Docker

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0.1 Context

0.2 Learned in this study

0.3 Things to explore

- Run a swarm example on multiple machines/VMs

1 Overview

2 Notes

- Image: An executable package (code, runtime, libraries, etc.)
- Container: An runtime instance of an image
- Repository: Collection of images
- Registry: Collection of repositories
- Task: A single container running in a service
- Stack: A group of interrelated services that share dependencies
- docker swarm init

3 Cheat sheet

3.1 List Docker CLI commands

docker
docker container –help

3.2 Display Docker version and info

docker –version
docker version
docker info

3.3 Execute Docker image

docker run hello-world

3.4 List Docker images

docker image ls

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

docker container ls
docker container ls –all
docker container ls -aq

docker build -t friendlyhello . # Create image using this directory's Dockerfile
docker run -p 4000:80 friendlyhello # Run "friendlyname" mapping port 4000 to 80
docker run -d -p 4000:80 friendlyhello # Same thing, but in detached mode
docker container ls # List all running containers
docker container ls -a # List all containers, even those not running
docker container stop # Gracefully stop the specified container
docker container kill # Force shutdown of the specified container
docker container rm # Remove specified container from this machine
docker container rm $(docker container ls -a -q) # Remove all containers
docker image ls -a # List all images on this machine
docker image rm # Remove specified image from this machine
docker image rm $(docker image ls -a -q) # Remove all images from this machine
docker login # Log in this CLI session using your Docker credentials
docker tag username/repository:tag # Tag for upload to registry
docker push username/repository:tag # Upload tagged image to registry
docker run username/repository:tag # Run image from a registry

docker stack ls # List stacks or apps
docker stack deploy -c # Run the specified Compose file
docker service ls # List running services associated with an app
docker service ps # List tasks associated with an app
docker inspect

4 Inspect task or container

docker container ls -q # List container IDs
docker stack rm # Tear down an application
docker swarm leave –force # Take down a single node swarm from the manager

5 See also

6 References