

WHAT MAKES WEBSITE SLOW?

Every Single Detail You Should Know
That Impacts

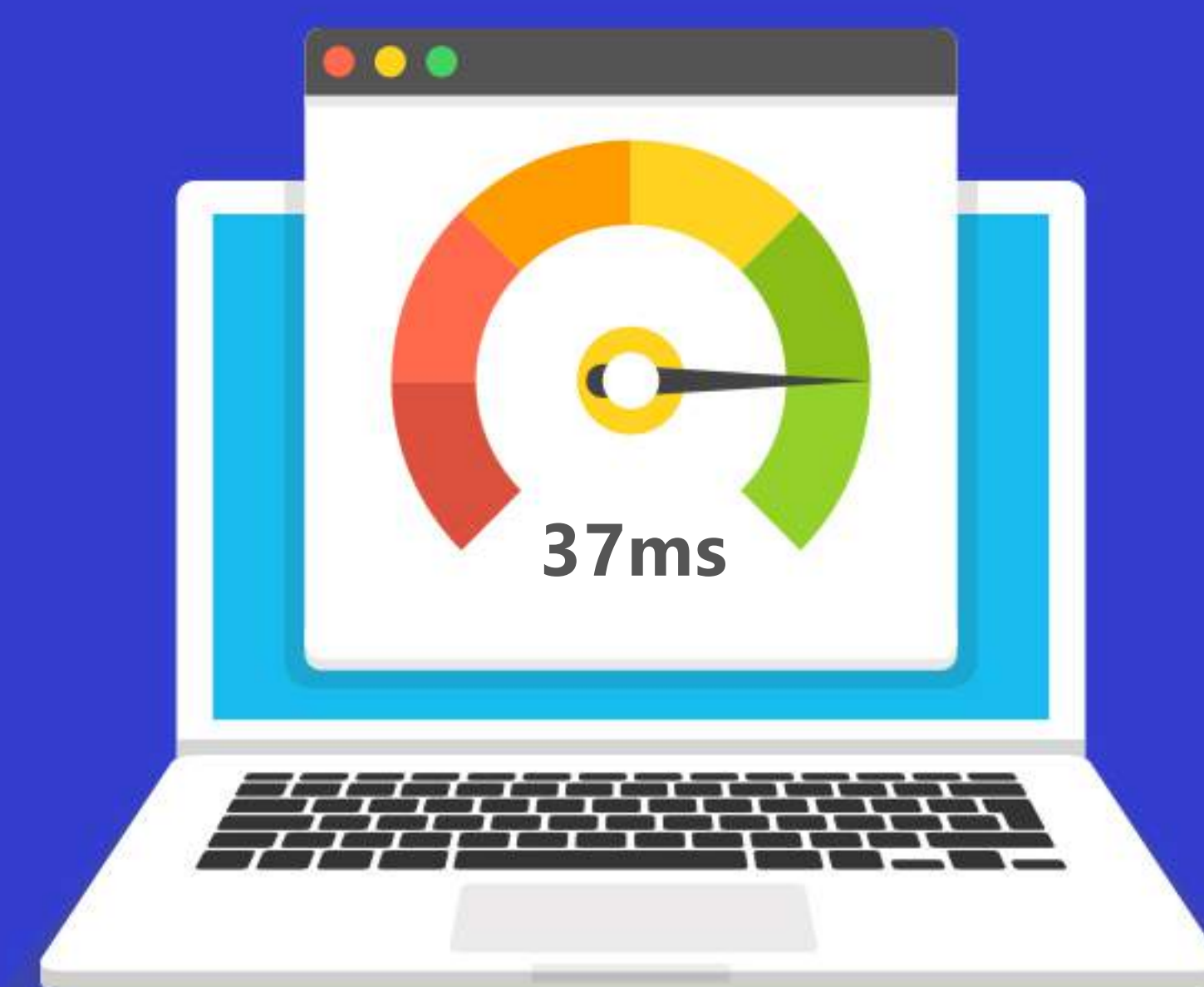


Introduction

There is an array of components that affect a page's loading time. Factors such as server response time, number of requests, resources, and bad coding, are all important to look out for in determining whether or not a page is loading slowly.

**Accelerate the Loading Times
of Your WordPress Website by
37ms.**

[READ MORE](#)



A page's load time starts when the user enters a URL or opens hyperlinks and ends when the browser loads all contents of a specific webpage. Between these two stages, the browser makes requests to the server to pull the needed information. The server then processes the requests and delivers it to the browser, which displays the page content.

Put simply, the load time of a page is determined by how quickly a page requests are delivered by the browser, processed by the server, and then sent back to the browser to load the contents.

Here are 12 factors you should check when performing page speed tests.

1. Server Response Time

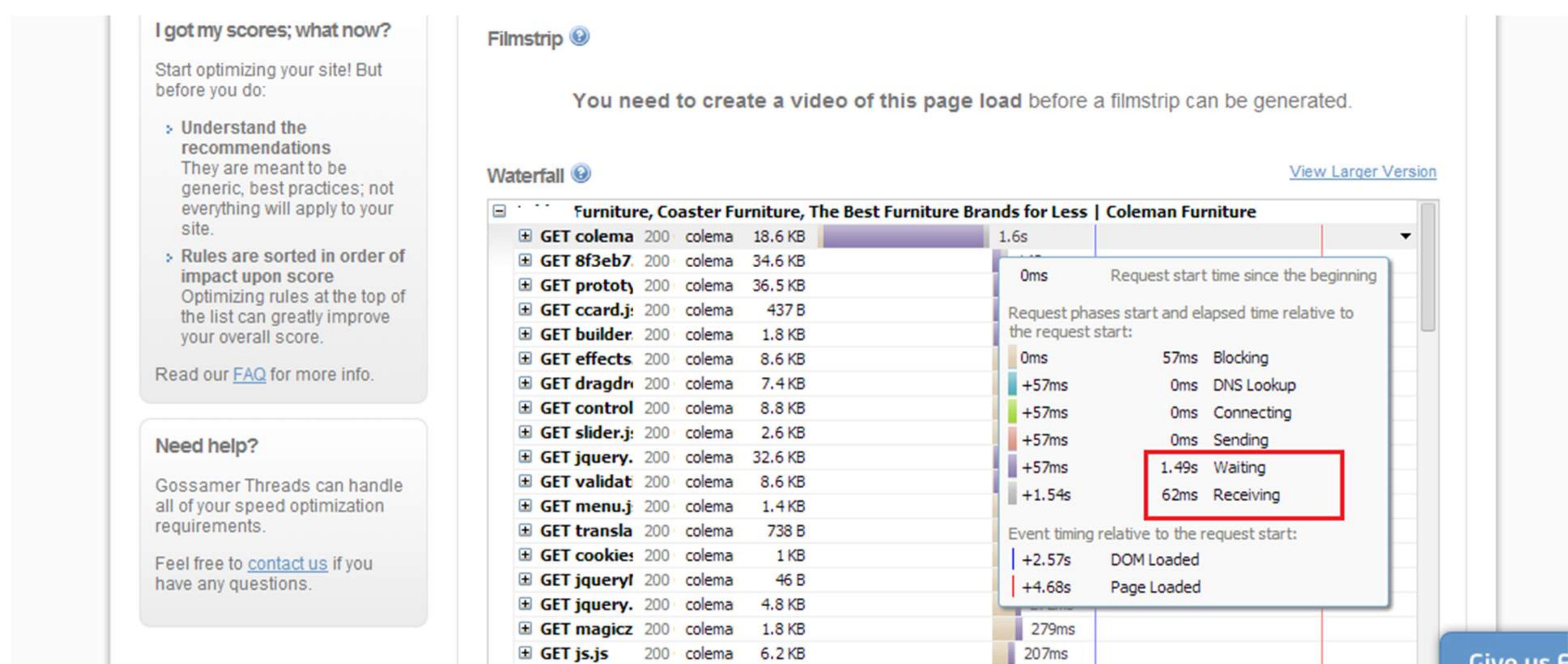
Improve Server Response Time

This rule triggers when PageSpeed Insights detects that your server response time is above 200 ms.

Source: developers.google.com

Server response time is the time it takes to process the request sent by the browser. The longer the server's response time, the slower the webpage its.

Server response time can affect page speed despite making other speed optimizations. Google and GTmetrix recommend server response time be within 200 milliseconds. If it goes beyond this, you need to take countermeasures.



The server response time is divided into two important times:

- Waiting time [also known as Time To First Byte (TTFB)] and
- Receiving time

Higher TTFB represents delays in time, the browser requests information when it receives a response. In the above screenshot of running page speed test using GTmetrix, the waiting time is 1.49 seconds and receiving time is 62 milliseconds.

2. Number of Server Requests

These are the number of HTTP requests the browser sends to the server for processing to display files for images, video, text, and other content formats. The more HTTP requests a page has, the longer it will take to load. This is why it is common practice to compress image and video files to optimize pages as it reduces the amount of data required for server processing.

According to KISSmetrics,
47% of consumers expect a webpage to load in two seconds or less, and 40% abandon a website that takes more than three seconds to load.



The problem occurs when there are multiple high definition files since the browser has to make HTTP requests separately and not simultaneously. As a result, user experience worsens, causing frustration for website visitors.

3. Distance Between Visitor and Server

The proximity of the visitor to the hosting server plays a key role in determining how quickly a page loads. If the physical distance between the two networks is high, the more time it will take for the browser to send requests and for the server to process it.

The Onion maximises its advertising inventory by improving site performance by 50% with CDNetworks.

Source: cdnetworks.com

Website owners that employ one specific **data center** for audiences that are distributed across multiple continents will face higher page load time due to the long distances involved.

For example, if a business has a data center in the US but has a website catering Australian customers, then Australian visitors will have a poor website user experience.

Launch Your WordPress on
60+ Data Centers for
Improved Performance

GET STARTED



4. Structure of a Webpage

How a page is structured can also dictate loading speed. A page is usually comprised of 3 key elements:

- HTML and CSS files
- Images and video files and
- Internal and external scripts

All of these determine how quickly and easily the browser can make processing requests to the server to display the page contents.

Basic HTML and CSS are the least time intensive, yet still, require optimization. However, multimedia files (images and videos) and scripts (both internal and external) tend to be more resource intensive and cause the pages to lag. In other words, anything that is large in size or number will need a longer time to load. Thus, if a page has excessive CSS, external scripts, and un-optimized multimedia files, the longer it will take for the browser to load the page.

5. Bad Coding and Queries

High coding density and slow SQL queries also drag your page. Any code, whether it is of HTML, CSS, or JavaScript, takes a sufficient amount of data. Thus, a page with unnecessary coding that doesn't provide any purpose or benefit towards the user experience, will affect page speed.

The same is the case for SQL queries that have been created poorly or have gotten slower over time as the website has expanded.

6. Dynamic Content

Using more dynamic content for building HTML pages is beneficial for having more control over a webpage. Aspects related to real-time updates, such as enabling comments and sidebar widgets, are useful for enhancing user experience.

However, the problem is the amount of time it takes to pull data from the server's database. The more dynamic content a page has, the slower the webpage will be. It is one of the reasons why it is recommended to use static content where possible.

7. Website Elements

WordPress themes and plugins have made taking advantage of certain functionalities and feature much easier. However, choosing resource intensive themes and adding too many plugins can slow down your website and page speed.

**Customize Your Website with OceanWP:
An Ultrafast and Lightweight WordPress
Theme**

[TRY NOW](#)



This is because plugins and themes pull JavaScript libraries and CSS files for every webpage, which puts a considerable amount of load on your website's resources. All scripts have to be loaded, each of which comes with HTTP requests that can cause TTFB and server response times to rise significantly. As a result, it distorts the functionality and performance of your theme and plugins

8. Too Many Redirects

Redirects are useful for sending visitors and search engine crawlers to another URL or a file of the page they requested. They are useful for preserving SEO health of a webpage if a version of a URL has been moved temporarily to another location or has been terminated permanently.

Although redirects have many SEO benefits, using too many can slow down your webpage loading speed and performance. This is because redirects work similar to signposts that help crawlers and visitors to find an authentic version of the URL. Having too many means that they will have to spend more time navigating their way around to find the right version.

9. Unconfigured Cache

Caching allows browsers to save an entire webpage or many of its images and scripts to minimize the time it takes to load all its contents the next time you surf a specific page.

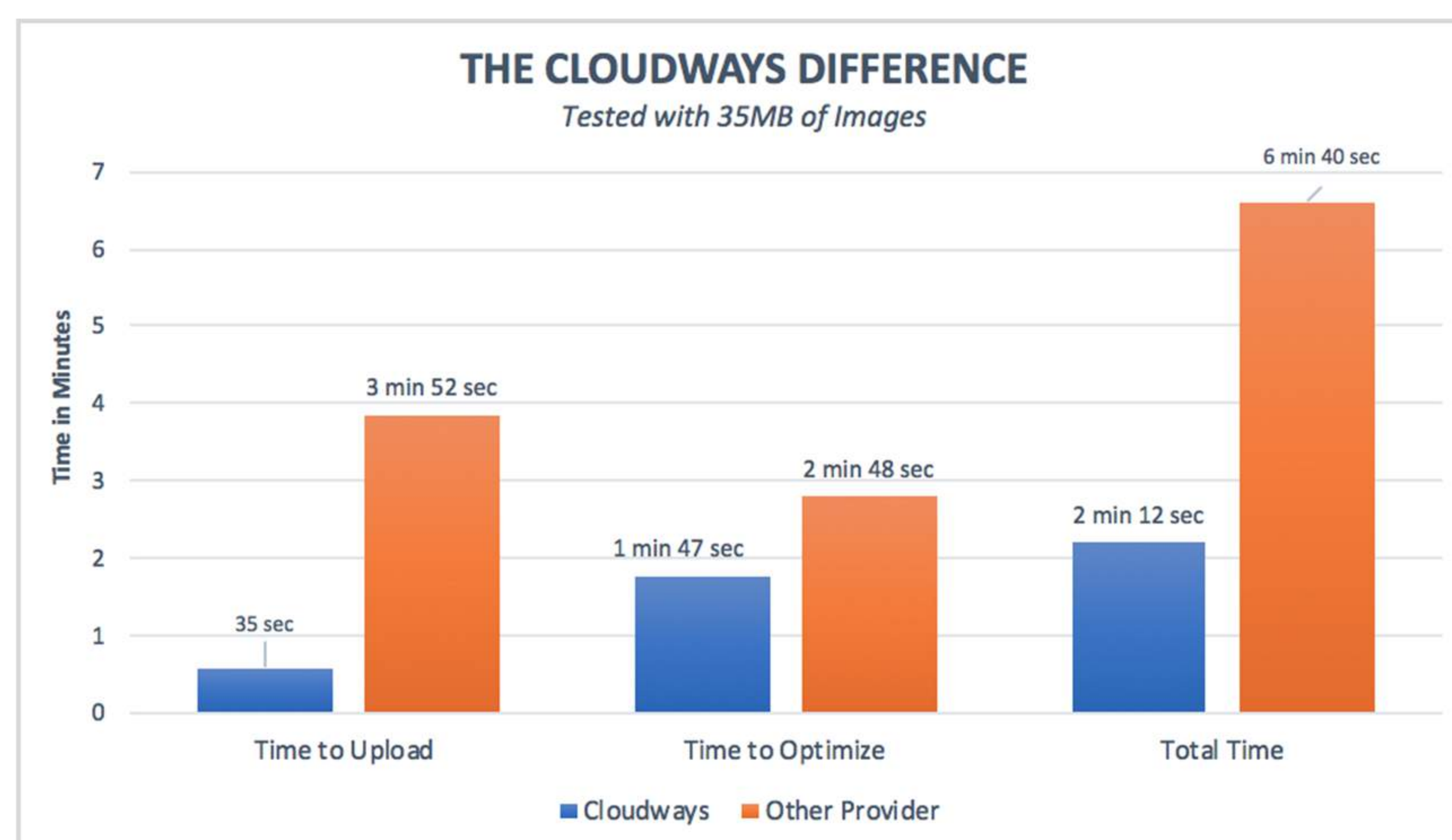
Without a configured caching system, the browser makes a request to load all contents of the page every time it is visited, thus increasing the server's response and load times.

10. Heavy Images

The larger the images are, the longer it takes to load, regardless of their format. While images help enhance a website's personality, they help engage visitors while helping enhance the overall user experience.

As mentioned previously, images that are not optimized, affect the structure of the webpage as they take more time to load due to their file size, which can be detrimental to your page speed and loading times. A large file can take up to 10 times longer to load than a normal-sized image.

The key is to know how to optimize each image to ensure it serves the purpose of enhancing the user experience without affecting loading times.



Images compress quicker with Cloudways

11. Web Traffic

All websites perform in accordance with the level of demand that is being put on the server. A large amount of traffic can put a considerable burden on the server, causing the website to perform poorly. When this happens, it means server resources, such as bandwidth and disk space, are not capable of accommodating the scale of requests.

In summary, the load time and speed of a webpage are dependent on the time it takes for the browser to send requests to the server and how quickly the server processes those requests and sends it back to the browser to load the page's content.

A higher number of requests, images, server response times, and coding, are among the many factors that increase waiting and receiving times, leading to higher loading times.

**Get a Secure and Scalable
Managed WordPress for
Optimal Performance**

HOST NOW





About Cloudways

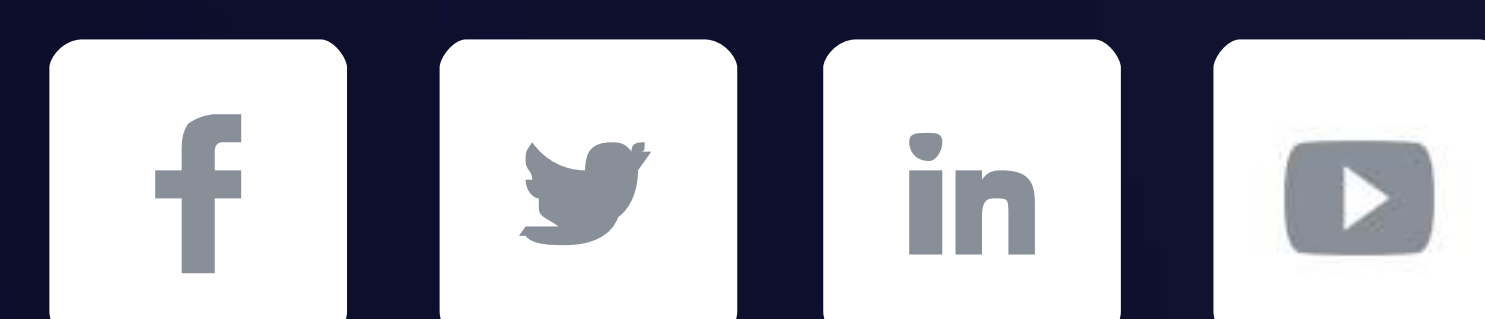
A Managed Cloud Hosting Platform Where Teams Can
Build, Deploy, Scale & Manage Phenomenal Web
Applications

Cloudways Ltd.

52 Springvale, Pope Pius XII Street,
Mosta MST2653, Malta

join@cloudways.com

Connect with Us



www.cloudways.com