Make your site load really quickly

A fast website is very important. 47% of people expect a site to load in less than two seconds and 4/10 of your visitors will abandon your site if it takes more than three seconds to load (source). A slow website is something that's just not acceptable to visitors.

There's more data. One usability study (that is dated, but the theory remains legitimate) suggests users will tolerate a small delay, but will be equally unsatisfied with a medium delay as a long delay. You might not think of your site as "slow", but even if it takes a bit of time to load visitors may perceive it the same way as they would an exceptionally slow site.

There's a way of avoiding visitors leaving because your site is slow: have a really fast site.

This is hardly groundbreaking analysis, but part of becoming a WordPress master is making sure you can work with any WordPress installation – even on poor quality shared hosting – and make it load really quickly.

Fortunately, it's not especially difficult to make any WordPress site load quickly if you know how. We'll cover here everything you need to know.

Analyse your site's current loading speed

The first thing to do is find out how fast your site is already. We'll use two tools to profile your site.

Pingdom Tools is a great (free) tool that will do this for you and tell you:

- How long your site takes to load (lower is better)
- The PageSpeed score assigned by Google (higher/100 is better – you canget the full test here; we'll come back to this later but for now the headline score will do)
- Your page's size in MB (lower is better)
- How many HTTP requests your site makes (fewer is better)

Test your site and make a note of the results. Screenshotting the page is probably easiest.

The second tool we'll use is P3, a plugin which measures the loading time/impact of other plugins. The plugin is made by web host GoDaddy but is free, works on any host and does the job nicely.

Install the plugin and run the profiler. Head to the advanced breakdown and you'll be able to see what proportion of your load time plugins are responsible for. Again, make a note of this and we'll look at ways to reduce that impact later.

We now know what your site's current performance is and can get on with improving it.

Choosing a caching plugin

You need a caching plugin. Caching plugins work by generating static HTML files for your site when can be loaded much faster than a page which needs to be generated each time. The gains from doing this are very significant and if you only do one thing to improve your site's performance, this should be it.

Conventional WordPress wisdom says choose between W3 Total Cache andWP Super Cache. Historically there's never been much difference between the two, although Total Cache did bundle more features for a time.

As a *WordPress Master* you're interested in the best option, not conventional wisdom. Here's where you can get an edge: a bit of digging shows Total Cache has been rarely updated in the last 24 months whereas Super Cache has been worked on by Automattic, the quasi-WordPress-parent-company. In that time Super Cache has added a lot of new features; because of these new updates from the people who know WordPress best, you'll want to be using Super Cache.

If you're working on a site where you can make no compromises on page load speed (think eCommerce) then the best free plugin won't cut it; you'll want the best plugin outright. These tests show WP Rocket is the best option available.

You'll experience an immediate improvement in page load time just from installing a caching plugin, ticking all the boxes in the settings that are recommended and then re-running the Pingdom test. We've seen a 30%+ improvement in loading time on sites just from using the plugin.

Unless you're using non-shared hosting you won't have anything other than the recommended options available. If you do have extra options you can use, check out these notes on how to get the most out of them.

Reduce page size

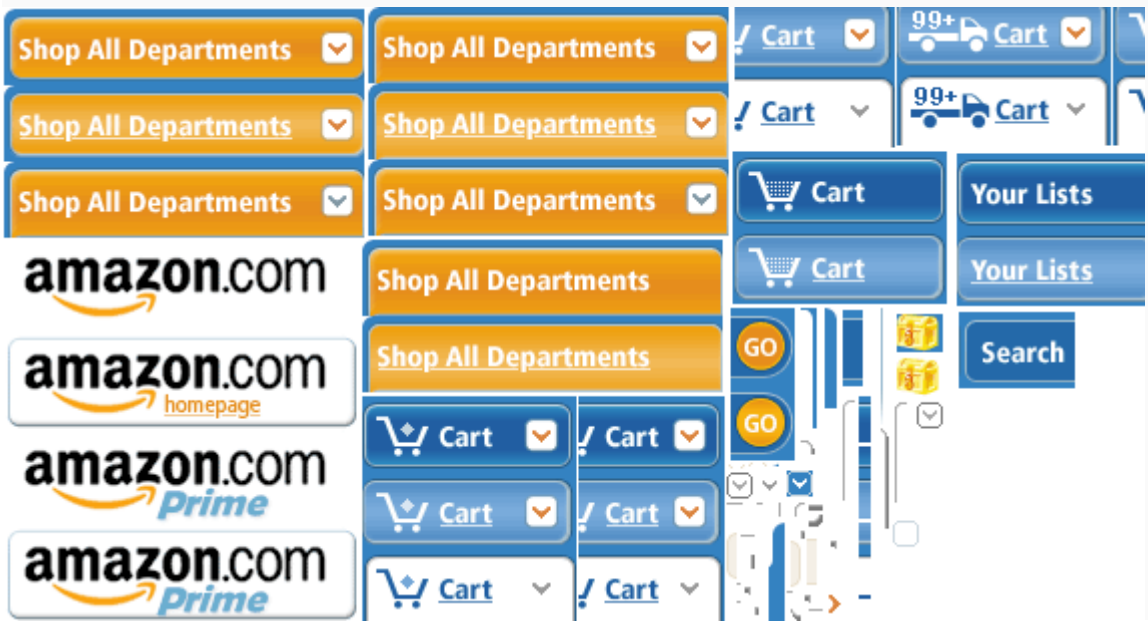
With caching sorted, the next target for making your site load really quickly is the page size. If less stuff (ie fewer MBs) is being loaded, your site loads faster. Simple, right?

An easy way of reducing the size of the files your site loads is by reducing the amount of characters in them. This is a process known as “minification” and it removes as many characters from source code as possible without changing its functionality.

Minification is a process that’s ripe for setting-and-forgetting whilst making a big improvement to your site.

Autoptimize has a very-difficult-to-pronounce name but handles minification excellently. Install the plugin and tick all the recommended settings and you should immediately see a fairly dramatic reduction in page size – we’ve immediately achieved a saving of around 30%. That won’t necessarily translate into an equivalent reduction in page loading time but it should make a reasonable difference.

CSS sprites work by combining all the images on your site into a single image, and then only displaying the segment of the combined image that fits the image which displayed originally. It’s then faster to load a single large image than lots of smaller images. Here's an example of Amazon's CSS sprite set up:



CSS sprites have historically been fiddly and time consuming to make. SpriteMeis a bookmarklet which will create a sprite for you and generate the code needed to put it into use, but it’s seven years old and it seems implausible nobody has found a better solution in that time. It’s also fiddly to use with WordPress as it requires editing the theme files directly, which will likely be overwritten every time you upgrade your theme.

Fortunately there’s a better although mildly temperamental solution available. The catchily named CSS Sprite for Google PageSpeed plugin will generate CSS

sprites for all the images on your site on the fly. The plugin author describes it as “in beta stage” but our testing found no problems. The plugin is free but uses the author’s external cloud service, so don’t rely on it forever. For now, though, it’s the only plugin available and does a good job.

Once you’ve made your page smaller, you can make it faster by utilising a “content delivery network” or CDN. We’ll cover these later on, but a quick tip is to install the Jetpack plugin, and enable Photon. Optimise for Google PageSpeed

Google PageSpeed rates sites by their theoretical possible loading time rather than their real-world speeds. PageSpeed is a factor in Google’s search algorithms. This is handy for you as it means you can just tick off a bunch of items and get a high PageSpeed.

The initial Pingdom Tools test gave you a PageSpeed score but you can get the full thing from Google here.

Most of the suggestions Google makes will be covered by the other optimisations we’re making, but there’s one which you won’t cover without specifically looking for it.

Google requests you “remove query strings from static resources”. You can do this with another set-and-forget plugin, “Remove Query Strings From Static Resources”. It does literally what it says on the tin. There are no settings.

Install the plugin and you should see an immediate improvement in your PageSpeed score.

Analysing plugins

You’ll often read that “having too many plugins installed is bad”, but we ran the P3 test earlier which established this clearly isn’t the case. It’s not how many plugins you have installed that’s important, but what they’re doing.

This is good to know; indeed, all we’ve really done to make your site load really quickly is install a bunch of plugins. Run the P3 test again, however, and you’ll find the plugins we’ve added are very low impact. It’s likely you have a couple of plugins which make up the vast majority of your loading time. These are typically things like:

- Jetpack by WordPress.com
- Sliders or galleries
- Email capture

The aim, therefore, is not to arbitrarily reduce the number of plugins installed but look at how the plugins which have a disproportionate impact on loading time are set up and what can be done to make them load faster.

Most resource intensive plugins will have some options which you can utilise to reduce their impact. You want to be using these. If you have a high-impact plugin with no loading options you may wish to consider an alternative plugin.

If you have options to only load the plugin on specific pages where it's used then utilise those or if it's possible to disable features you're not using then also do this. Jetpack, for example, has a lot activated by default, so there's likely stuff you've never looked at and won't miss. Head to Jetpack's settings and deactivate the features you're not using.

A quick note on Jetpack and page speed. A lot of Jetpacks slowness only occurs when a user is logged in as an admin on the site. A regular site visitor will not see the slowness since a lot of the functionality is not available for them. This is something to consider for other plugins as well (such as WP SEO), as P3 is likely overestimating their load impact.

Try out the different performance options available with your high-impact plugins and run Pingdom again after making changes to see what makes a difference. If you're not able to move the needle then you may wish to consider using an alternative plugin.

Plugin recap

Put all these measures into place and you're going to have a significantly faster website. In half an hour you should be able to take a site on any host and get fast loading times and a high PageSpeed score with relatively little difficulty.

All the plugins we've recommended are free and can make a real difference to your site's loading time.