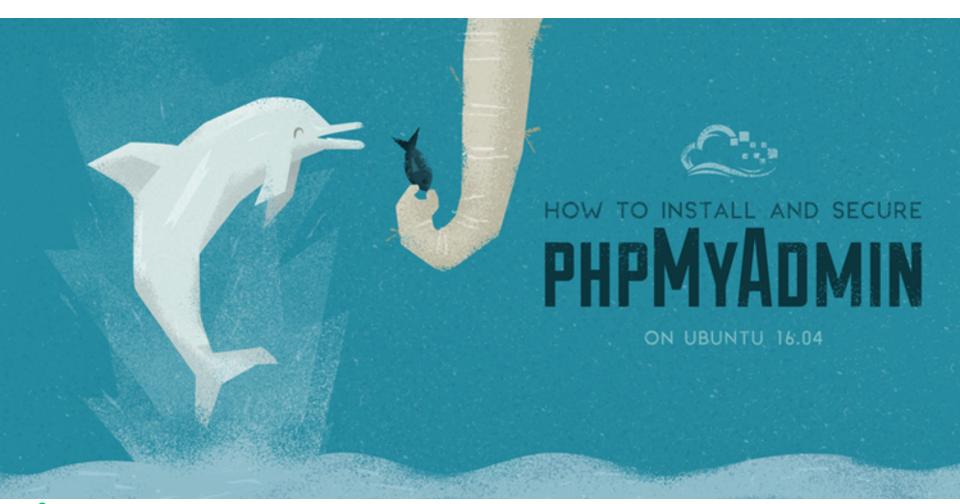




By: Brennen Bearnes







How To Install and Secure phpMyAdmin on Ubuntu 16.04



MYSQL

Not using **Ubuntu 16.04**? Choose a different version:



## Introduction

While many users need the functionality of a database management system like MySQL, they may not feel comfortable interacting with the system solely from the MySQL prompt.

**phpMyAdmin** was created so that users can interact with MySQL through a web interface. In this guide, we'll discuss how to install and secure phpMyAdmin so that you can safely use it to manage your databases from an Ubuntu 16.04 system.

## Prerequisites

Before you get started with this guide, you need to have some basic steps completed.

First, we'll assume that you are using a non-root user with sudo privileges, as described in steps 1-4 in the initial server setup of Ubuntu 16.04.

We're also going to assume that you've completed a LAMP (Linux, Apache, MySQL, and PHP) installation on your Ubuntu 16.04 server. If this is not completed yet, you can follow this guide on installing a LAMP stack on Ubuntu 16.04.

Finally, there are important security considerations when using software like phpMyAdmin, since it:

- Communicates directly with your MySQL installation
- Handles authentication using MySQL credentials
- Executes and returns results for arbitrary SQL queries

For these reasons, and because it is a widely-deployed PHP application which is frequently targeted for attack, you should never run phpMyAdmin on remote systems over a plain HTTP connection. If you do not have an existing domain configured with an SSL/TLS certificate, you can follow this guide on securing Apache with Let's Encrypt on Ubuntu 16.04.

Once you are finished with these steps, you're ready to get started with this guide.

# Step One — Install phpMyAdmin

To get started, we will install phpMyAdmin from the default Ubuntu repositories.

We can do this by updating our local package index and then using the apt packaging system to pull down the files and install them on our system:

```
$ sudo apt-get update
$ sudo apt-get install phpmyadmin php-mbstring php-gettext
```

This will ask you a few questions in order to configure your installation correctly.

Warning: When the first prompt appears, apache2 is highlighted, but **not** selected. If you do not hit **Space** to select Apache, the installer will *not* move the necessary files during installation. Hit **Space**, **Tab**, and then **Enter** to select Apache.

- For the server selection, choose apache2.
- Select **yes** when asked whether to use dbconfig-common to set up the database
- You will be prompted for your database administrator's password
- You will then be asked to choose and confirm a password for the phpMyAdmin application itself

The installation process actually adds the phpMyAdmin Apache configuration file into the /etc/apache2/conf-enabled/ directory, where it is automatically read.

The only thing we need to do is explicitly enable the PHP mcrypt and mbstring extensions, which we can do by typing:

```
$ sudo phpenmod mcrypt
$ sudo phpenmod mbstring
```

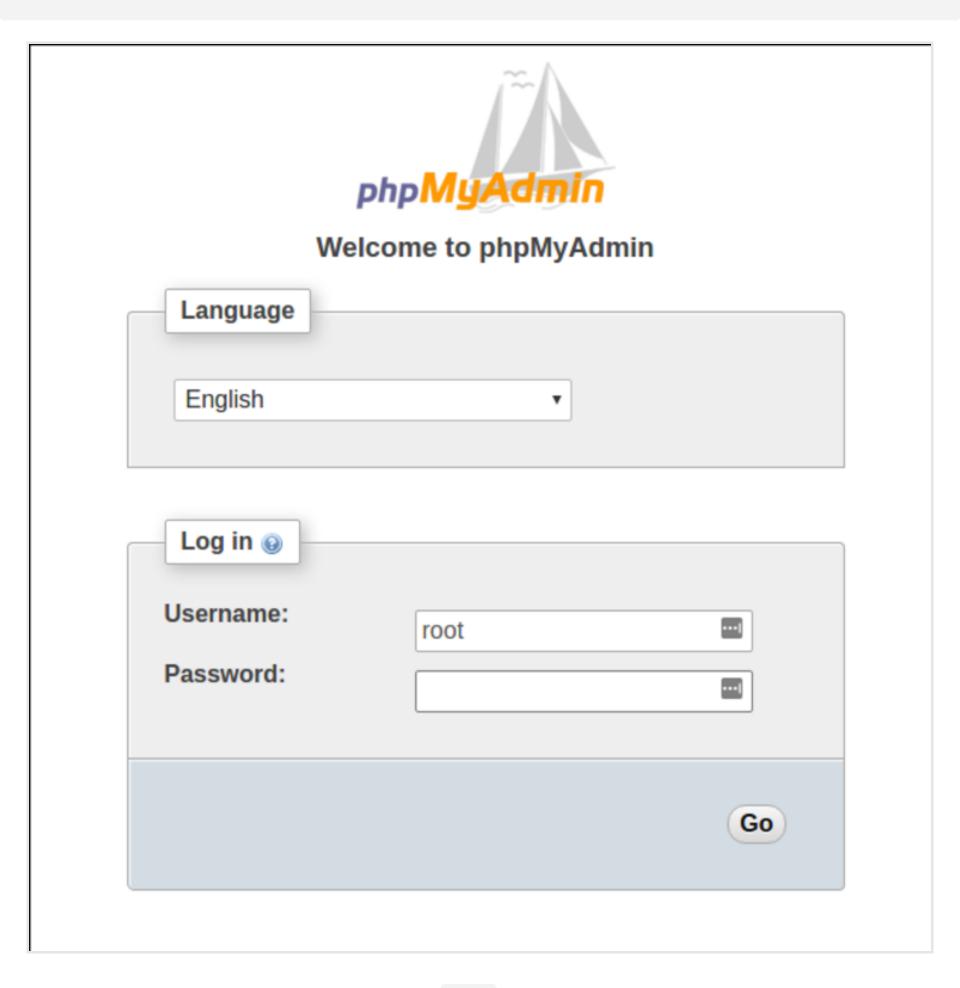
Afterwards, you'll need to restart Apache for your changes to be recognized:

```
$ sudo systemctl restart apache2
```

You can now access the web interface by visiting your server's domain name or public IP address

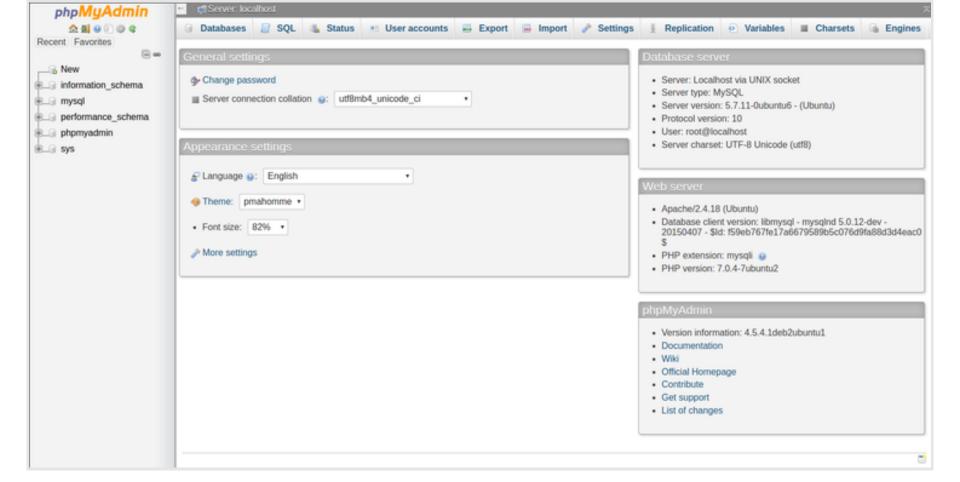
followed by /phpmyadmin:

https://domain\_name\_or\_IP/phpmyadmin



You can now log into the interface using the root username and the administrative password you set up during the MySQL installation.

When you log in, you'll see the user interface, which will look something like this:



# Step Two — Secure your phpMyAdmin Instance

We were able to get our phpMyAdmin interface up and running fairly easily. However, we are not done yet. Because of its ubiquity, phpMyAdmin is a popular target for attackers. We should take extra steps to prevent unauthorized access.

One of the easiest way of doing this is to place a gateway in front of the entire application. We can do this using Apache's built-in .htaccess authentication and authorization functionalities.

## Configure Apache to Allow .htaccess Overrides

First, we need to enable the use of .htaccess file overrides by editing our Apache configuration file.

We will edit the linked file that has been placed in our Apache configuration directory:

\$ sudo nano /etc/apache2/conf-available/phpmyadmin.conf

We need to add an AllowOverride All directive within the <Directory /usr/share/phpmyadmin> section of the configuration file, like this:

```
<Directory /usr/share/phpmyadmin>
   Options FollowSymLinks
   DirectoryIndex index.php
   AllowOverride All
   . . .
```

When you have added this line, save and close the file.

To implement the changes you made, restart Apache:

```
$ sudo systemctl restart apache2
```

### Create an .htaccess File

Now that we have enabled .htaccess use for our application, we need to create one to actually implement some security.

In order for this to be successful, the file must be created within the application directory. We can create the necessary file and open it in our text editor with root privileges by typing:

```
$ sudo nano /usr/share/phpmyadmin/.htaccess
```

Within this file, we need to enter the following information:

#### /usr/share/phpmyadmin/.htaccess

```
AuthType Basic
AuthName "Restricted Files"
AuthUserFile /etc/phpmyadmin/.htpasswd
Require valid-user
```

Let's go over what each of these lines mean:

• AuthType Basic: This line specifies the authentication type that we are implementing. This type will implement password authentication using a password file.

- AuthName: This sets the message for the authentication dialog box. You should keep this generic so that unauthorized users won't gain any information about what is being protected.
- AuthUserFile: This sets the location of the password file that will be used for authentication.

  This should be outside of the directories that are being served. We will create this file shortly.
- Require valid-user: This specifies that only authenticated users should be given access to this resource. This is what actually stops unauthorized users from entering.

When you are finished, save and close the file.

## Create the .htpasswd file for Authentication

The location that we selected for our password file was "/etc/phpmyadmin/.htpasswd". We can now create this file and pass it an initial user with the htpasswd utility:

```
$ sudo htpasswd -c /etc/phpmyadmin/.htpasswd username
```

You will be prompted to select and confirm a password for the user you are creating. Afterwards, the file is created with the hashed password that you entered.

If you want to enter an additional user, you need to do so without the -c flag, like this:

```
$ sudo htpasswd /etc/phpmyadmin/.htpasswd additionaluser
```

Now, when you access your phpMyAdmin subdirectory, you will be prompted for the additional account name and password that you just configured:

```
https://domain name or IP/phpmyadmin
```

The server http://107.170.75.175:80 requires a username and password. The server says: Restricted Files.	
User Name:	
Password:	
	<u>&amp; C</u> ancel Log In

After entering the Apache authentication, you'll be taken to the regular phpMyAdmin authentication page to enter your other credentials. This will add an additional layer of security since phpMyAdmin has suffered from vulnerabilities in the past.

## Conclusion

You should now have phpMyAdmin configured and ready to use on your Ubuntu 16.04 server. Using this interface, you can easily create databases, users, tables, etc., and perform the usual operations like deleting and modifying structures and data.

By: Brennen Bearnes

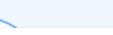
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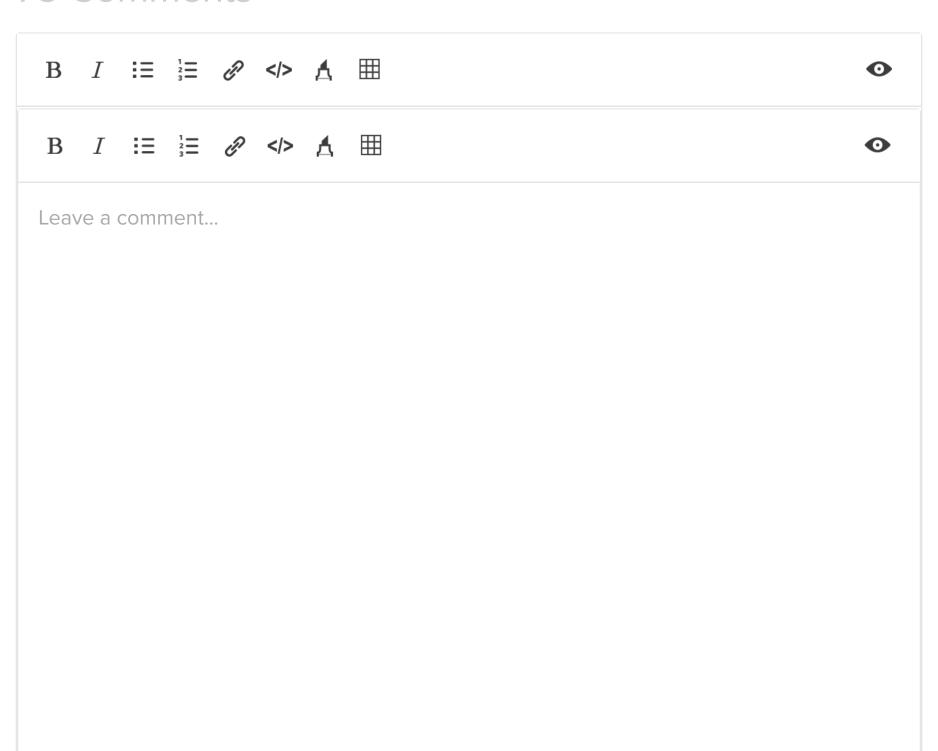
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Logged in as: agiansante00



### Comment

↑ iamkingsleyf April 25, 2016

<sub>o</sub> Hello;

Anyone for Nginx? also will it work with PHP7?

^ bpb April 25, 2016

Anyone for Nginx?

We have a guide for phpMyAdmin + Nginx on an Ubuntu 14.04 system. I won't make any promises about how soon, but it's on our list of things to port to 16.04.

also will it work with PHP7?

It should, yes. This guide uses PHP 7.



### How To Install and Secure phpMyAdmin with Nginx on an Ubuntu 14.04 Server

by Justin Ellingwood

Administering relational databases from the command line can be a daunting proposition for many people. A project called phpMyAdmin aims to alleviate this issue by providing an easy to use web interface for MySQL. In this guide, we'll discuss how to

#### Reply · Report

^ iamkingsleyf April 25, 2016

o alright...

thanks

Reply Report

1 Hello;

I was able to install it but i got this error

The mbstring extension is missing. Please check your PHP configuration.

#### Reply Report

^ jonasjancarik August 6, 2016

• For me, what helped was restarting *all* php services. You can find those starting with PHP by running service --status-all | grep php.

Then restart them one by one (there might be a better way) with sudo service php... restart.

You might also want to restart nginx: sudo service nginx restart.

Reply · Report

^ iamkingsleyf August 7, 2016

• Hey @jonasjancarik you use Ubuntu 16 too? how did you install the phpmyadmin?

Report

∴ jonasjancarik August 7, 2016

- @iamkingsleyf: I mostly followed the guide for Nginx and phpMyAdmin on Ubuntu 14.04. In short:
  - 1. Install phpmyadmin: sudo apt-get install phpmyadmin
  - 2. Create a symbolic link to your nginx web folder. The location depends on your setup identify the folder from which nginx serves web content, create a subdirectory for phpmyadmin and link it to the folder where phpmyadmin is installed, which should be /usr/share/phpmyadmin. In my case it looks like this: sudo ln -s /usr/share/phpmyadmin /home/jonasjancarik/public\_html/phpmyadmin
  - 3. **Enable mcrypt and mbstring** (this is a bit different from Ubuntu 14.04/PHP 5): sudo phpenmod mcrypt && sudo phpenmod mbstring

- 4. Restart PHP services: Check which PHP services are running: service
  --status-all | grep php Restart them one by one, e.g.: sudo
  service php7.0-fpm restart
- 5. Restart nginx: sudo service nginx restart
- 6. That should be all you should be able to access phpmyadmin via http://yourdomain.xy/phpmyadmin



How To Install and Secure phpMyAdmin with Nginx on an Ubuntu 14.04 S...

by Justin Ellingwood

Administering relational databases from the command line can be a daunting proposition for many people. A project called phpMyAdmin aims to alleviate this issue by providing an easy to use web interface for MySQL. In this guide,

#### Report

^ iamkingsleyf August 7, 2016

@jonasjancarik Thanks its working.

Report

^ isaacabrahamson August 3, 2017

@jonasjancarik, thanks, it still works! If you follow the default setup like I did, your second point will probably look like this: sudo ln -s
/usr/share/phpmyadmin /var/www/html/phpmyadmin. Why don't you

publish a rewritten guide for 16.04 since its been a long time and still not out yet?

Report

^ pulkitkumar190 February 12, 2017

• It's quite easy if you are on ubuntu 16.04 which comes with default php7.0 and you are working on php5.6 go to /etc/php/7.1/mods-available/ and copy mbstring.ini from there and paste it in following directory /etc/php/5.6/mods-available/ and paste there.

A simple script to do this is:

cp /etc/php/7.1/mods-available/mbstring.ini /etc/php/5.6/modsavailable/mbstring.ini

Run this command sudo phpenmod mcrypt to enable mcrypt
Run sudo phpenmod mbstring to enable mbstring
Restart apache server with sudo service apache2 restart

Refresh phpmyadmin page or open in new browser (or incognito mode) clearing cache and all.

Reply · Report

hbdev August 28, 2017

• I couldn't find a guide anywhere online for installing phpMyAdmin for Nginx on Ubuntu 16.04 so I wrote one myself.

http://devanswers.co/installing-phpmyadmin-nginx-ubuntu-16-04-17-04/

Hope this helps someone.

Reply · Report

^ juanesrios April 28, 2016

4 nano /etc/apache2/apache2.conf

Add the following to the bottom of the file:

phpMyAdmin Configuration Include /etc/phpmyadmin/apache.conf

Reply · Report

^ johndcarmack January 1, 2017

• Thanks. There seems to be a missing hash before the "phpMyAdmin Configuration" comment, but the include line got it up and working.

```
^ ruucmstudio June 20, 2017
    Yes, This is totally right.
     Including Digital Ocean's droplet and AWS Ubuntu(16.04),
     it should be added or https://domain name or IP/phpmyadmin goes to site's default
     'Not Found' page.
     Reply Report
   ^ ruucmstudio June 20, 2017

    Yes this comment is totally right.

     Including Digital Ocean's Droplet and AWS Ubuntu (16.04),
     it should be added or https://domain name or IP/phpmyadmin goes to site's default
     404 page.
     Reply · Report
   ^ zvoncha February 3, 2018
    Thanks. This one was missing in Step 1.
     Reply Report
^ alandjobs April 30, 2016
o The requested URL /phpmyadmin/ was not found on this server.
  Reply · Report
   ^ alandjobs April 30, 2016

    Then add the following line to the end of the file: Include /etc/phpmyadmin/apache.conf

     Then restart apache
     Reply Report
^ dyl4n May 23, 2016
 Would be great to see a tute on Nginx + php7 + phpMyAdmin soon!
  Reply Report

∧ SergeOvD May 26, 2016
```

Reply Report

"The installation process actually adds the phpMyAdmin Apache configuration file into the /etc/apache2/conf-enabled/ directory, where it is automatically read."

Nope, usually he does not.

U must copy:

sudo cp /etc/phpmyadmin/apache.conf /etc/apache2/conf-enabled/phpmyadmin.conf

Than open it:

sudo nano /etc/apache2/conf-enabled/phpmyadmin.conf

Add line after "DirectoryIndex index.php":

AllowOverride All

#### **Example:**

<Directory /usr/share/phpmyadmin>

Options FollowSymLinks

DirectoryIndex index.php

AllowOverride All

Reply · Report

^ redearmedia December 16, 2016

• It should, if you tick the box beside apache2 during installation. Unfortunately many people (myself included) have pressed continue thinking it was selected because it was *highlighted*. If you don't see an asterik\* beside apache2 then you haven't actually told the installer to configure apache.

Reply · Report

\_\_\_johndcarmack January 1, 2017

o I already had an asterisk in mine, and it still did not copy.

**YMMV** 

Reply · Report

^ abishot0857 November 7, 2017

Doesn't work even I do manually copy and edit as suggested. If you remove and reinstall however will do the trick.

sudo apt-get purge --auto-remove phpmyadmin php-mbstring php-gettext

Reply Report

^ Gagtech June 5, 2016

2 Hello,

Recently MySQL changed their code so that you could not leave a blank port when installing phpmyadmin so I keep getting an error when I try to install PHP my admin.

"An error occurred while installing the database:

mysql: [ERROR] mysql: Empty value for 'port' specified"

https://i.gyazo.com/ae194827faac9ff839e6c64b3c1fd4c8.png

Reply · Report

```
^ yoshisuper June 22, 2016
```

<sub>o</sub> Hi! I've followed the guide but i got an error while installing phpmyadmin. The error says: "Empty value for 'port' specified. " How can i fix it?

Reply · Report

```
^ danielmariluz August 16, 2016
```

o everythings fine, but

sudo phpenmod mcrypt sudo phpenmod mbstring

```
just give me
WARNING: Module mcrypt ini file doesn't exist under /etc/php/5.6/mods-
available
WARNING: Module mcrypt ini file doesn't exist under /etc/php/5.6/mods-
available
both cases, help me please!
using ubuntu 16.4
```

#### Reply · Report

thanks

```
∧ kikebravo August 17, 2016
♥ Hi,
```

I dont know what's happend... but I cant log in phpmyadmin. I tried with user and my pass, root and pass of phpmyadmin. Display this message: #1045 - Access denied for user 'root'@'localhost' (using password: YES)

Reply · Report

^ jkingaround September 16, 2016

3 Try logging in the with the user "phpmyadmin"

Reply · Report

^76imoveis November 13, 2016

hi there guys, i have tried that and it did work, but did not showed the wordpress table that was installed on it... should i need to login as root right? but as root it is giving the msg:
 #1045 - Access denied for user 'root'@'localhost' (using password: YES)

could somebody help me please? thanks!

Reply · Report

^ robinsouthchina February 22, 2017

• thank you very much! i had the same problem

Reply · Report

^ evigil17 August 20, 2016

Why am I getting php code instead of the gui? I'm using php 7.0 Thanks

Reply · Report

^ ymdahi August 27, 2016

For those of you who didn't select apache2 in the first step, you may want to re-install.

First uninstall:

```
apt-get remove phpmyadmin --purge
apt-get autoremove
```

Then start the installation process again.

I couldn't load phpmyadmin because I didn't select apache2 from the beginning. If there is a better way, please share.

Reply · Report

^ redearmedia December 16, 2016

There actually *is* a better way in that you don't need to uninstall phpmyadmin! Well, hopefully that's the case. For some people, an uninstall may be required. But this is what solved it for me

(took me back through the configuration screen where I was able to select apache2 after missing it the first time):

sudo dpkg-reconfigure phpmyadmin

Reply · Report

^Matttt August 3, 2017

 I'm going to try this and redearmedia's response too. I was disconnected from my server during installation and couldn't figure out how to get back to the installation prompt.

Reply · Report

^ cdayley August 27, 2016

Apache fails to restart after installing phpMyAdmin. Output of config file is 'Segmentation fault (core dumped). Any ideas? Thanks

Reply · Report

^ dawidurbanski October 27, 2016

• Hi. If anyone is facing this issue I do have fix.

It seems to be problem if the only installed php version is PHP 7. (No PHP 5 as addition).

cd /etc/apache2/mods-enabled

Edit php5.load in your favourite editor

sudo vim php5.load

Comment out the only line inside

#LoadModule php5\_module /usr/lib/apache2/modules/libphp5.so

Save and exit. Restart apache.

sudo service apache2 restart

Reply · Report

^ medkhelifi October 20, 2016

I used this tutorial for installing phpmyadmin; but didn't work after executing all instructions in step 01 I had this error message when trying to access phpmyadmin:

The requested URL /phpmyadmin was not found on this server.

After some research in the Internet I found the solution:

I had to add the following instruction in /etc/apache2/apache2.conf

Include /etc/phpmyadmin/apache.conf

then restart my apache2.

Reply · Report

^ novoselementos October 20, 2016

When I try to access my php admin <a href="www.mysite.com.br/phpmyadmin">www.mysite.com.br</a>, it keeps redirecting me to www.mysite.com.br

Do I need to change anything on DNS ??

Reply · Report

^ rafamds October 24, 2016

ο Hi,

I've tried to install phpmyadmin following this guide. But I rushed and didn't read the first warning in red color about hitting space to select Apache2. Now when I try to go to http://my.server.ip/phpmyadmin it trows a 404.

I tried doing a **sudo apt-get remove** and install it again to hit space this time, but that promp didn't appear again, and it still gives me a 404.

How can I correct this mistake?

Thanks

Reply Report

^ rafamds October 24, 2016

Nevermind. I saw a comment here explaining how... I always rush

Reply Report

^ redearmedia December 16, 2016

• For anyone that makes it this far down the list wondering about "skipping" apache2 (like I did), first try running:

sudo dpkg-reconfigure phpmyadmin

This may fix it without having to uninstall it as it takes you through the configuration again.

Reply · Report

^ nyannmn November 6, 2016

<sub>0</sub> Hello I can't create additional Authentication at phpmyadmin.

I am following this tutorial in creating phpmyadmin.

The last section is to create secure authentication.

I followed exactly. I have .htaccess file inside

/usr/share/phpmyadmin/.htaccess

I have .htpasswd file inside /etc/phpmyadmin/.htpasswd. When I look inside .htpasswd file, I saw username:password line inside the file. Those are credentials I have given.

I used the same user name as in the original credential to phpmyadmin.

But when I login to my phpmyadmin, that additional login window doesn't appear.

Why it doesn't appear?

Thanks

Reply · Report

- ^ burhanuddinshakir February 7, 2017
- Hi, I am having the same problem. Did you get it to work?

Reply Report

- ^ whotton June 22, 2017
- o I'm also having this exact same issue, did you manage to get it to work?

Reply · Report

- RenaissanceMan November 12, 2016
- o I have taken over running a website built on WordPress 4.6.1 which is running on Ubuntu 16.04 and using Apache2 webserver. It appears that phpMyAdmin was installed somewhere along the way, most likely when WordPress was installed on the server, but I haven't been able to access it. The fellow who owns the server is not overly computer literate, so I have been fairly much on my own.

Searching the entire hard drive reveals that the phpmyadmin files are all located in the same area of the directory structure as the WordPress files. I tried following the directions you give verbatim, but I am informed that all the particular phpmyadmin files are already installed. By enabling mcrypt and mbstring I was finally able to reach the login screen for phpMyAdmin and login successfully (YAY)!

However, as I proceeded to follow you direction to further secure access to the server's phpMyAdmin, I was unable to find the file phpmyadmin.conf where you indicated it ought to be found. Again, performing a search of the entire hard drive, I found two instances of that file. Comparing both of them, they are identical, but nowhere in them did I find a reference to a directory /usr/share/phpmyadmin. Now I'm really stumped and I hesitate to proceed with the directions any further because I am unable to execute this part of the instructions! Can someone please direct me on how to proceed to further secure access to phpMyAdmin on our server?

Reply · Report

^76imoveis November 13, 2016

hi there, may i get some help with this? i'm getting this error: #1045 - Access denied for user 'root'@'localhost' (using password: YES) when i try to login for the first time as showed in this tutorial Thank you!

Reply · Report

^ robinsouthchina February 22, 2017

o use this username instead of root: "phpmyadmin"

Reply · Report

↑ licensing663bce5b3b6ef13f5 December 11, 2016

This went well for me as written except for one thing. You forgot "apt-get install php-mcrypt".

Reply · Report

^ robinsouthchina February 22, 2017

• why do you need that?

Reply · Report

^ chrishager February 22, 2017

I'm not sure, honestly. But I followed the procedure to the letter and the received an error telling me I needed it, so I installed it.

Reply Report

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