Speed up your BuddyPress Site in 10 Steps

THE BUDDYBOSS TEAM

INTRO
WHY SPEED MATTERS

A faster site will lead to increased revenue, through a combination of improved user retention and better SEO results.

Studies have been performed by many entities including Google, Bing and Yahoo, giving us conclusive evidence that users prefer fast sites. This preference is important enough that speed is now a relevant factor when Google ranks sites in their search results.

BuddyPress provides some particular challenges when it comes to speed. BuddyPress is dynamic, meaning users are regularly contributing content and pages are always changing. For this reason we cannot just cache everything and call it a day. We need to get creative. What follows is a comprehensive guide as to how to speed up your BuddyPress site. If you follow everything in this guide you will see noticeable speed improvements right away.

Have fun :)

– The BuddyBoss Team

1. SERVER

It all starts at the server. Many of the methods we'll be recommending depend on a good server setup.

Imagine you have a slow computer. You can try optimizing it all day, but the most impactful thing you can do is simply to buy a faster computer. Same with your server. There is no getting around it, your website is hosted on physical hardware and it is limited by the same constraints as a computer, including processor speed, memory, and other factors. If you're using cheap shared hosting, your site is going to be slow no matter what you do. If you move your BuddyPress site to a powerful, dedicated server, you will have fixed half of your speed issues with just this one change.

So how do you choose a server company? Below are our recommendations, depending on your needs.

KNOWHOST

KnownHost offers an ideal balance of speed, price and ease of use, and has worked great hosting BuddyBoss.com. They use managed virtual private servers (VPS) which offer the benefits of a full private server but at a substantially lower price, along with fantastic technical support and virtually 100% uptime in our experience.

Our suggestion is to go with the SSD-2 plan. It gives you 40GB of storage (more than enough) along with 2.25GB of RAM, an SSD (much faster than a traditional hard drive), a powerful CPU (24 cores) and plenty of bandwidth. This will keep you going for a very long time.

RACKSPACE

Another popular option is Rackspace. If your primary concern is speed over all else, and you don't mind a somewhat steep learning curve to get there, Rackspace is an ideal choice. You won't get much out of the box – no phpMyAdmin, no cPanel, just an empty server that you need to configure. But what you do get is an incredible infrastructure that will scale as you grow, and will be super fast if configured correctly. They have incredible support as well, both phone and live chat.

2. OBJECT CACHING

PAGE CACHING VS OBJECT CACHING

Due to the dynamic nature of BuddyPress, page caching of HTML is not possible as it will cause content that is supposed to be updated in real-time to go stale. However we can still cache the PHP that is used to assemble those pages via Object Caching, which will reduce the amount of requests to your server and lead to noticeable gains in performance. Object Caching is built into WordPress and BuddyPress, you just need to enable it on your server.

HOW TO ENABLE APC OBJECT CACHE

If you're on shared hosting this will not be possible, as the change is set across the entire server. You'll need to follow our advice in the Server section first.

Once you have moved your site to a dedicated server, contact your web host and request that they install the "APC" caching technology on your server. APC stores the cached content in RAM, which is why I recommend at least 2GB of RAM for ideal server performance. Once your web host has confirmed that APC is installed and working, you will then need to enable it for WordPress with a plugin. My recommended method is with the APC Object Cache Backend plugin:

https://wordpress.org/plugins/apc/

This is not a true plugin, but rather a "drop-in" file. As such, you do not actually activate the plugin. You just need to copy the object-cache.php file directly into your /wp-content/ directory. To confirm that it's working, you can type this into your browser while logged in as a WordPress admin:

http://www.YOURDOMAIN.com/wp-admin/plugins.php?plugin _ status=dropins.

It should show APC Object Cache as a drop-in plugin.
You should begin seeing performance improvements.

3. ENABLE GZIP

Your website needs to send files to your visitors' browsers, and those files can sometimes be large. Using GZIP, you can compress your web pages and assets by as much as 70%, resulting in noticeable speed gains during page load.

Enabling GZIP is simple. You just need to contact your web host and request that they enable GZIP on your server. Now your web pages will download quickly as compressed files.

To confirm GZIP is working correctly, enter your site's address here:

http://checkgzipcompression.com/

4. CONTENT DELIVERY NETWORK (CDN)

WHAT IS A CDN?

A content delivery network (CDN) is a distributed network of servers around the globe that serve your site's assets, including images, stylesheets, and Javascript files. You can easily sync WordPress to a CDN so that your site assets are automatically offloaded to the CDN.

WHY USE A CDN?

When someone loads a page from your website, the majority of the browser requests are for content assets that are loading directly from your server, and with a moderate amount of traffic they will queue up and slow down your site's performance. Additionally, they have to be delivered from your server's physical location to your visitor, and if your server is in Los Angeles and your visitor is in the Philippines for example, this will cause a delay. With a CDN your visitor may get most of your site's files delivered from a server located in nearby Manila, resulting in a noticeable speed improvement.

SETTING UP A CDN WITH WORDPRESS/BUDDYPRESS

The first step is to purchase your CDN package. I recommend using MaxCDN as they are reliable, inexpensive, and easily integrate with several WordPress plugins. Some hosts such as Rackspace offer their own CDNs as well. Once you have correctly configured your CDN "zone" make sure to note down the CDN URL.

Next, download the plugin "CDN Linker" from Github (look for the "Download ZIP" button):

https://github.com/wmark/CDN-Linker

Install and activate the plugin on your website.

Go to Settings > CDN Linker in your WordPress dashboard. Then add your CDN URL that you noted earlier in the "CDN URL" field. If you're using MaxCDN, it will look something like this:

http://yourzone.youraccount.netdna-cdn.com

Save your settings. Your site should now be loading all assets via the CDN. To confirm, you can view your page source in a browser and you should see links (like stylesheets and Javascript files) using the new CDN URL structure.

5. MINIFY AND COMBINE CSS

Your website is likely to be loading many CSS stylesheets, perhaps twenty or more. These come from your theme as well as the plugins you are using. Each stylesheet needs to be downloaded separately by your browser, causing a noticeable speed impact. Additionally, the stylesheets contain a lot of empty whitespace which contributes to larger files sizes and more work for the browser to read through them.

Minifying is the process of removing all of the whitespace, leaving you with tiny compressed stylesheets. Then we can combine all of your stylesheets, with the end result being just one compressed stylesheet for the entire website! This will lead to speed improvements, especially noticeable on mobile devices.

BETTER WORDPRESS MINIFY

With Better WordPress Minify, it is very easy to automate the whole process of minifying and combining CSS files. First, install and activate Better WordPress Minify:

https://wordpress.org/plugins/bwp-minify/

Then go to BWP Minify > General Options. Check the box for "Minify CSS files automatically?" and set "For cache buster, use" to the option "Cache folder's last modified time" so your compressed stylesheets get regenerated when you update any theme or plugin.

All of your stylesheets should be minified and combined now. To confirm, you can view your page source in a browser and you should see every stylesheet combined into one file. Look for the extension ".css". Click to view the file, and you will see all whitespace has been removed.

6. MINIFY AND COMBINE JAVASCRIPT

If you read the previous section about CSS, this will be very familiar.

Your website is likely to be loading many Javascript files, perhaps twenty or more. These come from your theme as well as the plugins you are using. Each script needs to be downloaded separately by your browser, causing a noticeable speed impact. Additionally, the scripts contain a lot of empty whitespace which contributes to larger files sizes and more work for the browser to read through them.

Minifying is the process of removing all of the whitespace, leaving you with tiny compressed Javascript files. Then we can combine all of your scripts, with the end result being just one compressed Javascript file for the entire website! This will lead to speed improvements, especially noticeable on mobile devices.

BETTER WORDPRESS MINIFY

With Better WordPress Minify, it is very easy to automate the whole process of minifying and combining Javascript files. First, install and activate Better WordPress Minify:

https://wordpress.org/plugins/bwp-minify/

Then go to BWP Minify > General Options. Check the box for "Minify JS files automatically?" and set "For cache buster, use" to the option "Cache folder's last modified time" so your compressed scripts get regenerated when you update any theme or plugin.

All of your Javascript files should be minified and combined now. To confirm, you can view your page source in a browser and you should see every script combined into one file. Look for the extension ".js". Click to view the file, and you will see all whitespace has been removed.

7. COMPRESS SITE IMAGES

One thing often overlooked is the size of images uploaded into your media directory, both by admins and the members of your community. If a user uploads a 1GB image to your site, whenever someone views that page they will have to download a 1GB file. And if you have a page with 10 images like this, the page size will get enormous. This can lead to considerable speed delays, especially for mobile devices and slower internet connections.

TinyPNG

The solution we recommend is TinyPNG:

https://tinypng.com/

Despite the name, it will actually compress both PNG and JPG filetypes, often by 70% or more. Even if you compress your images first in Photoshop, you will still see noticeable gains by running it through TinyPNG, with virtually no loss in quality.

You can manually upload any image to the service and it will output a compressed version for you, but the real magic is in their fantastic WordPress plugin:

https://wordpress.org/plugins/tiny-compress-images/

The plugin will retroactively compress your site's entire media library, and will then automatically compress every new image that is uploaded into it. The catch? You have to pay for the service. The first 500 images per month are free, the next 9,500 are at $0.009 per image, and after that it's $0.002 per image. Sign up for your API here:

https://tinypng.com/developers

8. DEACTIVATE SLOW PLUGINS

The WordPress ecosystem is enormous and it can be tempting to run every plugin that looks interesting. But this can come at a cost as some plugins will slow down your site. Every plugin is adding more code that must be executed when you load a page.

P3 PLUGIN PROFILER

Often times it is just one plugin, or maybe a couple of plugins that are causing your site to slow down. You will need to diagnose the situation to figure out what is causing the problem. A fast method is just to disable all plugins, and re-enable them one by one until you find an obvious slowdown. However a more sophisticated solution exists. We recommend using the plugin "P3 Plugin Profiler" available here:

https://wordpress.org/plugins/p3-profiler/

This plugin creates a profile of your plugins' performance by measuring their impact on your site's load time. Using this, you can narrow down which specific plugins are causing slow load times and remove them. Go to Tools > P3 Plugin Profiler and click "Scan Now".

9. CLEAN YOUR DATABASE

Over time your database can grow to be full of redundant and unused content, which can lead slow PHP queries during page loads. It is possible to maintain a cleaner database using a plugin, which can lead to faster load times both on the front-end and in the WordPress dashboard.

WP OPTIMIZE

We recommend using the plugin "WP Optimize" available here:

https://wordpress.org/plugins/wp-optimize/

This plugin will clean up your database in various ways. For example, every time you edit a post, WordPress saves your edit as a revision. If on average you edit each post 10 times, and your site has 2000 posts, you may actually have 20,000 post revisions in your database. This plugin will remove all of the stale revisions resulting in a dramatically smaller and more efficient database. It will perform other various scheduled tasks as well.

10. TEST, TEST, TEST

It's important to test your site speed before and after implementing changes, so you know you're having a positive impact and not just relying on anecdotal evidence. There are two fantastic, free web tools that you can use to test your site.

GOOGLE PAGESPEED INSIGHTS

For figuring out what to optimize, we recommend using Google PageSpeed Insights, available here:

https://developers.google.com/speed/pagespeed/insights/

Enter your page URL and click "Analyze" and it will score your site and provide suggestions to speed it up. If you've followed the rest of this guide, you have already implemented many of the most important suggestions.

PINGDOM WEBSITE SPEED TEST

For determining your site's actual page load times, we recommend using the Pingdom Website Speed Test available here:

http://tools.pingdom.com

Enter your page URL and click "Test Now" and it will display the load time along with a visual waterfall showing which elements of your site are taking the most time to load. There may be a specific resource or two that are contributing to