BOOST YOUR WORDPRESS
PERFORMANCE

A QUICK BUT PRACTICAL GUIDE TO ONLINE DOMINANCE

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Ultimate WordPress Pit-Stop
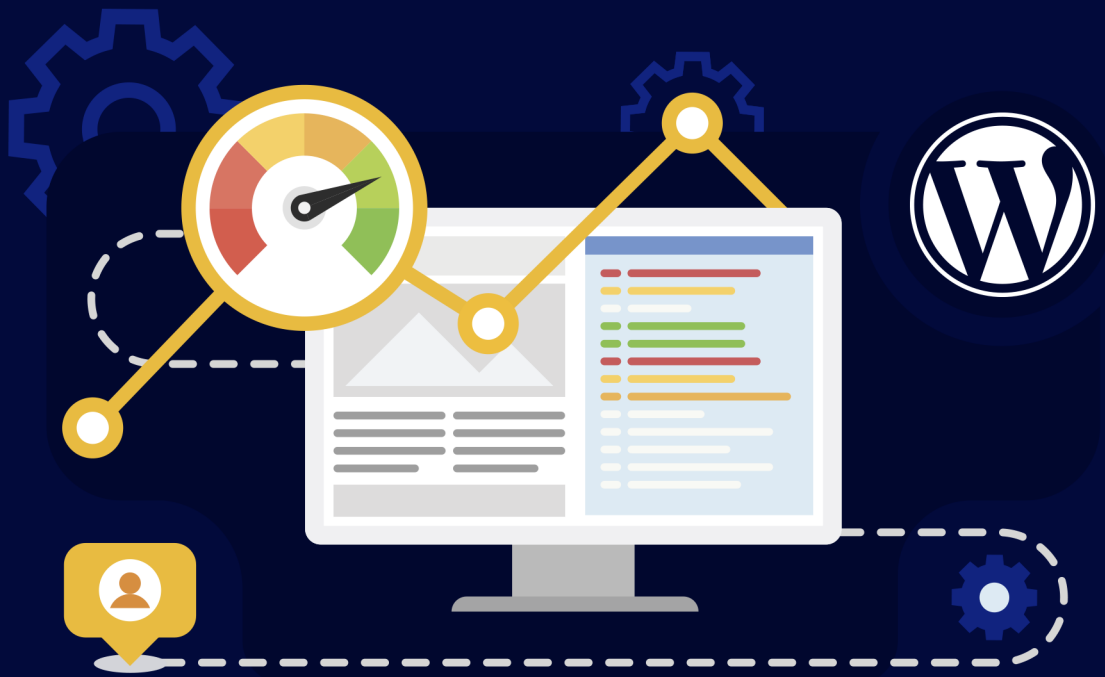
A Guide to Boost Your WordPress Performance

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Analysing your website's performance from time to time and taking the necessary measures to improve it is an essential part of running a website.

If you don't, not only do you lose visitors, but you might be losing a lot of business as well.

Mohammad Moeez

Chief Blogger - WPblog

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What is Slowing Down Your WordPress Website?

What is Slowing Down Your WordPress Website?

Let's start from the roots, shall we?

For most people, a WordPress website is the foundation of their business; and you don't neglect something that acts as a foundation to your business because of foregone conclusions that you don't want to see.

A great number of people fail to take care of their WordPress website and don't even realize that this important factor is hurting their business. Why? Because a lot of people think a website is self-sustaining and they just need to update their content and add as many features as possible for their users.

Okay, so every user may not be thinking that dramatically, because many WordPress website owners simply don't know how to take care of their site and optimize it for performance, to begin with. And that's okay.

Because we are here for you.

Just know that WordPress websites are prone to issues including **slowdowns, sluggish load speeds, and different errors,** etc., and there are a number of reasons as to why this happens.

Since speed is now considered the defining line between a good and a bad WordPress website, if your website has sluggish speed, your online asset is as good as nothing.

Without further ado, let's dive deep into the factors that affect your WordPress website's performance and then later we'll discuss in length the measures you can take to avoid slowdowns.

Once you're done, your website will be running like Usain Bolt in Olympics. A win-win for you and your audience.

Server Response Time

Whenever you open a website, the browser connects to a webserver to process the request and responds accordingly. The time the server takes to respond to that request is called 'server response time', a popular term in the world of WordPress.

Usually, slow server response times are the culprit for slow and laggy WordPress websites. There are a number of ways to reduce server response time, though.

Solution:

The first and easiest way to do that is to **check your hosting service.** If your hosting service isn't providing you good speed, that automatically translates to a slow website. In essence, if you choose a good, speedy hosting provider to begin with, the better your website performance will be.

Also, **reducing the number of extra plugins, extensions, and other optimization tweaks** you may have applied on your website can do the trick.

Apart from that, **keep your database optimized and clear your cache from time to time to ensure** swift website performance.

As a recommendation, try Cloudways for your hosting provider. Cloudways is a cloud host-

ing company that simply takes away all your hassles of managing your server and provides you a worry-free experience of running your website.

Number of Server Requests

A single core server has limitations on how many requests it can process at a time (around 100 per second). But when thousands (millions in many cases) of people are logged into your website, this processing power just isn't enough.

Solution:

One of the best ways for reducing server requests is to have a **stronger CPU with sufficient RAM to handle all the load**. This, of course, depends on the number of visitors your website enjoys. The more visitors your website has, the more powerful your server needs to be in order to efficiently manage requests.

Distance Between The Visitor and Server

The distance between your visitor and the location of the server determines how fast the website loads for them. For example, you live in Germany, and a website you log in to has its server in Australia, there's a high chance the website will load really slowly for you.

Solution:

To overcome this lag, **make sure your hosting provider has servers available in your target locations**. To cater to a global audience, you may need a **CDN** that has nodes in different parts of the world and makes it easier for you to reach audiences from different geographical locations.

The Structure of a Webpage

The more complex a website's structure is, the more time it takes for it to load and handle requests from multiple sources.

This is because on a complex website, the servers have to load multiple extensions, enhancements, and heavy-weight themes to display all the hard work that went behind the website.

Solution:

To counter that, your **website should only have the necessary tools, extensions, plugins**, and **resources**. And don't forget to KISS (no, not the naughty kiss, the acronym 'keep it simple silly' kISS).

Just remember that a simple website will always perform better and will need fewer resources to load.

Bad Coding and Queries

Bad coding, which results in multiple queries leading to slow website load speeds, is a result of poorly designed websites and lack of experience.

Solution:

To avoid bad code in your WordPress site, simply **hire an experienced developer who knows proper coding regime** and follows it diligently. This will not only avoid delays and compromises on your WordPress website's performance but also result in a more stable and robust website that continues to provide the kind of performance you need for a better user experience.

Dynamic Content

Unlike conventional, simple content, dynamic content needs more resources and time to load, so a slow server won't do you any good in this case.

Solution:

It's likely that you have a website with dynamic content which is making it load slow. A simple method to load such a website is to **enable caching** or to **reduce the number of complex images** on your website.

This will help the server load your website quickly and more efficiently, giving your user a seamless experience.

Website Elements

Your website is made up of various elements with different functions. Some elements take more time to load while others are lighter and load instantly.

Solution:

To make your website experience smooth for your users, make sure that **heavy elements that use Javascript are placed at the bottom of the web page**. Static elements, on the other hand, should be placed at the top of the web page.

As a result, when users land on your website, they will experience a faster load time because all the lighter elements will load quickly, and by the time they reach the bottom, the heavier elements would have loaded as well.

Too Many Redirects

Redirect is the method of sending someone from one URL to another URL. There are plenty of reasons why website owners may need to do that: when moving their content to a new URL; when changing their domain names; when deleting old content pages; or when merging two websites together. However, too many redirects can slow down your website.

Solution:

A simple solution to it is to, first of all, **use redirects only when necessary**. Secondly, always **redirect to a relevant alternate URL**. If your redirect URL isn't providing similar value to what your user was expecting, it's bound to increase your bounce rate.

And lastly, **beware of chained URL redirects**. Make sure that a URL that has already been redirected isn't redirected to another URL, because that will, for sure, increase your page load time by a large margin.

Unconfigured Cache

Unconfigured cache not only crumbles your WordPress site's performance but also compromises the overall user experience.
There are ways to overcome this issue, though.

Solution:

First, **make sure you clean your cache every few days**. If you think that cleaning your cache manually isn't the best way to deal with it, **install a plugin or an extension** that would do it for you.

WP Rocket & WP Super Cache are two of the best plugins for this job. They are lightweight and designed to not put any load on your WordPress-powered websites. But most impor-

tantly, these plugins will clear your cache on schedule without manual input from you!

Heavy Images

DSLR camera pictures and images are great. In fact, no phone camera image quality beats a professional camera's quality. And of course, the highest quality images set a great impression on visitors, so why not upload the biggest size images, right? Wrong.
A common rookie mistake site owners make is to upload full-resolution images in droves, and all that does is slow down their websites.

Solution:

The solution is simple: don't upload heavy images, and if you have to, **use an image optimization tool**. You can also use a **Lazy Load plugin** on your WordPress site if you feel high-resolution images are crucial to your website, and that loads resources only when they are needed instead of pre-loading them. BJ Lazy Load, Rocket Lazy Load, and Ajax Lazy Load are great plugins for this purpose.

Your Web Host

A bad hosting makes a bad website. It's as simple as that. If your base isn't strong, no matter what measures you take to make your website perform at its best, nothing will work.

Ecommerce websites are mostly at the receiving end of sufferings due to below-par hosting service. Especially during the holiday season when they experience a surge in traffic, their servers can't handle the load and their websites go down. Who would want that when they want to set a record for their sales?
We probably don't need to say this by now, but there's no other solution to this but to…

Solution:

Opt for a **hosting service that delivers performance**, is **tight on security**, and provides you enough **convenience to focus on your website**. We suggest Cloudways to everyone, in case it wasn't obvious.

Since we moved our servers to Cloudways, we've never had to worry about performance or security. Besides, their platform makes managing everything so easy, it's a child's play. So while Cloudways is one option, you can go for any Cloud hosting with a good reputation in the hosting communities and we're sure you'll be in good hands!

So, how do you know your website is performing badly? How do you even determine how much your site needs to improve before you can say "wow, I've done a good job!" and "wow, this ebook from WPblog is awesome!"?

Well, here's how to find out how well, or bad, your website is performing.

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How to Analyse Your WordPress Speed?

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You can assess your WordPress website's performance through speed testing tools. Some of the best speed testing tools are:

- Pingdom
- GT Metrix
- PageSpeedInsight

Woah. That was pretty easy, wasn't it? Yes. We regularly use these speed testing tools to keep a check on our blog's performance so people like you can keep your website's optimized. It's a win-win, see?

Now let's move on to the most important part of this guide: tips to help speed up your WordPress website!

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Speed Up Tips and Tricks

Speed Up Tips and Tricks

Here comes the most important part of this awesome WordPress Performance ebook that we created to help you get the best out of your WordPress website and improve its performance. If your website performs well, your users and visitors will keep wanting to come back to your website and in turn, you will generate a lot of income and become a millionaire and spend the rest of your life without any financial worries.

That sounds great. In theory. But practically, you have to do a lot to make that above statement come true. So what are we waiting for? Nothing. Let's dive in and start tweaking our websites for performance.

How to Speed Up Your WordPress Website?

It's easy. While previously we highlighted all the reasons that could be slowing down your website and their resolutions, now we're going to focus on tips and tricks that will help you load your WordPress website like a Tesla Roadster.

Frequent Updates

Can someone with an Audi from the 1980s compete with someone who has the latest Tesla model? Of course, not. Only the latest model can compete best with today's cars.

The same is true for your WordPress website. If you're using ancient versions of WordPress, your load speed will suffer.

So... just use the latest WordPress release? A great number of people try to steer clear from updates because either they're not comfortable with change or they think they won't be able to handle the upgrade themselves. With WordPress, that's not the case at all.

Updates bring enhancements on all fronts

WordPress updates are meant to introduce speed enhancements and updated security protocols that not only make your WordPress site safer but also faster and more seamless.

Before you push updates to your live website, though, make sure that you have tested it out on a staging environment because it's better to be safe than falling prey to a buggy update.

Use of Lightweight Themes

One of the biggest features of WordPress is customizability. You can play with themes, fonts, and layouts, etc., to your heart's content. BUT, when choosing a theme to dress your website, you need to be wary of good and bad themes.

Most free themes nowadays come with loads of options but are riddled with untidy codes that make your WordPress slow down. To avoid giving your site the tortoise treatment, you should opt for a lightweight (paid & premium if possible) theme.

Lightweight themes alleviate performance

Paid themes are regularly updated and optimized for performance & security. This is one of the biggest reasons why paid themes are so frequently recommended. You even get real user reviews for paid themes that tell which themes are best for performance, so you won't be shelling you cash for unknown themes.

On WPblog, we regularly churn out lists of great themes for our readers, and we have an awesome list of themes for you here as well: Fast Loading Themes For WordPress.

In the blog post linked above, you'll find a list of themes that you can't go wrong with if

you want performance-oriented WordPress themes!

Monitor and Remove Unnecessary Plugins

There are countless plugins and extensions you can download, but adding countless plugins and extensions to your WordPress is not a good strategy.

"But there are so many attractive plugins out there and I feel that I absolutely must collect them!"

First of all, plugins aren't collectibles. Many users tend to treat them that way and we're here to debunk that.

Secondly, if you do feel like your website needs tonnes of functionality, make sure you know how to choose the right plugin for your website.

Have a selection criteria

Just because a plugin is free, doesn't mean you should install it on your website. In fact, many free plugins tend to carry malware and slow down your website.

Hence, always download plugins from credible sources and if possible, buy premium plugins that offer support and regular updates. Not only does that ensure better security, but it also means better website performance.

Additionally, you should use a tool to monitor the plugins and their functionality, and there are plugins for that as well... for keeping an eye on other plugins. It'll help you monitor the plugins you need and the ones you can remove because they aren't serving any purpose.

Download Monitor

Embed Lightweight Advertisements

WordPress websites are a great source of making money. In fact, many entrepreneurs start their online businesses on WordPress, so there's that. And one of the best ways to earn via a WordPress website, in this case, is to display ads.

However, advertisements can take a toll on your WordPress if not kept in check.

Sometimes, advertisements themselves are based on complicated and resource-hungry elements that do little to nothing to attract your visitor and instead end up slowing your website down. They're a burden on your server, so it's important that you're careful with the ads you place on your website.

Optimize/Cache/Minimize Javascript Codes for Ads

There are plenty of ways to make sure that the ads you place on your WordPress site don't weigh it down.

First of all, any image/GIF/or animation that you want to serve as an ad should be optimized. You can easily decrease the size of your picture or GIF so that they don't take enough space on your server.

Secondly, you should always cache your website (discussed in detail next) so that your visitor's browser doesn't have to load the site's as well as ads' images every time.

And most importantly, the javascript code that serves ads plays a crucial role in affecting the load times of your site. So if you can keep javascript code attachments to a minimum, your site will do well with speeds and serving ads alongside.

Oh, and if you can, restrict rich media ads for users that have slow internet connectivity.

Enable Caching Mechanism

Enabling a cache mechanism helps dump not only unneeded files from your WordPress but also the ones that might be causing your WordPress site to lose its integrity.

Also, WordPress caching is one of the fastest ways to improve your website's performance. Not only will your website be fast, but it will also provide a better user experience for your users. So how do you enable cache on your website? It's easy.

Use a caching plugin

All you have to do is download and install a caching plugin to get started. We always recommend WP Super Cache to our users.. The plugin makes sure your cache is cleared at regular intervals and you don't have to worry about doing it manually.

Yup, it really is that simple. Without going into much detail about what a good caching plugin will do for your website, just know that it reduces a lot of load on your server and improves performance by a fair margin!

Enable Browser Caching

If you're wondering what's the difference between browser caching and the caching we discussed above, there's a small difference, but the results are the same: faster website performance.

Browser caching, just to make things clear, is client-side caching. It's a cache system built-in browsers and just like caching things on your server, you can cache things on your browser.

So if I visit a certain website, my browser will cache that website and the next time I visit that same website again, the website will load faster because it's already stored. Similarly, you can enable browser caching so that your website loads faster on your visitor's browser.

Browser caching using .htaccess file

While you can do it by installing a plugin, you can get into .htaccess file to do it yourself as well. This file itself is found inside the root folder of the hosting service you are using. Get a file editor and add the following code into the bottom of the file, without making any more changes,

```
#Customize expires cache start - adjust the period according to your needs<IfModule mod_expires.c> FileETag MTime Size AddOutputFilterByType DEFLATE text/plain text/html text/xml text/css application/xml application/xhtml+xml application/rss+xml application/javascript application/x-javascript ExpiresActive On ExpiresByType text/html "access 600 seconds" ExpiresByType application/xhtml+xml "access 600 seconds" ExpiresByType text/css "access 1 month" ExpiresByType text/javascript "access 1 month" ExpiresByType text/x-javascript "access 1 month" ExpiresByType application/javascript "access 1 month" ExpiresByType application/x-javascript "access 1 month" ExpiresByType application/x-shockwave-flash "access 1 month" ExpiresByType application/pdf "access 1 month" ExpiresByType image/x-icon "access 1 year" ExpiresByType image/jpg "access 1 year" ExpiresByType image/jpeg "access 1 year" ExpiresByType image/png "access 1 year" ExpiresByType image/gif "access 1 year" ExpiresDefault "access 1 month" </IfModule>#Expires cache end
```

So in WordPress, it takes a simple code to expire your cache. You can assign this cache a time interval so that your cache expires regularly. If you rarely make such changes to your WordPress powered website, you can change the values according to your needs.

Browser caching using a Plugin

As mentioned, you can also use a plugin to enable browser caching. We recommend Leverage Browser Caching. Simply download the plugin, install, and activate it. It'll the job for you.

Most hosting services, however, do this for you or make it really easy, like Cloudways, which not only makes sure your WordPress website is secure but also ensures it runs faster, smoother and provides the kind of experience your users expect from a high-end website.

Enable GZIP Compression

GZIP Compression is the process of compressing your WordPress files to make them smaller. These smaller files load faster, thus enhancing your website's performance.

Enable GZIP compression through .htaccess file

You can enable GZIP compression through the .htaccess file. All you have to do is add a shortcode in the .htaccess file. Don't forget to create a backup before you make any changes in the .htaccess file, though.

```
<ifModule mod_gzip.c>
mod_gzip_on Yes
mod_gzip_dechunk Yes
mod_gzip_item_include file .(html?|txt|css|js|php|pl)$
mod_gzip_item_include handler ^cgi-script$
mod_gzip_item_include mime ^text/.*
mod_gzip_item_include mime ^application/x-javascript.*
mod_gzip_item_exclude mime ^image/.*
```

```
mod_gzip_item_exclude rspheader ^Content-Encoding:.*gzip.*
</ifModule>
```

Adding this code will give compress your WordPress files and help them load faster for your visitors.

Optimize Images

Compressing images and larger files help make WordPress a joy to use. The heavier the images, the more resources it needs to load, and the worst your user's experience gets.

You can make sure that the quality of the image stands out but you can also make sure that the size of the image is less which would make it easier to load the files much quicker, especially for smartphones. The larger the images, the more time it requires them to load and it is unnecessary for images to be so large when they are to be viewed on smaller screens.

Use a Plugin to Optimize Images

But, the beauty of WordPress lies in its functionality via plugins. So here it is: Download the reSmush Image Optimizer plugin to make sure your images are being compressed and hopefully you'll notice the change in your site speed.

Embed Video Content

Images and videos add value to your content and make it more readable. However, you need to be careful when using visual content on your website. There are two ways you can add videos to your content:

- You can either upload it directly on your WordPress
- Embed them in your content

Uploading videos directly to your WordPress is not a good idea. Videos take up a lot of resources to load, so uploading them directly to your WordPress would mean slowing down your website.

Upload to YouTube, Embed in Your Post

On the other hand, using a third-party space, like YouTube, for example, to host your videos will have next to no impact on your site speed. So if you want videos in your posts, first upload the video on YouTube, then embed it in your post. This way, the video will use YouTube's server resources, and not yours!

Minify and Combine HTML, CSS and JavaScript

Minification is not a new process, but somehow unheard of when it comes to speeding WordPress.

So what is minification? Simply put, minification is the process of removing unnecessary characters from a piece of code. These unnecessary characters may include line breaks and white spaces, etc., that aren't necessary for the computer to make sense of the code.

Here's an example:

```
#bluetext {

font-size: 2em;

color: blue;

}


#redtext {

font-size: 1em;

color: red;

}
```

While there's nothing wrong with the above code, it can be minified to this:

```
#bluetext{font-size:2em;color:blue;}#redtext{font-size:1em;color:red;}
```

You might think this doesn't look impactful, but considering the number of codes and scripts there must be under the hood to run your website, minification can make a significant impact on your website's speed.

So how do you minify CSS and JavaScript?

You could do it manually, of course, but we recommend that you use a plugin. There are plenty of plugins that will do the minification for you with little to no effort on your part.

Autoptimize is one of the most popular WordPress minification plugins around. Not only does it minify your scripts, but it also goes further and allows you to bundle your code and cache them as well to completely optimize your site's performance.

Use Lazy Load for Text, Videos, and Images

Lazy loading, or on-demand loading, is an optimization method that loads only necessary content and renders what is visible. If you don't scroll down a web page, lazyload won't load or download that part, hence the lazy moniker.

If your web pages have a lot of content, especially high-definition images and video, Lazy Loading is a great way for you to optimize your site for speed.

Lazy loading offers a more seamless and robust balance between optimizing content delivery and a streamlined interface when it comes to the end-users. It helps users connect faster to the content they need and businesses, in turn, spend less on consuming resources that they don't need.

So how do I lazy load my website?

There are plugins to do that. WordPress is amazing, isn't it?

a3 Lazy Load is by far one of the best options to Lazy load texts, videos, and scripts on your website. You can bring down your website loading time by a significant margin using this nifty plugin!

Disable Hotlinking

Hotlinking is a method of serving images and content from another website. For instance, if you have a high-quality image on your website and someone out there really, really likes it, they can use your URL to display the image on their website but it will be putting a load on your server.

Did you know hotlinking is illegal and counts as theft? In case you've been doing it, stop.

In case people are hotlinking off of your site, you need to take measures to prevent it from happening.

How to Prevent Hotlinking

There are a number of ways you can stop people from hotlinking off of your website.

- Use a CDN that offers hotlink protection
- Enable hotlink protection in Apache & NGINX
- Use a plugin: All In One WP Security & Firewall
- Disable right-click on your website

These are simple methods to prevent your server from getting bogged down with other website's traffic load.

So that was a load of information to help you boost your WordPress website, wasn't it?

In Conclusion

We've discussed at length on the many ways you can improve your WordPress website's performance. And hopefully, once you're through with these, your WordPress will be flying high.

All of the methods we've discussed in this guide are easy to implement. However, if you think there's something that whizzed over your head because we didn't really take enough measures to explain it properly, there's no need to worry.

You can always email us at admin@wpblog.com or connect with us on Twitter.

I'd be more than happy to help you sort out your WordPress speed issues, and who knows, if there are enough requests, might even go ahead and write another one of these super-useful guides for you?

WPblog is a WordPress resource website that regularly publishes content covering WordPress themes, plugins, hosting, news and ecommerce. WPblog aims to educate WordPress users about the best WordPress products and best practices so that they can create amazing websites.