

【Demo】Python Flask + Redis 練習

準備一個python文件 app.py

```
from flask import Flask
from redis import Redis
import os
import socket

app = Flask(__name__)
redis = Redis(host=os.environ.get('REDIS_HOST', '127.0.0.1'), port=6379)

@app.route('/')
def hello():
    redis.incr('hits')
    return f"Hello Container World! I have been seen {redis.get('hits').decode('utf-8')} times and my hostname is {socket.gethostname()}.\\n"
```

準備一個Dockerfile

```
FROM python:3.9.5-slim

RUN pip install flask redis && \
    groupadd -r flask && useradd -r -g flask flask && \
    mkdir /src && \
    chown -R flask:flask /src

USER flask

COPY app.py /src/app.py

WORKDIR /src

ENV FLASK_APP=app.py REDIS_HOST=redis

EXPOSE 5000

CMD ["flask", "run", "-h", "0.0.0.0"]
```

準備一個Redis image

```
$ docker image pull redis
$ docker image build -t flask-demo .
$ docker image ls
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
flask-demo	latest	4778411a24c5	About a minute ago	126MB
python	3.9.5-slim	c71955050276	8 days ago	115MB
redis	latest	08502081bff6	2 weeks ago	105MB

建立一Bridge

```
$ docker network create -d bridge demo-network
8005f4348c44ffe3cdcbdda165beea2b0cb520179d3745b24e8f9e05a3e6456d
```

```
$ docker network ls
NETWORK ID   NAME          DRIVER  SCOPE
2a464c0b8ec7 bridge        bridge  local
8005f4348c44 demo-network  bridge  local
80b63f711a37 host          host    local
fae746a75be1 none          null    local
```

創建container

創建一個叫 `redis-server` 的container，連到 demo-network上

```
$ docker container run -d --name redis-server --network demo-network redis
002800c265020310231d689e6fd35bc084a0fa015e8b0a3174aa2c5e29824c0e
$ docker container ls
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS          NAMES
002800c26502   redis    "docker-entrypoint.s..." 4 seconds ago   Up 3 seconds   6379/tcp       redis-server
```

創建 flask container，連到 demo-network上

```
$ docker container run -d --network demo-network \
--name flask-demo \
--env REDIS_HOST=redis-server \
-p 5000:5000 flask-demo
```

打開瀏覽器訪問 <http://127.0.0.1:5000>

應該能看到類似下面的內容，每次刷新頁面，計數加1

Hello Container World! I have been seen 36 times and my hostname is 925ecb8d111a.

合併步驟成一腳本

```
# prepare image
docker image pull redis
docker image build -t flask-demo .

# create network
docker network create -d bridge demo-network

# create container
docker container run -d --name redis-server --network demo-network redis
docker container run -d --network demo-network --name flask-demo --env REDIS_HOST=redis-server -p 5000:5000 flask-demo
```

🕒修訂版本 #1

★由 treeman 建立於 7 🍀🍀🍀 2022 08:01:58

🔧由 treeman 更新於 5 🍀🍀🍀 2023 10:14:58