# Docker学习笔记

# 环境搭建

## 参考链接：

<https://docs.docker.com/>

<https://docs.docker.com/install/linux/docker-ce/centos/#install-using-the-convenience-script>

## 安装

目前采用Most users [set up Docker’s repositories](https://docs.docker.com/install/linux/docker-ce/centos/#install-using-the-repository) and install from them, for ease of installation and upgrade tasks. This is the recommended approach.此方式

安装依赖包：

yum install -y yum-utils \

device-mapper-persistent-data \

lvm2

配置仓库：

yum-config-manager \

--add-repo \

https://download.docker.com/linux/centos/docker-ce.repo

安装

yum install docker-ce

启动

systemctl start docker

运行hello world

docker run hello-world

## 非root管理docker

# systemctl enable docker

# usermod -aG docker $USER

$ docker run hello-world

## 配置开机启动

systemctl enable docker – 开启开机启动

systemctl disable docker

# 常用命令

## Docker

docker –version

docker info

docker run hello-world

docker image ls

docker container ls --all

## Recap and cheat sheet

## List Docker CLI commands

docker

docker container --help

## Display Docker version and info

docker --version

docker version

docker info

## Execute Docker image

docker run hello-world

## List Docker images

docker image ls

## List Docker containers (running, all, all in quiet mode)

docker container ls

docker container ls --all

docker container ls –aq

## 附加常用命令

# 查看docker 信息

docker inspect ${containerId}

# 进入容器

docker exec -it ${containerID} /bin/bash

# 宿主机拷贝到容器：

docker cp sourcePath ${containerId}:destinationPath

# 容器拷贝到宿主机：

docker cp ${containerId}:destinationPath sourcePath

# 保存一个image

docker save -o ./workspace/docker/tomcat0.1.tar tomcat:0.1

docker save -o destinationPath imageName

# 加载一个文件到image

docker load -i sourcePath

# docker hub & 常用环境

<https://hub.docker.com/explore/>

选择官方镜像，进行配置

## 安装配置Tomcat

参考链接：

<https://hub.docker.com/_/tomcat/>

Docker Pull Command

$ docker pull tomcat

启动：

$ docker run -it --rm -p 8888:8080 tomcat

## 安装配置CentOS [未验证]

参考链接：

<https://hub.docker.com/_/centos/>

Docker Pull Command

$ docker pull centos

运行

docker run centos

查看ID

docker container ls

## 安装配置MySQL

下载

docker pull mysql

Start a mysql server instance

docker run --name bage-mysql -p 3306:3306 -e MYSQL\_ROOT\_PASSWORD=mysql -d mysql

进入mysql容器

docker exec -it bage-mysql /bin/bash

在容器内部进行登录

mysql -u root –p

创建数据库

Create database mydb;

创建用户

CREATE USER 'bage'@'%' IDENTIFIED BY 'bage';

授权

grant all privileges on mydb.\* to 'bage'@'%';

## 安装配置Postgres

参考链接：

<https://hub.docker.com/_/postgres/>

Docker Pull Command

docker pull postgres

start a postgres instance

docker run -it -p 5432:5432 --name bage-postgres -e POSTGRES\_PASSWORD=postgres -d postgres

docker run --name bage-postgres -e POSTGRES\_PASSWORD=postgres -d postgres

connect to it from an application

docker run -it --rm --link bage-postgres:postgres postgres psql -h postgres -U postgres

创建数据库：

CREATE TABLE weather (

city varchar(80),

temp\_lo int, -- low temperature

temp\_hi int, -- high temperature

prcp real, -- precipitation

date date

);

## 安装配置Nginx

下载安装：

docker pull nginx

启动：

docker run -p 80:80 --name tmp-nginx-container -d nginx

进入容器：

docker exec -it tmp-nginx-container /bin/bash

默认配置文件位置：

/etc/nginx/nginx.conf

拷贝配置文件出来进行编辑:

docker cp tmp-nginx-container:/etc/nginx/nginx.conf /home/bage/workspace/docker/docker/

编辑修改后进行返回：

docker cp /home/bage/workspace/docker/docker/ tmp-nginx-container:/etc/nginx/nginx.conf

## 安装配置Nexus[非官方]

下载

docker pull sonatype/nexus3

**Running**

To run, binding the exposed port 8081 to the host.

$ docker run -d -p 8081:8081 --name nexus sonatype/nexus3

To test:

$ curl -u admin:admin123 <http://localhost:8081/service/metrics/ping> (如不能访问，先在web进行访问http://localhost:8081进行登录，后再次验证)

## 安装配置Redis

参考链接：<https://hub.docker.com/_/redis/>

Docker Pull Command

docker pull redis

**start a redis instance**

$ docker run --name some-redis -d redis

**connect to it from an application**

$ docker run --name some-app --link some-redis:redis -d application-that-uses-redis

**... or via redis-cli**

$ docker run -it --link some-redis:redis --rm redis redis-cli -h redis -p 6379

// TODO

# 常见错误

## 启动centos镜像报错

[bage@promote Desktop]$ docker run centos

WARNING: IPv4 forwarding is disabled. Networking will not work.

## Redis启动后无法进行访问

参考链接：

<https://blog.csdn.net/weixin_39800144/article/details/79235460>

<https://blog.csdn.net/flymoringbird/article/details/80717700>