



Raspberry Pi 4B LAMP/LNMP配置

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LAMP

1.安装Mariadb

在Raspberry Pi中，MySQL无法安装，会自动建议安装Mariadb，它和MySQL同源，具体介绍大家可自行搜索。

```
$ sudo apt-get install mariadb-server mariadb-client
```

2. 安装PHP和apache

phpmyadmin会自动把其他相关依赖（包括apapche2）都装好，安装过程要选择和apache协同，还可设置phpmyadmin用户密码，注意要先装前面的数据库，这样设置过程才不会出现数据库连接错误。

```
$ sudo apt-get install phpmyadmin
$ sudo apt-get install apache2 #实际不需要执行命令，phpmyadmin会附带把apache2装好
$ sudo apt-get install libapache2-mod-php #这个没安装apache可能解析不了php代码，导致页面上直接显示php代码
$ sudo ln -s /usr/share/phpmyadmin/ /var/www/html/ #在apache默认web目录下添加phpmyadmin的软链接，否则后者无法打开
```

3. 测试php和apache的协同

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搜索

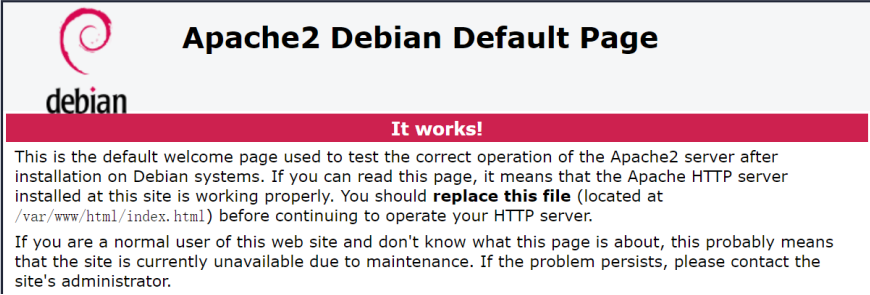
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谷歌搜索

我的标签

- 树莓派(6)
- 微服务(6)

- 测试apache



- 测试php页面

在默认的网站根目录/var/www/html/下新增php程序phpinfo.php，并添加内容：

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

/phpinfo.php

PHP Version 7.3.14-1~deb10u1

System	Linux raspberrypi 4.19.75-v7l+ #1270 SMP Tue Sep 24 18:51:41 BST 2019 armv7l
Build Date	Feb 16 2020 15:07:23
Server API	Apache 2.0 Handler

4. 修改MariaDB数据库配置

```
$ sudo mysql_secure_installation #设置root密码，是否删除匿名用户，是否只允许localhost连接，是否删除test库，最后更新权限。
```

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```
pi@raspberrypi:/var/www/html $ sudo mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

Set root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them. This is intended only for testing, and to make the installation
go a bit smoother. You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y

Remove anonymous users? [Y/n] y
... Success!

Normally, root should only be allowed to connect from 'localhost'. This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] n
... skipping.

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
pi@raspberrypi:/var/www/html $
pi@raspberrypi:/var/www/html $
pi@raspberrypi:/var/www/html $
```

之后在终端用root登录数据库

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

发现会报错 "ERROR 1698 (28000): Access denied for user 'root'@'localhost'", [树莓派4B安装PHP7.3 + Nginx + MySQL 教程](#)给出了解决办法

```
$ sudo mysql -u root
MariaDB [(none)]> use mysql;
MariaDB [mysql]> update user set plugin='mysql_native_password';
MariaDB [mysql]> flush privileges;
```

2019年4月(3)

2017年12月(1)

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最新评论

1. Re:Ubuntu环境的docker实践——SDN进阶操作

安装时那个报错Error setting resource limits. Mininet's performance may be affected.未解决是怎么装上的啊

--tang0616

之后重新使用root密码登录, 成功。

```
pi@raspberrypi:~$ mysql -u root -p
Enter password:
ERROR 1698 (28000): Access denied for user 'root'@'localhost'
pi@raspberrypi:~$ sudo mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 54
Server version: 10.3.22-MariaDB-0+deb10u1 Raspbian 10

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> use mysql;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [mysql]> update user set plugin='mysql_native_password';
Query OK, 2 rows affected (0.001 sec)
Rows matched: 2  Changed: 2  Warnings: 0

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.001 sec)

MariaDB [mysql]> Ctrl-C -- exit!
Aborted
pi@raspberrypi:~$ mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 55
Server version: 10.3.22-MariaDB-0+deb10u1 Raspbian 10

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> █
```

5.测试数据库连接

- 编写php连接数据库的脚本testdblink.php (我习惯用PDO连接, 测试账号root)

```
<?php

$servername = "localhost";
$dbName = "mysql";
$username = "root";
$password = "此处输入root密码";

try {
    $conn = new PDO("mysql:host=$servername;dbname=$dbName", $username,
$password);
    echo "连接成功";
}
catch(PDOException $e)
{
    echo $e->getMessage();
}
?>
```

保存为testdblink.php放在apache的/var/www/html默认目录下测试。

← → ↺ ⬆ ⓘ 不安全 | ██████████/testdblink.php

连接成功

由于安装了phpmyadmin, 就可以直接通过web管理数据库了。

登录地址: <http://服务器ip地址/phpmyadmin/index.php>

/phpmyadmin/index.php



欢迎使用 phpMyAdmin

语言 - Language

中文 - Chinese simplified ▼

登录

用户名:

密码:

执行

6. 修改apache2监听端口

apache2默认监听80端口，如果不希望这个端口被使用，可以尝试修改。

```
$ cd /etc/apache2/  
$ sudo nano ports.conf
```

```
GNU nano 3.2 ports.conf  
  
# If you just change the port or add more ports here, you will likely also  
# have to change the VirtualHost statement in  
# /etc/apache2/sites-enabled/000-default.conf  
  
#Listen 80  
Listen 8080  
  
<IfModule ssl_module>  
    Listen 443  
</IfModule>  
  
<IfModule mod_gnutls.c>  
    Listen 443  
</IfModule>  
  
# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

```
$ cd /etc/apache2/sites-enabled/  
$ sudo nano 000-default.conf
```

```
GNU nano 3.2 000-default.conf  
  
#<VirtualHost *:80>  
<VirtualHost *:8080>  
    # The ServerName directive sets the request scheme, ho  
    # the server uses to identify itself. This is used whe  
    # redirection URLs. In the context of virtual hosts, t  
    # specifies what hostname must appear in the request's  
    # match this virtual host. For the default virtual hos  
    # value is not decisive as it is used as a last resort  
    # However, you must set it for any further virtual hos  
    #ServerName www.example.com
```

```
$ sudo service apache2 restart
```



连接成功

LNMP

1. 安装Mariadb

同lamp

2. 安装和配置nginx

```
$ sudo apt-get install nginx
```

先前apache已将监听端口修改至8080，将80端口腾出

修改nginx配置文件

```
$ sudo nano /etc/nginx/sites-available/default
```

保持80端口监听

```
# Default server configuration
#
server {
    listen 80 default_server;
    listen [::]:80 default_server;
```

手工追加index.php。注意到“root /var/www/html;”，说明nginx的默认根目录是/var/www/html，Web页面文件要放在这个目录下

```
GNU nano 3.2 /etc/nginx/sites-available/default
```

```
# Don't use them in a production server!
#
# include snippets/snakeoil.conf;

root /var/www/html;

# Add index.php to the list if you are using PHP
index index.html index.htm index.nginx-debian.html index.php;
```

将

```
# pass PHP scripts to FastCGI server
#
#location ~ \.php$ {
#    include snippets/fastcgi-php.conf;
#
#    # With php-fpm (or other unix sockets):
#    fastcgi_pass unix:/run/php/php7.3-fpm.sock;
#    # With php-cgi (or other tcp sockets):
#    fastcgi_pass 127.0.0.1:9000;
#}
```

修改为如下：

```
# pass PHP scripts to FastCGI server
#
location ~ \.php$ {
    include snippets/fastcgi-php.conf;
#
#     # With php-fpm (or other unix sockets):
    fastcgi_pass unix:/run/php/php7.3-fpm.sock;
#     # With php-cgi (or other tcp sockets):
    fastcgi_pass 127.0.0.1:9000;
}
```

重启

```
$ sudo systemctl restart nginx
```

3. 安装php-fpm

在安装phpmyadmin时，有一步骤是选择配合的web服务器，由于要用nginx，所以此时都不选放空。php很多组件在安装phpmyadmin时组件都装了，nginx需要另外装php-fpm。

```
$ sudo apt-get install php-fpm
```

4. 测试

测试php，可以发现Server API和apache的php页面不同

/phpinfo.php

PHP Version 7.3.14-1~deb10u1

System	Linux raspberrypi 4.19.75-v7l+ #1270 SMP Tue Sep 24 18:51:41 BST 2019 armv7l
Build Date	Feb 16 2020 15:07:23
Server API	FPM/FastCGI
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.3/fpm
Loaded Configuration File	/etc/php/7.3/fpm/php.ini
Scan this dir for additional .ini files	/etc/php/7.3/fpm/conf.d

8080/phpinfo.php

PHP Version 7.3.14-1~deb10u1

System	Linux raspberrypi 4.19.75-v7l+ #1270 SMP Tue Sep 24 18:51:41 BST 2019 armv7l
Build Date	Feb 16 2020 15:07:23
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.3/apache2
Loaded Configuration File	/etc/php/7.3/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/7.3/apache2/conf.d
Additional .ini files parsed	/etc/php/7.3/apache2/conf.d/10-mysqlnd.ini, /etc/php/7.3/apache2/conf.d/10-opcache.ini,

数据库已经安装，直接测试也ok。

← → ↺ 🏠 ⓘ 不安全 |

/testdblink.php

连接成功

有个bug：nginx监听端口是80，apache2的监听端口已经改成了8080，但是直接在浏览器那里输入ip，仍旧是apache的页面，而输入“ip地址/phpinfo.php”时，却能定位到fpm，而不是apache。用命令/etc/init.d/apache2 stop 停止apache2服务，80端口正常8080端口无法打开，说明nginx正常，但是默认页面还是apache2的。
解决：我同时保留了apache和nginx，经查看/var/www/html/目录发现：目录中有index.html和另一个index.nginx-debian.html，前者是安装apache时默认添加的。直接在浏览器那里输入ip实际默认访问的是

ip/index.html。因此要测试nginx的基本页面，应该访问ip/index.nginx-debian.html。

/index.nginx-debian.html

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

分类: Linux

标签: 树莓派

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