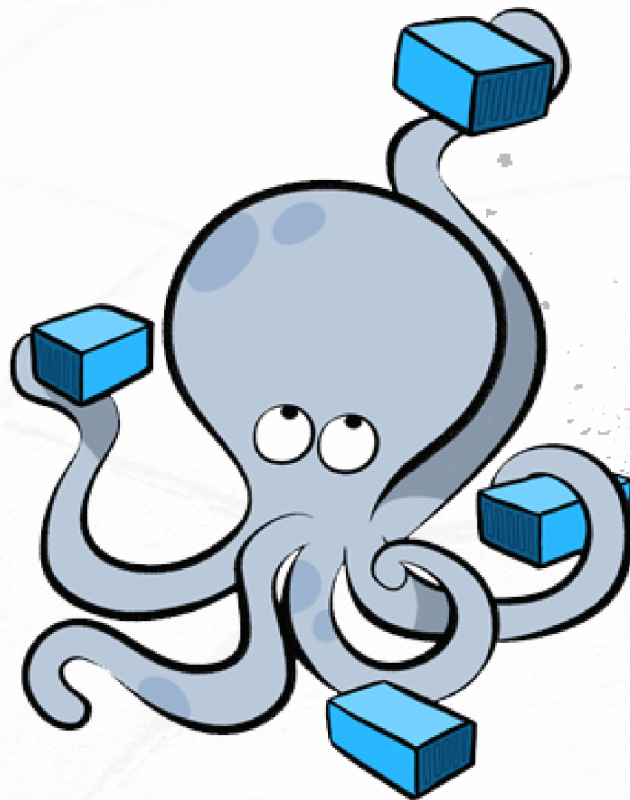# Docker Compose

```
php:
    build: php
    ports:
        - "80:80"
        - "443:443"
    volumes:
        - ./php/www:/var/www/html
    links:
        - db
```

```
$ docker-compose up
```

Overview of Docker Compose

- Compose is a tool for defining and running multi-container Docker applications. With Compose, you use a Compose file to configure your application's services.

- Then, using a single command, you create and start all the services from your configuration.

a three-step process

- 1) Define your app's environment with a Dockerfile so it can be reproduced anywhere.

- 2) Define the services that make up your app in docker-compose.yml so they can be run together in an isolated environment.

- 3) Lastly, run docker-compose up and Compose will start and run your entire app.

① Write your dockerfile

```
WORKDIR /code
ADD requirements.txt
/code/
RUN pip install -r
requirements.txt
ADD . /code
CMD python app.py
```

② Write your compose.yml file

```
web:
  build: .
  links:
  - db
  ports:
  - "8000:8000"
db:
  image: postgres
```

③ Run your app

```
$ docker-compose up
```

YAML file

```yaml
msgq:
    image: rabbitmq:3.5-management
    hostname: msgq
    ports:
        - "15672:15672"
results:
    image: redis:3.0.4
    hostname: results
    ports:
        - "6379:6379"
flower:
    build: .
    dockerfile: Flower.dockerfile
    ports:
        - "5555:5555"
```

Install Docker Compose

- you'll need to install Docker first.

- $ curl -L "https://github.com/docker/compose/releases/download/1.11.2/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose

- $ **chmod** +**x** /usr/**local**/bin/docker-compose

- $ docker-compose --*version*

Define the project

1) Create an empty project directory.

    #mkdir wordpress

    #cd wordpress

    #vi docker-compose.yml

 2) Build the project

    $ docker-compose up –d

3) Open browser : https:\\ip:8000

```yaml
version: '2'
services:
  db:
    image: mysql:5.7
    volumes:
      - db_data:/var/lib/mysql
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: wordpress
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: wordpress
  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    ports:
      - "8000:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_PASSWORD: wordpress
volumes:
  db_data:
```