

Is Your DNS Slowing Down Your Site? The Hidden Impact of Low TTL Settings

TL;DR:

DNS TTL (Time to Live) controls how long DNS records are cached. When TTL is set too low, it causes frequent lookups that can slightly—but consistently—slow down your website. Adjusting TTL settings smartly can improve site speed, reduce strain on name servers, and make your site more efficient for users around the world.

The Hidden Setting Linked With Page Speed You May Have Overlooked

When you think about website speed, your mind probably jumps to images, hosting, JavaScript, or WordPress plugins. But did you know that your site's DNS settings could be quietly working against you? I mean, you check all these minute details with images and scripts, etc. but there's one thing that's overlooked, which is a big deal, actually...

The hidden culprit? **Low TTL (Time to Live) settings** in your DNS records.

Let's explore what TTL is, how it affects DNS resolution times, and why optimizing this overlooked setting can shave off precious milliseconds on every visit.

What Is TTL in DNS?



TTL stands for Time to Live. It determines **how long a DNS record is cached** by recursive DNS resolvers (like those operated by ISPs or DNS services such as Google DNS or Cloudflare).

Here's how it works:

- When someone visits your site, their browser needs to resolve the domain to an IP address.
- If the DNS resolver already has your record cached (from a previous visit), it skips asking upstream servers.
- If your TTL is too low (say 300 seconds), that cache expires quickly, forcing **frequent new lookups**.

In English, your local ISP's (Internet Service Providers) DNS servers might already have a local copy of DNS records for a domain, so as long as that record hasn't expired, it can be used. If it's expired, then people web browsers are told, "No, we don't have a valid record on that domain, so hold on while I got get it." It then goes to the root server, gets it, then goes on the save it and report it to the web browser/device looking for the site's IP address or maybe the email portion of the domain (MX).

The Problem With Low TTL Values

Many developers and hosts set low TTLs as a default or for convenience during migrations. But if you leave it that way long-term, you're slowing things down.

Here's why low TTLs are problematic:

- **More DNS lookups:** Each lookup takes time—usually 50-200ms.
- **Wasted queries:** Every new visitor or expired cache means extra DNS traffic.
- **Root server strain:** If your authoritative nameservers are contacted too often, that adds load and creates another point of failure.
- **Mobile lag:** On mobile networks, latency is already high. Extra DNS hops amplify the issue.

Use My Website TTL Checker

I built a little tool for your to check the A and CNAME records for your website: [TTL Checker](#)

What's a Good TTL Setting?

A "good" TTL is a balance between performance and flexibility.

Recommended DNS TTL values (cheat sheet):

- **A/AAAA (IP address) records:** 3600 to 86400 seconds (1 to 24 hours)
- **CNAME records:** 3600 to 86400 seconds
- **MX (Mail) records:** 86400 seconds
- **TXT records (SPF, DKIM, etc.):** 3600 to 86400 seconds

Use **lower TTLs (300 – 900 seconds)** only temporarily:

- During DNS migrations
- When testing records

Otherwise, bump them up!

If you're planning on moving your website to a new host, you'll actually want a low TTL so that when you put the new IP address in, it only lives 5-10 minutes, and the latest record is forced. So then, after your website migration, you need to go back and increase the TTL. This, I suspect, is why some websites have low times in their TTLs – their web developer got so excited about the launch that they forgot about moving that back up.

How to Check Your Current TTL

Use one of these methods:

1. Command line (in a program like Terminal on a Mac):

Copy

```
dig yourdomain.com
```

Look for the ANSWER SECTION and note the TTL column.

2. Online Tools:

- [DNSChecker.org](https://dnschecker.org)
- [MXToolbox](https://mxtoolbox.com)

Does TTL Really Affect Page Speed?

Yes—but it's subtle.

DNS lookup time is one of the very first steps in loading a site. If the DNS record isn't cached, every visitor may experience a delay of 100ms or more.

Multiply that by hundreds or thousands of visits per day and it adds up—especially if:

- You're running paid ads (first impressions matter!)
- Your bounce rate is high
- Visitors are on mobile

Every millisecond counts.

Also, if someone is browsing your website – they're active on it, reading pages, watching videos, and your TTL is set way down to 5 minutes (300 seconds), then even as they're going from page to page, you're forcing them to get that root record, over and over. Bad, Webmaster, bad!

Real-World Example

We've seen client sites repeatedly hit root DNS servers for every visit due to TTL values set to just 5 minutes. After adjusting to 6-hour TTLs, not only did page speed slightly improve, but it also reduced DNS request volume by over 90%.

If you're not planning on moving your website soon, set it up to 1 day or even 1 week.

Bonus: TTL and CDNs

Content Delivery Networks (like Cloudflare, Fastly, or BunnyCDN) also rely on DNS. Low TTLs force edge nodes to refresh their cache more often. That means:

- Less effective caching
- Slower performance

Optimize your TTLs for better CDN behavior too.

Conclusion: Speed Gains Start at the Root

Website performance isn't just about code or content. DNS is the very first impression your site makes—and TTL plays a big role.

By setting smart, stable TTLs, you ensure:

- Faster load times
- Fewer DNS lookups
- More efficient caching

This is an easy win. Don't miss it.

FAQs about TTL Records and Page Speed

What is TTL in DNS settings?

TTL stands for Time to Live. It tells DNS resolvers how long to cache your DNS records before querying again.

Does TTL affect website speed?

Yes—low TTLs cause more frequent DNS lookups, which slightly slow down load times.

How do I check my DNS TTL?

Use dig in the terminal or visit tools like MXToolbox or DNSChecker.org.

What is a good TTL for DNS?

1 to 24 hours (3600 to 86400 seconds) is ideal for most records.

Why is my DNS lookup time so high?

Possible reasons: low TTLs, slow name servers, or DNS misconfigurations.

How can I speed up my website's DNS resolution?

Use faster DNS providers (like Cloudflare), increase TTLs, and monitor DNS health.

Further Reading / Resources:

- [Cloudflare: What is TTL?](#)
 - [DNS Made Easy: TTL Settings Explained](#)
 - [GTmetrix: DNS Lookup Time](#)
 - [DNSPerf Global DNS Performance Benchmarks](#)
-

Questions About TTL and Page Speed?

Let's talk. Leave your questions in the comments.

Original article: <https://tonyherman.com/is-your-dns-slowng-down-your-site-the-hidden-impact-of-low-ttl-settings/>

PDF version: https://tonyherman.com/is-your-dns-slowng-down-your-site-the-hidden-impact-of-low-ttl-settings/?apa_pdf=1

Special Offer for Readers

1,000+ Channels • On-Demand Movies • **5 Devices**

\$69.99/mo (~\$2.33/day)

Try it for a month and see if you like it, then switch.

Start Your Trial

Click to learn more about CUE Broadcast

Tip: Get 3 friends or family to sign up and you get it for free.