

The need for speed.

How WP Engine Improves Mobile Performance.

Each year, customers are spending more time on mobile and less time on all other media. In fact, compared to 2016, time spent on mobile everyday has increased by 7 minutes in 2017. On average, people spend 3 hours and 15 minutes on their phone per day while during that same time frame, desktop and TV usage has decreased.

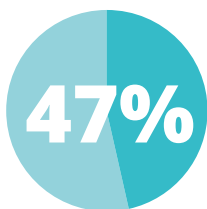
As people turn to their mobile devices to access the web more frequently, it is imperative that businesses adapt and evolve their websites in a way that caters to these trends. As part of this evolution, it is critical that sites are not only designed with the mobile use case in mind (e.g. responsive design, mobile design principles, AMP, PWA, etc.), but are also performant in ways that lend to a positive mobile-user experience.

As the leading WordPress Digital Experience Platform, WP Engine helps customers create beautiful, intuitive, and reliable WordPress digital experiences. We know that when it comes to gaining a competitive business advantage on the web, speed is essential. Our platform is inherently equipped with powerful, innovative technology so we decided to experiment with the simple question: **Will the migration to the WP Engine Digital Experience Platform result in better performing mobile websites?**

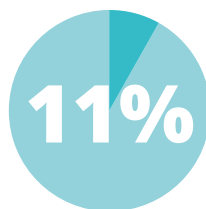
The stress response to (mobile performance) delays is similar to that of watching a horror movie or solving a mathematical problem and greater than waiting in a check-out line at the grocery store.

- Ericsson

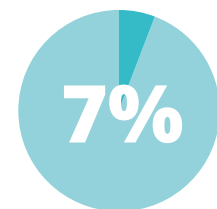
*ConsumerLab Nuero Research
2015*



of customers expect a webpage to load in 2 seconds or less



loss in page views results from only a 1 second delay in page load time



reduction in conversions results from a 1 second delay

WP Engine Fast Facts

Founded in 2010 | 75k+ Customers in 136 Countries | Supporting 500K+ WordPress Domains
Serving 2B Page Views/Day | Largest Customer Success Team in WordPress, Available 24/7/365

Methodology

Before and after migration benchmarks were captured based on metrics collected using [WP Engine's Speed Tool](#), a tool that allows users to test website performance at real consumer connection speeds. WP Engine WordPress architect, Ryan Hoover, created a proprietary tool specifically designed to utilize this technology and generate reliable pre and post migration metrics.

To ensure more accurate and representative results, invalid domains and duplicates were omitted. Before and after mobile performance results were calculated according to TTFB (time to first byte), start render time, and document complete time.

- **TTFB:** Time from when the user started navigating to the page until the first bit of the server response arrived. The bulk of this time is usually referred to the “back-end time” and is the amount of time the server spent building the page for the user.
- **Start Render Time:** The first point in time that something was displayed on the screen. Before this point in time the user was staring at a blank page. This does not necessarily mean the user saw the page content—it could just be something as simple as a background color—but it is the first indication of something happening for the user.
- **Document complete:** The metrics collected up until the browser considered the page loaded. This usually happens after all of the images content have loaded but may not include content that is triggered by javascript execution.

Results

Before and after results using the WebPageTest tool helped provide evidence for the hypothesis: migration to the WP Engine platform results in better performing mobile websites.



Although our research was focused solely on migration, it is not the only way WP Engine customers experience better mobile performance. Post-migration, WP Engine helps improve performance using site speed enhancements through caching solutions like Proprietary EverCache, scalable architecture, and the enablement of PHP 7 and HTTP/2.

For more information on how you can use the WP Engine Digital Experience Platform to retain site visitors via speedy mobile performance, visit our [plans](#) page.