Title: Docker-compose services starting order

Post Body:

I'm trying to start 3 docker containers in a sequential order using the docker-compose. I have the following containers:

- app-service-db container -> Database
- config-service container -> Spring boot application
- app-service container -> Spring boot application

I want the ' app-service ' container to start only when the other two containers have finish starting. I'm using the ' wait-for ' script to wait for the services to become available (https://github.com/Eficode/wait-for).

Here is what I have inside the docker-compose.yml

```
    version: '3.4' services:     config-service:       image: 'config-service:1.0'       hostname: config-service       contai
```

config.dockerfile

```
FROM openjdk:8-jdk-alpine VOLUME /tmp ADD target/config-1.0-final.jar config.jar ENTRYPOINT ['java', '-jar', 'config.jar'] EXP
```

app-db.dockerfile

```
FROM mariadb:10.3
```

app.dockerfile

```
FROM openjdk:8-jdk-alpine VOLUME /tmp ADD target/app-1.0-final.jar app.jar ENTRYPOINT ['java', '-jar', 'app.jar'] EXPOSE 8080
```

When I run the ' docker-compose up ' cmd the ' app-service ' container is starting before the ' app-service-db ' and ' config-service ' have finished and is exited because it can't find any connection. How can I make this work and force the ' app-service ' container to start only when the other two containers have started.

Thanks in advance.

Accepted Answer:

I see more problems in your configs. There is problem with entrypoint and command relation, to fully uderstand that please see this What is the difference between CMD and ENTRYPOINT in a Dockerfile? So your entrypoint is to run java application - that's probably why wait is not working. I would suggest to override entrypoint for app-service by adding following section in docker-compose:

```
entrypoint: sh -c './wait-for app-service-db:3306 && ./wait-for config-service:8888 && java -jar app.jar'
```

Also I can't see where you are adding this script wait-for into docker image (missing ADD in app's dockerfile?)

Highest Rated Answer:

You can ensure the start ordering of your services defined in your `docker-compose.yml` with the `depends_on` keyword: https://docs.docker.com/compose/compose-file/#depends_on

This is a Docker runtime thing. You don't specify this in a `Dockerfile`, from which you build your Docker image.

Docker does not wait for your config and db services to finish starting, before starting your service. But Docker has a article in the official documentation explaining two alternatives to solve this use-case: https://docs.docker.com/compose/startup-order/

1. Use tools as *wait-for-it* (https://github.com/vishnubob/wait-for-it) or *dockerize* (https://github.com/jwilder/dockerize)
2. or write your own wait script

In the article https://docs.docker.com/compose/startup-order/ are examples for both solutions.