

GNU/Linux Administration - Support #568

Install a Linux, Apache2, MySQL, PHP Web Server on Debian

02/21/2015 01:38 PM - Daniel Curtis

Status:	Closed	Start date:	02/21/2015
Priority:	Normal	Due date:	
Assignee:	Daniel Curtis	% Done:	100%
Category:	Web Server	Estimated time:	1.50 hour
Target version:	Debian	Spent time:	3.50 hours

Description

This is a simple guide for setting up a LAMP server on Debian 7 (wheezy); which is a Linux, Apache, MySQL, and PHP web server. When finished, web pages that are copied into the default /var/www directory will be served.

Prepare The Server

This guide is assumed that a Bare Debian install with only SSH Server access, a user that has sudo access.

- Obtain a root shell and upgrade the server:

```
sudo -s
apt-get update && apt-get upgrade
```

- Set the hostname in the hosts:

```
vi /etc/hosts
```

- And add/modify the following:

```
127.0.1.1    www.example.com www
```

- And also edit the hostname file:

```
vi /etc/hostname
```

- And add/modify the following:

```
www
```

- Reboot to apply the hostname settings:

```
reboot
```

Install Apache 2

- Install apache:

```
apt-get install apache2
```

Configure Apache 2

- Edit the default apache2 Vhost config:

```
vi /etc/apache2/sites-available/default
```

- And add/modify the following VirtualHost block:

```
<VirtualHost *:80>
    ServerName www.example.com

    DocumentRoot /var/www
    <Directory /var/www>
        Options -Indexes FollowSymLinks MultiViews
        AllowOverride All
        Order allow,deny
        allow from all
    </Directory>
</VirtualHost>
```

- **NOTE:** Make sure AllowOverride is set to ALL, or else the .htaccess file will not work.

- Restart apache2:

```
service apache2 restart
```

- Now navigate to <http://www.example.com> and the default **It Works!** should be displayed.

Install MySQL 5.5

- Install MySQL server and client:

```
apt-get install mysql-server mysql-client
```

- **NOTE:** During the setup a prompt will appear to set the **root** MySQL user password. Set a strong password and do not forget it.

Configure a new MySQL database

- Log into the MySQL console:

```
mysql -h localhost -u root -p
```

- Create the **webappuser** user with the **SuperSecretPassword** password and the **webappdb** database:

```
CREATE USER 'webappuser'@'localhost' IDENTIFIED BY 'SuperSecretPassword';
CREATE DATABASE IF NOT EXISTS `webappdb` CHARACTER SET utf8 COLLATE utf8_general_ci;
GRANT ALL PRIVILEGES ON `webappdb`.* TO 'webappuser'@'localhost';
```

```
flush privileges;
exit
```

Install PHP 5

- Install PHP 5 with the apache-php module and a few common PHP extensions:

```
apt-get install php5 libapache2-mod-php5 php5-cli php5-mysql php5-mcrypt php5-gd
```

- PHP has many extensions, run the following to get a list of all available extensions:

```
apt-cache search php5-
```

- Restart apache for the php module to take effect:

```
service apache2 restart
```

(Extra) Install PhpMyAdmin

- Install phpmyadmin:

```
apt-get install phpmyadmin
```

- **NOTE:** Make sure to enable **[X]apache2** when the prompt appears.
- Open <http://www.example.com/phpmyadmin> to access phpmyadmin
 - **NOTE:** The setup will not secure the phpmyadmin install, it is usually a good idea to deny access to the phpmyadmin interface to everyone except a host or specific network like a LAN.

(Extra) Install Apache 2 Passenger

- Install the apache2 passenger module:

```
apt-get install libapache2-mod-passenger
```

- Edit the apache2 passenger config file:

```
nano /etc/apache2/mods-available/passenger.conf
```

- And add/modify the apache user as the default passenger user:

```
<IfModule mod_passenger.c>
  PassengerRoot /usr
  PassengerRuby /usr/bin/ruby
  PassengerDefaultUser www-data
</IfModule>
```

- Edit the default apache2 Vhost config:

```
vi /etc/apache2/sites-available/default
```

- And add/modify the following VirtualHost block:

```
<VirtualHost *:80>
  ServerName www.example.com

  DocumentRoot /var/www/rubyapp/public
  <Directory /var/www/rubyapp/public>
    Options -Indexes FollowSymLinks -MultiViews
    AllowOverride All
    Order allow,deny
    allow from all
```

```
</Directory>
</VirtualHost>
```

- Edit the apache2 default ssl Vhost config file:

```
vi /etc/apache2/sites-available/default-ssl
```

- And Add the following:

```
<VirtualHost *:443>
  ServerName www.example.com

  DocumentRoot /var/www/rubyapp/public
  <Directory /var/www/rubyapp/public>
    Options FollowSymLinks
    AllowOverride All
    Require all granted
  </Directory>

  SSLEngine on

  SSLCertificateFile /etc/apache2/ssl/www.example.com.crt
  SSLCertificateKeyFile /etc/apache2/ssl/www.example.com.key

  <FilesMatch "\.(cgi|shtml|phtml|php)$">
    SSLOptions +StdEnvVars
  </FilesMatch>

  BrowserMatch "MSIE [2-6]" nokeepalive ssl-unclean-shutdown downgrade-1.0 force-response-1.0
  BrowserMatch "MSIE [17-9]" ssl-unclean-shutdown
</VirtualHost>
```

Securing Apache with SSL

- Install openssl:

```
apt-get install openssl
```

- Generate a strong SSL key and a CSR to send for signing by a CA:

```
mkdir /etc/apache2/ssl && cd /etc/apache2/ssl
openssl req -sha512 -out www.example.com.csr -new -newkey rsa:4096 -nodes -keyout www.example.com.key
```

- Make sure to securely copy the SSL certificate to www.example.com.crt
- Edit the apache2 default ssl Vhost config file:

```
vi /etc/apache2/sites-available/default-ssl
```

- And Add the following:

```
<VirtualHost *:443>
  ServerName www.example.com

  DocumentRoot /var/www
```

```
<Directory /var/www>
    Options FollowSymLinks
    AllowOverride All
    Require all granted
</Directory>

SSLEngine on

SSLCertificateFile /etc/apache2/ssl/www.example.com.crt
SSLCertificateKeyFile /etc/apache2/ssl/www.example.com.key

<FilesMatch "\.(cgi|shtml|phtml|php)$">
    SSLOptions +StdEnvVars
</FilesMatch>

BrowserMatch "MSIE [2-6]" nokeepalive ssl-unclean-shutdown downgrade-1.0 force-respons
e-1.0
BrowserMatch "MSIE [17-9]" ssl-unclean-shutdown
</VirtualHost>
```

- Change the SSL certificate and key ownership to the apache user:

```
chown www-data:www-data /etc/apache2/ssl/www.example.com.{crt,key}
chmod o-rwx /etc/apache2/ssl/www.example.com.key
```

- Enable the ssl apache modules:

```
a2enmod ssl
```

Forcing SSL on a Website

- Enable forced SSL connection by setting the two lines from earlier in the .htaccess file. Open the file for editing:

```
vi /var/www/.htaccess
```

- Look for the following two lines, and remove the # characters before them:

```
RewriteCond %{HTTPS} !=on
RewriteRule ^ https://%{HTTP_HOST}%{REQUEST_URI} [L,R=301]
```

- Restart apache2:

```
service apache2 restart
```

- Now the website will be accessible from <https://www.example.com>

Related issues:

Related to GNU/Linux Administration - Support #566: Install BeansBooks on a D...	Closed	02/09/2015
Copied to GNU/Linux Administration - Support #570: Install Redmine on a Debia...	Closed	02/21/2015
Copied to GNU/Linux Administration - Support #571: Install Magento on a Debia...	Closed	02/21/2015
Copied to GNU/Linux Administration - Support #572: Install ownCloud on a Debi...	Closed	02/21/2015
Copied to GNU/Linux Administration - Support #573: Install Piwik on a Debian ...	Closed	02/21/2015
Copied to GNU/Linux Administration - Support #575: Install WordPress on a Deb...	Closed	02/21/2015

History

#1 - 02/21/2015 01:39 PM - Daniel Curtis

- Target version set to Debian

#2 - 02/21/2015 01:39 PM - Daniel Curtis

- Related to Support #566: Install BeansBooks on a Debian LAMP Server added

#3 - 02/21/2015 01:50 PM - Daniel Curtis

- % Done changed from 0 to 50

- Estimated time set to 1.50 h

#5 - 02/21/2015 01:54 PM - Daniel Curtis

- Description updated

- % Done changed from 50 to 70

#6 - 02/21/2015 02:01 PM - Daniel Curtis

- Description updated

- Status changed from New to In Progress

#7 - 02/21/2015 02:03 PM - Daniel Curtis

- Description updated

#8 - 02/21/2015 02:46 PM - Daniel Curtis

- Copied to Support #570: Install Redmine on a Debian LAMP Server added

#9 - 02/21/2015 03:31 PM - Daniel Curtis

- Description updated

- Status changed from In Progress to Resolved

- % Done changed from 70 to 90

#10 - 02/22/2015 04:18 PM - Daniel Curtis

- Description updated

#11 - 02/22/2015 04:31 PM - Daniel Curtis

- Copied to Support #571: Install Magento on a Debian LAMP Server added

#12 - 02/22/2015 04:32 PM - Daniel Curtis

- Subject changed from Installing a Linux, Apache2, MySQL, PHP (LAMP) Server on Debian to Installing a Linux, Apache2, MySQL, PHP Debian LAMP Server

#13 - 02/23/2015 09:47 AM - Daniel Curtis

- Description updated

#14 - 02/23/2015 03:41 PM - Daniel Curtis

- Copied to Support #572: Install ownCloud on a Debian LAMP Server added

#15 - 02/24/2015 01:34 PM - Daniel Curtis

- Copied to Support #573: Install Piwik on a Debian LAMP Server added

#16 - 02/25/2015 10:55 AM - Daniel Curtis

- Copied to Support #575: Install WordPress on a Debian LAMP Server added

#17 - 03/18/2015 09:39 AM - Daniel Curtis

- Status changed from Resolved to Closed

- % Done changed from 90 to 100

#18 - 10/03/2015 09:34 AM - Daniel Curtis

- Subject changed from Installing a Linux, Apache2, MySQL, PHP Debian LAMP Server to Install a Linux, Apache2, MySQL, PHP Web Server on

Debian

- Description updated