How to Install phpMyAdmin with Apache (LAMP) on Ubuntu 20.04

📅 Last Updated: May 12, 2020   👤 Xiao Guoan (Admin)   💬 4 Comments   ☰ Ubuntu

This tutorial will be showing you how to install phpMyAdmin with Apache, MariaDB, PHP7.4 (LAMP stack) on Ubuntu 20.04 LTS. phpMyAdmin is a free and open-source web-based database management tool written in PHP. It provides a graphical web interface for users to manage MySQL or MariaDB database.

phpMyAdmin allows administrators to:

- browse through databases and tables;
- create, copy, rename, alter and drop databases;
- create, copy, rename, alter and drop tables;
- perform table maintenance;
- add, edit and drop fields;
- execute any SQL-statement, even multiple queries;
- create, alter and drop indexes;
- load text files into tables;

- create and read dumps of tables or databases;
- export data to SQL, CSV, XML, Word, Excel, PDF and LaTeX formats;
- administer multiple servers;
- manage MySQL users and privileges;
- check server settings and runtime information with configuration hints;
- check referential integrity in MyISAM tables;
- create complex queries using Query-by-example (QBE), automatically
- connecting required tables;
- create PDF graphics of database layout;
- search globally in a database or a subset of it;
- transform stored data into any format using a set of predefined functions, such as displaying BLOB-data as image or download-link;
- manage InnoDB tables and foreign keys;

Prerequisites

To follow this tutorial, you need a Ubuntu 20.04 OS running on your local computer or on a remote server.

If you are looking for a VPS (Virtual Private Server), then you can create an account at Vultr via my referral link to get $50 free credit (for new users only). And if you need to set up phpMyAdmin with a domain

name, I recommend buying domain names from [NameCheap](#) because the price is low and they give whois privacy protection for free.

It is assumed that you have already installed LAMP stack on Ubuntu 20.04. If not, please check out the following tutorial.

- [How to Install LAMP stack (Apache, MariaDB, PHP7.4) on Ubuntu 20.04 LTS](#)

With that out of the way, let's get started with installing phpMyAdmin.

# Step 1: Download and Install phpMyAdmin on Ubuntu 20.04

phpMyAdmin is included in Ubuntu 20.04 software repository. so we can easily install it with the command below.

```
sudo apt update
sudo apt install phpmyadmin
```

The above command will install all necessary dependencies including PHP7 extensions. During the installation, it will prompt you to select a web server to configure. Hit the space bar to select apache2. (An asterisk indicates the item is selected). Then hit Tab key and Enter to
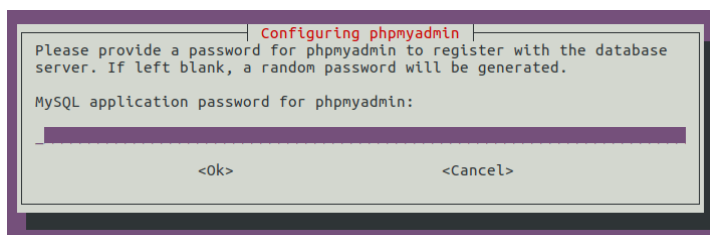
confirm your choice.
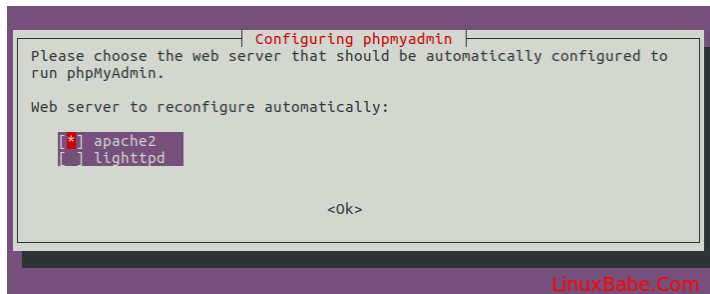
In the next screen, select `Yes` to configure a database for phpMyAdmin with `dbconfig-common`.
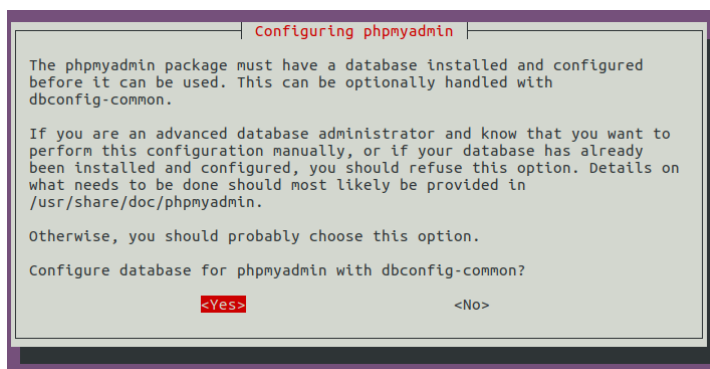
Then set a password for the `phpmyadmin` user in MariaDB/MySQL.

Once this step is done, a new database named `phpmyadmin` is created and the database user `phpmyadmin` has necessary privileges to manage this database. If you are curious as I am, you can log into MariaDB and check what privileges phpmyadmin user has been granted.

You can use the following command to log

into MariaDB server.

```
sudo mysql -u root
```

Then check the privileges of phpmyadmin user.

```
show grants for phpmyadmin@localh
ost;
```

Output:

As you can see, user phpmyadmin has all privileges on database phpmyadmin. Now you can exit by executing:

```
exit;
```

Step 2: Accessing phpMyAdmin from a Sub-directory

When installing phpMyAdmin, a configuration file is placed at /etc/apache2 /conf-enabled/phpmyadmin.conf, which allows us to access phpMyAdmin via sub-directory. If you have installed other web applications like WordPress on the same Ubuntu 20.04 server, then simply add /phpmyadmin after your domain name in the

browser address bar.

example.com/phpmyadmin
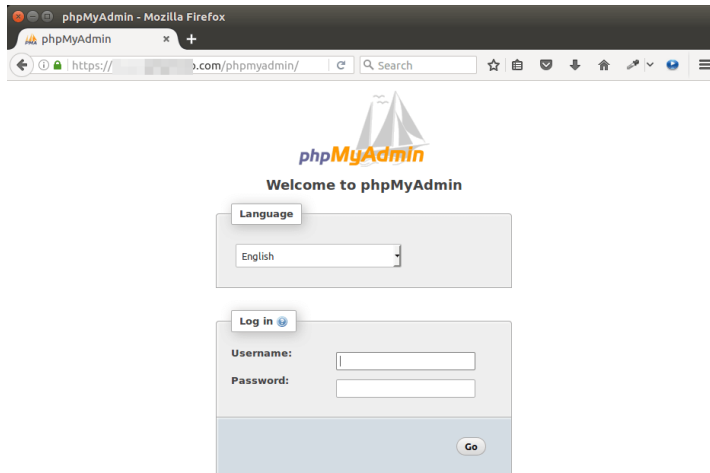
If phpMyAdmin is installed on your local Ubuntu computer, then you can access phpMyAdmin web interface by typing in the following text in the browser address bar.

localhost/phpmyadmin

If the connection is refused or failed to complete, there might be a firewall preventing HTTP requests. If you are using iptables firewall, then you need to run the following commands to open TCP port 80 and 443.

```
sudo iptables -I INPUT -p tcp --d
port 80 -j ACCEPT
sudo iptables -I INPUT -p tcp --d
port 443 -j ACCEPT
```

If you are using UFW firewall, then run this command to open TCP port 80 and 443.

```
sudo ufw allow 80,443/tcp
```

Now You can use MariaDB/MySQL username and password to log into phpMyAdmin. If you can't login as root, go to step 5 to troubleshoot this problem.

Step 3: Access phpMyAdmin From a Sub-domain

If your Ubuntu 20.04 server doesn't have other Apache virtual host, then you may want to use a sub-domain to access phpMyAdmin web interface. This way, you can enable HTTPS to encrypt the traffic.

First, we need to create an Apache virtual host for phpMyAdmin. The existing phpMyAdmin configuration snippet can be used as a template. Let's copy it to a new file.

```
sudo cp /etc/apache2/conf-enabled
/phpmyadmin.conf /etc/apache2/sit
es-available/phpmyadmin.conf
```

Then edit the new file with a command line text editor, such as Nano.

```
sudo nano /etc/apache2/sites-avai
lable/phpmyadmin.conf
```

This file lacks `<VirtualHost>` tags, so we need to add the following lines at the beginning of this file. Replace `pma.example.com` with your preferred sub-domain for phpMyAdmin. Don't forget to create DNS A record for this sub-domain.

```
<VirtualHost *:80>
    ServerName pma.example.com
    DocumentRoot /usr/share/phpmy
admin

    ErrorLog ${APACHE_LOG_DIR}/pm
a.error.log
    CustomLog ${APACHE_LOG_DIR}/p
ma.access.log combined
```

Add the following line at the end of this file to close the `<VirtualHost>` tag.

```
</VirtualHost>
```

Save and close the file. (To save a file in Nano text editor, press `Ctrl+O`, then press Enter to confirm. To exit, press `Ctrl+X`.) Then enable this virtual host.
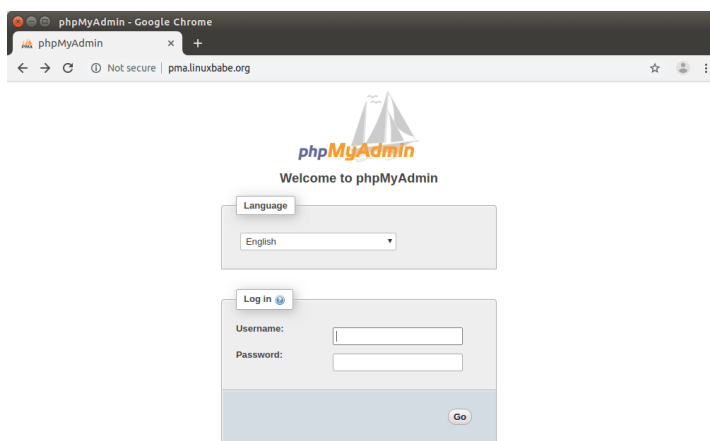
```
sudo a2ensite phpmyadmin.conf
```

Reload Apache web server for this change to take effect.

```
sudo systemctl reload apache2
```

Now you should be able to access phpMyAdmin web interface via

```
pma.example.com
```


Before entering user credentials in the login form, let's enable HTTPS.

Step 4: Enable HTTPS on phpMyAdmin with Apache

To secure the phpMyadmin web interface, we can install a free Let's Encrypt TLS certificate. Run the following command to install the Let's Encrypt client (certbot) from Ubuntu 20.04 software repository.

```
sudo apt install certbot python3-
```

```
certbot-apache
```

Python3-certbot-apache is the Apache
plugin for Certbot. Now run the following
command to obtain and install TLS
certificate.

```
sudo certbot --apache --agree-tos
--redirect --hsts --staple-ocsp
--must-staple -d pma.example.com
--email you@example.com
```

Where:

- **-apache:** Use the Apache
  authenticator and installer
- **-agree-tos**: Agree to Let's Encrypt
  terms of service
- **-redirect**: Enforce HTTPS by adding
  301 permanent redirect.
- **-hsts**: Add the Strict-Transport-
  Security header to every HTTP
  response.
- **-staple-ocsp**: Enables OCSP Stapling.
- **-must-staple**: Adds the OCSP Must
  Staple extension to the certificate.
- **-d** flag is followed by a list of domain
  names, separated by comma. You can
  add up to 100 domain names.
- **-email**: Email used for registration
  and recovery contact.

You will be asked if you want to receive
emails from EFF(Electronic Frontier
Foundation). After choosing Y or N, your

TLS certificate will be automatically obtained and configured for you, which is indicated by the message below.

Step 5: Troubleshoot phpMyAdmin Login Error

If you try to login to phpMyAdmin with MariaDB root account, you may see the following error.

```
#1698 - Access denied for user 'r
oot '@'localhost'
```

or

```
mysqli_real_connect(): (HY000/169
8): Access denied for user 'root
'@'localhost'
```

If you log in with user phpmyadmin, you won't see the above error. However, user phpmyadmin can only be used to manage the phpmyadmin database. The cause of the error is that by default MariaDB root user is authenticated via the unix_socket plugin, instead of using the mysql_native_password plugin. To solve

this problem, we can create another admin user and grant all privileges to the new admin user.

Log into MariaDB server from the command line.

```
sudo mysql -u root
```

Create an admin user with password authentication.

```
create user admin@localhost ident
ified by 'your-preferred-password
';
```
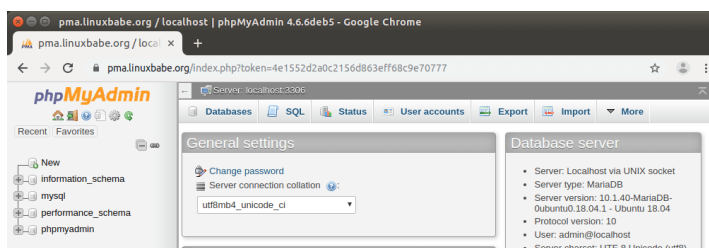
Grant all privileges on all databases.

```
grant all privileges on *.* to ad
min@localhost with grant option;
```
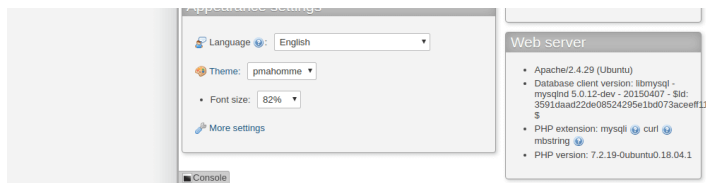
Flush privileges and exit;

```
flush privileges;

exit;
```

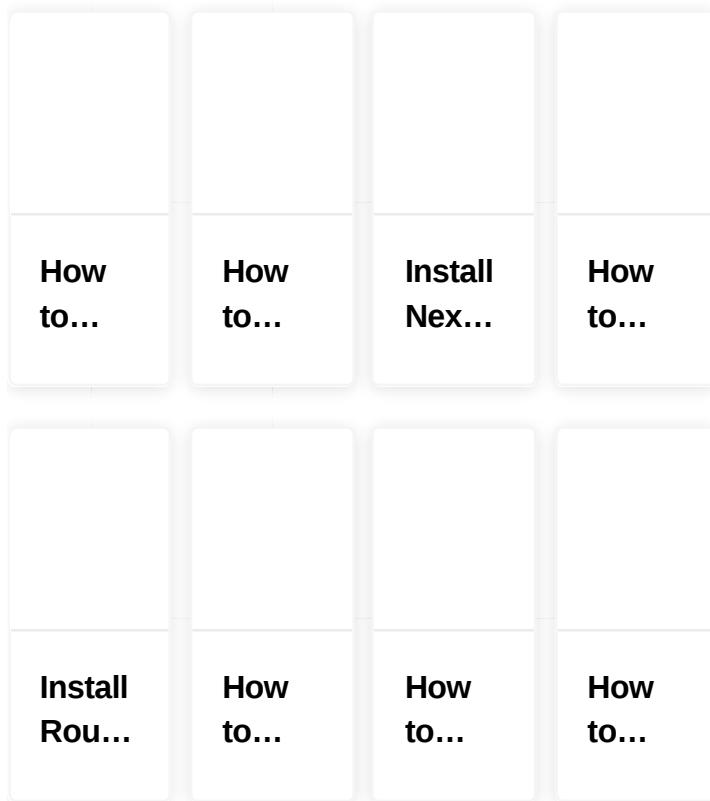Now you can log into phpMyAmin with the admin account and manage all databases.

Wrapping Up

I hope this tutorial helped you install phpMyAdmin with LAMP on Ubuntu 20.04. As always, if you found this post useful, then [subscribe to our free newsletter](#) to get more tips and tricks. Take care 🙂

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