more.](#)

URL	Size (KB)
...34f6f27f-88a9-425a-910e-39100034def3/devtools-priority-seg....gif (res.cloudinary.com)	1,472.9 KB
...96fa3207-4fff-4b7b-bfa0-c115062d826a/demo-unit-perf-tests.gif (cloud.netlifyusercontent.com)	798.7 KB
...en_US/base.js (www.youtube.com)	448.2 KB
...js/player.js (f.vimeocdn.com)	131.7 KB
...8422076c-6eea-4b35-a98c-b15445cb2dff/viewport-percentage-m....jpg (res.cloudinary.com)	97.8 KB
...01/front-end-performance-checklist-2019-pdf-pages (www.smashingmagazine.com)	93.9 KB

URL	Size (KB)
/css/main.css (www.smashingmagazine.com)	75.5 KB
...db62c469-bbfc-4959-839d-590abb41b64e/responsive-breakpoint....png (res.cloudinary.com)	73.4 KB
...c987b182-0a0e-40e5-8f8d-dd81feb991f5/replace-animated-gifs.jpg (res.cloudinary.com)	72.3 KB
...elenawebbolditalic/elenawebbolditalic.woff2 (d33wubrfki0l68.cloudfront.net)	60.6 KB

## 6 Reduce JavaScript execution time 3.3 s i ^

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. [Learn more](#).

URL	Total	Script	Parse	Eval	Compile	Parse
...www-embed-player-vflMEG-ug/www-embed-player.js (www.youtube.com)	1,061 ms	93 ms	4 ms	6 ms	0 ms	0 ms
...en_US/base.js (www.youtube.com)	829 ms	28 ms	5 ms	7 ms	2 ms	0 ms
...js/player.js (f.vimeocdn.com)	391 ms	1 ms	22 ms	0 ms	6 ms	0 ms

URL	Total	Scr ipt Eva lua tio n	Scr ipt P ar se
...js/app.js (d33wubrfki0l68.cloudfront.net)	240 ms	12 1 ms	4 1 ms
/bundles/a138d7f....js (d33wubrfki0l68.cloudfront.net)	192 ms	17 8 ms	1 5 ms
/js/vendors~AddToCart~Amnesia~Checkout~CheckoutC...~CheckoutC.....js (www.smashingmagazine.com)	188 ms	16 1 ms	2 7 ms
...01/front-end-performance-checklist-2019-pdf-pages (www.smashingmagazine.com)	147 ms	60 ms	5 ms
/analytics.js (www.google-analytics.com)	138 ms	68 ms	1 4 ms
/embed/Cjo9iq8k-bc (www.youtube.com)	64 ms	58 ms	7 ms
/js/PreLoad.js (www.smashingmagazine.com)	53 ms	47 ms	6 ms

7 Minimize Critical Requests Depth

5 chains found



The Critical Request Chains below show you what resources are loaded with a high priority. Consider reducing the length of chains, reducing the download size of resources, or deferring the download of unnecessary resources to improve page load. [Learn more.](#)

Maximum critical path latency: **1,430 ms**

#### Initial Navigation

...01/front-end-performance-checklist-2019-pdf-pages (www.smashingmagazine.com)
...elenawebbolditalic/elenawebbolditalic.woff2 (d33wubrfki0l68.cloudfront.net) - <b>460 ms, 60.6 KB</b>
...elenawebregularitalic/elenawebregularitalic.woff2 (d33wubrfki0l68.cloudfront.net) - <b>460 ms, 60.26 KB</b>
...mijabold/mija_bold-webfont.woff2 (d33wubrfki0l68.cloudfront.net) - <b>460 ms, 23.96 KB</b>
...mijaregular/mija_regular-webfont.woff2 (d33wubrfki0l68.cloudfront.net) - <b>290 ms, 23.43 KB</b>
...elenawebbold/elenawebbold.woff2 (d33wubrfki0l68.cloudfront.net) - <b>450 ms, 59.39 KB</b>

#### 8 User Timing marks and measures

3 user timings [^](#)

Consider instrumenting your app with the User Timing API to measure your app's real-world performance during key user experiences. [Learn more.](#)

Name	Type	Start Time	Duration
mark_ol	Mark	4,066.64 ms	
mark_fs	Mark	4,468.24 ms	
mark_qoes	Mark	4,480.23 ms	

#### Passed audits

11 audits [^](#)

##### 1 Eliminate render-blocking resources



Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles. [Learn more.](#)

##### 2 Properly size images

Potential savings of 7 KB [^](#)

Serve images that are appropriately-sized to save cellular data and improve load time. [Learn more.](#)

URL	Size (KB)	Potential Savings (KB)
 ...shop/smashing-book-6-product-image-opt.png (res.cloudinary.com)	27 KB	5 KB
 /avatar/d41d8cd....jpg?s=250&d=mm&r=g (www.gravatar.com)	3 KB	2 KB

## 3 Minify CSS



Minifying CSS files can reduce network payload sizes. [Learn more.](#)

## 4 Minify JavaScript

Potential savings of 5 KB 



Minifying JavaScript files can reduce payload sizes and script parse time. [Learn more.](#)

URL	Size (KB)	Potential Savings (KB)
/bundles/a138d7f....js (d33wubrfki0l68.cloudfront.net)	16 KB	5 KB

## 5 Efficiently encode images



Optimized images load faster and consume less cellular data. [Learn more.](#)

## 6 Serve images in next-gen formats



Image formats like JPEG 2000, JPEG XR, and WebP often provide better compression than PNG or JPEG, which means faster downloads and less data consumption. [Learn more.](#)

## 7 Enable text compression



Text-based resources should be served with compression (gzip, deflate or brotli) to minimize total network bytes. [Learn more.](#)

## 8 Preconnect to required origins



Consider adding preconnect or dns-prefetch resource hints to establish early connections to important third-party origins. [Learn more.](#)

## 9 Server response times are low (TTFB)

Root document took 150 ms 



Time To First Byte identifies the time at which your server sends a response. [Learn more.](#)



## 10 Avoid multiple page redirects

Redirects introduce additional delays before the page can be loaded. [Learn more.](#)

## 11 Preload key requests



Consider using <link rel=preload> to prioritize fetching resources that are currently requested later in page load. [Learn more.](#)

### What's New

Read about the [July 2018 Google Speed Update](#).

### Web Performance

Learn more about [web performance tools at Google](#).

### Give Feedback

Have specific, answerable questions about using PageSpeed Insights? Ask your question on [Stack Overflow](#). For general feedback and discussion, start a thread in our [mailing list](#).

### About PageSpeed Insights

PageSpeed Insights analyzes the content of a web page, then generates suggestions to make that page faster. [Learn more.](#)