

Bloggers Performance Improving by Exploiting (WordPress) Tools with Ubuntu 12.04 and Apache HTTP Server

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Abstract

Blogger is a type of web applications like Facebook, Twitter, and others that allows multi-user blogs with time-stamped entries to publish services[1]. Some difficulties occur in the server such as server failure or slow loading happened at opening the blogger, we propose WordPress blog toll, to overcome these problem, that is to exploit features by installing, configuring and hosting on any other server. The paper demonstrates how to host WordPress on your own computer using Ubuntu and Apache web server.

Keywords

Blogger, WordPress blog toll, Ubuntu, Apache, Virtual Private Server.

I. Introduction

Wordpress is a free and open source website and blogging tool that uses PHP and MySQL[2]. It was created in 2003 and has since then expanded to manage 22% of all the new websites created and has over 20,000 plugins to customize its functionality. WordPress users may install and switch between themes. Themes allow users to change the look and functionality of a WordPress website or installation without altering the information content or structure of the site[3].

Themes may be installed using the WordPress “Appearance” administration tool or theme folders may be uploaded via FTP. The PHP, HTML (Hyper Text Markup Language) and cascading style sheets (CSS) code found in themes can be added to or edited for providing advanced features. Thousands of WordPress themes exist, some free, and some paid for templates. WordPress users may also create and develop their own custom themes if they have the knowledge and skill to do so[4].

The easiest way to build a platform in today’s world is to start a blog. While you can do this with free hosted options like WordPress.com, Type Pad.com, and Blogger.com, you will get the most `company that is offering services to your blogger but we need to pay to company therefore must have credit card if you want to host to any company service [5] if you don’t have a credit card and you need to host your blogger as study about hosting, you can host your blogger on your own computer without pay anything.

II. Proposed WordPress Blog Toll Methodology

Before working with wordpress, you need to have LAMP, installed on your virtual private server. If you don’t have the Linux, Apache, MySQL, PHP stack on your VPS (Virtual Private Server) you must set it up on your computer, see figure (1).

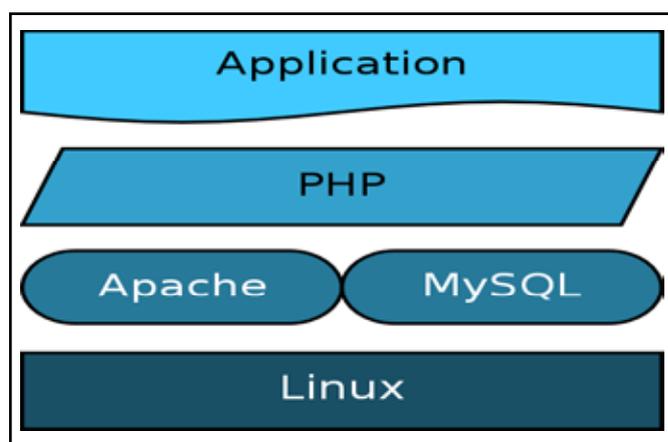


Fig.1: Steps to Build Wordpress

This can be done by following these steps :

1. Install(LAMP) Stack

- 1- Install Linux (Ubuntu 12.04): it is open source Operating System. It give Administrator more control on system and it software need update continuously, therefore; you have to connect to internet.
- 2- Install Apache: Apache is a free open source software, which runs over 50% of the world’s web servers[3]. To install Apache, type this command in terminal.
`sudo apt-get install apache2`
- 3- Install MySQL: MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other ‘AMP’ stacks), type these commands:
`sudo apt-get install mysql-server libapache2-mod-auth-mysql php5-mysql`
you should activate it.
`sudo mysql_install_db`
Finish up by running the MySQL set up script:
`sudo /usr/bin/mysql_secure_installation`
- 4- Install PHP: is an open source web scripting language that is widely use to build dynamic webpages. To install PHP, then `sudo apt-get install php5 libapache2-mod-php5 php5-mcrypt`
You can decide to install the module that you want, such as `php5-mysql`:
`sudo apt-get install php5-mysql`

2. Install and Configure Wordpress

After install LAMP stack, you had tools to setup to the Wordpress as follows:

1st step. Download WordPress

We can download Wordpress straight from their website:

```
wget http://wordpress.org/latest.tar.gz
```

You can unzip it by typing:

```
tar -xvzf latest.tar.gz
```

2nd step. Create the WordPress Database, Password and User

The files will be in the home directory. Log into the MySQL Shell by typing :

```
mysql -u root -p
```

Login using your MySQL root password, and then we need to create a Wordpress database, a user in that database, and give that user a new password. First, let's make the database (you can choose any DB name that you prefer and put it instead of Wordpress :

```
CREATE DATABASE wordpress;
```

Query OK, 1 row affected (0.01 sec)

Then we need to create the new user :

```
CREATE USER wordpressuser@localhost;
```

Query OK, 0 rows affected (0.00 sec)

Set the password for your new user:

```
SET PASSWORD FOR wordpressuser@localhost=PASSWORD("password");
```

Query OK, 0 rows affected (0.00 sec)

It is very important to grant all privileges to the new user. Without this command, the Wordpress installer will not be able to start up:

```
GRANT ALL PRIVILEGES ON wordpress.* TO wordpressuser@localhost IDENTIFIED BY 'password';
```

Query OK, 0 rows affected (0.06 sec)

Then refresh MySQL:

```
FLUSH PRIVILEGES;
```

Query OK, 0 rows affected (0.00 sec)

Exit out of the MySQL shell:

```
exit
```

3rd step. Setup the WordPress Configuration

Copy the sample Wordpress configuration file into a new file, which we will edit, and create a new one:

```
cp ~/wordpress/wp-config-sample.php ~/wordpress/wp-config.php
```

Then open the Wordpress config:

```
sudo nano ~/wordpress/wp-config.php
```

A configuration file like figure(2) will exit .

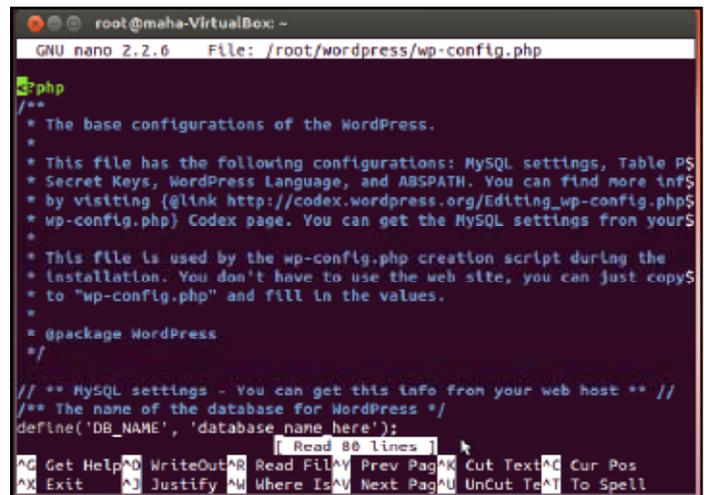


Fig.2: Wordpress Configuration File

Find the section that contains the field below and change to the names (your database, username, and password) that you choose:

```
// ** MySQL settings - You can get this info from your web host ** //
```

```
/** The name of the database for WordPress */
```

```
define('DB_NAME', 'Blog');
```

```
/** MySQL database username */
```

```
define('DB_USER', 'maha');
```

```
/** MySQL database password */
```

```
define('DB_PASSWORD', '5679765');
```

Save and Exit.

4th step: Transferring Wordpress Files to the Website's Root Directory

In this step we transfer the WordPress files to the website's root directory.

```
sudo rsync -avP ~/wordpress/ /var/www/
```

Then we set the permissions on the installation. First, switch into the web directory:

```
cd /var/www/
```

Give ownership of the directory to the Apache user.

```
sudo chown username:www-data /var/www -R
```

```
sudo chmod g+w /var/www -R
```

WordPress easily follows installation form online.

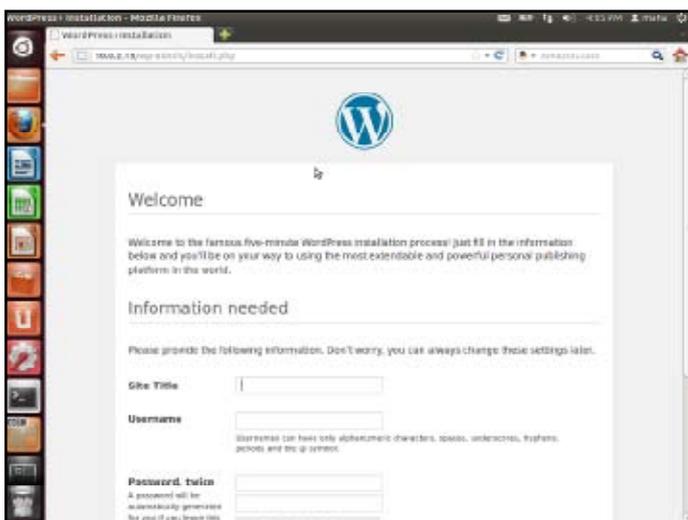
We must install specific PHP module to run. If it is not yet installed on your server, download php-gd:

```
sudo apt-get install php5-gd
```

Figure(3) illustrate the steps of Installing and configuring Wordpress.

III. Result

After all that is done in the previous sections, the Wordpress online installation page is up and waiting for you, access the page by typing (Ip address /wp-admin/install.php) in URL research tab that's found in web browser. You can get the Ip address for your computer from connection information, the address will look like this (Http://10.0.2.15/wp-admin/install.php) and fill out the short online form. See figure (4)



PP 4: Wordpress

After that, you can write and publish your post from your blogger. Note that URL is just Ip address, see figure (5).



Fig. 5: Publishing Post

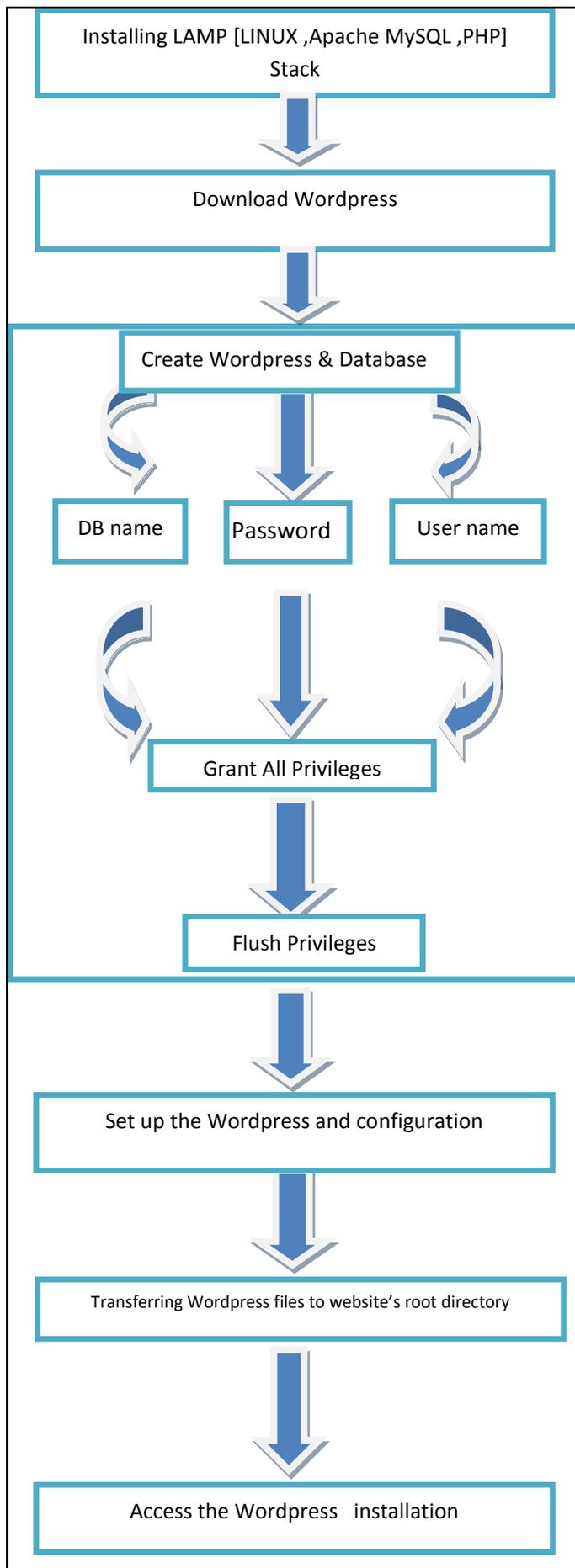


Fig.3: Steps of Installing and Configuring Wordpress

To demonstrated the improvement in the performance, we compare between blogger hosting free and Wordpress hosting by viewing the same video for both the blogger and the Wordpress (on the same computer).

It is clear from Table- 1 that the consuming time to see video of 3.19s is 6.37s on blogger hosting free, while on Wordpress hosting the consuming time is 3.20s, since the ordinary consuming time on our proposed Wordpress blog toll is 3.19s .

Table. 1 : The Consuming Time

Number of Test	Consuming Time (Blogger hosting free)	Consuming Time (Wordpress hosting on own computer)
1	6.37 s	3.20 s
2	4.25 s	3.19 s
3	3.59 s	3.19 s

IV. Conclusion

This paper has proven that the proposed WordPress blog toll improves the performance of the blogger. It had seen that when the loading on main server is high, the consuming time for seeing video is 6.37 s (blogger hosting free), while you can see the same video on our proposed Wordpress using Apache server in 3.20 s, this is very efficient as compared with the 3.19s real time for the video.

V. Future Work

To host your Wordpress, all you need to create an account to the service that you choice, create an instance, changes the remote host that is found in wp-config.php file from local host to the host that is offering the service, and finally need map IP Address and Domain Name.

References

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