

Report for speed optimization work on: <https://projects.shortpixel.com/demo3jru/>

Introduction

A ShortPixel representative offered me a chance to provide speed optimization on a demo website: <https://projects.shortpixel.com/demo3jru/>. I decided to spend one day on speed optimization of this small website and write a report about it.

The website hasn't been optimized for speed for a while, with its code outdated, and it could use a tune-up.

No single test is perfect, so I use multiple tests to get a clear picture of the website's speed.

I used the proper server location for those tests -> UK (where I could choose the server location like the WPT test or server performance).

This website in question has decent server performance in the EU, but not so much elsewhere. A solid CDN service might help level it up across the globe.

Performance Test
URL SPEED

URL

LOCATION	STATUS	DNS	CONNECT	TLS	TTFB
Frankfurt	200	1.34 ms	5.86 ms	15.75 ms	2 s
Amsterdam	200	29.97 ms	19.27 ms	36.08 ms	294.31 ms
London	200	8.61 ms	19.76 ms	31.85 ms	393.13 ms
New York	200	6.45 ms	101.68 ms	113.88 ms	536.68 ms
San Francisco	200	18.07 ms	166.03 ms	178.52 ms	729.05 ms
Singapore	200	14.51 ms	179.01 ms	192.59 ms	761.41 ms
Sydney	200	3.73 ms	310.38 ms	381.37 ms	1.22 s
Bangalore	200	104.16 ms	140.03 ms	147.84 ms	647.73 ms

Figure 1 Server response time (TTFB)

2. State of the website before the optimization

2.1.1. Google PSI for MOBILE before the improvement

https://pagespeed.web.dev/analysis/https-projects-shortpixel-com-demo3jru/4jii1othd9?form_factor=mobile

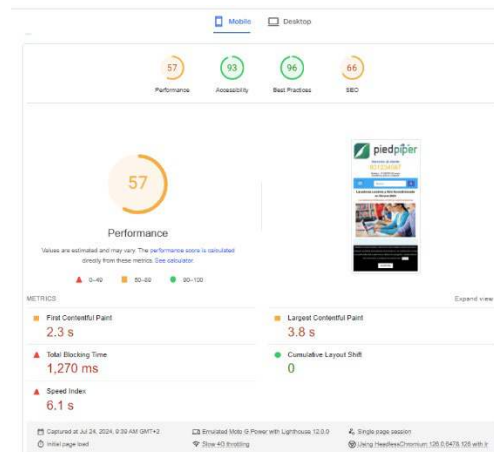


Figure 2 Google PSI for mobile scores

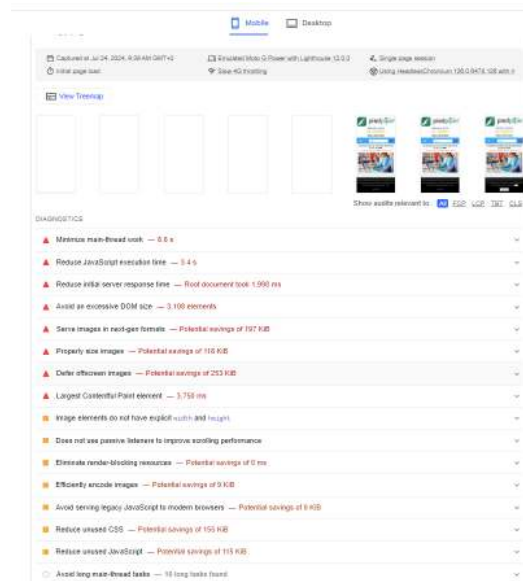


Figure 3 Google PSI for mobile diagnostics

These results show that the website has not been tuned up for speed in quite some time, and the mobile test suffers because of it.

2.1.2. Google PSI for MOBILE after the improvement

https://pagespeed.web.dev/analysis/https-projects-shortpixel-com-demo3jru/0ky2460ros?form_factor=mobile

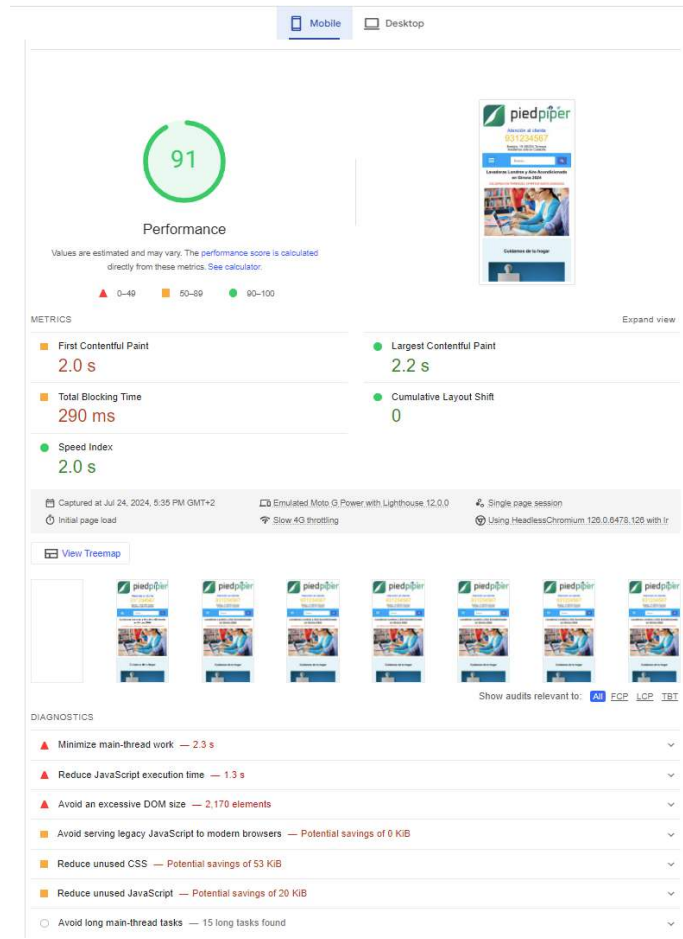


Figure 4 Google PSI and diagnostics for mobile score

I'll stick to the mobile scores, as a good mobile score is harder to achieve. And the images speak for themselves, a nice jump on the mobile test from 57 to 91. Most of the diagnostic opportunities are sorted out.

The desktop test was also improved, as you can check on the test links above.

SPEED OPTIMIZATION WORK FOR: HTTPS://PROJECTS.SHORTPIXEL.COM/DEMO3JRU/

2.2.1. WPT test before my work

https://www.webpagetest.org/result/240724_AiDcM2_4WJ/

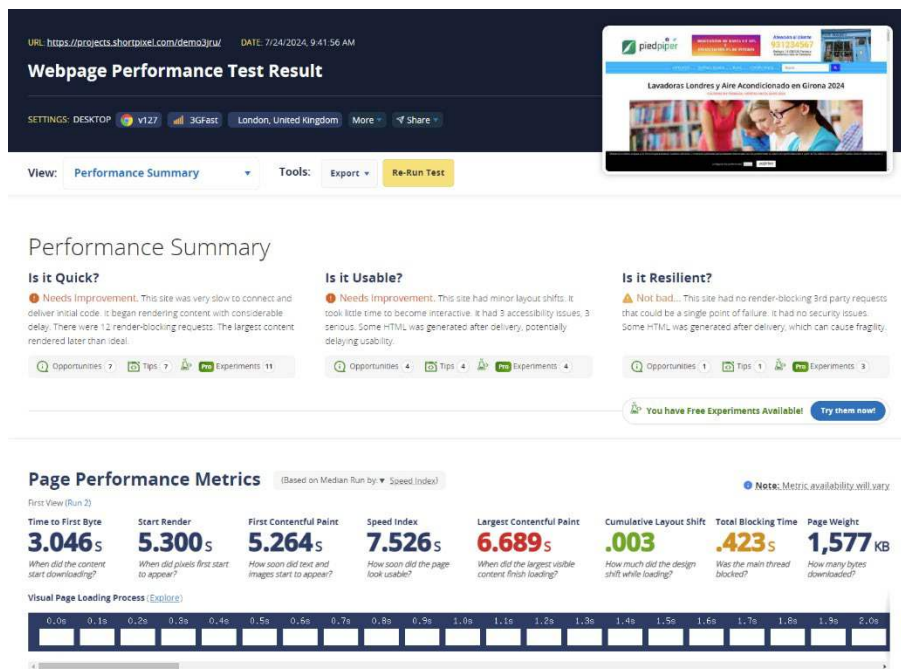


Figure 5 WPT test

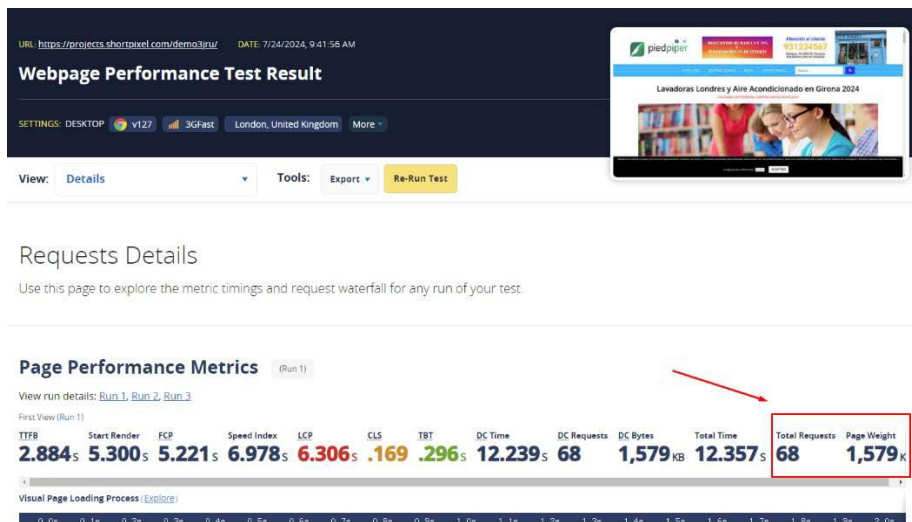


Figure 6 WPT single run

LCP at 6.3s, 68 requests, and around 1.5 MB in size.

SPEED OPTIMIZATION WORK FOR: HTTPS://PROJECTS.SHORTPIXEL.COM/DEMO3JRU/

2.2.2. WPT test after my work

https://www.webpagetest.org/result/240724_BiDcTE_AZG/

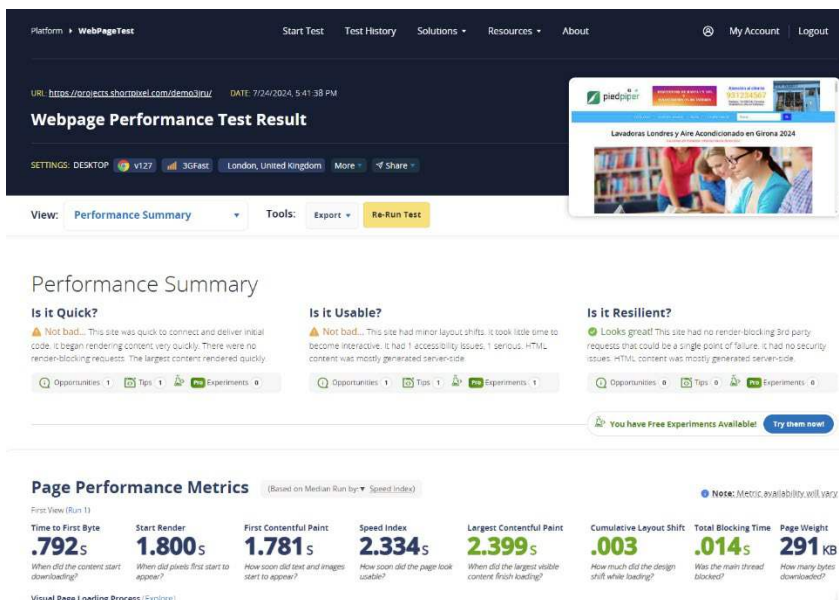


Figure 7 WPT after

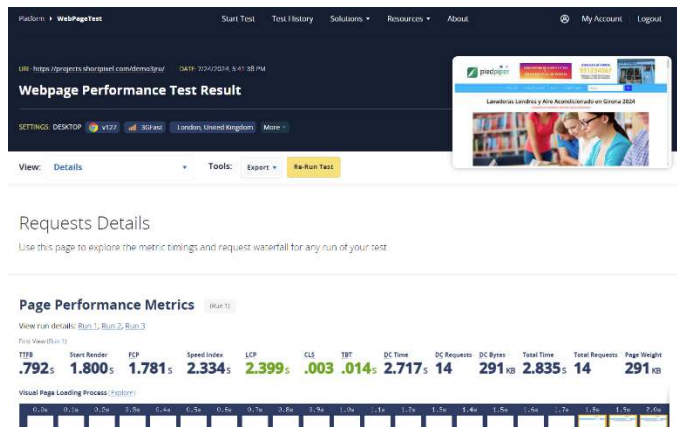


Figure 8 WPT single run

After my improvements, the LCP was cut by half to 2.39s, and I trimmed the number of initial requests to 14, and the size to 0.2MB. It's always nice to see green across the board.

3. Website developer console errors and Site Health

-Before I started working the website threw an error on the homepage (possibly elsewhere as well).



Figure 9 console error

Most likely caused by too aggressive settings on the Autoptimize plugin.

There are no visible console errors on the homepage after my work.

-The Site Health **before** my work revealed some issues (see the image below).

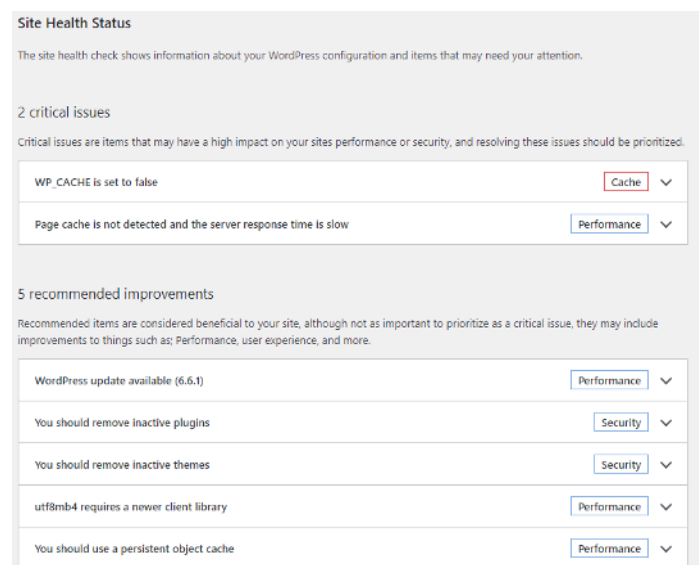
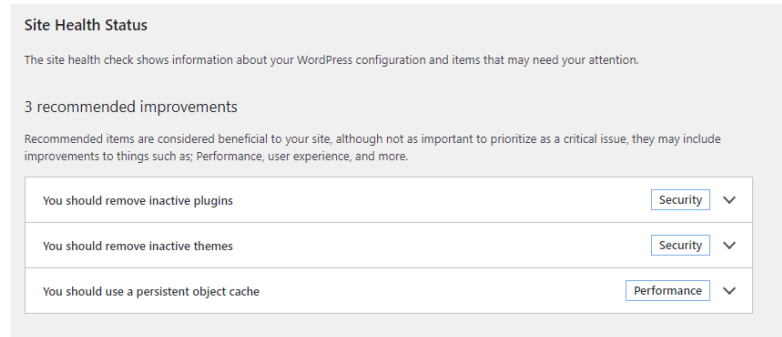


Figure 10 Site Health section

-The Site Health **after** my work shows a different picture.



4. A short version of some things I've done:

- As I don't have access to a server, I started with a full local backup. For the same reason I temporarily changed the admin email. I wouldn't want to end up locked up by the Wordfence plugin.

I updated/installed the following:

- Perfmatters 1.5.8->newest (used my license, as I usually do to my clients who need it). Then I properly configured it and unloaded the extra code (WooCommerce) from some pages/posts.
- Deleted old, and installed new WP Rocket (my license again). I'm aware that the server is Litespeed, as Litespeed cache would be a viable option as well. Most of my time went to optimizing and configuring its settings. For instance:
 - lazyload optimization
 - File optimization CSS/JS
 - DB cleanup of revisions and transients
- Replaced the Smush with the EWWW IO plugin, as I find it more reliable in bulk image optimization. Then I transferred the images to the next-gen format (WebP).
- Homepage - removed a single slider image from the hero section, and replaced it with a fixed hero image.
- I checked the DB autoload size, it's around 500Kb which is fine.
- Tested multiple times.

5. Future recommendations

- Upload images in the next-gen format (WebP) in proper size, as part of your routine.
- There are many outdated plugins/theme files on the website. Keep all the plugins/theme/WP-core files/PHP versions on their latest iteration, if possible.
- Keep the database in shape, and conduct regular checks on it.
- Keep only one extra theme, there is no need for 5 themes
- Replace Akismet anti-spam/Jetpack plugins with a more performance-friendly solution

6. Conclusion

As this was a 1-day project, I had enough time to tune the website's speed and write up a report, but not enough to conduct and test everything possible. Most importantly I've increased the speed of the website significantly without visual errors or loss of functions.

This website seems to neglect regular maintenance (so many updates are on hold). I reluctantly conduct updates on a short project like this one, as that can open a Pandora's box, but I did it in this case (especially with WP core files).

Here's the link to my speed optimization prices/service if you'd liked my service and want to use it in the future:

<https://wpservice.pro/pricing-speed-optimization/>

P.s.

Please be aware that I've made changes to the code, and although I've tested it on this short project – **there is the possibility that you'll find some issues with it later. This is why I have a one-month guarantee – if in that time you spot an error that is caused by my work, I'll fix it ASAP for free.**

If you'll need someone to keep an eye on your website, for long-term maintenance, regular speed improvements, or SEO work, please feel free to contact me on the contacts below.

Best wishes:

Dalibor Družinec, founder of:

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