Loading Time Optimization of an e-Commerce Website

About Our Client

Our client was an e-commerce platform that retailed authentic sports nutrition supplements at moderate rates.

Problem(s) Faced by Our Client

When the client approached Netilly, the e-commerce website had been launched just about a month back, and the loading time was over 22 seconds on desktop. Due to the high loading time, the website was experiencing high bounce rates and very low traffic volume.

Objective of the Project Undertaken by Netilly

Our objective was to optimize the website for loading time.

Approach

Our web designers performed an extensive audit of the website using multiple tools and found the below issues on the website.

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List of Issues Found			
Sl No.	**Category**	**Issues Found**	**Notes**
1	Website	Serve Scaled Images	
2	Website	Defer Parsing Of Javascript	
3	Website	Defer offscreen images	
4	Website	Serve images in next gen formats	
5	Website	Remove Unused CSS	
6	Website	No Caching Mechanism Found	(Manually configuring the site for e-commerce caching is recommended)
7	Website	Js load time is very high	
8	Website	FCP is over 8.9sec (very bad score)	FCP - First Contentful Paint
9	Website	FID is over 2.5ms (very bad scroe again)	FID - First Input Delay
10	Website	Interaction time is over 38s	
11	Server	TTFB is over 2.8secs	
12	Server	No Caching Mechanism Found	

In addition, fixing these issues was challenging as the earlier developers had used a theme with multiple issues. Also, we found over 608 images/videos in the media folder on the website. These content pieces needed to be individually fixed by scaling them, optimizing them, and then changing the format.

Strategy Used

Images took up a lot of file size space, especially if they were bloated and oversized. That's why the number one on our list of things was to optimize images. Firstly, we removed the unwanted images because they were unnecessarily increasing the loading time. Then the images were optimized and scaled-down, as the result of this page load time was reduced. Secondly, Java script loading time was also very high, and as a result, we optimized it through Plugin.
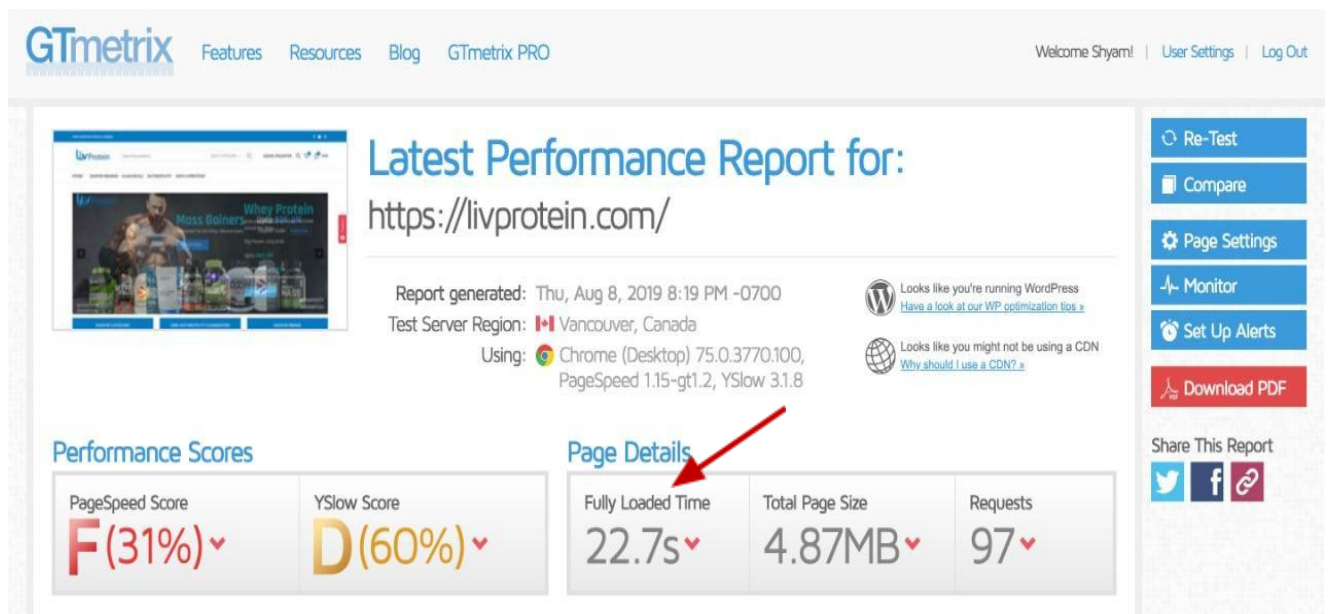
- Removed unused CSS manually, completed in two days.
- Optimized the Serve images in next-gen formats.
- Used high compression for images to significantly reduce loading time.

Results Achieved

We were able to bring down the loading time of the website from 22.7 seconds to 7.7 seconds.

Before

After

Performance Report for:

https://livprotein.com/

Report generated: Mon, Aug 19, 2019 9:40 PM -0700
Test Server Region: 🇮🇳 Mumbai, India
Using: Chrome (Desktop) 75.0.3770.100, PageSpeed 1.15-gt1.2, YSlow 3.1.8

PageSpeed Score	YSlow Score	Fully Loaded Time	Total Page Size	Requests
B (88%) ⌃	D (65%) ⌄	7.7s ⌄	2.16MB ⌃	71 ⌃

Top 5 Priority Issues

Serve scaled images	D (64)	♥ AVG SCORE: 71%	IMAGES	HIGH
Leverage browser caching	D (67)	⌃ AVG SCORE: 61%	SERVER	HIGH
Optimize the order of styles and scripts	A (92)	◆ AVG SCORE: 94%	CSS/JS	HIGH
Specify a cache validator	A (92)	◆ AVG SCORE: 94%	SERVER	HIGH
Minimize request size	A (92)	◆ AVG SCORE: 96%	CONTENT	HIGH