

CWV – What is First Input Delay (FID)?

Last Modified on 10/21/2021 11:52 am EDT

First Delay Input (FID) is one of Google's Core Web Vitals (CWV). FID is an important user-centric metric for measuring load responsiveness, according to [Web.dev](#). It helps quantify a user's perception of a responsive or unresponsive page.

How is FID measured?

The FID metric helps measure a user's first impression of your site's interactivity and responsiveness. It begins when a user first interacts with a page (for example, when they click a link, scroll down, tap a slider) to the time when the browser begins processing event handlers.

It is measured in milliseconds.

What is a good FID score?

Like most user-centric Core Web Vitals, a good FID indicates a high-quality user experience. Google wants your FID to be less than 100 milliseconds.

- Great = less than 100 milliseconds
- Needs improvement = between 100 milliseconds and 300 milliseconds
- Poor = more than 300 milliseconds

Publishers should strive for the fastest loading page speed possible, which actively contributes to higher organic Google rankings and strong SEO. As Core Web Vitals like FID are incorporated into Google's algorithm, users will begin to expect these rapidly loading pages.

What contributes to a poor FID score?

FID only measures the delay in event processing, meaning it does not measure the event processing time itself nor the time to update the user interface. It takes a [real user interacting with the page](#), and FID cannot be tested in a lab.

The most common causes of a poor FID are:

- Long tasks where a browser must pause
- Lengthy Javascript execution
- Heavy Javascript bundles
- Render-blocking Javascript

Anything that creates unnecessary times between input and your page's response contributes to a low FID.

Long tasks where a browser must pause

A slow response time means it takes too long for the browser to receive content from the server, creating a slow page load experience for the user. A faster server improves the load speed of your entire site and contributes to a good FID.

Lengthy Javascript execution

Scripts and stylesheets are both rendered blocking assets that delay a page load, consequently negatively affecting your FID and Google ranking. Optimize your page for interaction readiness by moving costly scripts off the critical path.

Heavy Javascript bundles

While the main thread is executing Javascript, a browser cannot respond to user interactions, creating the delay that causes the user to tap their mobile screen multiple times or click on a website again and again. Action you can take to address this:

- Optimize and compress large images
- Preload important resources
- Compress text
- Cache your assets

Render-blocking Javascript

Third parties like analytics tracking platforms or ad tech vendors can unintentionally increase page latency. Ensure third parties aren't contributing to keeping your network busy and periodically creating unresponsive times.

How can I measure FID?

FID is different from the other two Page Experience CWVs, LCP and CLS. As First Input Delay measures the actual user's experience and interaction, FID requires a user to engage with the page.

In addition to tracking your pages' FID scores over time in [Freestar Analytics](#), you can measure your FID score in more detail using:

- [PageSpeed Insights](#)
- [Search Console \(Core Web Vitals Report\)](#)

Assess your current Core Vitals by heading into your [Google Search Console](#) to examine each web property.

How can I improve FID on my website?

Once you've pulled your report, it's time to improve your FID.

Overall, there are four (4) simple ways to improve FID on your website.

Reduce third-party code impact

Especially when working with multiple ad tech vendors, ensure they are using asynchronous technology and not dragging down page speed, costing you not only revenue but high organic Google rankings. Regularly assess and optimize third-party code, analytics, and tags.

Reduce JavaScript execution time

Only render the minimal code needed and remove any heavy styling.

Minimize main thread work

Reduce styling and layout complexities. Moving non-critical operations to a separate worker thread can also free up the main thread to improve FID.

Reduce request counts and transfer sizes

Again, ensure the user is only getting the most critical, important information on the first load. Keep request counts low and transfer sizes small.

How does FID affect my website SEO?

Google values fast sites, and page speed is already a well-known attribute in its ranking algorithm. Slow sites lead to high bounce rates and user frustration, which will inevitably bring your site down in Google rankings.

For publishers looking to diversify traffic acquisition, organic Google search is an important channel to consistently optimize.

A poor FID will negatively impact your search engine optimization:

- Lower organic search traffic
- Difficulty ranking on page 1 for desired keywords and terms
- Decreased ad revenue due to fewer impressions, page views, and clicks
- High bounce rates

Google Core Web Vitals and SEO go hand in hand, and it's important to pay attention to the organic Google ranking effects.

Where can I find more information?

For more information to help improve your FID score, visit the web.dev site.

- <https://web.dev/fid/>
- <https://web.dev/optimize-fid/>

To further understand Core Web Vitals and what they mean for publishers' Google rankings, read more about other Core Web Vitals:

- [CWV – What is Cumulative Layout Shift \(CLS\)?](#)
- [CWV – What is Largest Contentful Paint \(LCP\)?](#)
- [CWV – What is First Contentful Paint \(FCP\)?](#)

For industry insights and information about our product offerings, [check out our blog!](#)

Want to see our products in action? For a demo, fill out a form [here](#).