

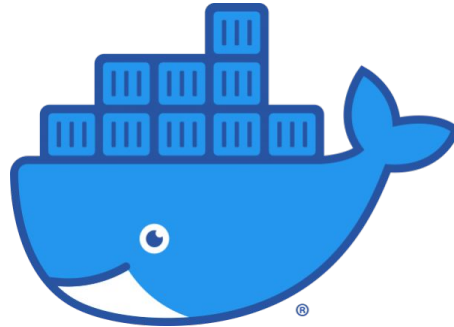
# Contenerization

# What is it?

- Virtual Machine



- Container



# Why do we need it?

- development environment
- managing server

# Docker during development

- automatize environment
- isolate execution
- connect several components of you application

# What is a Dockerfile ?

- instructions to build a docker image
- some commands :
  - FROM
  - COPY
  - RUN
  - ENV
  - EXPOSE
  - CMD

# How does it works?

- Docker daemon
- Docker images, container, services, networks
- Docker registries

# How developers use it?

- add a Dockerfile to the root of your project
- find a base image to extend
- copy your files in the container and write a run command
- test your image on your computer

# Docker in production

- Build docker image in CI/CD
- Put this image in a registry
- Run you image where you want with you environment variables



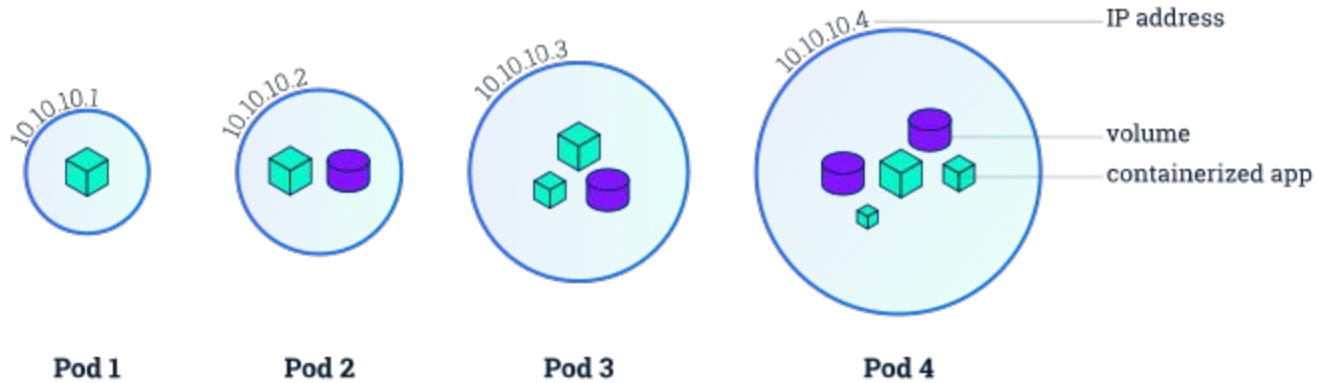
# Docker in production

- manage container health
- upgrade your software version
- auto rerun in case of crash

# How to deploy with docker?

- running directly docker on your server
- docker-compose/ docker swarm
- kubernetes
- automatic cloud provider services (cloud run, elastic bean stalk)

# What is a cluster?



# What is a cluster?

- manage application on several servers
- use load balancing and run multiple instances of your app
- upgrade software versions without down time

# Your time!

You have a server and a database

Put them in docker