← Docker 安装 MySQL Docker 安装 Tomcat →

Docker 安装 PHP

安装 PHP 镜像

方法一、docker pull php

查找Docker Hub上的php镜像

```
runoob@runoob:~/php-fpm$ docker search php
NAME                      DESCRIPTION                                     STARS     OFFICIAL   AUTOMATED
php                       While designed for web development, the PH...   1232      [OK]       
richarvey/nginx-php-fpm   Container running Nginx + PHP-FPM capable ...   207                  [OK]
phpmyadmin/phpmyadmin     A web interface for MySQL and MariaDB.          123                  [OK]
eboraas/apache-php        PHP5 on Apache (with SSL support), built o...   69                   [OK]
php-zendserver            Zend Server - the integrated PHP applicati...   69        [OK]       
million12/nginx-php       Nginx + PHP-FPM 5.5, 5.6, 7.0 (NG), CentOS...   67                   [OK]
webdevops/php-nginx       Nginx with PHP-FPM                              39                   [OK]
webdevops/php-apache      Apache with PHP-FPM (based on webdevops/php)    14                   [OK]
phpunit/phpunit           PHPUnit is a programmer-oriented testing f...   14                   [OK]
tetraweb/php              PHP 5.3, 5.4, 5.5, 5.6, 7.0 for CI and run...   12                   [OK]
webdevops/php             PHP (FPM and CLI) service container             10                   [OK]
...
```

这里我们拉取官方的镜像,标签为5.6-fpm

```
runoob@runoob:~/php-fpm$ docker pull php:5.6-fpm
```

等待下载完成后，我们就可以在本地镜像列表里查到REPOSITORY为php,标签为5.6-fpm的镜像。

```
runoob@runoob:~/php-fpm$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
php                 5.6-fpm             025041cd3aa5        6 days ago          456.3 MB
```

方法二、通过 Dockerfile 构建

创建Dockerfile

首先，创建目录php-fpm,用于存放后面的相关东西。

```
runoob@runoob:~$ mkdir -p ~/php-fpm/logs ~/php-fpm/conf
```

logs目录将映射为php-fpm容器的日志目录

conf目录里的配置文件将映射为php-fpm容器的配置文件

进入创建的php-fpm目录，创建Dockerfile

```
FROM debian:jessie

# persistent / runtime deps
ENV PHPIZE_DEPS \
        autoconf \
        file \
        g++ \
        gcc \
        libc-dev \
        make \
        pkg-config \
        re2c
RUN apt-get update && apt-get install -y \
        $PHPIZE_DEPS \
        ca-certificates \
        curl \
        libedit2 \
        libsqlite3-0 \
        libxml2 \
    --no-install-recommends && rm -r /var/lib/apt/lists/*

ENV PHP_INI_DIR /usr/local/etc/php
RUN mkdir -p $PHP_INI_DIR/conf.d

##<autogenerated>##
ENV PHP_EXTRA_CONFIGURE_ARGS --enable-fpm --with-fpm-user=www-data --with-fpm-group=www-data
##</autogenerated>##

ENV GPG_KEYS 0BD78B5F97500D450838F95DFE857D9A90D90EC1 6E4F6AB321FDC07F2C332E3AC2BF0BC433CFC8B3

ENV PHP_VERSION 5.6.22
ENV PHP_FILENAME php-5.6.22.tar.xz
ENV PHP_SHA256 c96980d7de1d66c821a4ee5809df0076f925b2fe0b8c362d234d92f2f0a178e2

RUN set -xe \
    && buildDeps=" \
        $PHP_EXTRA_BUILD_DEPS \
        libcurl4-openssl-dev \
        libedit-dev \
        libsqlite3-dev \
        libssl-dev \
        libxml2-dev \
        xz-utils \
    " \
    && apt-get update && apt-get install -y $buildDeps --no-install-recommends && rm -rf /var/lib/apt/li
sts/* \
    && curl -fSL "http://php.net/get/$PHP_FILENAME/from/this/mirror" -o "$PHP_FILENAME" \
    && echo "$PHP_SHA256 *$PHP_FILENAME" | sha256sum -c - \
    && curl -fSL "http://php.net/get/$PHP_FILENAME.asc/from/this/mirror" -o "$PHP_FILENAME.asc" \
    && export GNUPGHOME="$(mktemp -d)" \
    && for key in $GPG_KEYS; do \
        gpg --keyserver ha.pool.sks-keyservers.net --recv-keys "$key"; \
    done \
    && gpg --batch --verify "$PHP_FILENAME.asc" "$PHP_FILENAME" \
    && rm -r "$GNUPGHOME" "$PHP_FILENAME.asc" \
    && mkdir -p /usr/src/php \
    && tar -xf "$PHP_FILENAME" -C /usr/src/php --strip-components=1 \
    && rm "$PHP_FILENAME" \
    && cd /usr/src/php \
    && ./configure \
        --with-config-file-path="$PHP_INI_DIR" \
        --with-config-file-scan-dir="$PHP_INI_DIR/conf.d" \
        $PHP_EXTRA_CONFIGURE_ARGS \
        --disable-cgi \
# --enable-mysqlnd is included here because it's harder to compile after the fact than extensions are (since it's a plugin for several extensions, not an extension in itself)
        --enable-mysqlnd \
# --enable-mbstring is included here because otherwise there's no way to get pecl to use it properly (see https://github.com/docker-library/php/issues/195)
        --enable-mbstring \
        --with-curl \
        --with-libedit \
        --with-openssl \
        --with-zlib \
    && make -j"$(nproc)" \
    && make install \
    && { find /usr/local/bin /usr/local/sbin -type f -executable -exec strip --strip-all '{}' + || true; } \
    && make clean \
    && apt-get purge -y --auto-remove -o APT::AutoRemove::RecommendsImportant=false -o APT::AutoRemove::SuggestsImportant=false $buildDeps

COPY docker-php-ext-* /usr/local/bin/

##<autogenerated>##
WORKDIR /var/www/html

RUN set -ex \
    && cd /usr/local/etc \
    && if [ -d php-fpm.d ]; then \
        # for some reason, upstream's php-fpm.conf.default has "include=NONE/etc/php-fpm.d/*.conf"
        sed 's!=NONE/!=!g' php-fpm.conf.default | tee php-fpm.conf > /dev/null; \
        cp php-fpm.d/www.conf.default php-fpm.d/www.conf; \
    else \
        # PHP 5.x don't use "include=" by default, so we'll create our own simple config that mimics PHP
```

```
 7+ for consistency
        mkdir php-fpm.d; \
        cp php-fpm.conf.default php-fpm.d/www.conf; \
        { \
            echo '[global]'; \
            echo 'include=etc/php-fpm.d/*.conf'; \
        } | tee php-fpm.conf; \
    fi \
    && { \
        echo '[global]'; \
        echo 'error_log = /proc/self/fd/2'; \
        echo; \
        echo '[www]'; \
        echo '; if we send this to /proc/self/fd/1, it never appears'; \
        echo 'access.log = /proc/self/fd/2'; \
        echo; \
        echo 'clear_env = no'; \
        echo; \
        echo '; Ensure worker stdout and stderr are sent to the main error log.'; \
        echo 'catch_workers_output = yes'; \
    } | tee php-fpm.d/docker.conf \
    && { \
        echo '[global]'; \
        echo 'daemonize = no'; \
        echo; \
        echo '[www]'; \
        echo 'listen = [::]:9000'; \
    } | tee php-fpm.d/zz-docker.conf

EXPOSE 9000
CMD ["php-fpm"]
```

通过Dockerfile创建一个镜像，替换成你自己的名字

```
runoob@runoob:~/php-fpm$ docker build -t php:5.6-fpm .
```

创建完成后，我们可以在本地的镜像列表里查找到刚刚创建的镜像

```
runoob@runoob:~/php-fpm$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
php                 5.6-fpm             025041cd3aa5        6 days ago          456.3 MB
```

使用php-fpm镜像

运行容器

```
runoob@runoob:~/php-fpm$ docker run -p 9000:9000 --name  myphp-fpm -v ~/nginx/www:/www -v $PWD/conf:/us
r/local/etc/php -v $PWD/logs:/phplogs   -d php:5.6-fpm
00c5aa4c2f93ec3486936f45b5f2b450187a9d09acb18f5ac9aa7a5f405dbedf
runoob@runoob:~/php-fpm$
```

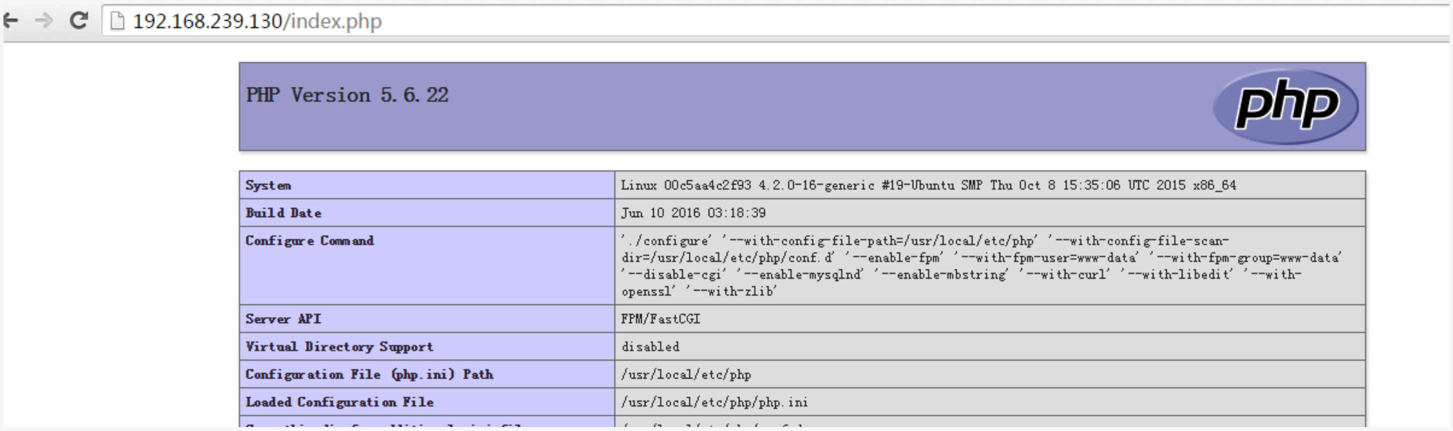
命令说明:

- -p 9000:9000 :将容器的9000端口映射到主机的9000端口
- --name myphp-fpm :将容器命名为myphp-fpm
- -v ~/nginx/www:/www :将主机中项目的目录www挂载到容器的/www
- -v $PWD/conf:/usr/local/etc/php ：将主机中当前目录下的conf目录挂载到容器的/usr/local/etc/php
- -v $PWD/logs:/phplogs ：将主机中当前目录下的logs目录挂载到容器的/phplogs

查看容器启动情况

```
runoob@runoob:~/php-fpm$ docker ps
CONTAINER ID    IMAGE         COMMAND      ...   PORTS                    NAMES
00c5aa4c2f93    php:5.6-fpm   "php-fpm"    ...   0.0.0.0:9000->9000/tcp   myphp-fpm
```

通过浏览器访问phpinfo()



PHP Version 5.6.22

System	Linux 00c5aa4c2f93 4.2.0-16-generic #19-Ubuntu SMP Thu Oct 8 15:35:06 UTC 2015 x86_64
Build Date	Jun 10 2016 03:18:39
Configure Command	'./configure' '--with-config-file-path=/usr/local/etc/php' '--with-config-file-scan-dir=/usr/local/etc/php/conf.d' '--enable-fpm' '--with-fpm-user=www-data' '--with-fpm-group=www-data' '--disable-cgi' '--enable-mysqlnd' '--enable-mbstring' '--with-curl' '--with-libedit' '--with-openssl' '--with-zlib'
Server API	FPM/FastCGI
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/usr/local/etc/php
Loaded Configuration File	/usr/local/etc/php/php.ini

PS:此处是通过nginx+php实现web服务，nginx配置文件的fastcgi_pass应该配置为myphp-fpm容器的IP。

```
fastcgi_pass  172.17.0.4:9000;
```

容器IP的查方法

```
docker inspect 容器ID或容器名 |grep '"IPAddress"'
```

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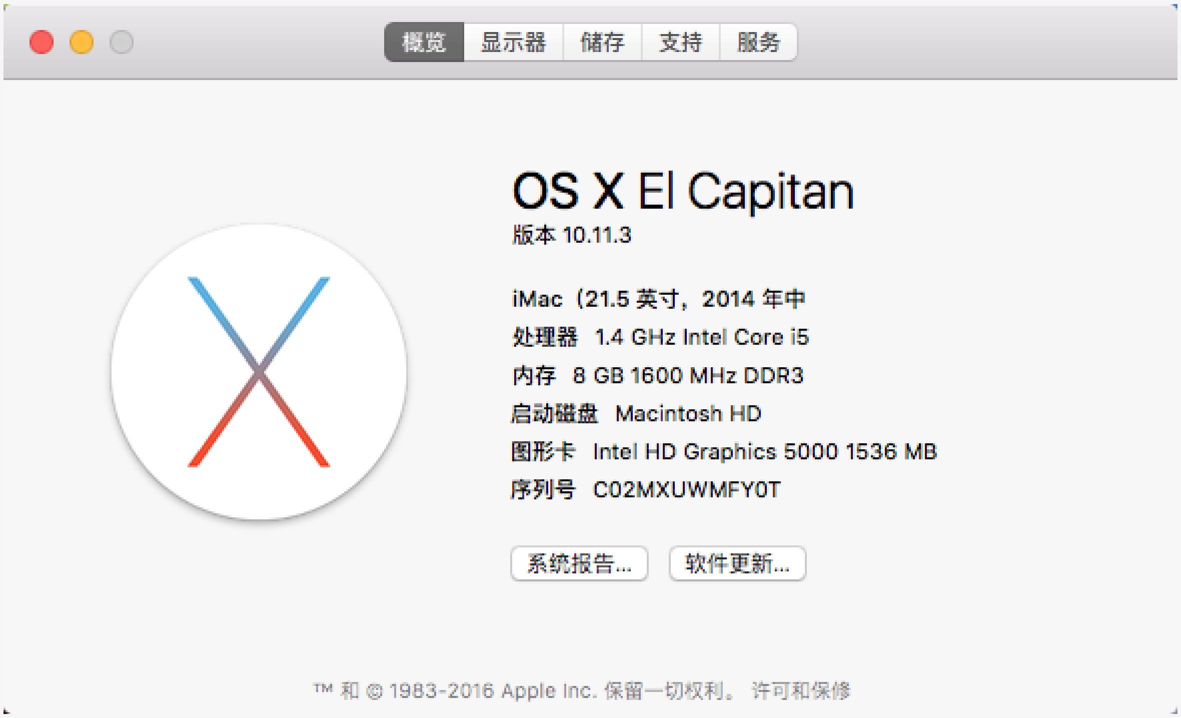
1 篇笔记

写笔记

Docker 配置 nginx、php-fpm、mysql

运行环境



OS X El Capitan

版本 10.11.3

iMac（21.5 英寸，2014 年中

处理器 1.4 GHz Intel Core i5

内存 8 GB 1600 MHz DDR3

启动磁盘 Macintosh HD

图形卡 Intel HD Graphics 5000 1536 MB

序列号 C02MXUWMFY0T

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创建目录

```
mkdir -p /Users/sui/docker/nginx/conf.d && mkdir /Users/sui/www &&  cd /Users/sui/docker/nginx/conf.d && sudo touch default.conf
```

启动 php-fpm

解释执行 php 需要 php-fpm，先让它运行起来：

```
docker run --name sui-php -d \
    -v /Users/sui/www:/var/www/html:ro \
    php:7.1-fpm
```

`--name sui-php` 是容器的名字。

`/Users/sui/www` 是本地 php 文件的存储目录，/var/www/html 是容器内 php 文件的存储目录，ro 表示只读。

编辑 nginx 配置文件

配置文件位置：/Users/sui/docker/nginx/conf.d/default.conf。

```
server {
    listen       80;
    server_name  localhost;

    location / {
        root   /usr/share/nginx/html;
        index  index.html index.htm;
    }

    error_page   500 502 503 504  /50x.html;
    location = /50x.html {
        root   /usr/share/nginx/html;
    }

    location ~ \.php$ {
        fastcgi_pass   php:9000;
        fastcgi_index  index.php;
        fastcgi_param  SCRIPT_FILENAME  /var/www/html/$fastcgi_script_name;
        include        fastcgi_params;
    }
}
```

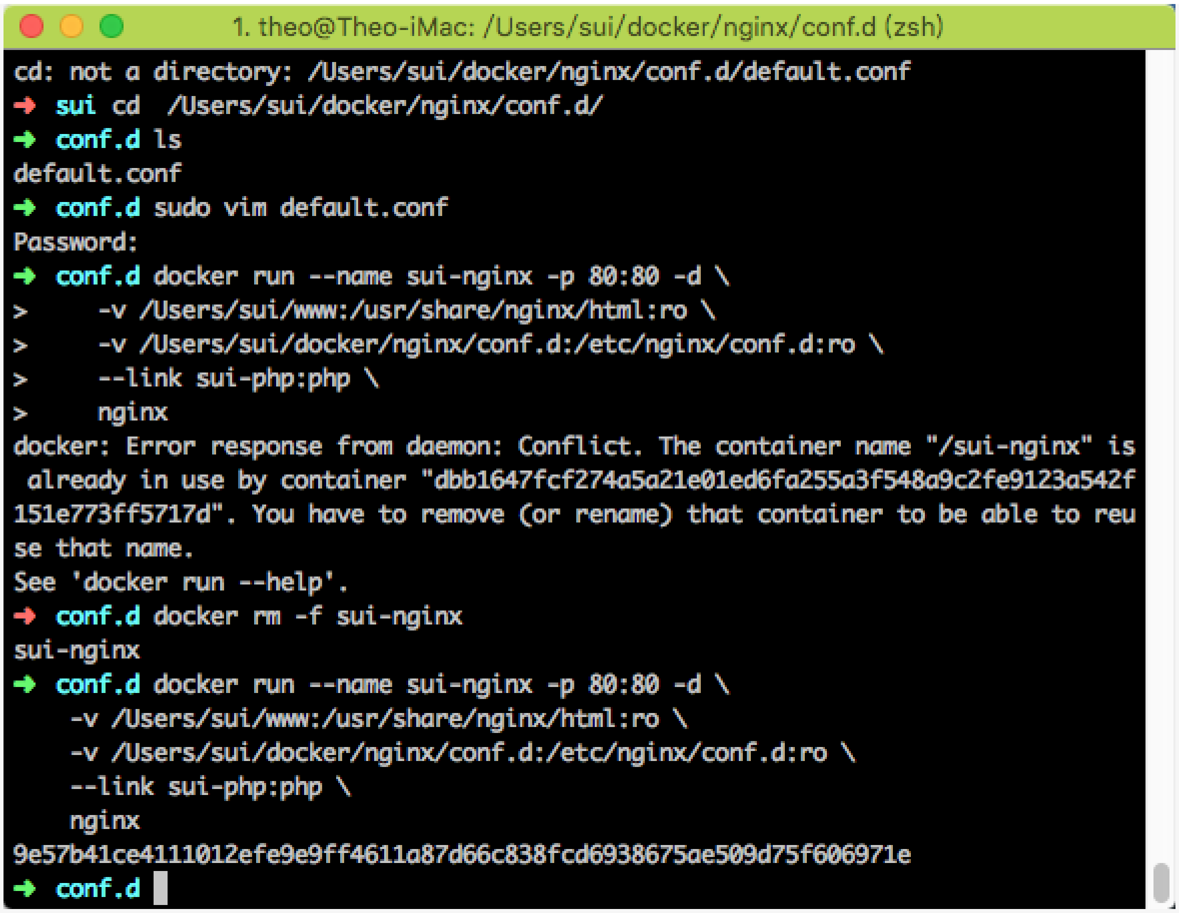
说明：

- php:9000 表示 php-fpm 服务的访问路径，下文还会提及。
- /var/www/html 是 ***sui-php*** 中 php 文件的存储路径，经 docker 映射，变成本地路径 /Users/sui/www（可以再看一眼 php-fpm 启动命令

启动 nginx:

```
docker run --name sui-nginx -p 80:80 -d \
    -v /Users/sui/www:/usr/share/nginx/html:ro \
    -v /Users/sui/docker/nginx/conf.d:/etc/nginx/conf.d:ro \
    --link sui-php:php \
    nginx
```

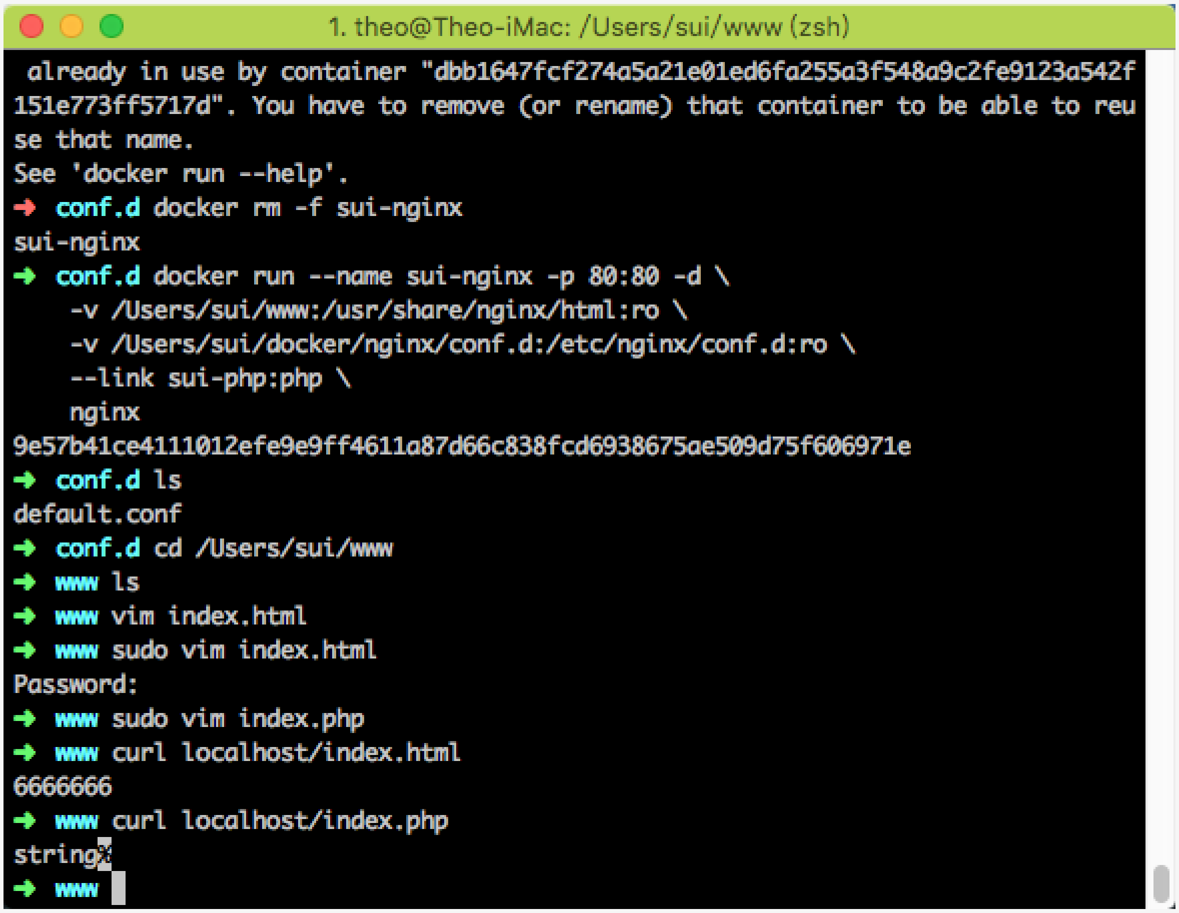
- -p 80:80 用于添加端口映射，把 ***sui-nginx*** 中的 80 端口暴露出来。
- /Users/sui/www 是本地 html 文件的存储目录，/usr/share/nginx/html 是容器内 html 文件的存储目录。
- /Users/sui/docker/nginx/conf.d 是本地 nginx 配置文件的存储目录，/etc/nginx/conf.d 是容器内 nginx 配置文件的存储目录。
- --link sui-php:php 把 ***sui-php*** 的网络并入 ***sui-nginx***，并通过修改 ***sui-nginx*** 的 /etc/hosts，把域名 ***php*** 映射成 127.0.0.1，让 nginx 通过 php:9000 访问 php-fpm。



```
cd: not a directory: /Users/sui/docker/nginx/conf.d/default.conf
➜ sui cd  /Users/sui/docker/nginx/conf.d/
➜ conf.d ls
default.conf
➜ conf.d sudo vim default.conf
Password:
➜ conf.d docker run --name sui-nginx -p 80:80 -d \
>     -v /Users/sui/www:/usr/share/nginx/html:ro \
>     -v /Users/sui/docker/nginx/conf.d:/etc/nginx/conf.d:ro \
>     --link sui-php:php \
>     nginx
docker: Error response from daemon: Conflict. The container name "/sui-nginx" is
 already in use by container "dbb1647fcf274a5a21e01ed6fa255a3f548a9c2fe9123a542f
151e773ff5717d". You have to remove (or rename) that container to be able to reu
se that name.
See 'docker run --help'.
➜ conf.d docker rm -f sui-nginx
sui-nginx
➜ conf.d docker run --name sui-nginx -p 80:80 -d \
    -v /Users/sui/www:/usr/share/nginx/html:ro \
    -v /Users/sui/docker/nginx/conf.d:/etc/nginx/conf.d:ro \
    --link sui-php:php \
    nginx
9e57b41ce4111012efe9e9ff4611a87d66c838fcd6938675ae509d75f606971e
➜ conf.d
```

测试结果

在 /Users/sui/www 下放两个文件：index.html index.php



```
 already in use by container "dbb1647fcf274a5a21e01ed6fa255a3f548a9c2fe9123a542f
151e773ff5717d". You have to remove (or rename) that container to be able to reu
se that name.
See 'docker run --help'.
➜ conf.d docker rm -f sui-nginx
sui-nginx
➜ conf.d docker run --name sui-nginx -p 80:80 -d \
    -v /Users/sui/www:/usr/share/nginx/html:ro \
    -v /Users/sui/docker/nginx/conf.d:/etc/nginx/conf.d:ro \
    --link sui-php:php \
    nginx
9e57b41ce4111012efe9e9ff4611a87d66c838fcd6938675ae509d75f606971e
➜ conf.d ls
default.conf
➜ conf.d cd /Users/sui/www
➜ www ls
➜ www vim index.html
➜ www sudo vim index.html
Password:
➜ www sudo vim index.php
➜ www curl localhost/index.html
6666666
➜ www curl localhost/index.php
string%
➜ www
```

mysql 和 phpmyadmin

mysql 服务器

```
sudo mkdir -p /Users/sui/docker/mysql/data /Users/sui/docker/mysql/logs /Users/sui/docker
/mysql/conf
```

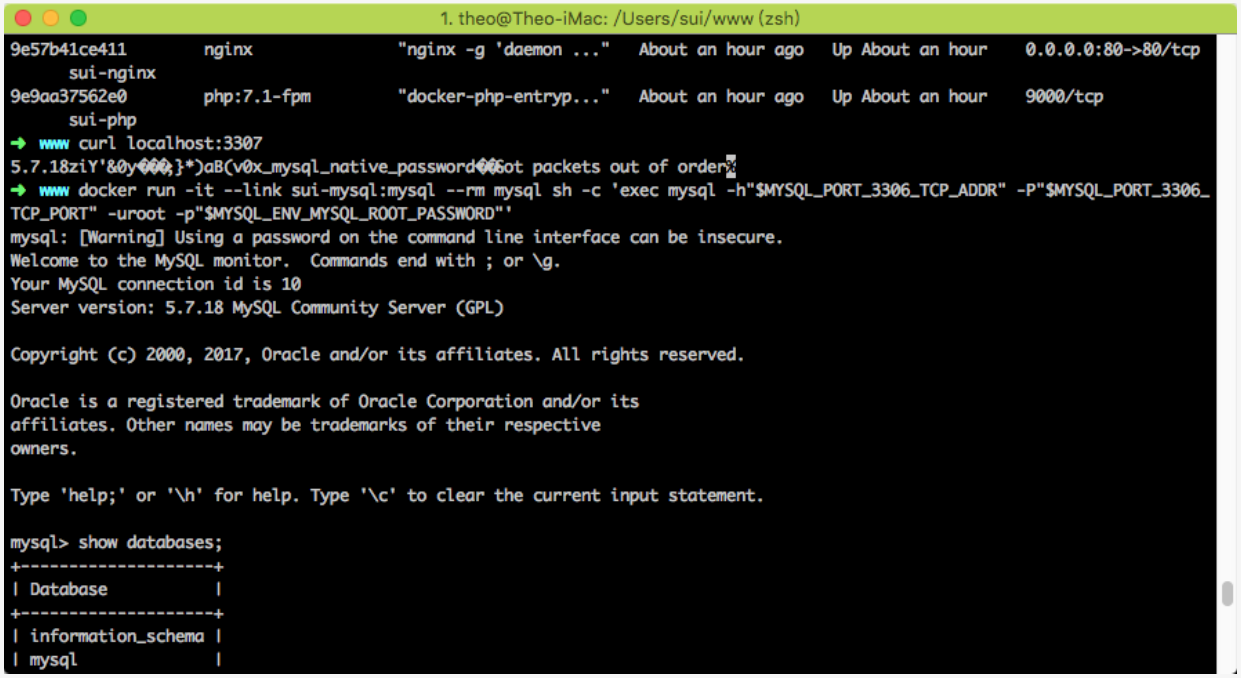
- data 目录将映射为 mysql 容器配置的数据文件存放路径
- logs 目录将映射为 mysql 容器的日志目录
- conf 目录里的配置文件将映射为 mysql 容器的配置文件

```
docker run -p 3307:3306 --name sui-mysql -v /Users/sui/docker/mysql/conf:/etc/mysql -v /U
sers/sui/docker/mysql/logs:/logs -v /Users/sui/docker/mysql/data:/mysql_data -e MYSQL_ROO
T_PASSWORD=123456 -d --link sui-php mysql
```

进入mysql客户端:

```
docker run -it --link sui-mysql:mysql --rm mysql sh -c 'exec mysql -h"$MYSQL_PORT_3306_TC
P_ADDR" -P"$MYSQL_PORT_3306_TCP_PORT" -uroot -p"$MYSQL_ENV_MYSQL_ROOT_PASSWORD"'
```

注意：我本地 3306 端口有 mysql, 所以这里用3307端口。



```
9e57b41ce411        nginx               "nginx -g 'daemon ..."   About an hour ago   Up About an hour    0.0.0.0:80->80/tcp
      sui-nginx
9e9aa37562e0        php:7.1-fpm         "docker-php-entryp..."   About an hour ago   Up About an hour    9000/tcp
      sui-php
➜  www curl localhost:3307
5.7.18ziY'&0y���;}*)aB(v0x_mysql_native_password��Got packets out of order%
➜  www docker run -it --link sui-mysql:mysql --rm mysql sh -c 'exec mysql -h"$MYSQL_PORT_3306_TCP_ADDR" -P"$MYSQL_PORT_3306_
TCP_PORT" -uroot -p"$MYSQL_ENV_MYSQL_ROOT_PASSWORD"'
mysql: [Warning] Using a password on the command line interface can be insecure.
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 5.7.18 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
```
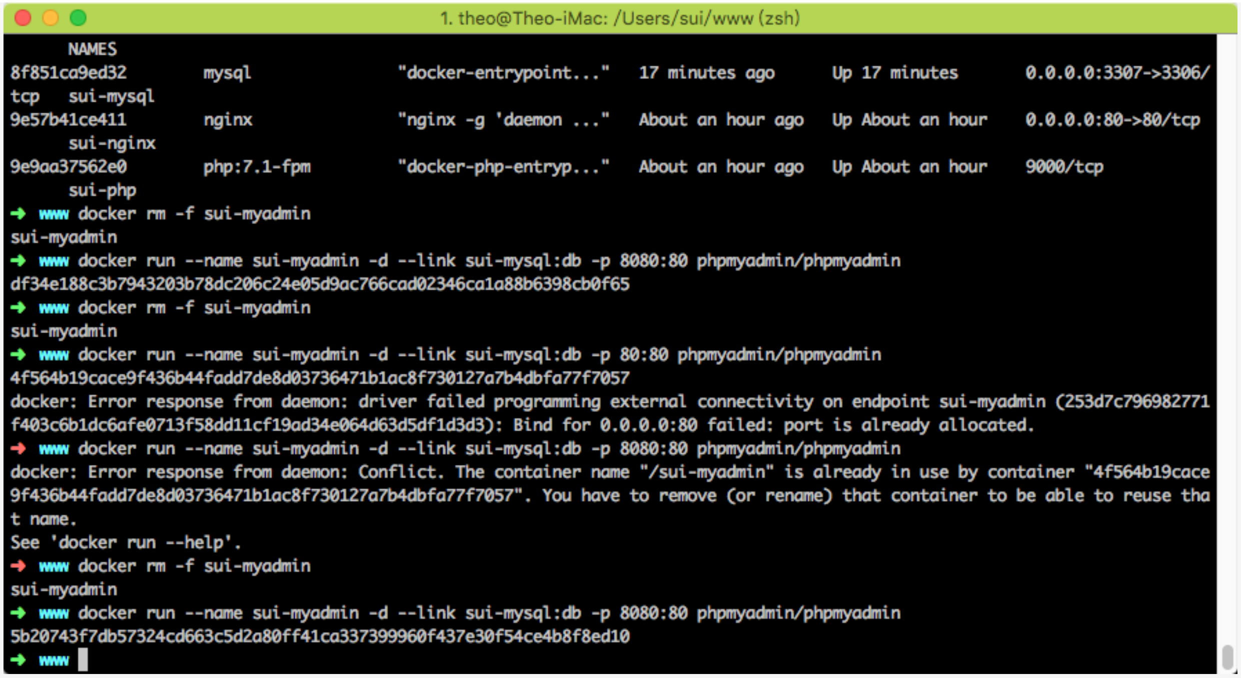
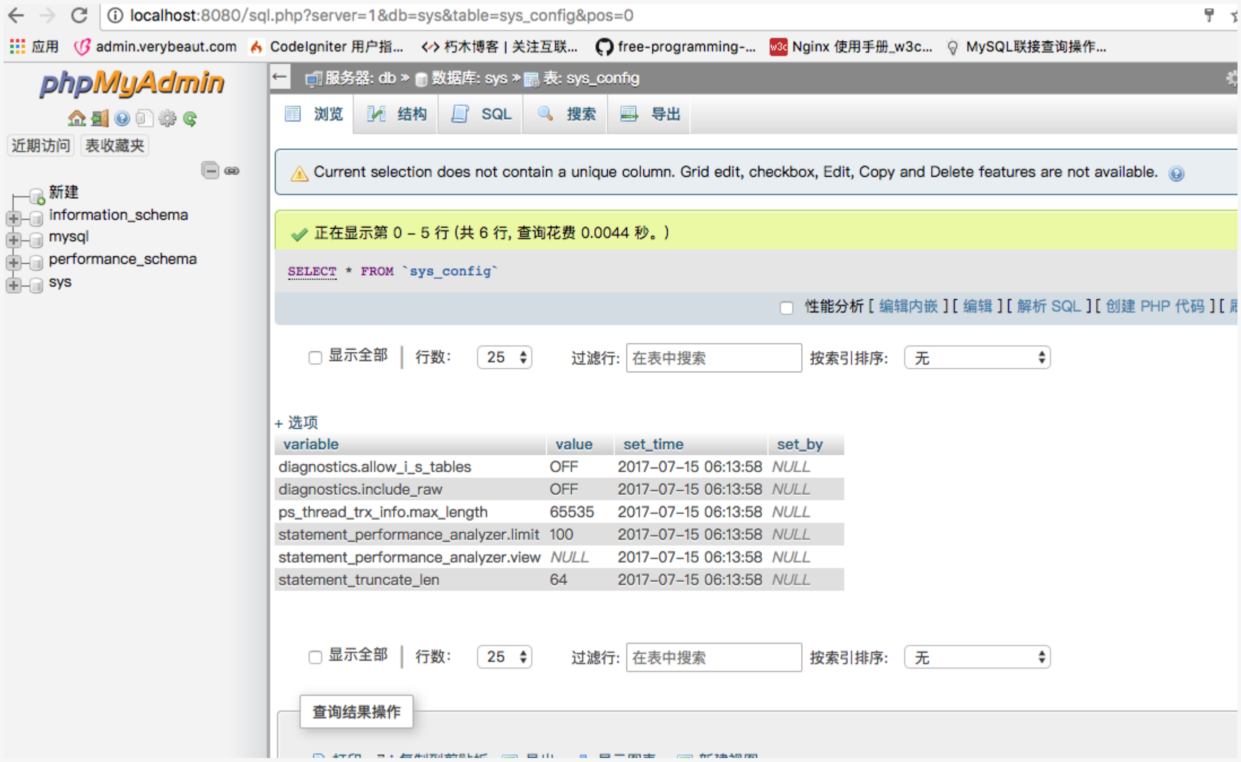

phpmyadmin

```
docker run --name sui-myadmin -d --link sui-mysql:db -p 8080:80 phpmyadmin/phpmyadmin
```



```
      NAMES
8f851ca9ed32        mysql               "docker-entrypoint..."   17 minutes ago      Up 17 minutes       0.0.0.0:3307->3306/
tcp    sui-mysql
9e57b41ce411        nginx               "nginx -g 'daemon ..."   About an hour ago   Up About an hour    0.0.0.0:80->80/tcp
      sui-nginx
9e9aa37562e0        php:7.1-fpm         "docker-php-entryp..."   About an hour ago   Up About an hour    9000/tcp
      sui-php
➜  www docker rm -f sui-myadmin
sui-myadmin
➜  www docker run --name sui-myadmin -d --link sui-mysql:db -p 8080:80 phpmyadmin/phpmyadmin
df34e188c3b7943203b78dc206c24e05d9ac766cad02346ca1a88b6398cb0f65
➜  www docker rm -f sui-myadmin
sui-myadmin
➜  www docker run --name sui-myadmin -d --link sui-mysql:db -p 80:80 phpmyadmin/phpmyadmin
4f564b19cace9f436b44fadd7de8d03736471b1ac8f730127a7b4dbfa77f7057
docker: Error response from daemon: driver failed programming external connectivity on endpoint sui-myadmin (253d7c796982771
f403c6b1dc6afe0713f58dd11cf19ad34e064d63d5df1d3d3): Bind for 0.0.0.0:80 failed: port is already allocated.
➜  www docker run --name sui-myadmin -d --link sui-mysql:db -p 8080:80 phpmyadmin/phpmyadmin
docker: Error response from daemon: Conflict. The container name "/sui-myadmin" is already in use by container "4f564b19cace
9f436b44fadd7de8d03736471b1ac8f730127a7b4dbfa77f7057". You have to remove (or rename) that container to be able to reuse tha
t name.
See 'docker run --help'.
➜  www docker rm -f sui-myadmin
sui-myadmin
➜  www docker run --name sui-myadmin -d --link sui-mysql:db -p 8080:80 phpmyadmin/phpmyadmin
5b20743f7db57324cd663c5d2a80ff41ca337399960f437e30f54ce4b8f8ed10
➜  www
```

大功告成:



Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

✓ 正在显示第 0 – 5 行 (共 6 行, 查询花费 0.0044 秒。)

```
SELECT * FROM `sys_config`
```

□ 性能分析 [编辑内嵌] [编辑] [解析 SQL] [创建 PHP 代码] [

□ 显示全部 | 行数: 25 过滤行: 在表中搜索 按索引排序: 无

+ 选项

variable	value	set_time	set_by
diagnostics.allow_i_s_tables	OFF	2017-07-15 06:13:58	NULL
diagnostics.include_raw	OFF	2017-07-15 06:13:58	NULL
ps_thread_trx_info.max_length	65535	2017-07-15 06:13:58	NULL
statement_performance_analyzer.limit	100	2017-07-15 06:13:58	NULL
statement_performance_analyzer.view	NULL	2017-07-15 06:13:58	NULL
statement_truncate_len	64	2017-07-15 06:13:58	NULL

□ 显示全部 | 行数: 25 过滤行: 在表中搜索 按索引排序: 无

查询结果操作

pengqiangsheng 7个月前 (08-31)