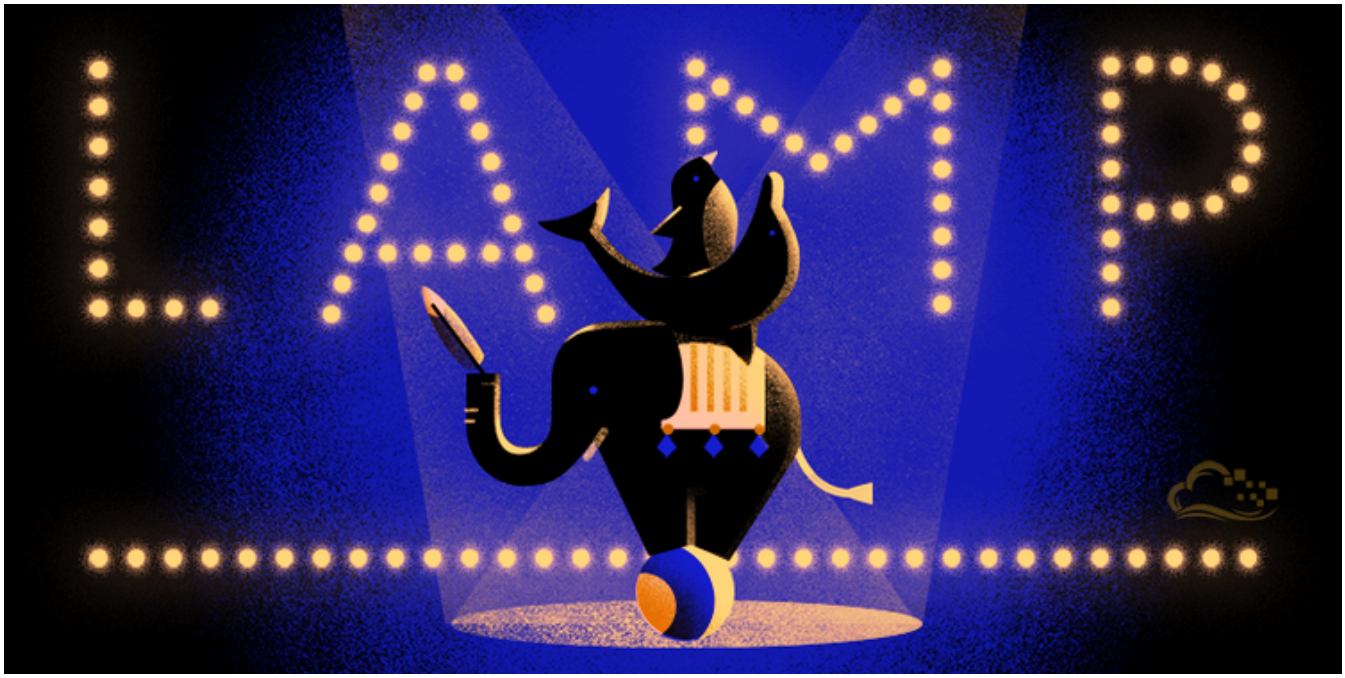
By: Justin Ellingwood



How To Install Linux, Apache, MySQL, PHP (LAMP) stack on Ubuntu 14.04

275

Posted April 18, 2014 1.4m LAMP STACK GETTING STARTED APACHE MYSQL PHP UBUNTU

Intro

A "LA r to host operating system, with the Apache web server. The site data is stored in a MySQL database, and dynamic content is processed by PHP.

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In this guide, we'll get a LAMP stack installed on an Ubuntu 14.04 Droplet. Ubuntu will fulfill our first requirement: a Linux operating system.

> **Note:** The LAMP stack can be installed automatically on your Droplet by adding this script to its User Data when launching it. Check out this tutorial to learn more about Droplet User Data.

Prerequisites

Before you begin with this guide, you should have a separate, non-root user account set up on your server. You can learn how to do this by completing steps 1-4 in the initial server setup for Ubuntu 14.04.

Step 1: Install Apache

The Apache web server is currently the most popular web server in the world, which makes it a great default choice for hosting a website.

We can install Apache easily using Ubuntu's package manager, `apt`. A package manager allows us to install most software pain-free from a repository maintained by Ubuntu. You can learn more about how to use `apt` here.

For our purposes, we can get started by typing these commands:

```
sudo apt-get update
sudo apt-get install apache2
```

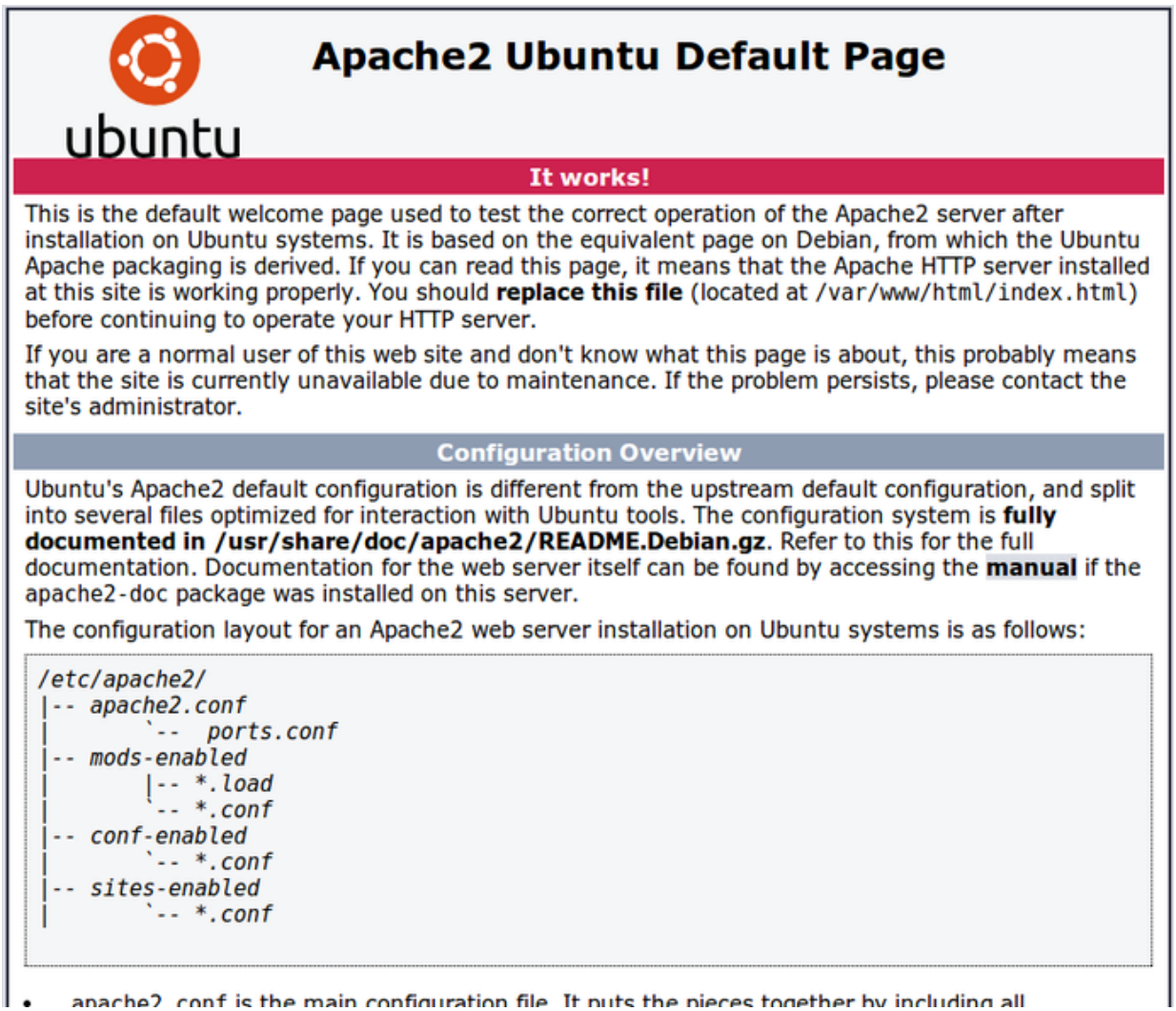
Since we are using a `sudo` command, these operations get executed with root privileges. It will ask you for your regular user's password to verify your intentions.

After

You c ublic IP ad addre

```
http://your_server_IP_address
```

You will see the default Ubuntu 14.04 Apache web page, which is there for informational and testing purposes. It should look something like this:



If you see this page, then your web server is now correctly installed.

How To Find your Server's Public IP Address

If you

Usua

From ur

addre


```
ip addr show eth0 | grep inet | awk '{ print $2; }' | sed 's/\/.*$/
```

This will give you one or two lines back. They are both correct addresses, but your computer may only be able to use one of them, so feel free to try each one.

An alternative method is to use an outside party to tell you how *it* sees your server. You can do this by asking a specific server what your IP address is:

```
curl http://icanhazip.com
```

Regardless of the method you use to get your IP address, you can type it into your web browser's address bar to get to your server.

Step 2: Install MySQL

Now that we have our web server up and running, it is time to install MySQL. MySQL is a database management system. Basically, it will organize and provide access to databases where our site can store information.

Again, we can use `apt` to acquire and install our software. This time, we'll also install some other "helper" packages that will assist us in getting our components to communicate with each other:

```
sudo apt-get install mysql-server php5-mysql
```

Note: In this case, you do not have to run `sudo apt-get update` prior to the command. This is because we recently ran it in the commands above to install Apache. The package index on our computer should already be up-to-date.

During the installation, your server will ask you to select and confirm a password for the MySQL "root" user. This is an administrative account in MySQL that has increased privileges. Think of it as being similar to the root a er).

Wher

envir

First, we need to tell MySQL to create its database directory structure where it will store its information. You can do this by typing:

```
sudo mysql_install_db
```

Afterwards, we want to run a simple security script that will remove some dangerous defaults and lock down access to our database system a little bit. Start the interactive script by running:

```
sudo mysql_secure_installation
```

You will be asked to enter the password you set for the MySQL root account. Next, it will ask you if you want to change that password. If you are happy with your current password, type "n" for "no" at the prompt.

For the rest of the questions, you should simply hit the "ENTER" key through each prompt to accept the default values. This will remove some sample users and databases, disable remote root logins, and load these new rules so that MySQL immediately respects the changes we have made.

At this point, your database system is now set up and we can move on.

Step 3: Install PHP

PHP is the component of our setup that will process code to display dynamic content. It can run scripts, connect to our MySQL databases to get information, and hand the processed content over to our web server to display.

We can once again leverage the `apt` system to install our components. We're going to include some helper packages as well:

```
sudo apt-get install php5 libapache2-mod-php5 php5-mcrypt
```

This s

In mo

Curre `ml`.

We w st.

To do this, type this command to open the `dir.conf` file in a text editor with root pri

```
sudo nano /etc/apache2/mods-enabled/dir.conf
```

It will look like this:

```
<IfModule mod_dir.c>
    DirectoryIndex index.html index.cgi index.pl index.php index.xhtml index.htm
</IfModule>
```

We want to move the PHP index file highlighted above to the first position after the `DirectoryIndex` specification, like this:

```
<IfModule mod_dir.c>
    DirectoryIndex index.php index.html index.cgi index.pl index.xhtml index.htm
</IfModule>
```

When you are finished, save and close the file by pressing "CTRL-X". You'll have to confirm the save by typing "Y" and then hit "ENTER" to confirm the file save location.

After this, we need to restart the Apache web server in order for our changes to be recognized. You can do this by typing this:

```
sudo service apache2 restart
```

Install PHP Modules

To enhance the functionality of PHP, we can optionally install some additional modules.

To se

```
ap
```


The r

```
php5-cgi - server-side, HTML-embedded scripting language (CGI bina
```

```
php5-cli - command-line interpreter for the php5 scripting language
php5-common - Common files for packages built from the php5 source
php5-curl - CURL module for php5
php5-dbg - Debug symbols for PHP5
php5-dev - Files for PHP5 module development
php5-gd - GD module for php5
. . .
```

To get more information about what each module does, you can either search the internet, or you can look at the long description in the package by typing:

```
apt-cache show package_name
```

There will be a lot of output, with one field called `Description-en` which will have a longer explanation of the functionality that the module provides.

For example, to find out what the `php5-cli` module does, we could type this:

```
apt-cache show php5-cli
```

Along with a large amount of other information, you'll find something that looks like this:

```
. . .
SHA256: 91cfdbda65df65c9a4a5bd3478d6e7d3e92c53efcddf3436bbe9bbe27eca409d
Description-en: command-line interpreter for the php5 scripting language
 This package provides the /usr/bin/php5 command interpreter, useful for
 testing PHP scripts from a shell or performing general shell scripting tasks.
 .
 The following extensions are built in: bcmath bz2 calendar Core ctype date
 d
 m
 s
 x
 .
 P
 o
 for web development and can be embedded into HTML.
Description-md5: f8450d3b28653dcf1a4615f3b1d4e347
```

```
Homepage: http://www.php.net/
. . .
```

If, after researching, you decide you would like to install a package, you can do so by using the `apt-get install` command like we have been doing for our other software.

If we decided that `php5-cli` is something that we need, we could type:

```
sudo apt-get install php5-cli
```

If you want to install more than one module, you can do that by listing each one, separated by a space, following the `apt-get install` command, like this:

```
sudo apt-get install package1 package2 ...
```

At this point, your LAMP stack is installed and configured. We should still test out our PHP though.

Step 4: Test PHP Processing on your Web Server

In order to test that our system is configured properly for PHP, we can create a very basic PHP script.

We will call this script `info.php`. In order for Apache to find the file and serve it correctly, it must be saved to a very specific directory, which is called the "web root".

In Ubuntu 14.04, this directory is located at `/var/www/html/`. We can create the file at that location by typing:

```
su
```


This

```
<?
phpinfo();
?>
```

When you are finished, save and close the file.

Now we can test whether our web server can correctly display content generated by a PHP script. To try this out, we just have to visit this page in our web browser. You'll need your server's public IP address again.

The address you want to visit will be:

```
http://your_server_IP_address/info.php
```

The page that you come to should look something like this:

PHP Version 5.5.9-1ubuntu4

System	Linux blah 3.13.0-24-generic #46-Ubuntu SMP Thu Apr 10 19:11:08 UTC 2014 x86_64
Build Date	Apr 9 2014 17:08:00
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php5/apache2
Loaded Configuration File	/etc/php5/apache2/php.ini
Scan this dir for additional .ini files	/etc/php5/apache2/conf.d
Additional .ini files parsed	/etc/php5/apache2/conf.d/05-opcache.ini, /etc/php5/apache2/conf.d/10-pdo.ini, /etc/php5/apache2/conf.d/20-json.ini, /etc/php5/apache2/conf.d/20-mysql.ini, /etc/php5/apache2/conf.d/20-mysqli.ini, /etc/php5/apache2/conf.d/20-pdo_mysql.ini, /etc/php5/apache2/conf.d/20-readline.ini
PHP API	20121113
Build	

This page basically gives you information about your server from the perspective of PHP. It is useful for

debugging and to ensure that your settings are being applied correctly.

If this was successful, then your PHP is working as expected.

You probably want to remove this file after this test because it could actually give information about your server to unauthorized users. To do this, you can type this:

```
sudo rm /var/www/html/info.php
```

You can always recreate this page if you need to access the information again later.

Conclusion

Now that you have a LAMP stack installed, you have many choices for what to do next. Basically, you've installed a platform that will allow you to install most kinds of websites and web software on your server.

Some popular options are:

- Install Wordpress the most popular content management system on the internet
- Set Up PHPMyAdmin to help manage your MySQL databases from web browser.
- Learn more about MySQL to manage your databases.
- Learn how to create an SSL Certificate to secure traffic to your web server.
- Learn how to use SFTP to transfer files to and from your server.

Note: We will be updating the links above to our 14.04 documentation as it is written.

By Justin Ellingwood

What are your favorite bash aliases?

Check out what our community came up with when we asked for their most useful bash aliases.

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ggk.deshapriya *April 22, 2014*

0 Thanks man. great tutorial

robertoramospereira *April 23, 2014*

0 fera ...infelismente não conseguir instalar :(

someuser *April 24, 2014*

6 You can do this in a lot less steps
1. sudo apt-get update
2. sudo apt-get install tasksel
3. sudo tasksel install lamp-server
Done!

ForkinSpace *April 3, 2015*

0 Thanks for sharing. Great shortcut to installing LAMP

vinnizworld *June 14, 2015*

1 There is no harm in installing step by step. It helps us understand what and why we are installing and this article have done it really well. Cheers to Justin :)

Cool Nice shortcut by the way. Helps in critical situations :)

robertoramospereira *April 25, 2014*

0 Deu tudo certo mas, no phpmyadmin estar aparecendo esta mensagem`` A extensão mcrypt não está presente. Por favor, verifique a configuração do PHP´´

0 Following the tutorial and getting the following issue:

ubuntu@host:~$ sudo mysql_install_db

FATAL ERROR: Could not find my-default.cnf

If you compiled from source, you need to run 'make install' to copy the software into the correct location ready for operation.

If you are using a binary release, you must either be at the top level of the extracted archive, or pass the --basedir option pointing to that location.

Any ideas on what basedir should be?

---

bouzeghoub *March 20, 2015*

0 mysql*install*db FATAL ERROR: Could not find ./bin/my*print*defaults

pkg_info | grep -i mysql
mysql-client-5.5.9 Multithreaded SQL database (client)
mysql-server-5.5.9 Multithreaded SQL database (server)

/usr/local/bin/mysqlinstalldb
FATAL ERROR: Could not find ./bin/my*print*defaults

If you compiled from source, you need to run 'make install' to copy the software into the correct location ready for operation.

If you are using a binary release, you must either be at the top level of the extracted archive, or pass the --basedir option pointing to that location.

Solution:

// look for binary path.

which mysqlinstalldb
/usr/local/bin/mysql*install*db

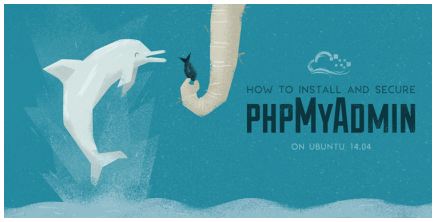
Posted by Jun Hsieh at 9:45 AM
Labels: FreeBSD, MySQL

asb MOD *April 25, 2014*

0 @robertoramospereira: You need to install the mcrypt extension. Run:

```
sudo apt-get install php5-mcrypt
sudo php5enmod mcrypt
```

See: https://www.digitalocean.com/community/articles/how-to-install-and-secure-phpmyadmin-on-ubuntu-14-04



How To Install and Secure phpMyAdmin on Ubuntu 14.04
by Justin Ellingwood

While many users require access to a database management system like MySQL, not all users feel comfortable interacting with the MySQL prompt on a daily basis. In this guide, we'll

rich636856 *April 25, 2014*

1 I should mention I installed mysql-server-5.6.

asb MOD *April 25, 2014*

0 @rich

I'd strongly recommend that you use the default mysql-server package, and not the mysql-server-5.6 one.

0 ıs
ht

asb MOD *April 25, 2014*

1 @rich: 5.6 is in Ubuntu's "universe" repository while 5.5 is in "main." That means that 5.5 will receive updates and security support for the life of Ubuntu 14.04. 5.6 is maintained by the community and only will receive updates on a best effort basis. I've been able to reproduce your problem using 5.6, and I believe it is a bug in the package.

rich636856 *April 25, 2014*

0 @andrewsb, thanks for that!

emailspade *April 29, 2014*

0 I am setting LAMP up on ubuntu 14.04 64bit and I go through all these steps, but I keep getting this error every time I restart the apache server

AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using mydomain.com. Set the 'ServerName' directive globally to suppress this message

This is my third attempt doing this on new droplets and I get the same results every time. I never had this issue on Ubuntu 12.04

asb MOD *April 29, 2014*

0 @emailspade:

That message is just a warning. To suppress it, edit "/etc/apache2/sites-enabled/000-default.conf" and set "ServerName" to your domain name.

emailspade *April 29, 2014*

1 Nevermind, think I may have solved it by adding "ServerName localhost" to the apache2.conf file

0

php5-mcrypt configurado para instalar manualmente.
Os seguintes pacotes foram instalados automaticamente e já não são necessári
fonts-dejavu-extra icedtea-netx-common java-common libgif4 ttf-dejavu-extra tzdata-java

Utilize 'apt-get autoremove' para os remover.
0 pacotes atualizados, 0 pacotes novos instalados, 0 a serem removidos e 12 não atualizados.

asb MOD *April 30, 2014*

0 Did you also run: (or via Google translate) Será que você também corre:

```
sudo php5enmod mcrypt
```

robertoramospereira *April 30, 2014*

0 Venho usando o ubuntu desda da versão 10.04 nunca tive problema com isso ,
resolvi usar a nova versão 14.04 ,mas estou tendo este probleminha

ac432183 *May 5, 2014*

0 Spin up an Ubuntu 14.04 droplet and install LAMP using Overcast:

overcast digitalocean create my-lamp-droplet
overcast run my-lamp-droplet install/core install/apache install/mysql install/php

Spin up a preconfigured LAMP Ubuntu 12.04 droplet using Overcast:

overcast digitalocean create my-lamp-droplet --image-slug lamp-ubuntu-12.04

http://andrewchilds.github.io/overcast/

0 Doesn't work - I get blank page or it shows PHP code instead of interpreting it - th[illegible]out of error log - http://pastebin.com/gtcAu1MT

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