

Increasing Website Loading Speed

A Case Study



Alan My Thoughts

Overview

Initially, I dedicate [Alan My Thoughts](#) as just a portfolio site whereby I can showcase all my published works in one place. But eventually, I realized that I need to market myself beyond just showing myself as a freelance content writer and showcase my work.

As a freelance writer, my job is to help businesses creating content.

Therefore, it's also my responsibility to bring awareness and educate my potential clients about building trust among their customers and solve their pain points through content.

In order to attract more clients to come to my site, one of the steps that I have taken is to ensure that my site loads fast enough. But I realized that, at times, that my website did load pretty slowly. I personally hate waiting so long for a website to load, so I assumed that anyone visiting my site would have the same sentiment.

Why I plan to make my website load faster?

Loading time is a significant concern for most websites. This includes slow, frequent loading and any other issues that cause the page to take more than just a few seconds to load.

My aim for the long term is to get my site load faster, which in turn provides a better user experience for my site. It is expected that a website should load fast enough so that users can expect the site to be up and running by the time they got there, primarily if it is dedicated to serving customers.

A study from [StrangeLoop](#) that involved large sites like Google and Amazon showed that a delay on the page load time of 1 second could result in a 7% loss in conversions, 11% fewer page views, and a 16% decrease in customer satisfaction.

Additionally, according to the [Loadstorm](#) study, if a site loads slower than 5 seconds, you stand a 74% chance of losing traffic.

Yikes... big yikes. I personally don't want to lose my customers on my site just because of slow site loading. So, it's better for me to focus on providing a better user experience in the long term by making my site load faster, no matter what time of day.

Long term benefits of making my site faster to load

The long-term benefits of making my site faster to load are a win-win for my customers and me. Here are some benefits:

Good for search engine optimization (SEO)

[Google's PageSpeed](#) is one of many ranking factors for a website to rank on Google search engine results. And it's no secret that with faster loading times, the rate of user engagement and conversions will increase, which signals to Google that my site is user-friendly.

Especially with the upcoming [Core Web Vital update](#) in 2021, Google is more focused on your site's user experience: how fast a site loads, if it has an excellent overall user experience, if it is mobile-friendly, and if it is secured through an SSL certificate.

Increase page views

Getting my site to load faster means potential customers are more likely to visit my site. They don't like waiting too long to load a site.

Better pageviews lead to more potential leads, which will, in turn, make my business more robust.

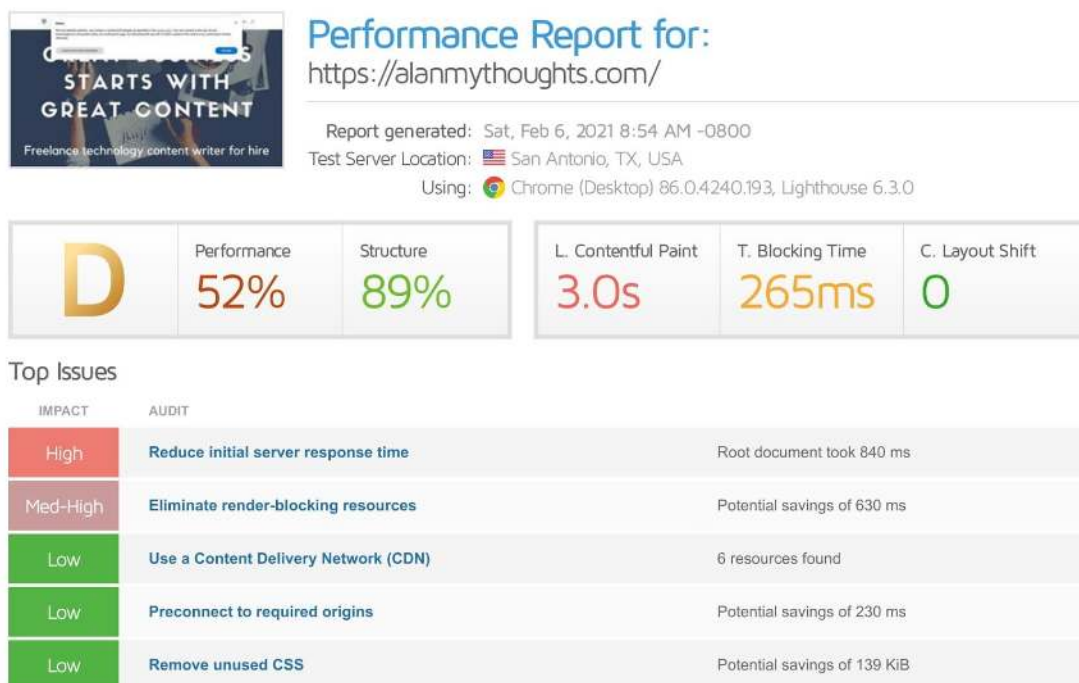
Problem

As mentioned in the overview, I had a problem with the slow loading of my site.

How do I know that my website loads slowly?

I use [GTmetrix](#) to measure my website's performance. GTmetrix measures both performance and structure of my website, as well as how my site is built for performance.

Overall, my website scored a D, with performance only scored 52%, but scored a bit well on the structure (at 89%). This was before I attempted to improve my site further.



I am by no means a website techie. In fact, I don't really have much knowledge in website development, let alone getting my hands dirty with the coding stuff.

From my observation, the way my site is set up is not too that great, and that my website is not optimized for optimum performance. Sure, I like how user-intuitive when designing my website, especially on the backend, but I discounted the fact that a great user experience must include fast loading times.

Again, I'm not a website techie, but I do manage to identify the factors behind my site's slow loading: poor performance of my previous web host and the bloated WordPress theme that I used.

Poor web hosting performance

Poor web hosting performance can result in a variety of symptoms such as slow load times, high ping times, and reduced site ranking. This is especially true if using shared hosting, which I used previously.

My website is hosted on a shared server, which means that it is shared with other websites with the same server simultaneously.

This means that although most of my website's performance issues are expected, some problems could have arisen from the hosting server itself.

I used to host my website on [Hostinger](#). At first, I like using it over how cheap it is over my another previous web host ([SiteGround](#)) while providing similar features that I'm pretty familiar with.

However, when I started to experience a number of issues with my website's performance that I'm currently experiencing, it is a sign that I should move to another web host.

Well, I should have done that earlier though.

The problem with using Hostinger's shared hosting

As with other shared hosting providers, the issue with using Hostinger's shared hosting is that it's not powerful enough. It may be suitable for a small or a hobby website, but in the long term, since I intend to get serious about my online presence, I need a powerful enough shared server to handle the loading needs of my website.

Using shared hosting means I'm consuming the same computer resources as hundreds of other customers. In other words, I'm sharing my server with potentially other users, which means my server resources were already crowded from the beginning. Not to mention, the load on the web hosting server is already heavy when more people use their server resources at the same time.

Due to the nature of shared hosting, if one website gets a lot of traffic, other websites on the server suffer due to the excessive and highly unfair allocation of server resources. This also means slower loading times on my site, which translates to more lack of user experience, and people would eventually leave my site if they fed up with the slow loading.

There's a lack of options to truly get the highest level of performance, other than migrating away from a shared host. Unfortunately, I had many things to consider before migrating away from Hostinger, which resulted in me staying over there.

Plus, the cloud hosting plans on Hostinger isn't cheap for my budget, so I had no choice but to stay in the same host until I got a viable alternative, which I will explain later in this case study.

Did I mention server response time? When I made a performance test on my site through GTmetrix, one of the things that I need to fix is to reduce the initial server response time. But it was only a few weeks later I learned that this has to do with the hosting. Well, I got the urge further to change hosting with that regard.

Now that I've covered the hosting part, let me explain the WordPress theme, which also contributed to the slow loading of my website.

Bloated WordPress theme

Not all WordPress themes on the net are created equal. I wish I get to know earlier that some of the themes are simply bloated with too many features and stuff that have no use at all. But I didn't know that; I only care about how easy to use a theme is, especially if there's a drag and drop page builder as well as an interactive editor.

For me, at first, [Divi](#) matched what I looked for. It has an intuitive drag-and-drop page builder, which helps me with creating pages that are worth sharing. Though I haven't used all the features there as much.

Like really, there were too many features that I don't really need, plus the theme itself isn't cheap. Thus, when I'm getting used to a theme and promised myself not to change to another theme again, I decided to stick with Divi for as long as I can (it ended up the other way around).

Because my website was loading too slow, I had to install several plugins on the backend to speed it up back. I replaced the [Shortpixel Image Optimizer](#) plugin with [ShortPixel Adaptive Images](#). Unlike the image optimizer plugin, the ShortPixel Adaptive Images features a content delivery network or CDN to host my images. I thought if I host all the photos on Shortpixel instead of my site, it will load much faster, less burden on my web host.

I also installed the [Autoptimize](#) plugin to minify the Javascript and CSS codes on my WordPress backend. This plugin basically combines the Javascript and CSS codes on my WordPress site so that it takes less time to load my site each time. This supposedly speeds up my site as a result.

But overall, such steps did little to speed up my site. The performance kept getting worse over time. Therefore, I had to do something different to improve the loading speed of my blog.

Solution

One day, I found out about the [Online Media Masters](#) website, and it lists out the host recommendations as well as other recommendations that can be made for my WordPress site.

I noticed that they recommend WordPress sites to be hosted with [Cloudways](#), and the web host recommendations were based on the performance test that has been done on each web host (which then published the results on the site).

The following steps that I made are based on the recommendations made there.

I migrated to a new web host by a different provider

I finally decided to use a different hosting provider with a different server that provided me with better storage, better speeds, and affordable pricing for my budget. I chose to migrate my website from Hostinger to [Cloudways Digital Ocean](#) hosting.

I won't explain this much as I took action merely based on the recommendations and the stats that I saw on the Online Media Masters site. But I suppose that my site should load faster than ever with such a server, thus reducing the initial server response time.

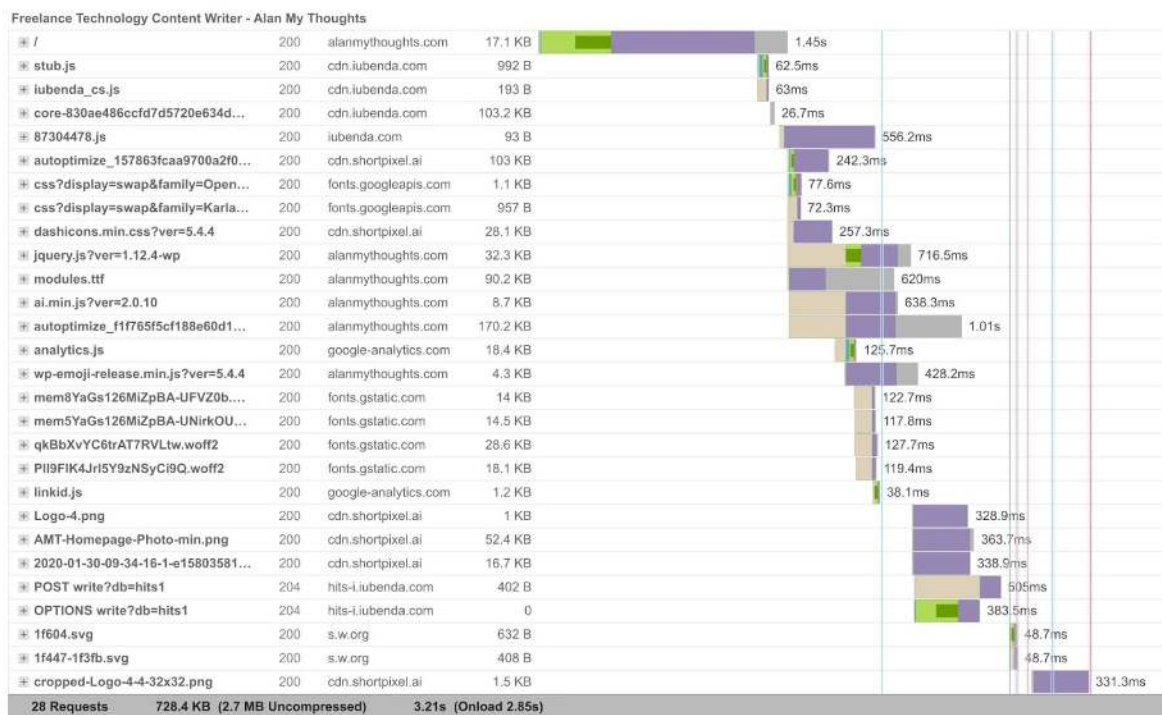
How much do I pay for the hosting? Only around \$7+ per month. And this is not a shared hosting btw—quite a steal.

Minimize HTTP requests

I'm not going to explain what is HTTP requests like I'm a geek here. But from what I understand, if there are too many mish meshes of codes in the backend of a site, each time a person loads the site, it will make a lot of HTTP requests due to too many codes.

This also translates to longer loading times on the site. Apparently, this was the case for my site before making this change.

The waterfall chart displays the loading behaviour of your site in your selected browser. It can be used to discover simple issues such as 404's or more complex issues such as external resources blocking page rendering.



So this is what I did.

Changed to a lightweight WordPress theme

I used to have Divi for my site. But since then, I was on the verge of a more lightweight alternative. After some research done on several lightweight themes that I encountered, I chose [Astra](#).

Like Divi, Astra is made for people who want to set up a website quickly and are not interested in programming. But unlike Divi, Astra is a lightweight and fast-loading alternative that I presume will be an excellent user experience.

I'm not going to list out the main features that made me selected Astra, but here is the screenshot that I've taken from the Happy Add-ons website.

Basic Features of Astra, extremely optimized WordPress themes

- Profoundly customizable
- **Less than 50KB weighed front-end size**
- Allow importing lots of pre-built templates
- WooCommerce support
- Auto page builder option
- **No coding for customization**
- Built-in header layout

Better for whom?

Astra is for them who want to build page effortlessly and don't want to trouble with coding. Besides that, you can use this theme to speed up your website. After using this theme the user will not be bothered for web layout settings.

Source: [Happy Add-ons](#)

Optimize the codes on my WordPress backend

Now that I have changed to a new theme, I need to optimize the codes on the backend. You may recall that I used the Autooptimize plugin previously to minify the CSS and Javascript codes, but this time, I decided to use the [WP Rocket](#) plugin instead.

Not only is it recommended by Online Media Masters, but it includes all features that are needed to optimize my site on the backend, which otherwise I need to install many other plugins at the same time.

Also, to note, I used Divi to build my pages as well as to edit my web content, thus stopping using the Gutenberg blocks as the editor. But once I made the switch to Astra and Gutenberg blocks, I realized that many codes were messing around the pages, and some were even displayed on the pages themselves.

Not good.

Eventually, I had to remove all the codes on my page, plus edit my content and add any page elements through Gutenberg blocks, moving forward.

Optimize the size of images on my website

Lastly, the images on my site should be reduced in size. By size, I mean, let's say if the image is around 3MB and I want to reduce it to just 500KB without sacrificing the quality of those images.

As I feel that the site may be performed better at this point, I have decided to ditch the ShortPixel Adaptive Images (the CDN, remember?) with the ordinary Image Optimizer (also by ShortPixel) plugin instead. With that, all the images will be hosted on my site, albeit at reduced sizes, along with the maintained image quality.

How long does it take to revamp my website?

It took me about 6 days, which I spent 5 days redesigning the site on the new Astra theme so that it resembles the ones from Divi. The server and website migration only took me a day, to my surprise.

Outcome

I'm not going to describe this final outcome much, but I ran a test again five days after I have finished redesigning my site. Here you go:



What do you think? :D

I hope you enjoyed this case study :)

Thanks for reading!



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