

# How... to... fi..x... slo..w.... s..ites...

Troubleshooting common speed issues on  
WordPress websites



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# Identifying speed issues

# Using Chromes Network Tab

- Chrome's javascript console has a handy network tab which will give you information about how long it took to load the individual assets of a website you visit.
- To view this, open up Google Chrome, right click on any webpage and click 'inspect'.
- You can also open it up using CTRL, shift and J
- To use it, select the network tab from the side menu, and then load the page you want to inspect with the network tab open.

The image shows a web browser window with the URL `wapuudashboardpet.com`. The page content includes a blue header with the site logo, a menu icon, and a main section titled "HOME" with several paragraphs of text. A blue arrow points to the "Network" tab in the browser's developer tools.

The Network tab displays a list of resources loaded by the browser. The table below summarizes the visible data:

Name	Status	Type	Initiator	Size	Time	Waterfall
wapuudashboardpet.com	200	docu...	Other	20.5 KB	307 ms	
jquery-migrate.min.js?ver=1.4.1	200	script	(index) Parser	3.8 KB	126 ms	
jquery.js?ver=1.12.4-wp	200	script	(index) Parser	32.3 KB	124 ms	
navigation.js?ver=1.0	200	script	(index) Parser	1.1 KB	101 ms	
style.css?ver=5.3.2	200	styles...	(index) Parser	14.7 KB	98 ms	
wp-emoji-release.min.js?ver=5.3.2	200	script	(index)33 Script	4.2 KB	84 ms	
wp-embed.min.js?ver=5.3.2	200	script	(index) Parser	718 B	84 ms	
styles.css?ver=5.1.6	200	styles...	(index) Parser	631 B	84 ms	
jquery.scrollTo.js?ver=2.1.2	200	script	(index) Parser	2.3 KB	83 ms	
theme.min.css?ver=5.3.2	200	styles...	(index) Parser	628 B	81 ms	
global.js?ver=1.0	200	script	(index) Parser	2.4 KB	79 ms	
style.min.css?ver=5.3.2	200	styles...	(index) Parser	5.7 KB	79 ms	
blocks.css?ver=1.1	200	styles...	(index) Parser	1.8 KB	79 ms	
skip-link-focus-fix.js?ver=1.0	200	script	(index) Parser	400 B	73 ms	
ban2.png	200	png	(index)	52.6 KB	67 ms	

# GTMetrix and Webpagetest

- [gtmetrix.com](https://gtmetrix.com), [webpagetest.org](https://webpagetest.org) and Google's page speed insights are all online tools where you can input the URL of your website and get some handy feedback on what they think might be slowing down your site.



- They're very useful tools, but sometimes its best to get your hosting provider's opinion of things you're unsure about.

PageSpeed Insights HOME DOCS

http://wapuudashboardpet.com/ ANALYZE

MOBILE DESKTOP

Requested URL redirected to: <https://wapuudashboardpet.com/> RE-ANALYZE

**86**

<https://wapuudashboardpet.com/>

0-49 50-89 90-100 ⓘ

**Field Data** — The Chrome User Experience Report [does not have sufficient real-world speed data](#) for this page.

**Origin Summary** — The Chrome User Experience Report [does not have sufficient real-world speed data](#) for this origin.

**Lab Data** ☰

First Contentful Paint	3.0 s	First Meaningful Paint	3.4 s
Speed Index	3.2 s	First CPU Idle	3.4 s

PageSpeed Insights HOME DOCS

MOBILE DESKTOP

Performance score.


**Opportunity** Estimated Savings

- ▲ Eliminate render-blocking resources 1.03 s
- Remove unused CSS 0.15 s
- Serve images in next-gen formats 0.15 s

**Diagnostics** — More information about the performance of your application. These numbers don't **directly** affect the Performance score.

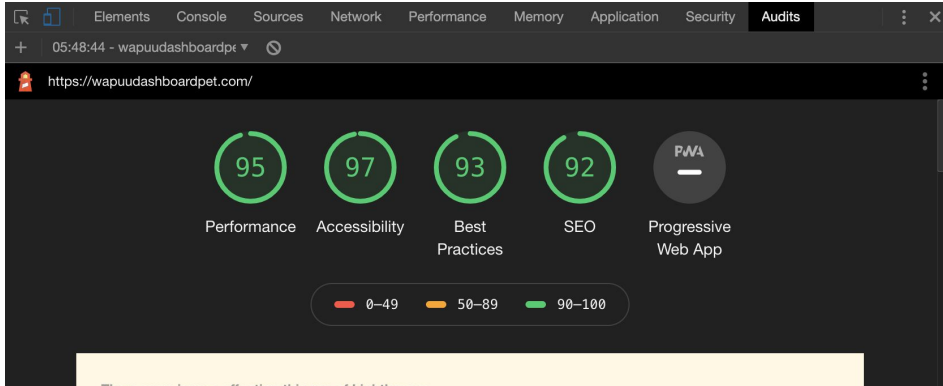
- ▲ Ensure text remains visible during webfont load
- Minimize main-thread work - 2.1 s
- Avoid chaining critical requests — 16 chains found
- Keep request counts low and transfer sizes small — 21 requests · 195 KB

**Passed audits** (17)

 The **speed score** is based on the lab data analyzed by [Lighthouse](#).  
Analysis time: 31/01/2020, 15:02:36

**What's New** Read the latest [Google Webmaster Central posts about performance & speed](#).

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



There were issues affecting this run of Lighthouse:

- Chrome extensions negatively affected this page's load performance. Try auditing the page from a Chrome profile without extensions.



Performance

**Opportunities** — These suggestions can help your page load faster. They don't [directly affect](#) the Performance score.

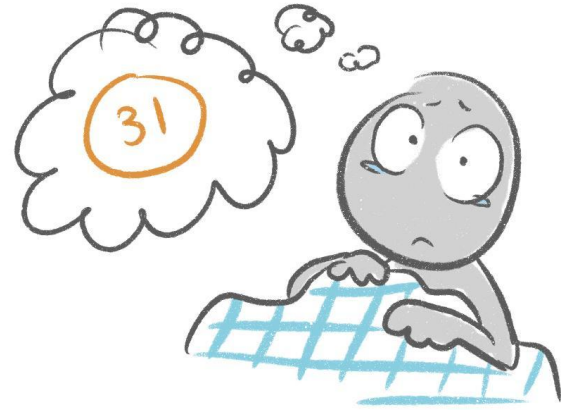
Opportunity	Estimated Savings
■ Eliminate render-blocking resources	0.44 s
■ Minify CSS	0.3 s
■ Remove unused CSS	0.3 s
■ Defer offscreen images	0.15 s

**Diagnostics** — More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

- ▲ Ensure text remains visible during webfont load
- Avoid chaining critical requests — 16 chains found
- Keep request counts low and transfer sizes small — 20 requests • 213 KB

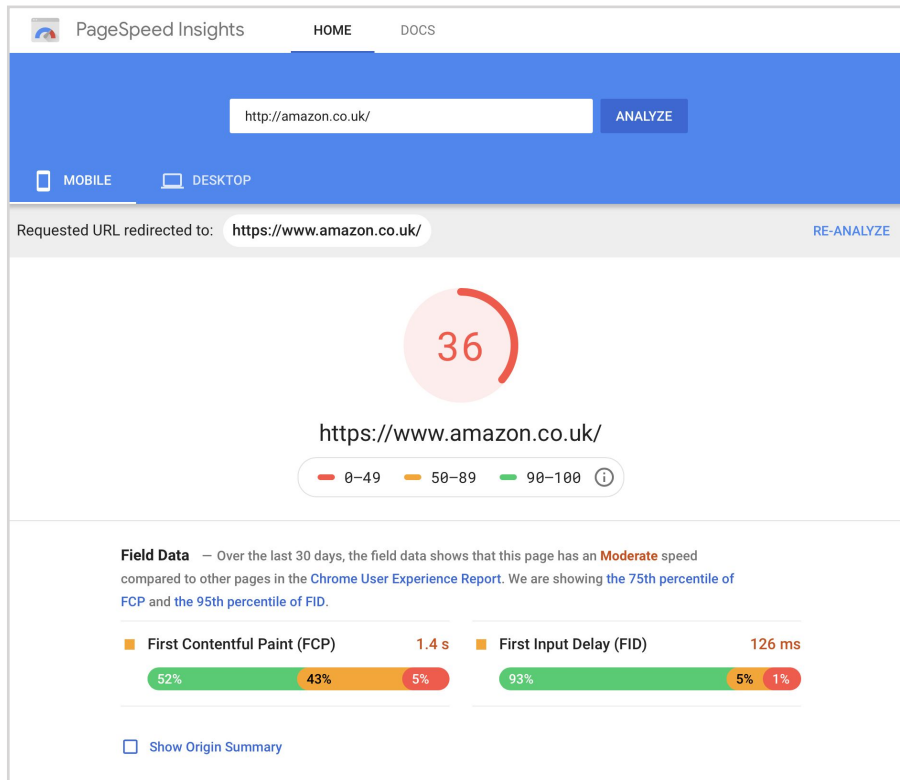
Passed audits (17)

Don't let these numbers keep you up at night



It's very hard to get a perfect score on these sites. Take their advice as guidelines for how to improve your performance, but pay attention to the actual user experience of your site.





**Despite this score, Amazon's site loads in under a second.**



Your site slows down by 1 second. What will happen to conversions, bounces and revenue? We will tell you.

[Find Out More](#)

# Web Page Performance Test for

[wapuudashboardpet.com](#)

From: London, UK - EC2 - Chrome - Cable  
08/02/2020, 05:47:55

[Need help improving?](#)

<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	
First Byte Time	Keep-alive Enabled	Compress Transfer	Compress Images	Cache static content	Effective use of CDN

Tester: l-0b23ab84c70ce2b83

**First View only**

Test runs: 3

[Re-run the test](#)

[View JSON result](#)  
[Raw page data](#) - [Raw object data](#)  
[Export HTTP Archive \(.har\)](#)  
[View Test Log](#)

## Performance Results (Median Run)

	Load Time	First Byte	Start Render	First Contentful Paint	Speed Index	Last Painted Hero	First CPU Idle	Document Complete			Fully Loaded			
								Time	Requests	Bytes In	Time	Requests	Bytes In	Cost
First View (Run 1)	0.857s	0.312s	0.600s	0.659s	0.664s	0.900s	> 0.600s	0.857s	22	217 KB	0.940s	23	219 KB	\$----

[Plot Full Results](#)

## Test Results

Run 1:

	Waterfall	Screenshot
First View (0.857s)		

# Web Page Performance Test for [wapuudashboardpet.com](http://wapuudashboardpet.com)

From: London, UK - EC2 - Chrome - Cable  
08/02/2020, 05:47:55

Need help improving?

A  
First Byte Time

A  
Keep-alive Enabled

A  
Compress Transfer

A  
Compress Images

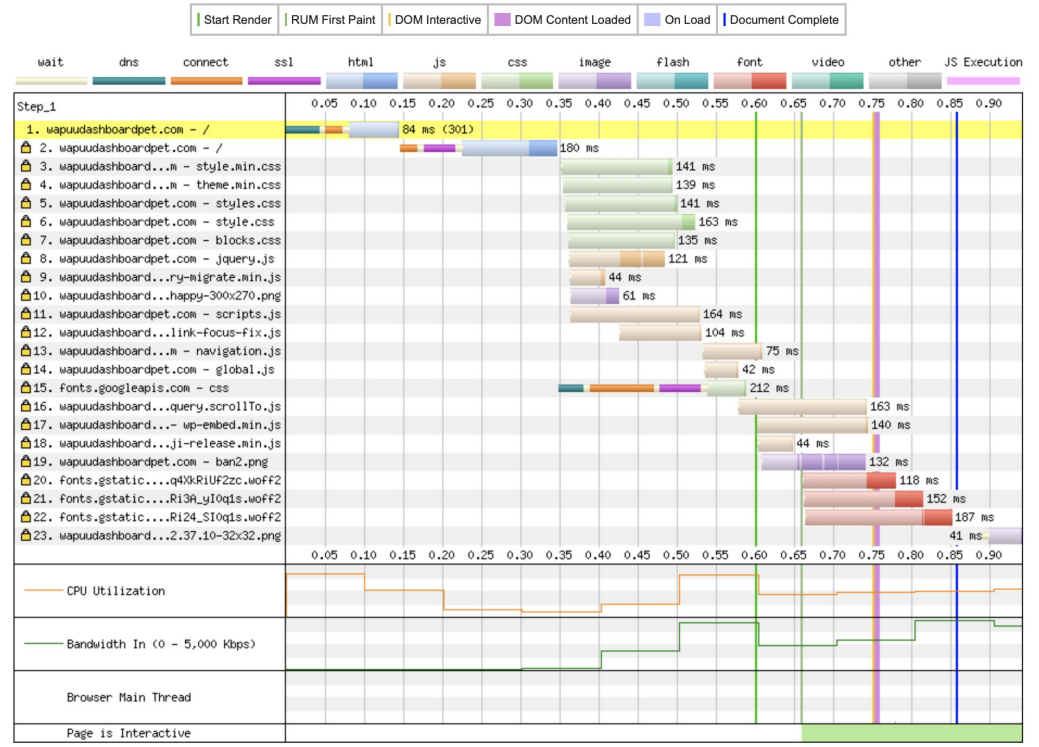
A  
Cache static content

✓  
Effective use of CDN

### Full Optimization Checklist

Step_1	Keep-Alive	GZip	Compress Img	Progressive	Cache S
1: wapuudashboardpet.com - /	100%	100%	100%	N/A	97%
2: wapuudashboardpet.com - /	✓	✓			✓
3: wapuudashboardpet.com - style.min.css	✓	✓			✓
4: wapuudashboardpet.com - theme.min.css	✓	✓			✓
5: wapuudashboardpet.com - styles.css	✓	✓			✓
6: wapuudashboardpet.com - style.css	✓	✓			✓
7: wapuudashboardpet.com - blocks.css	✓	✓			✓
8: wapuudashboardpet.com - jquery.js	✓	✓			✓
9: wapuudashboardpet...ry-migrate.min.js	✓	✓			✓
10: wapuudashboardpet...happy-300x270.png	✓	✓	✓		✓
11: wapuudashboardpet.com - scripts.js	✓	✓			✓
12: wapuudashboardpet...p-link-focus-fix.js	✓	✓			✓
13: wapuudashboardpet.com - navigation.js	✓	✓			✓
14: wapuudashboardpet.com - global.js	✓	✓			✓
15: fonts.googleapis.com - css	✓	✓			✓
16: wapuudashboardpet...jquery.scrollTo.js	✓	✓			✓
17: wapuudashboardpet...wp-embed.min.js	✓	✓			✓
18: wapuudashboardpet...moji-release.min.js	✓	✓			✓
19: wapuudashboardpet.com - ban2.png	✓	✓	✓		✓
20: fonts.gstatic.c...Kq4XkR1UF2zc.woff2	✓	✓			✓
21: fonts.gstatic.c...XkR13A_y10q1s.woff2	✓	✓			✓
22: fonts.gstatic.c...XkR124_S10q1s.woff2	✓	✓			✓
23: wapuudashboardpet...12.37.10-32x32.png	✓	✓	✓		✓
	Keep-Alive	GZip	Compress Img	Progressive	Cache S

### Waterfall View



# Big speed culprits

**Most of the time we see low scores due to:**

Unoptimised Images

Large Javascript/CSS

External resources



**Easy optimisation for everyone**

# Image Optimisation Plugins

- Jetpack: Photon - Downsizes images based off the size of the element they are being displayed in.
- WP Smush - Compresses images by removing meta data, optimising compression and changing GIF files into smaller extended PNG files.
- EWWW Image Optimizer - Automatically optimises images as you upload them to your site.

## WebP

WebP is a modern image format that provides superior lossless and lossy compression for images on the web. Using WebP, webmasters and web developers can create smaller, richer images that make the web faster.

# Online image compression tools

[compressor.io](https://compressor.io)

- Lossless or lossy, reduces image size by around 38%

[gifreducer.com](https://gifreducer.com)

- Allows you to select level of dithering, can keep a lot of image quality and reduced image size by around 12%

[pngquant.org](https://pngquant.org)

- Reduces .png file sizes by up to 70%

<https://github.com/mozilla/mozjpeg>

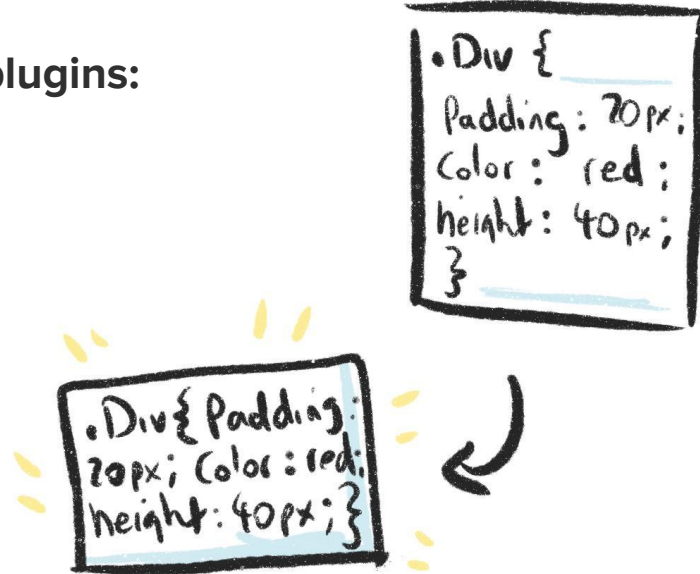
- Same for JPEGs

# Minify Javascript and CSS

There are plugins which will minify these scripts on your site - meaning they will remove all white space from the files and save them into a new file - making it a lot smaller.

## WordPress minification plugins:

- Autoptimize
- WP Super Minify
- WP Fastest Cache





# HTTP/2

HTTP/2 is an upgrade to the HTTP protocol which can speed up your website.

When a normal HTTP request is made on your website. Every packet requires a new request. So every asset loaded on your site is a new HTTP request.

HTTP/2 keeps the stream open, meaning a request is made, and then data is pushed through, but the stream is kept open, so more requests can be added to it, speeding things up.

HTTP/2 needs an SSL to work.

# Caching

Caching can speed up your website a great deal. Rather than the server getting every asset from scratch each time you visit the website, the page once rendered gets stored in memory, meaning it can load faster.

Caching can be handled with a plugin, or on the server level. If you're not sure ask your hosting provider, as too much caching can cause a lot of confusion when developing your site.

## WordPress caching plugins:

- W3 Total Cache
- WP Rocket
- WP Fastest Cache





**Other reasons your site could be slow**

# Other reasons site might be slow

## Too many plugins?

Having a lot of plugins isn't always a bad thing, but the longer you've had your site, the more plugins you've likely installed. Older plugins might not still be maintained and even disabled plugins can still be causing a slowdown because of the data they keep on your site.

## Solution

Do regular plugin audits. Are your plugins still being updated? Do you need them all? Delete the ones you're not using.



# Other reasons site might be slow

## DDOS attacks

A DDOS is where other servers or IPs are making lots of requests to your site in quick succession, taking up the memory on your server and making your site slow.

## Solution

Speak to your hosting provider about security services such as Fail2ban and limiting access to commonly abused DDOS target files (xmlrpc.php for example)



# Other reasons site might be slow

## Hacked?

Sometimes unexplained slowness might be an indication your site is hacked. Take a look for any file changes, or files you did not add. Check the mail queue on your server. Malicious scripts can take up a lot of memory and lead to a slow website.



## Solution

Clean up the hacked site. Remove all infected files and patch up vulnerabilities.

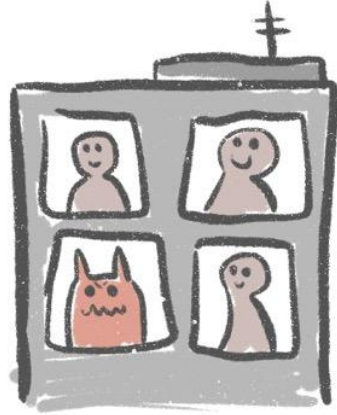
# Other reasons site might be slow

## Using shared hosting?

Shared hosting means your website shares server space with other websites - usually hundreds of them! These websites are sharing the resources of the server and sometimes there's not enough to go around, slowing down your site!

## Solution

Switch to container/VPS based hosting.



VS



# Thank you very much!



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