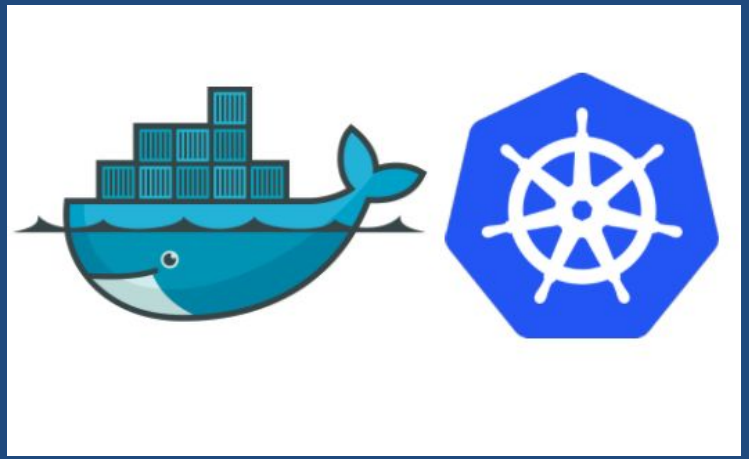
Docker Architecture



Session 3

16th June 2018

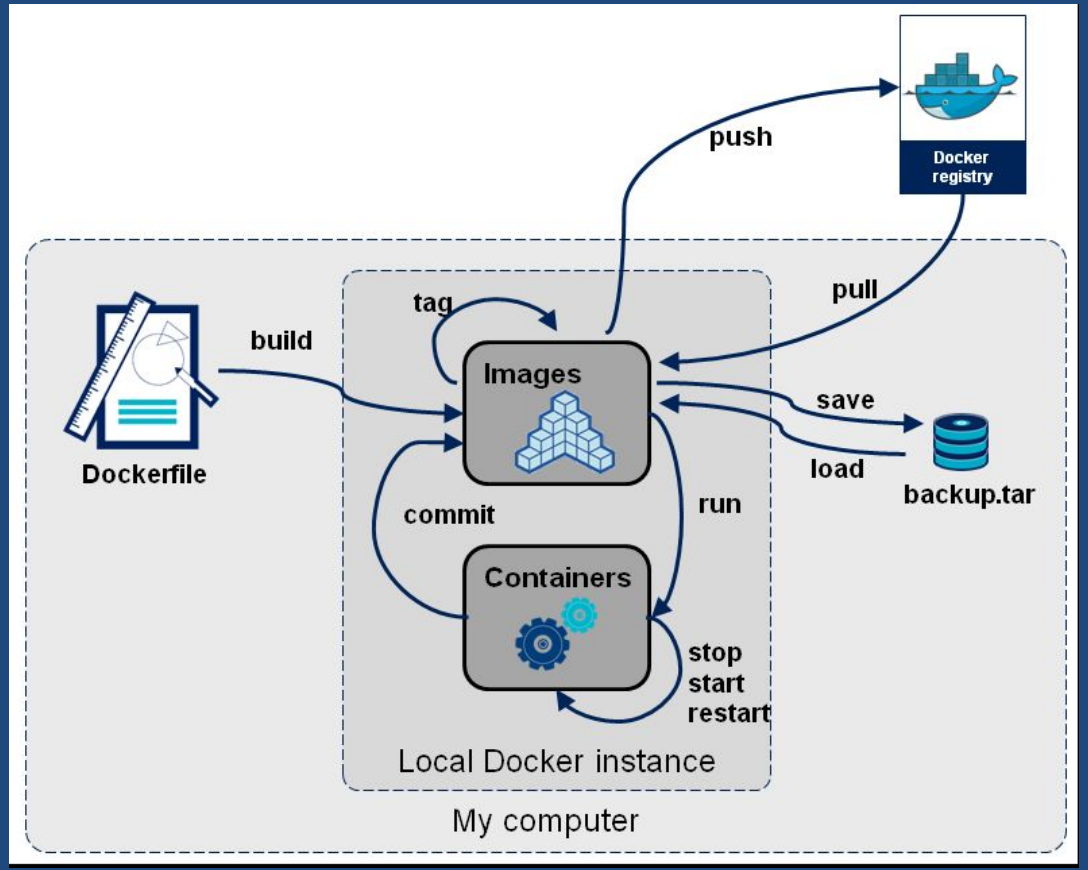
Rama Krishna Bhupathi

Docker Architecture

Docker uses a client server architecture and remote API to manage and create containers and images.

Docker containers are created from Docker Images

Relationship is analogous to classes(images) and objects(containers)



Docker Image

What does the image contain?

Contains a set of instructions in A file called Dockerfile.

The commands are executed in the order mentioned.

A simple one looks like this:

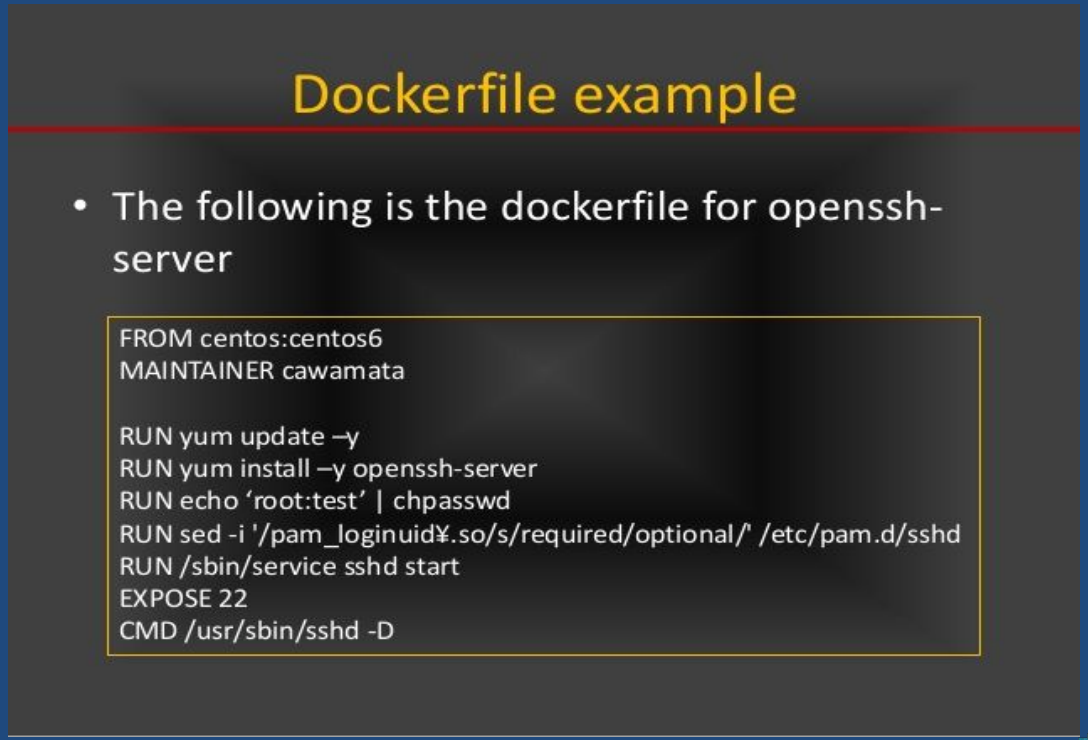
```
FROM nginx:alpine
COPY . /usr/share/nginx/html
```

INSTRUCTION	DESCRIPTION
FROM	This must be the first instruction in the Dockerfile and identifies the image to inherit from.
MAINTAINER	Provides visibility and credit to the author of the image
RUN	Executes a Linux command for configuring and installing
ENTRYPOINT	The final script or application used to bootstrap the container, making it an executable application
CMD	Provide default arguments to the ENTRYPOINT using a JSON array format
LABEL	Name/value metadata about the image
ENV	Sets environment variables
COPY	Copies files into the container
ADD	Alternative to copy

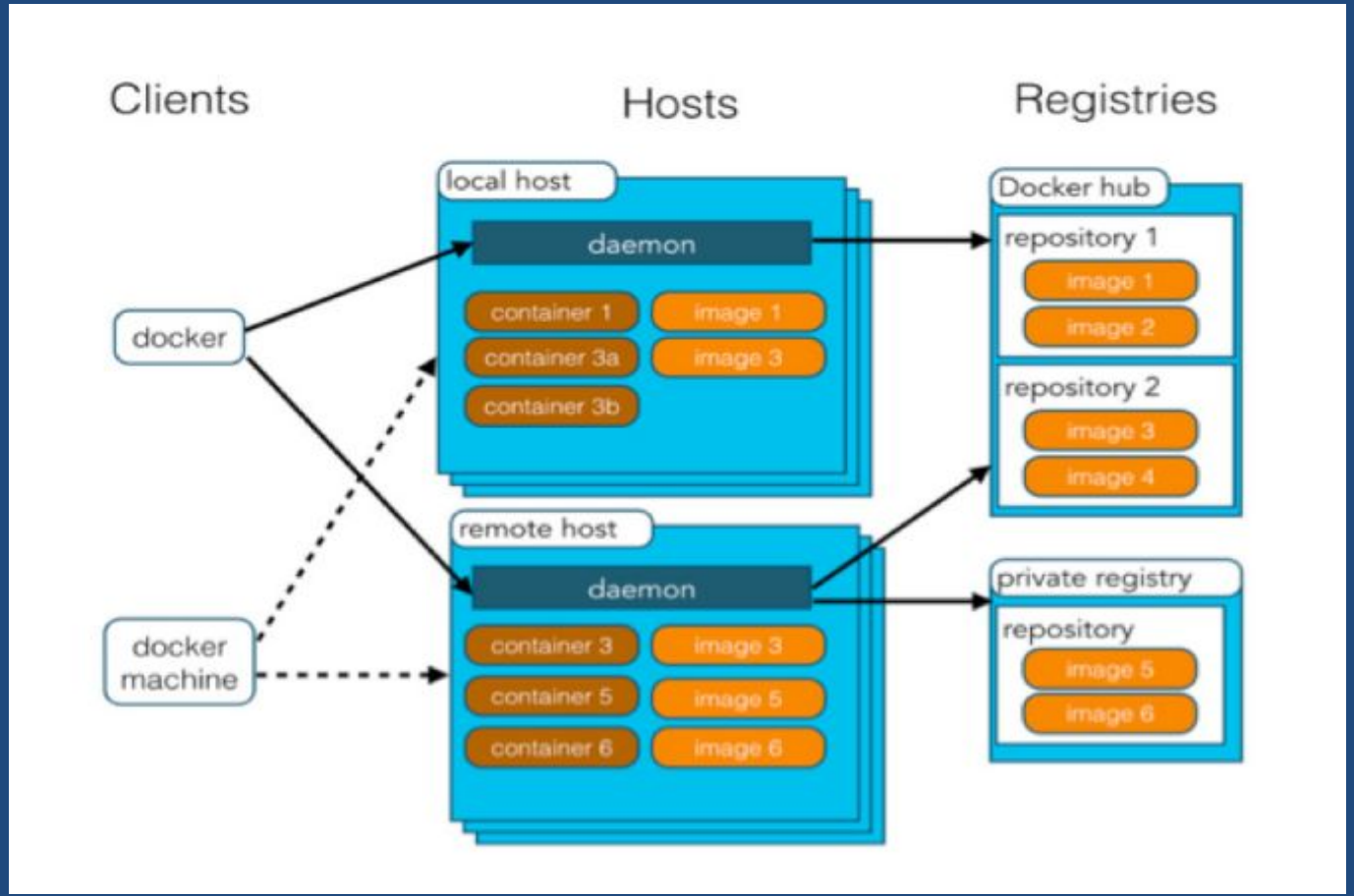
Dockerfile

https://docs.docker.com/get-started/#test-docker-installation

Dockerfile defines what goes on in the environment inside your container like Packages to install , download , configure and run.



Docker Architecture



Docker Registry

A docker registry is a storage and content delivery system, holding named Docker images, available in different tagged versions.

By Default the Docker registry is docker.io or hub.docker.com

Go to https://hub.docker.com/_/mysql/

Click on the Dockerfile for MySQL to examine the contents.

Docker Exercise

Let us build a static web server using docker containers.

Go to

https://www.katacoda.com/courses/docker/create-nginx-static-web-server

Let us first modify the index.html and use a customized “Hello World”. Edit the file and put your name next to the “Hello World”.

Follow thru the steps

Course Materials

All the course materials are available on GitHub. Access the following URL.

https://github.com/ramakris/gentfg-kubernetes

Questions ?