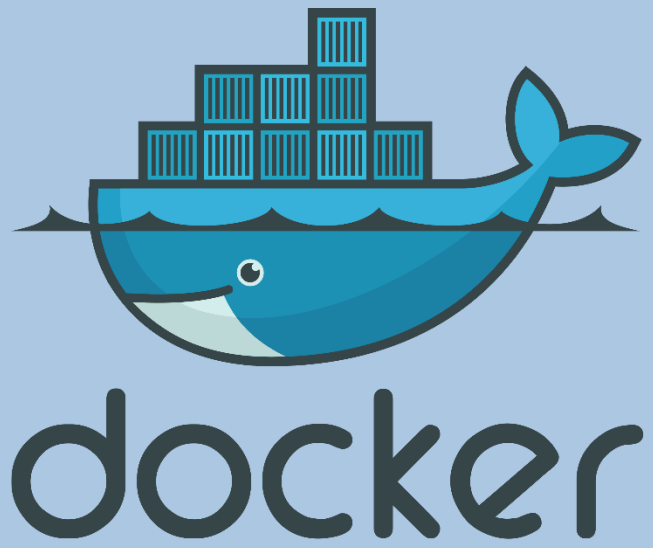

Docker Tutorials

Create Data Containers

Introduction

- There are two ways of approaching stateful Containers, that is containers are store and persistent data for future use.
  - One approach is using the *-v <host-dir>:<container-dir>* option to map directories.
  - The other approach is to use Data Containers.

Step 1 - Create Container

- 数据容器是唯一负责存储/管理数据的容器
- Like other containers they are managed by the host system. However, they don't run when you perform a ***docker ps*** command.
- We use busybox as the base as it's small and lightweight in case we want to explore and move the container to another host.
- Create a Data Container for storing configuration files using
  - *docker create -v /config --name dataContainer busybox*

Step 2 - Copy Files

- To copy files into a container you use the command ***docker cp***. The following command will copy the *config.conf* file into our dataContainer and the directory *config*.
  - *docker cp config.conf dataContainer:/config/*

Step 3 - Mount Volumes From

- Now our Data Container has our config, we can reference the container when we launch dependent containers requiring the configuration file.
- Using the *--volumes-from <container>* option we can use the mount volumes from other containers inside the container being launched. In this case, we'll launch an Ubuntu container which has reference to our Data Container. When we list the config directory, it will show the files from the attached container.
  - *docker run --volumes-from dataContainer ubuntu ls /config*

```
$ docker cp config.conf dataContainer:/config/
$ docker run --volumes-from dataContainer ubuntu ls /config
config.conf
```

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Step 4 - Export / Import Containers

- If we wanted to move the Data Container to another machine then we can export it to a .tar file.
  - *docker export dataContainer > dataContainer.tar*
- Import the Data Container back into Docker.
  - *docker import dataContainer.tar*

```
$ docker export dataContainer > dataContainer.tar
$ docker import dataContainer.tar
sha256:fb8c13f01244393f67550e08e8d9f6430ebdf3a9672d1550f841fe91c73b4a7e
```

Reference

- https://www.katacoda.com/courses/docker/data-containers