WEBSITE SPEED

Quick guide to optimize website loading speed in 2020

Introduction

Everyone talks about page loading speed, but why?

There is great interest in the loading speed of pages, because this is directly involved in determining the user experience and it is seriously taken into consideration by Google's algorithm.

Now, the loading speed depends on a myriad of technological factors, but I would like to show you the methods that I generally apply.

Google actually relies on TTFB (Time To First Byte), which is the time that the server takes to send the first byte since the user's browser makes a request.

TTFB

First of all, what is a good loading speed?

Best practices set this optimal value to a maximum of 0.2 seconds.

As you may have noticed, this is a very different value from the total loading time of the page, because it has to do only with the responsiveness of the server.

When is a site considered fast?

Let's see in practice what is the optimal timing.

The total page load time can be measured with online tools, such as Pingdom o GTmetrix (rendering included).

Consider that this value is influenced by many factors, such as the test server, but also by the specific page you are evaluating.

You could find out that the homepage loads in 4 seconds, while the internal articles only take 0.6s.

But what is an average value to refer to when doing this type of optimization?

In my sites, I tend to stay in the range of 1-2 seconds, considering these elements:

●Server response to serve the page

●Javascript dependencies and CSS style sheets ●Images

●Favicon

●Iframe (eg YouTube video)

Having said that, we now see in practice what are the most useful interventions to speed up a site, considering that some will be particularly technical, while others are much easier.

Optimizations

What to do to improve the loading speed of a website

●**Gzip compression:** reduces the size of HTML and CSS / Javascript dependencies.

To enable it, enter a specific code in the .htaccess file of your hosting.

.●**Images:** compress the files with external software like TinyPNG or apply the practice of Lazy Loading.

●**Minification:** the removal of spaces, commas, and other useless characters from style sheets, scripts, and HTML help to recover space.

You'll find several free tools or WordPress plugins like WP Fastest Cache.

●**Browser Cache:** if a user visits 20 pages, with a cache, the browser can download the JS and CSS files locally so there is no need to request them continuously from the server.

You will need to enter a specific code in the .htaccess file of your hosting.

●**Server Cache:** I refer to WordPress plugins like CometCache or other server side solutions to save each page and serve it to the user when requested, without having to regenerate it.

●**Multiple redirects:** a series of 301 redirects, in addition to diluting the value, takes time, and the sum of these delays can result in unjustified waiting for the users.

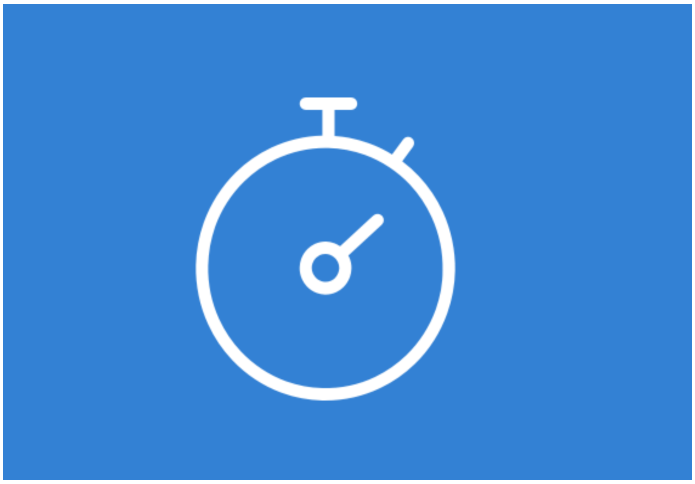
- **Type of server:** based on the number of visitors and the type of content, you can make all the optimizations you want, but a shared hosting may still be inadequate.

It will therefore be necessary to upgrade to a VPS or even a dedicated server with exclusive resources to better manage the requests of your visitors.

- **Technology:** it is evident that using WordPress, Joomla or other CMS will be much heavier than a pure HTML site.

The choice of architecture has a significant impact on response times, regardless of the type of server you have.

- **Updates:** technology advances and new versions tend to be optimized.



This is what happened, for example, in the benchmark developed by Kinsta.com.

It has been verified that, with WordPress 5, having PHP 7.3 offered significantly better performance (253.2 requests per second) compared to the classic PHP 5.6 (91.64 requests per second), which is still used in many servers.

Obviously we have to evaluate the deprecated functions and the incompatibility of many plugins, but it is certainly worth considering.

Optimize from day 1

Think about speed from the 1st day of the project.

●**Light themes:** when choosing the template, you should opt for a small and fast loading theme, otherwise, you will have a hard time trying to optimize it later.

●**Limit the plugins:** if you use WordPress, you should try to only use the plugins you really need or bundle them together from the beginning.

For example, instead of using 3 plugins for social features, check if there is only one that already does everything.

.**Limit the media:** it is important to use images or multimedia content in the pages, but do not overdo it.

For example, including 50 photographs in a "solar panel" post is excessive and would only slow down the page.

The same goes for YouTube video embeds, since embedding 20 videos on one page doesn't make much sense.

●**Remove useless dependencies:** when you remove some features from the template, remember to also remove all the references to CSS and JS files, which only slow down the page loading.

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