pycharm 远程连接docker容器调试程序

blog.csdn.net/hanchaobiao/article/details/84069299

Pycharm远程调试服务器中的代码（docker容器内部）

一、首先假设你已启动了一个docker容器，并在启动时将容器的22端口映射到宿主机的10022端口

启动示例：

```
docker run -d --name django_api -p 8000:80 -p 10022:22 -p 5000:5000 --link
mysql_host:mymysql --link redis_host:myredis  -v
$PWD:/home/docker/code/app/:Z python3/django/ngnix
```

 启动后使用xshell远程连接宿主机的10022端口是无法连接成功的，此时我们需要进入docker容器内部进行一些操作：

二、进行容器内部修改

彩蛋：文章最后我会讲解如何修改Dockerfile 使其在建立时就允许ssh远程登陆

```
docker exec -it 容器名 /bin/bash
```

1、修改root用户密码

```
passwd
```

2、首先检查容器内部是否以安装 openssh-server与openssh-client 若没安装执行一下命令安装

```
apt-get install openssh-server
apt-get install openssh-client
```

3、修改SSH配置文件以下选项

```
vim /etc/ssh/sshd_config


# PermitRootLogin prohibit-password # 默认打开 禁止root用户使用密码登陆，需要将其注释
RSAAuthentication yes #启用 RSA 认证
PubkeyAuthentication yes #启用公钥私钥配对认证方式
PermitRootLogin yes #允许root用户使用ssh登录
```

4、启动sshd服务

```
/etc/init.d/ssh restart
```

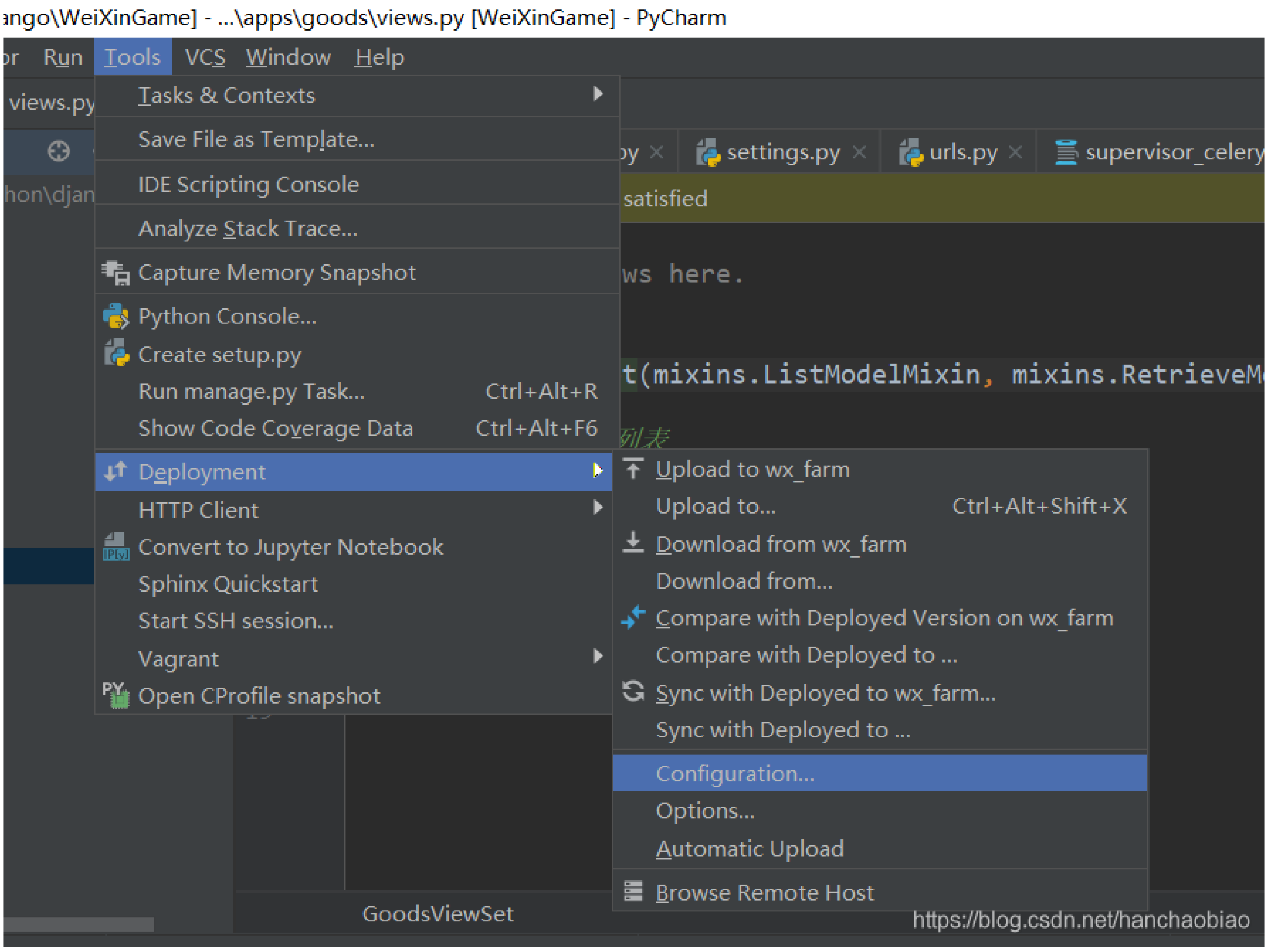
5、退出容器，连接测试

> ssh root@127.0.0.1 -p 10022
>
> 输入密码成功进入容器内部即配置成功

6、如若需要将修改后的容器重新保存为镜像，则可进行相应处理，本文直接使用修改后的镜像进行后续操作

三、使用Pycharm远程连接

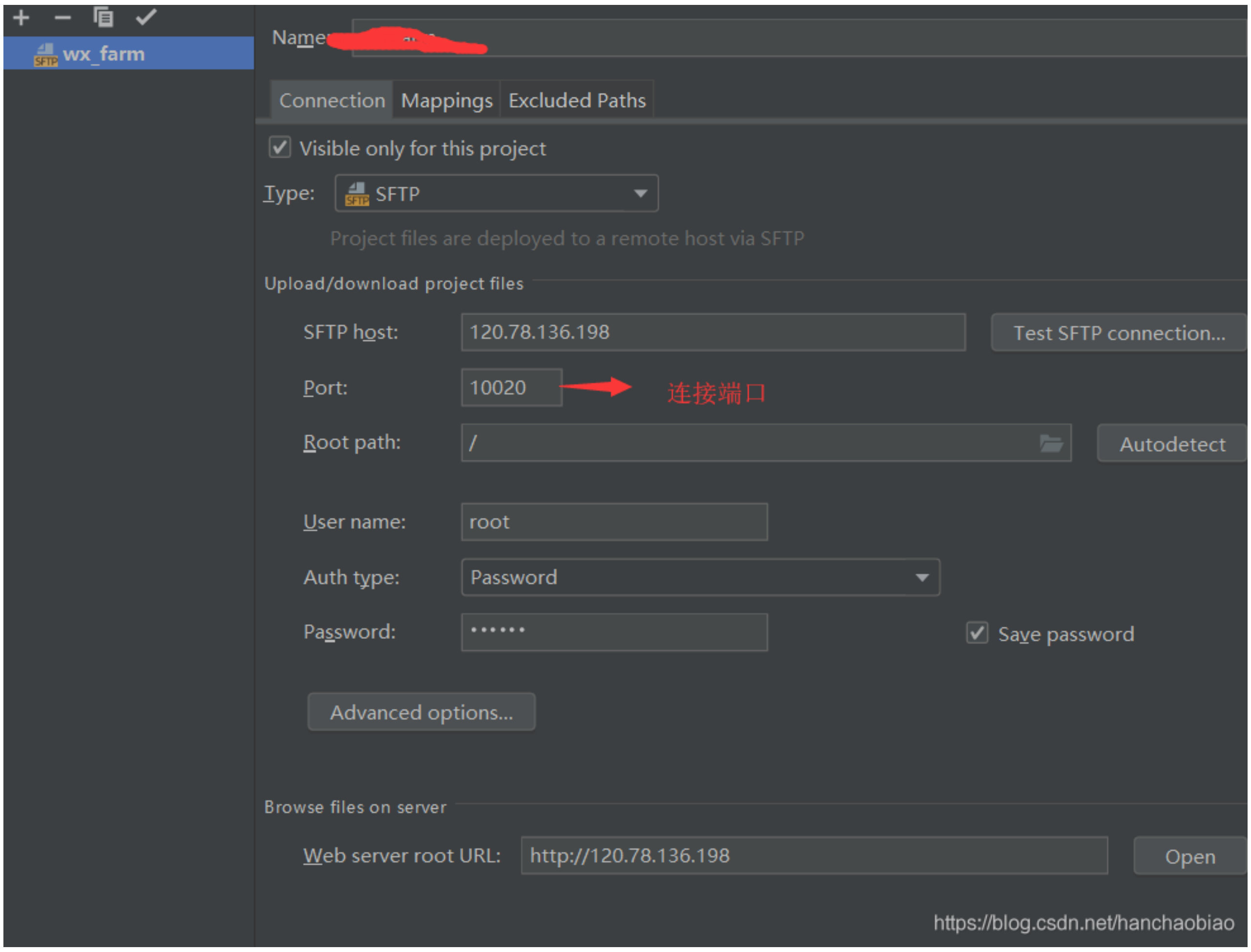
1、打开配置界面


ango\WeiXinGame] - ...\apps\goods\views.py [WeiXinGame] - PyCharm
or Run Tools VCS Window Help
views.py
hon\djan
Tasks & Contexts
Save File as Template...
IDE Scripting Console
Analyze Stack Trace...
Capture Memory Snapshot
Python Console...
Create setup.py
Run manage.py Task... Ctrl+Alt+R
Show Code Coverage Data Ctrl+Alt+F6
Deployment
HTTP Client
Convert to Jupyter Notebook
Sphinx Quickstart
Start SSH session...
Vagrant
Open CProfile snapshot
py settings.py urls.py supervisor_celery
satisfied
Upload to wx_farm
Upload to... Ctrl+Alt+Shift+X
Download from wx_farm
Download from...
Compare with Deployed Version on wx_farm
Compare with Deployed to ...
Sync with Deployed to wx_farm...
Sync with Deployed to ...
Configuration...
Options...
Automatic Upload
Browse Remote Host
GoodsViewSet
https://blog.csdn.net/hanchaobiao

```
ws here.

t(mixins.ListModelMixin, mixins.RetrieveM
列表
```

2、按照远程服务器信息配置信息：配置好后可以点击测试连接测试是否能够连接成功


Name: [redacted]

Connection | Mappings | Excluded Paths

☑ Visible only for this project

Type: SFTP

Project files are deployed to a remote host via SFTP

Upload/download project files

SFTP host: 120.78.136.198 | Test SFTP connection...

Port: 10020 连接端口

Root path: / | Autodetect

User name: root

Auth type: Password

Password: •••••• ☑ Save password

Advanced options...

Browse files on server

Web server root URL: http://120.78.136.198 | Open

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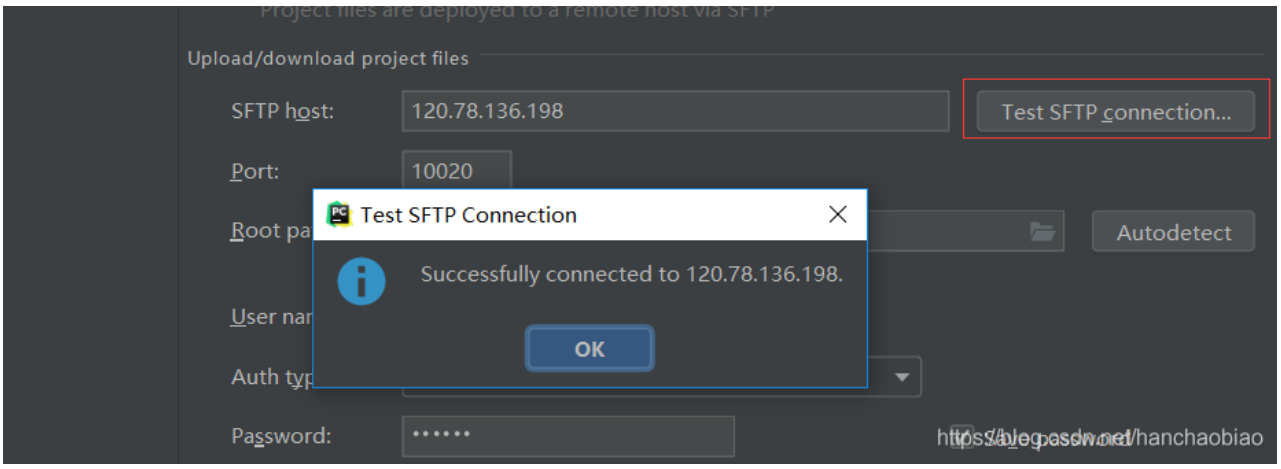
点击测试连接


Test SFTP Connection

Successfully connected to 120.78.136.198.

OK

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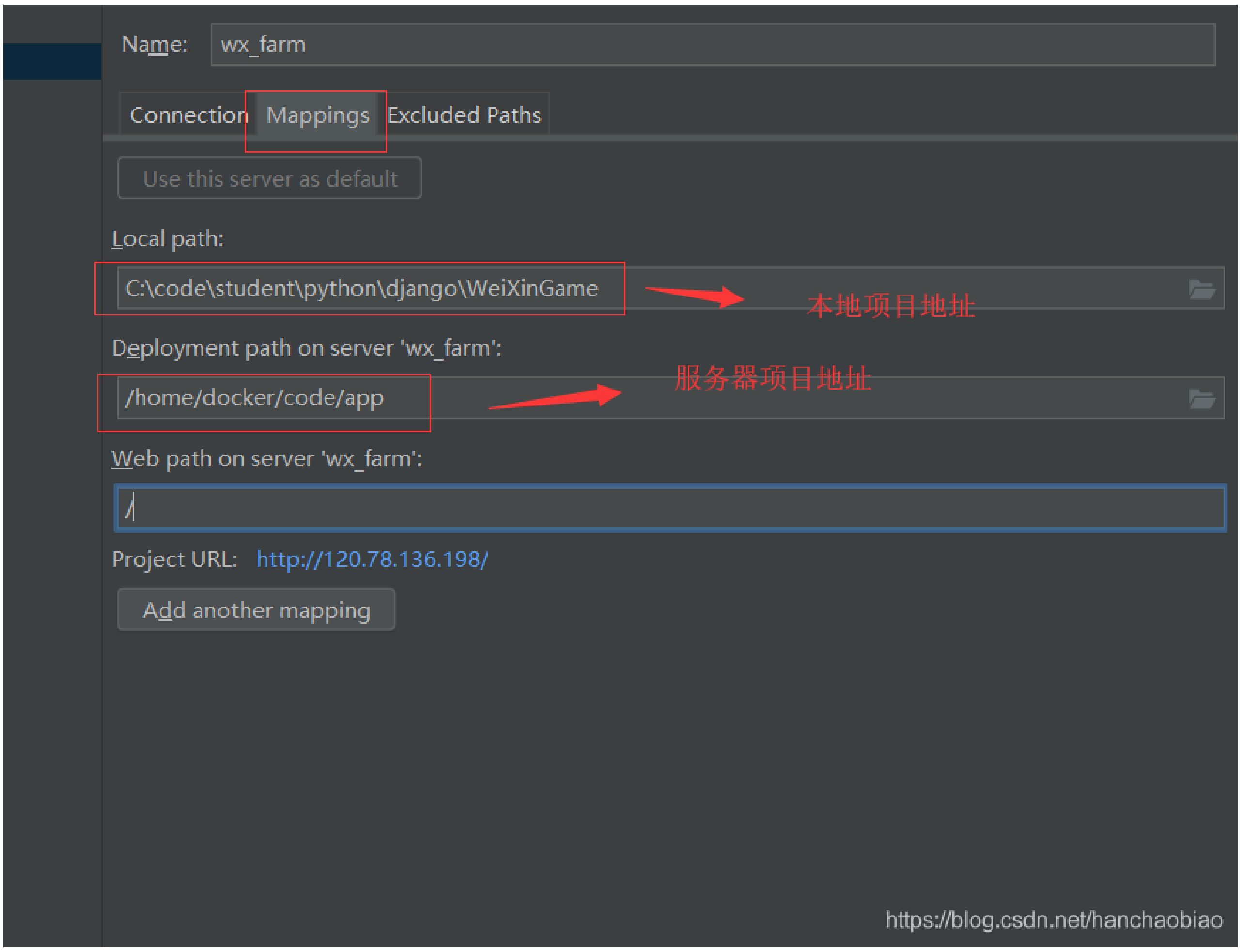
将本地的代码和服务器代码连接


Name: wx_farm

Connection | Mappings | Excluded Paths

Use this server as default

Local path: C:\code\student\python\django\WeiXinGame

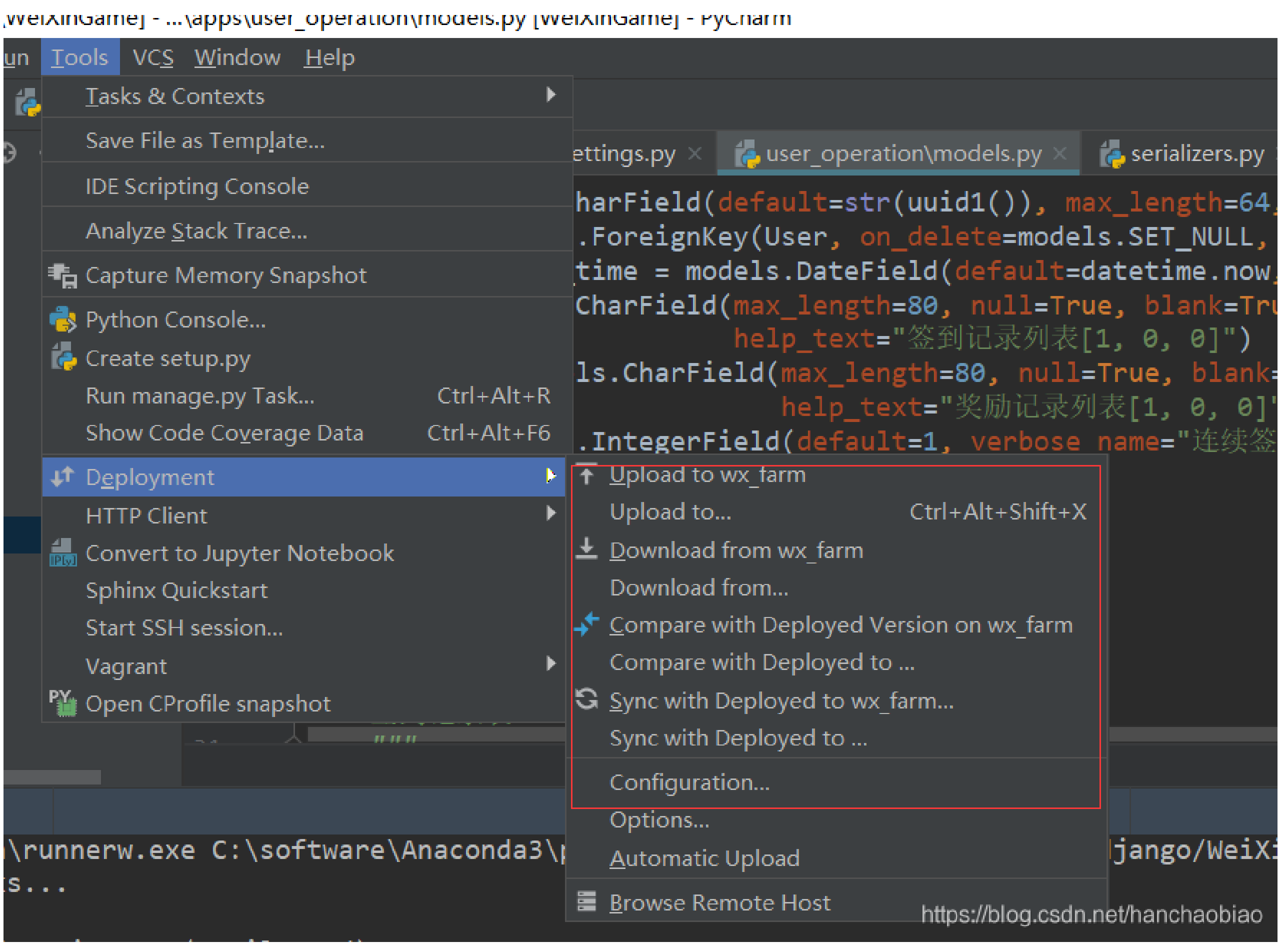
Deployment path on server 'wx_farm': /home/docker/code/app

Web path on server 'wx_farm': /

Project URL: http://120.78.136.198/

Add another mapping

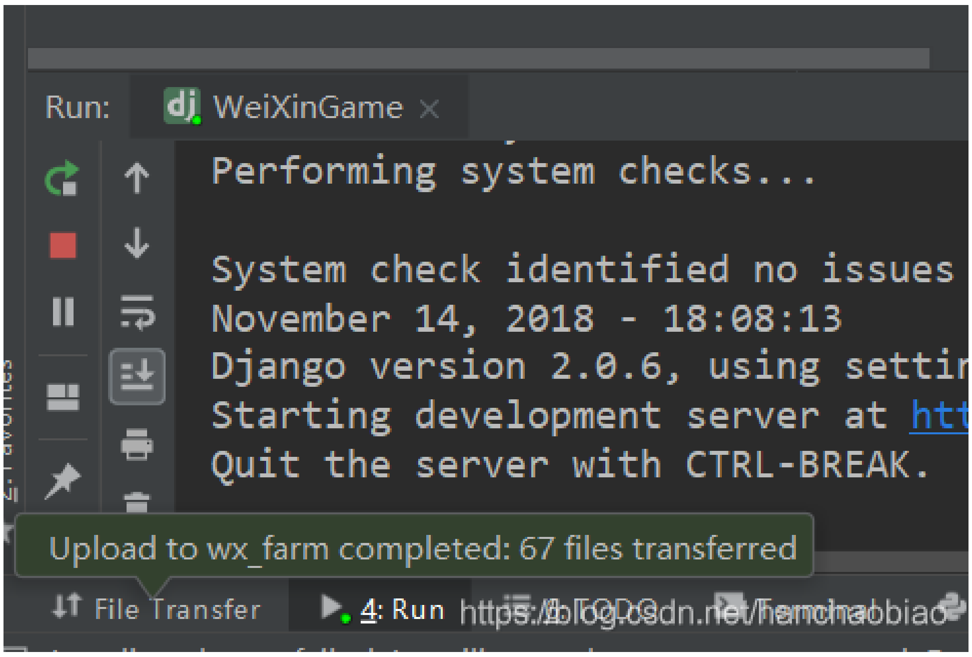
此时便可以远程调试代码了


WeiXinGame] - ...\apps\user_operation\models.py [WeiXinGame] - PyCharm

```
harField(default=str(uuid1()), max_length=64,
.ForeignKey(User, on_delete=models.SET_NULL,
time = models.DateField(default=datetime.now,
CharField(max_length=80, null=True, blank=Tru
          help_text="签到记录列表[1, 0, 0]")
ls.CharField(max_length=80, null=True, blank=
             help_text="奖励记录列表[1, 0, 0]"
.IntegerField(default=1, verbose_name="连续签
```

```
\runnerw.exe C:\software\Anaconda3\                 jango/WeiX
s...
```

测试上传本地代码到服务器：



Run: WeiXinGame

```
Performing system checks...

System check identified no issues
November 14, 2018 - 18:08:13
Django version 2.0.6, using settir
Starting development server at htt
Quit the server with CTRL-BREAK.
```

Upload to wx_farm completed: 67 files transferred

彩蛋：修改Dockerfile 建立镜像时就允许用户通过远程连接

由于我在CMD中启动了 `supervisord` 此时容器启动后需要手动进入容器启动sshd

/etc/init.d/ssh start

或者将启动命令放入supervisor-app.conf文件中，使其建立容器时就启动

```
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#
# http://www.apache.org/licenses/LICENSE-2.0
#
# Unless required by applicable law or agreed to in writing, software
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.
```

```
FROM ubuntu:16.04
MAINTAINER Dockerfiles
# Install required packages and remove the apt packages cache when done.
RUN apt-get update && \
apt-get upgrade -y && \
apt-get install -y \
git \
vim \
python3 \
python3-dev \
python3-setuptools \
python3-pip \
nginx \
supervisor \
openssh-server \
sqlite3 && \
pip3 install -U pip setuptools && \
rm -rf /var/lib/apt/lists/*
# 更新pip
RUN pip3 install --upgrade pip
# install uwsgi now because it takes a little while
RUN pip3 install uwsgi
RUN pip3 install meld3==1.0.0
# setup all the configfiles
RUN echo "daemon off;" >> /etc/nginx/nginx.conf
# 设置root用户密码
RUN echo root:hancb|chpasswd
# 允许root用户使用密码通过ssh登录
RUN echo "PermitRootLogin yes" >> /etc/ssh/sshd_config
RUN sed -i 's/PermitRootLogin prohibit-password/# PermitRootLogin prohibit-password/' /etc/ssh/sshd_config
## 启动ssh连接
RUN /etc/init.d/ssh start
COPY nginx-app.conf /home/docker/code/app/
# 将配置文件软连接过去, 注意需要写绝对路径
RUN rm -f /etc/nginx/sites-available/default
RUN ln -s  /home/docker/code/app/nginx-app.conf /etc/nginx/sites-available/default
COPY supervisor-app.conf /home/docker/code/app/
RUN rm -f /etc/supervisor/conf.d/supervisor-app.conf
RUN ln -s /home/docker/code/app/supervisor-app.conf  /etc/supervisor/conf.d/
RUN ln -s /home/docker/code/app/conf/supervisord.conf  /etc/supervisor/conf.d/  # celery
# COPY requirements.txt and RUN pip install BEFORE adding the rest of your code, this will cause Docker's caching mechanism
# to prevent re-installing (all your) dependencies when you made a change a line or two in your app.
COPY requirements.txt /home/docker/code/app/
RUN pip3 install -r /home/docker/code/app/requirements.txt
# 设置默认python版本为python3
# RUN update-alternatives --install /usr/bin/python python /usr/bin/python3 3
# RUN update-alternatives --install /usr/bin/python python /usr/bin/python2 2
# add (the rest of) our code
COPY uwsgi.ini /home/docker/code/app/
COPY uwsgi_params /home/docker/code/app/
# install django, normally you would remove this step because your project would already
# be installed in the code/app/ directory
# RUN django-admin.py startproject website /home/docker/code/app/
EXPOSE 80
CMD ["supervisord", "-n"]
```

pycharm 远程调试*docker* 中的Python脚本