

Docker Tips

Dockerfile - onbuild

FROM python:3-onbuild

MAINTAINER Rob Kooper kooper@illinois.edu

CMD ["python", "./demo1.py"]

demo1.py

```
import flask
```

```
app = flask.Flask(__name__)
```

```
@app.route("/")
```

```
def hello():
```

```
    return "demo1"
```

```
if __name__ == "__main__":
```

```
    app.run(host="0.0.0.0", port=8888, threaded=True)
```

Building Container (1/2)

```
docker build -t demo1 .
Sending build context to Docker daemon 4.096 kB
Step 1/3 : FROM python:3-onbuild
# Executing 3 build triggers...
Step 1/1 : COPY requirements.txt /usr/src/app/
Step 1/1 : RUN pip install --no-cache-dir -r requirements.txt
---> Running in 455d028b80c4
Collecting Flask==0.12.1 (from -r requirements.txt (line 1))
  Downloading Flask-0.12.1-py2.py3-none-any.whl (82kB)
.....
Step 1/1 : COPY . /usr/src/app
---> b8eb822fc844
```

Building Container (2/2)

Step 1/1 : COPY ./usr/src/app

---> b8eb822fc844

Removing intermediate container 7b8dea73ed72

Removing intermediate container 455d028b80c4

Removing intermediate container 96de67c27aac

Step 2/3 : MAINTAINER Rob Kooper kooper@illinois.edu

---> Running in b59e2147e984

---> 008009792229

Removing intermediate container b59e2147e984

Step 3/3 : CMD python ./demo1.py

---> Running in 8ed63593b2a9

---> 2c03655ae914

Removing intermediate container 8ed63593b2a9

Successfully built 2c03655ae914

How did that work?

```
ONBUILD COPY requirements.txt /usr/src/app/
```

```
ONBUILD RUN pip install --no-cache-dir -r requirements.txt
```

```
ONBUILD COPY . /usr/src/app
```

This is a one time deal, next container will not run ONBUILD again

Output

```
docker run -t -i -p 8888:8888 --rm demo1
```

```
* Running on http://0.0.0.0:8888/ (Press CTRL+C to quit)
```

```
172.17.0.1 - - [12/May/2017 09:27:44] "GET / HTTP/1.1" 200 -
```

```
curl localhost:8888
```

```
demo1
```

Dockerfile - arg

FROM python:3

MAINTAINER Rob Kooper kooper@illinois.edu

ARG TEXT

ENV TEXT=\${TEXT:-unknown}

WORKDIR /usr/src/app

COPY . /usr/src/app

CMD ["python", "./demo2.py"]

demo2.py

```
import os
```

```
if __name__ == "__main__":  
    print(os.getenv("TEXT", "NOTHING"))
```

Builds and Output

```
docker build -t demo2 .
```

```
docker run --rm -t -i demo2
```

```
NOTHING
```

```
docker build --build-arg TEXT=hello -t demo2 .
```

```
docker run --rm -t -i demo2
```

```
hello
```