

Nathan Guenther  
Homework 3

```
# Step 1
# Prep host directory
mkdir profile
cd profile
touch info
nano info
```

```
ubuntu@ip-172-31-34-67:~/profile$ pwd
/home/ubuntu/profile
ubuntu@ip-172-31-34-67:~/profile$ ls
info
ubuntu@ip-172-31-34-67:~/profile$ cat info
Nathan Guenther
ubuntu@ip-172-31-34-67:~/profile$
```

# Step 2

# Create Containers, mount profile, link together, keep running

```
docker run -d --name="client" ubuntu tail -f /dev/null
```

```
docker run -d -v /home/ubuntu/profile:/home/ubuntu/profile -it --link client:client --name="server"
```

```
ubuntu tail -f /dev/null
```

```
docker stop client
```

```
docker rm client
```

```
docker run -d -v /home/ubuntu/profile:/home/ubuntu/profile -it --link server:server --name="client"
```

```
ubuntu tail -f /dev/null
```

# Connect to Server - Ping test client

```
docker exec -it server bash
```

```
ping client
```

# Connect to Client - Ping test server

```
docker exec -it client bash
```

```
ping server
```

```
ubuntu@ip-172-31-34-67:~$ docker run -d -it --link server:server --name="client" ubuntu t
713dd9ccb507575de440361624e28b552791af26262be8410c5988e1fa82f25e
ubuntu@ip-172-31-34-67:~$
ubuntu@ip-172-31-34-67:~$
ubuntu@ip-172-31-34-67:~$ ls
info  profile  static_web
ubuntu@ip-172-31-34-67:~$ docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED            STATUS
713dd9ccb507        ubuntu             "tail -f /dev/null"     18 seconds ago    Up 18 s
4464f9654ea1        ubuntu             "tail -f /dev/null"     2 minutes ago     Up 2 mi
ubuntu@ip-172-31-34-67:~$ docker^C
ubuntu@ip-172-31-34-67:~$ ^C
ubuntu@ip-172-31-34-67:~$ docker exec -it server bash
root@4464f9654ea1:/# ping client
PING client (172.17.0.2) 56(84) bytes of data.
64 bytes from client (172.17.0.2): icmp_seq=1 ttl=64 time=0.065 ms
64 bytes from client (172.17.0.2): icmp_seq=2 ttl=64 time=0.065 ms
^C
--- client ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 999ms
rtt min/avg/max/mdev = 0.065/0.065/0.065/0.000 ms
root@4464f9654ea1:/# ^C
root@4464f9654ea1:/# exit
exit
ubuntu@ip-172-31-34-67:~$ docker exec -it client bash
root@713dd9ccb507:/# ping server
PING server (172.17.0.3) 56(84) bytes of data.
64 bytes from server (172.17.0.3): icmp_seq=1 ttl=64 time=0.043 ms
64 bytes from server (172.17.0.3): icmp_seq=2 ttl=64 time=0.046 ms
64 bytes from server (172.17.0.3): icmp_seq=3 ttl=64 time=0.048 ms
64 bytes from server (172.17.0.3): icmp_seq=4 ttl=64 time=0.047 ms
^C
--- server ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 2997ms
rtt min/avg/max/mdev = 0.043/0.046/0.048/0.002 ms
root@713dd9ccb507:/#
```

```

# Step 3
# Prepare DockerFile
mkdir apache
cd apache
vim Dockerfile (Specify Enviornment)
{
    FROM ubuntu:12.04

    # Install dependencies
    RUN apt-get update -y
    RUN apt-get install -y git curl apache2 php5 libapache2-mod-php5 php5-mcrypt php5-mysql

    # Install app
    RUN rm -rf /var/www/*
    ADD src /var/www

    # Configure apache
    RUN a2enmod rewrite
    RUN chown -R www-data:www-data /var/www
    ENV APACHE_RUN_USER www-data
    ENV APACHE_RUN_GROUP www-data
    ENV APACHE_LOG_DIR /var/log/apache2

    EXPOSE 80

    CMD ["/usr/sbin/apache2", "-D", "FOREGROUND"]
}

# Prepare Web Files to serve
mkdir src
vim src/index.php (Outline Hello World HTML)
{
    <?php
        echo "<html><head>Hello World - Homework 3!</head></html>";
}

# Build Image
docker build -t thiagomarini/apache-php .

# Create Container
docker run -p 80:80 thiagomarini/apache-php

# View Public IP --> Hello World Page
http://52.38.4.121/

```

