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BEST FRIEND OR WORST ENEMY? THE DOs AND DON'Ts OF WORDPRESS MULTISITE

WHITE PAPER BY TAYLOR MCCASLIN



DOs and DON'Ts OF WORDPRESS MULTISITE

This white paper is based on a presentation given at a recent WordCamp. If you'd like to follow along, check out [this video](#).

Like Dr. Jekyll and Mr. Hyde, multisite can be your best friend or worst enemy...sometimes both. Before you start developing a series of sites on WordPress, it's important to determine whether using a multisite network is a good decision or not. In this white paper, we'll take a look at:

- What multisite is
- What it is not
- The dos and don'ts
- Use cases
- Best practices

Brands like P&G, Indeed, The Home Depot, University of Texas, and Ketel One Vodka use WordPress multisite as part of their web strategy. How do you know if this feature is the right solution for you?

Before we get started, here are some key terms that will help you understand multisite better:

- **Install:** an instance or installation of WordPress
- **Network:** a set of subsites that operate within the single WordPress install configured for multisite
- **Site:** one of the subsites in the multisite network

Now that that's out of the way, let's take a look at what multisite is and what it is not.

WHAT IS MULTISITE?

The original vision of WordPress multisite was to enable blogging networks, however today people are trying to use it as a utility for managing multiple sites—up to several thousand—using a **single installation** of WordPress. So it's important to understand that people are trying to make multisite do things it wasn't designed to do. With multisite there is **one host, one install of WordPress, and many sites.**

Think of it this way: multisite is like an apartment complex—there is one shared roof (hosting), common spaces (filesystems), and many private apartments (sites).

WHAT ISN'T MULTISITE?

Now that you know what multisite is, here are some things multisite isn't:

- A network of sites that can be moved to separate hosts
- A set of sites that can be easily separated into their own WordPress installs
- A set of sites that can have different IP addresses

THE DOs AND DON'Ts

With all of that in mind, here are some essential tips on what you should and shouldn't do with WordPress multisite:

DON'T PUT SITES THAT YOU DON'T TRUST INTO A PUBLIC MULTISITE NETWORK.

Choosing a public network has a lot of baggage that goes with it. Putting your multisite on a public network means anyone can come and sign up for a website within your network. For example, WordPress.com and Happytables.com are open, public networks. By default, if anybody can sign up, that means that anybody can upload any sort of media or other file types to your network. Concerns with this include anyone being able to upload content, embeds, and scripts under your domain, which could be risky in terms of copyright.

DO CONSIDER A PRIVATE/TRUSTED NETWORK.

Having your multisite on a private network means that you must grant people the ability to do things, like alter plugins and themes. For instance, WordCamp.org is a private multisite network where trusted members are allowed to create a WordCamp site in a central location.

DO USE MULTISITE FOR UNIVERSITY NETWORKS.

Establishing a series of collegiate sites into a multisite network allows the university to have its main flagship property, and then give every college, department, and school inside that university its own custom website that keeps everything together in a nice package on a private network.

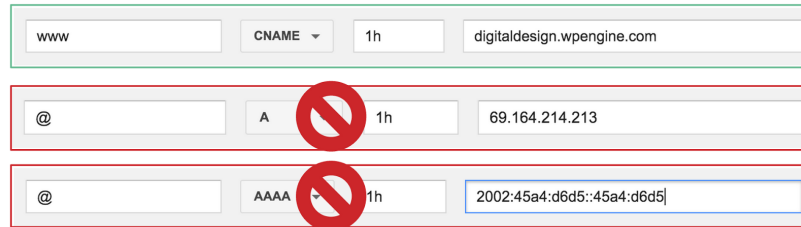
DO DECIDE HOW YOU WANT YOUR URL STRUCTURES TO LOOK.

There are two options for URL structures: sub-domain and sub-folder. Using a sub-domain URL structure gives you a lot more flexibility. It's also better for your SEO and is less restrictive for your end users (the people who are creating the sites).

On the other hand, sub-folders is more restrictive. For instance, with sub-folders, the first person who signs up for a multisite network might decide that they want "/blog" as their user. Guess who can't use /blog now? Everyone else. This restrictiveness is why you should consider the subdomain route -- then everybody can have a "/blog" in their domain if they wish.

DO ALWAYS USE CNAMEs.

This one has actually burned me pretty bad in the past. I built a big multisite that had around 250 to 300 websites on it—all with individual domain names. What I did not realize was that they were all set with A records (which points to an IP address). That's great until your host changes the IP address for your WordPress installation. People will be calling you asking why their website is down. Because they were using IP addresses, every single one of those domain settings for their DNS had to be updated.



Therefore, use CNAMEs. No matter what your host does, with CNAMEs you never have to worry about this issue. Your domains will always point back to your multisite network.

DO BE AWARE THAT LOGGING INTO ONE PLACE MIGHT LOG YOU INTO OTHERS.

All blogs have central user management and therefore a user only has to login once to access all sites on the network. If a user logs in on your multisite, they'll have access to all sites on the network. This doesn't play well with two-factor authentication plugins, which will log you in for every site you're on.

DO UNDERSTAND THAT CHANGES TO ONE THEME WILL AFFECT ALL SITES USING THAT THEME.

For example, if you change a template file and break a theme, then all of the sites using that theme will be broken. There is a way around this where as a super-admin you can network enable specific themes to specific sites, so that not all are affected if a change is made. This network enabling allows you to restrict available themes to subsites. For instance, you can say "sites 1, 2, and 3 can only use this specific theme."

DON'T EVER MODIFY A THEME WITHOUT USING THE CHILD THEMES PLUGIN ON YOUR MULTISITE.

The [One-Click Child Theme](#) is a one-click button that allows you to create a child theme for a parent theme for every single subsite on a multisite network. This allows you to customize the CSS in a theme of a particular site without modifying the actual parent theme and affecting every multisite on your network.

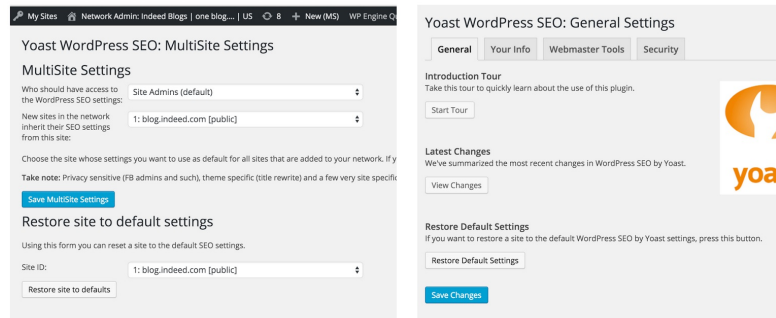
DO INSTALL PLUGINS ON THE NETWORK (FOR YOUR SITE ADMINS).

This allows other users on the site to activate and manage plugins. A plugin that is activated for the entire network will appear as a network

activated plugin. For a non-super admin to activate a plugin to manage it, the plugin itself already has to be added to the multisite network. By using a “Must Use Plugin” option, this will inhibit plugins being deactivated through the admin.

DO BE AWARE THAT YOU CAN END UP WITH PLUGIN SETTINGS IN MULTIPLE PLACES.

For instance, the Yoast plugin contains multisite settings in multiple places. There are network plugin settings in the Network Admin, and site specific settings in the normal WP Admin for all the sites.



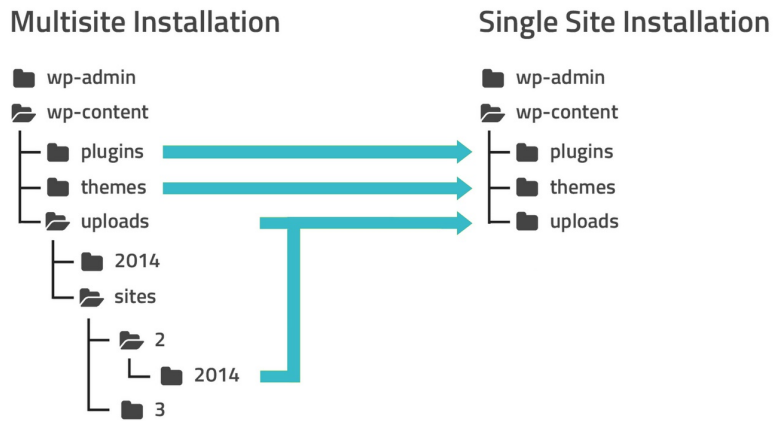
DO BE AWARE OF FILE STRUCTURE DIFFERENCES.

When you install a single vanilla WordPress site, you already have the multisite code on your server. There’s not a multisite version of WordPress—it’s the same core files. You’re just setting up a config value to generate some .htaccess rules to help map domains in subfolders to all of those different sites. File structures will differ between a multisite network and a standard WordPress site. Here are some differences to note:

- wp-config.php *has extra lines*
- .htaccess *has extra lines*
- wp-content/sunrise.php *if you are using domain mapping*
- wp-content *has extra subfolders*

DO BE AWARE THAT THE WP-CONTENT WILL HAVE SOME EXTRA FOLDERS THAT AREN'T NORMALLY THERE.

The plugins and themes folders will look the exact same, however the uploads folder will not. The second you start adding multiple sites to your subsite, you’ll have a sites folder that also has subfolders with numbers in them, which are the blog ID.



DO CHECK WITH YOUR HOST TO ENSURE THEY ALLOW SPECIFIC ACCESS PATHS FOR EACH INDIVIDUAL SFTP USER.

Your host should allow you to grant your site admins access to only specific site directories. This will allow you to choose the file path for a SFTP and grant users access to it. It also allows you to grant people who need direct access to only the file system of the sites they're managing.

DO BE AWARE OF DATABASE STRUCTURE DIFFERENCES.

By enabling multisite, you'll have six more tables in addition to the normal WordPress tables. A huge number of tables are introduced per multisite **(10+6+(N*8))**. N refers to the number of sites in the multisite network. The tables will also be prefixed with your blog ID. This means that if you have 100 sites, you'll have 816 tables. For 1,000 sites, you'll have 8,016 tables (and so on). WordPress.com, a multisite network, has 95 million sites, meaning it has 296,000,016 tables in a single database!

Normal WordPress (10)

wp_options
 wp_posts
 wp_postmeta
 wp_comments
 wp_commentmeta
 wp_terms
 wp_term_taxonomy
 wp_term_relationships
 wp_users*
 wp_usermeta*

Multisite Specific (10 + 6)

wp_blogs
 wp_blog_versions
 wp_registration_log
 wp_signups
 wp_site
 wp_sitemeta

PER Multisite (10 + 6 + (N * 8))

wp_2_options
 wp_2_posts
 wp_2_postmeta
 wp_2_comments
 wp_2_commentmeta
 wp_2_terms
 wp_2_term_taxonomy
 wp_2_term_relationships

DO USE A MANAGED WORDPRESS HOSTING PLATFORM.

Hosting is of the utmost importance when choosing to work on a multisite network. Managed hosts are dedicated to tailoring their hosting services to specific sites only, like WP Engine which only hosts WordPress sites. With a dedicated hosting provider, you'll have people who are constantly watching and maintaining the infrastructure around your multisite network so you don't have to do it all yourself.

DO LOOK FOR A HOST WHO OFFERS THESE QUALITIES FOR YOUR MULTISITE NETWORK.

(Hint: WP Engine supports all of these things)

- Automatic backups with one-click restore.
- The ability to download backups should something go awry. Say your host goes down along with your site—you won't be able to access those backups if your host doesn't provide downloadable backups. Good hosts offer downloadable backups that you can store for any time access.
- Built in staging sites. This is not something offered by most hosts for multisites. Having this feature is super important because then you can specifically go and work on the staging site of the site you're interested in.
- Granular deploy to production controls (deploy on specific tables) - you have to have a staging site first, before you can deploy to the actual site. You want to be able to granularly control what you're deploying to your multisite.

DON'T CODE ON A LIVE SERVER WITH A MULTISITE NETWORK.

This will bring all of the sites down if you are not extremely careful, and let's be honest, we all make typo mistakes. If you are making changes to a theme that you know is shared across your multisite network, you want to be able to mitigate any risk you can in deploying those changes. To do this, use granular deploy control so when you're making changes to only a specific theme, that maybe isn't used across your network, only that theme will be deployed. This mitigates the risk everywhere else of anything that could go wrong with that deploy.

DO LOOK FOR EXTRA SECURITY FEATURES WHEN CHOOSING A HOST FOR YOUR MULTISITE.

Because you're putting 100 websites in one place, there's now 100 times the security risk in one single point of failure. Many managed hosts include a ton of added security measures that aren't included with WordPress itself, like automatic IP blacklisting.

DO KNOW YOUR HOST'S LIMITATIONS.

Some hosts will not support multisite subdomains or subfolders. It's important to understand what your host requires and to make sure that you fit into that box. WP Engine supports both.

DO USE VERSION CONTROL.

Being able to instantly see what has changed and being able to roll-back is super important with multisites. If one file gets changed by someone, you need to know what changed, how to fix it, as well as who did it.

DO DEFINE ('DISALLOW_FILE_EDIT', TRUE); This is perhaps my favorite thing to do on every single WordPress site I build, multisite or not. This setting disables the Admin File Editor to ensure that you don't bring down your site should you make a

mistake, like not add the closing bracket in you code and clicking save, when editing or making changes to say your theme files.

```
DO DEFINE  
( 'DO_NOT_UPGRADE_GLOBAL_TABLES',  
TRUE );
```

For large sites, this prevents dbDelta() and the upgrade functions from doing expensive queries against global tables. When you've got a lot of sites, you've probably got a lot of plugins and those plugins have updates. We all know what happens to sites that don't upgrade WordPress or that don't update plugins...they encounter vulnerabilities.

When you don't keep your multisite network updated, you've collected a whole lot of sites that are now potential targets at a single point of failure. This essentially allows you to maintain the way you're updating your multisite network. This code is primarily best for large sites and will prevent your plugins from doing expensive database queries to update themselves whenever an automatic update runs.

```
DO ADD THIS CODE: ADD_ACTION(  
'NETWORK_ADMIN_MENU', 'MY-SETTINGS' );
```

This code enables you to customize the interface for your users, making it easier for them to get to where they need to go to maintain and manage those sites. With this action, you'll be able to add extra submenus, menu options, and quick-links to the network and admin panel for your sub-users. You can find the full documentation on the Codex [here](#).

```
DON'T USE THE CODE:  
CURRENT_USER_CAN('UNFILTERED_HTML')
```

Unfiltered HTML allows the user to post HTML markup or even JavaScript code in pages, posts, comments, and widgets. This is not a good idea. By default, the super-admin is the only one that can do this on a multisite network. Be sure to search your code for this line, and if it exists, kill it with fire. Unfiltered HTML opens you up to a lot of potential security risks. If you need unfiltered HTML, for some reason, I highly recommend you write a shortcode or custom oEmbed to avoid this at all costs.

```
DON'T LOOP THROUGH YOUR NETWORK SITES
```

Unless you know what you're doing, by looping through your network sites, you'll cripple your site performance, if you don't crash your site altogether. The way multisite handles what site you're currently viewing and serving content for is complicated and looping through the sites is a lot of work for your server. If you have thousands of sites on a multisite network, you probably don't want to iterate through those.

USE CASES FOR MULTISITE

CASE 1:

"I WANT TO ALLOW USERS TO CREATE THEIR OWN SITES WITHIN A NETWORK WITH SOME CONSTRAINTS, CAN I DO THAT WITH MULTISITE?"

Answer: YES. This is what multisite is meant to do—create sites with some constraints. *Pro-tip: customize the admin. Both WordPress.com and Happytables.com allow for this.*

CASE 2:

"I WANT TO CENTRALLY MANAGE ALL MY CLIENT'S SITES, CAN I DO THAT WITH MULTISITE?"

Answer: NO. This is what everyone wants multisite to be and to do, but this is not what multisite was built for. There are other alternatives that are built to do this, like Jetpack Site Management.

CASE 3:

"I WANT TO HAVE A MULTISITE NETWORK WHERE EACH SITE IS IN A DIFFERENT LANGUAGE, IS THAT POSSIBLE?"

Answer: MAYBE. The biggest concern when you do this is SEO optimization. You're by default going to have duplicate content, which Google doesn't like and could penalize you for. There are plugins, like WPML, that are built to do this specific task. Don't try and fit this problem into a multisite box.

CASE 4:

"I HAVE A LOT OF CONTENT THAT IS VERY DIFFERENT, AND I WANT ALL MY SITES TO LOOK DIFFERENT, BUT IT'S STILL ALL MY CONTENT, CAN MULTISITE HELP?"

Answer: NO. Instead, you can map domains to categories and tags. There are plugins created specifically for this task to accomplish the thing you are trying to do with multisite without all of the complications of multisite. Another option is to create custom templates for custom posts types and category archives.

CONCLUSION

When used correctly, WordPress multisite is a great way to manage a large network of sites on a single install. It helps you maintain control, while allowing your end-users to launch their own sites. Keeping these do's and don'ts in mind will help you navigate the sometimes complicated world of WordPress multisite and let you know the right time and right use case for it. Following these dos and don'ts will help make WordPress multisite your best friend, instead of your worst enemy.



ABOUT WP ENGINE

WP Engine powers amazing digital experiences for websites and applications built on WordPress. The company's premium managed hosting platform provides the performance, reliability and security required by the biggest brands in the world, while remaining affordable and intuitive enough for smaller businesses and individuals. Companies of all sizes rely on WP Engine's award-winning customer service team to quickly solve technical problems and create a world-class customer experience. Founded in 2010, WP Engine is headquartered in Austin, Texas and has offices in San Francisco, California, San Antonio, Texas, and London, England.

WANT TO TRY MULTISITE?

Multisite unlocks the power to run numerous sites from a single WordPress install. WP Engine multisite is available for Professional plans and higher and makes running a multisite network easy.

Give us a call or visit our site to learn more about how your business can benefit from multisite.

Call 877-973-6446
Visit wpengine.com