WPMU WordPress Multisites

WHEN TO USE THEM AND HOW TO MANAGE THEM EFFECTIVELY

When to use them and when not.

Good Use Cases

- Creating a wordpress.com style blogging platform.
- Creating an Esty style e-shop platform.
- Educational blogging network.
- Community style sites where each member has their own blog.

Bad Use Cases

- Client's small website
- Portfolio style sites
- Personal blog
- Managing many non connected wordpress sites

WPMU The advantages

WHAT'S SO GREAT ABOUT WPMU ?

One WordPress Installation only !!

The greatest asset of WPMU is that any number of sites can be hosted under one installation of wordpress, really the only limitation is that of your hosting package.

- ▶ Centralised Site and User management.

- ▶ Centralised theme and plugin management.

- ▶ The ability to monetise your installation. (pay to blog)

- ▶ Great for community style networks with a large amount of blogs rather than one site with many authors and many pages.

WPMU The disadvantages

WHAT'S NOT SO GREAT ABOUT WPMU ?

That same one installation can cause problems.

The key thing to remember about WPMU is it's resource intensive and you can quickly become a victim of your own success. Lets take a quick look at the primary problems then we will take a look at solutions for them.

- ▶ Large database = slow site response.
- ▶ Lots of subsites can quickly consume both storage space and bandwidth
- ▶ Compatability issues with plugins and themes.
- ▶ Spam sites and other problem type sites.

WPMU Database Issues and Management

- One key thing to remember is that although we can have an unlimited number of sub sites on a Multisite installation, all data is stored in a single database. This means that when a multisite grows naturally things become slower as WordPress processes any calls to the database. Plus some hosts will limit the size that a database can reach.

- How can we get round this. A lot of people use caching plugins on their WPMU installations or even their hosts use them. Caching can help but to be honest it can bring just as many issues as it solves. One of the best methods although not so easy to set up is that of using multiple databases for that same single WordPress installation, this spreads the main site and sub sites over a number of databases and thus reduces the response times for both searches and site loading. There are several plugins out there that can do this and some offer a VIP database which again you can use to monetise your installation. However not every plugin and theme will work out of the box in a multi database setup some will need tweaking.

- As a guide 1-5000 sites should be fine with your default installation.

- 5000-50000 sites 16 databases.

- 50000-100000 256 databases.

- 100000+ 4096 databases.

- The key here is to plan ahead, how big do you realistically think your site is going to get and then go for the setup that will match it. One of the largest multisites in the world Edublogs.org actually now runs on 3 dedicated DB Servers. (But then again it does have some 2000000 sites and users on it. One thing to remember this type of setup is not a simple plugin installation but quite a complex setup not suitable for the average user.

WPMU Database Issues and Management (continued)

- Another alternative here is the use of distributed databases (for example hyperdb) This involves a the use of a cluster of MySQL databases on different Servers.

- The most intensive interaction with a database is that when a record is written to a database. The methodology in this method revolves around the use of one database for writing which is replicated to a number of other servers and the visitors read from these. This allows for an increase in performance and also redundancy so if one should fail the visitors will still get the information from the other servers.

- A key advantage over the previous multidb solution is plugin compatability, as it's a mirror of a single database at heart there are far less potential issues with plugins not being able to find component parts or settings for a subsite.

- Obviously cost will be an issue here, but it's a project that I am planning on working on where a group of individuals could potentially share resources or the cost of servers.

- One issue against this the problem of replication across the servers which can cause the sites to be out of synch.

- One thing to keep in mind whichever way you choose for delivering high performance is database optimisation, make sure that periodically you must optimise your databases, this can be done either via phpMyAdmin or via a plugin.

- Also you should make sure to reduce un wanted / unnecessary excess data in your databases, empty your spam comments and all trashed posts comments etc.

- Delete old post or page revisions

- wp-Optimize is a good plugin choice for optimising tables.

WPMU Resource Management

- One common mistake that people make when offering a WPMU hosting style site is to load the installation with a huge amount of plugins some of which never get used. Make sure that any unused plugins are uninstalled this saves a lot of wasted resources, any plugins that are not being used at all then simply delete them.

- Use a plugin to manage storage / bandwidth of subsites there are a few choices available although one of the best is commercial it allows you to easily monetarize a multisite by creating levels which allows you to assign premium plugins and themes to each level along with the bandwidth and storage each subsite has.

- If your site is growing rapidly you should consider offloading static content such as images, css etc. You can use for example free image sites such as Flickr (although this service does have some problems) Or you can use commercial commercial services such as tgose from Amazon or MaxCDN. If this is not a viable solution for you then consider using a plugin like wpSmushit to optimise images on your sites.

- Consider offloading feeds aswell as this too can save on server resources.

- Another technique is to use multiple hostnames for example the images can be offloaded to resources1.your domain.com, resources2.your domain.com, resources3.your domain.com.

- One option which is debatable with regards to site performance in a multisite is that of using caching software (whether serverside or within wordpress), this works on a site which has a lot of content which doesn't change but by nature a multiste is very dynamic and therefore may not really benefit from caching.

Spam Management.

► One of the biggest issues facing Multisite developers is SPLOG's (spam blogs) There are a few plugins available to help manage this issue ranging from free to commercial plugins. These should play a key role in managing these types of site. Spam comments and sites just eat up valuable resources.

► Consider installing plugins which allow site visitors to mark sites and comments as spam which need to be moderated.

Final Steps

- Make sure that your host allows a minimum of 128 Mb of ram available for use to WordPress and make sure that you set an upper limit. This can be done with a simple edit to wp-config.php

```
define('WP_POST_REVISIONS', 3);
define('WP_DEBUG', false);
define('WP_MEMORY_LIMIT', '128M');
define('WP_MAX_MEMORY_LIMIT', '256M');
```

- Optimise php.ini as follows.

```
zlib.output_compression = on
memory_limit = 512M
max_execution_time = 240
max_input_time = 120
```

- Make sure that all themes and plugins are optimised Consider using a plugin such as Minify
- Use CSS sprites rather than multiple images

Questions?

FEEL FREE TO ASK AWAY ☺