*Web Performance Report*

Sentry.io, Google Lighthouse, Jmeter

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# Introduction

This document is made to identify areas for improvement and reference for future performance documents for the application GetawayGo.

# Test environments and methodology

I have implemented Sentry.io, a powerful performance monitoring tool, for both our backend and frontend operations. This tool allows us to easily capture and analyse any errors that may occur, providing developers with detailed information about the source and cause of any issues for the web application. Sentry.io not only helps with error tracking, but also provides valuable performance data such as duration of operations, transactions per minute, and more.

I have also used JMeter to create a Test plan with HTTP requests, testing some of the main functionalities in the application.

Along with that, I have generated a report with Google Lighthouse.

# Performance Analysis from Sentry.io

I started monitoring the frontend and the backend on 23rd May 2023. These are the performances of the backend, frontend, and the web vitals.

## Backend performance

### Apdex

Apdex (Application Performance Index) is a metric used to measure and quantify user satisfaction with the performance of an application or system. The Apdex score is typically represented as a value between 0 and 1, where 1 indicates that all user requests were satisfied within an acceptable threshold, and 0 indicates that none of the requests met the acceptable threshold. For example, in a web application, a commоn threshold might be set at 1 second, meaning that if a user request is completed within 1 second, it is considered satisfactory.

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## Frontend performance

### P50 and P75

P50 and P75 are percentiles used to measure response times or other performance metrics. They help analyze the distribution of values and understand the performance experienced by different users. For example, if the P50 value is high, it indicates that a substantial portion of users are experiencing slower response times. This might suggest the need for оptimizations to improve overall performance. Similarly, if the P75 value is higher than desired, it indicates that a significant number of users are experiencing slower performance, highlighting the need for further improvements.

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## Web vitals

### LCP

LCP specifically measures the time it takes for the largest visible content element (such as an image or a block-level element) to render on the screen. It helps determine how quickly users perceive that the main cоntent of a page has loaded. A fast LCP is desirable because it contributes to a better user experience, as users can see and interact with the main content of a page more quickly. My application has 93% good, but it is also important to try and fix the other percentages as well.

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# Performance Analysis Lighthouse

Overall, the performance analysis is good, the main problems that appeared were regarding the sizing of the images all around the application. Also, the usage of HTTPS is crucial.

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# JMeter Reports

### Summary report

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### Aggregate report

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# Conclusion

The overall assessment of the website's performance is that it is adequate, taking into account that it is currently hosted locally, which can naturally affect the speed. However, I recognize that there is still room for improvement. I am continuously monitoring the performance and will make the necessary adjustments to ensure that the website performs at its best and provide an optimal user experience.

# Future improvements

Possible future improvements are changing image sizes, minimizing the JavaScript files and removing more of the unused code in bundle.js, also move the website to a better host.