

# Microservices development session



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# Microservices (1)

## Concepts

1. SaaS is divided in small services
2. Services should be minimal and complete
3. Services should be interchangeable
4. Services should communicate through language agnostic APIs

# Microservices (2)

## Pros

- Separation of concerns
- It fits perfectly Unit Testing
- Reusability
- Resilience

## Cons

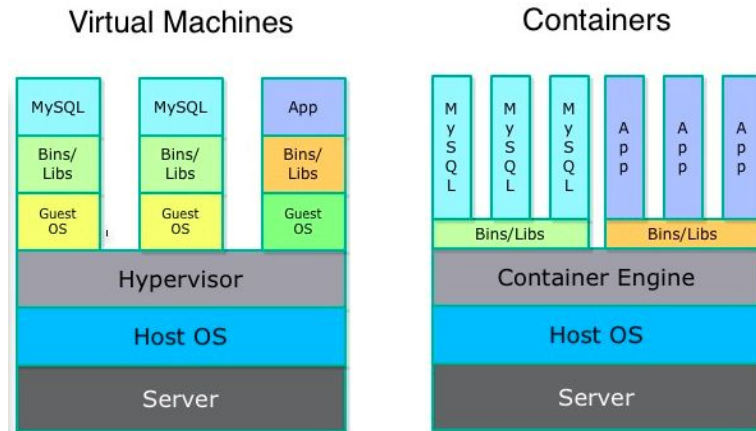
- Microservices orchestration is complex (Mesosphere, Kubernetes etc.)



## Dockerfile:

```
1 FROM ubuntu:14.04
2 MAINTAINER Marco Capuccini, marco.capuccini@farmbio.uu.se
3
4 RUN apt-get update && apt-get install --yes openms
5 ADD entrypoint.sh /
6 ADD params /params
7 ENTRYPOINT ["/entrypoint.sh"]
8
```

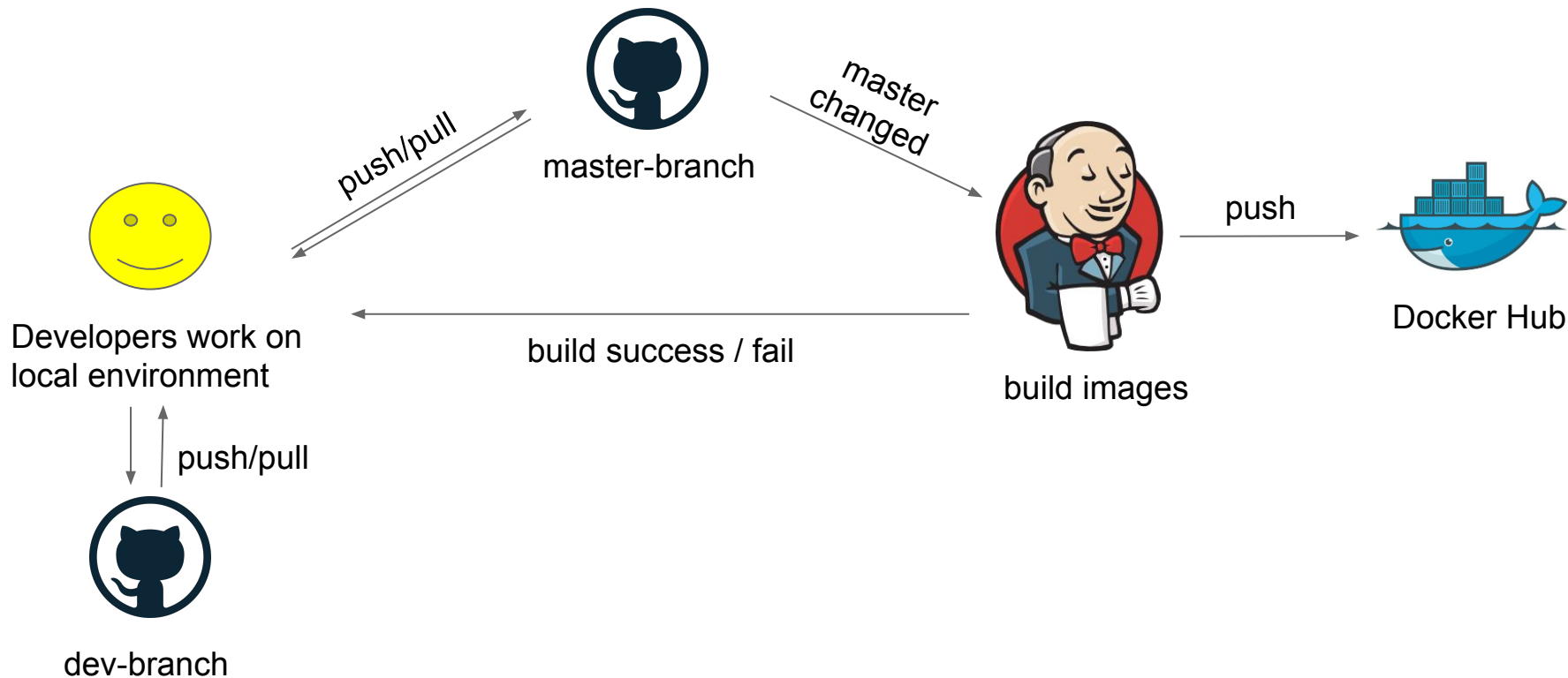
```
$ docker build -t openms .
$ docker run openms [args...]
```



Only Linux kernel supports containers:

- For Windows and Mac hosts virtualization is needed
- Windows apps can't be "dockerized"

# Docker microservices lifecycle



# Hands-on session

Instructions:

<https://github.com/phnmnl/workflow-demo>