

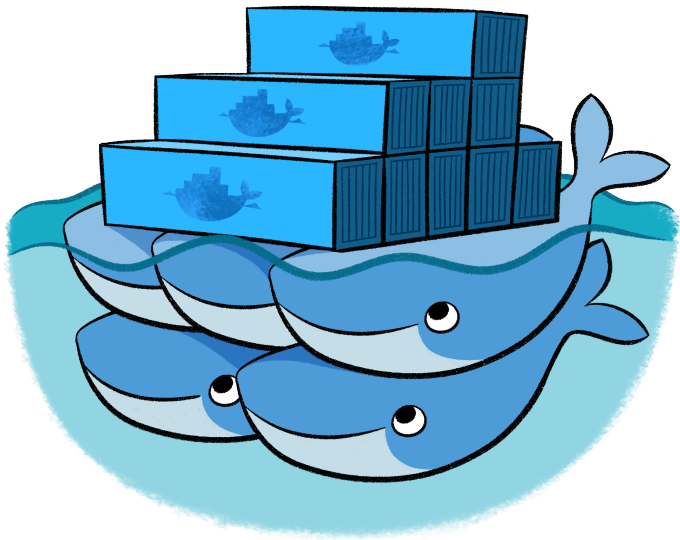
Docker on a developer's desktop

JavaCamp #13

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Welcome

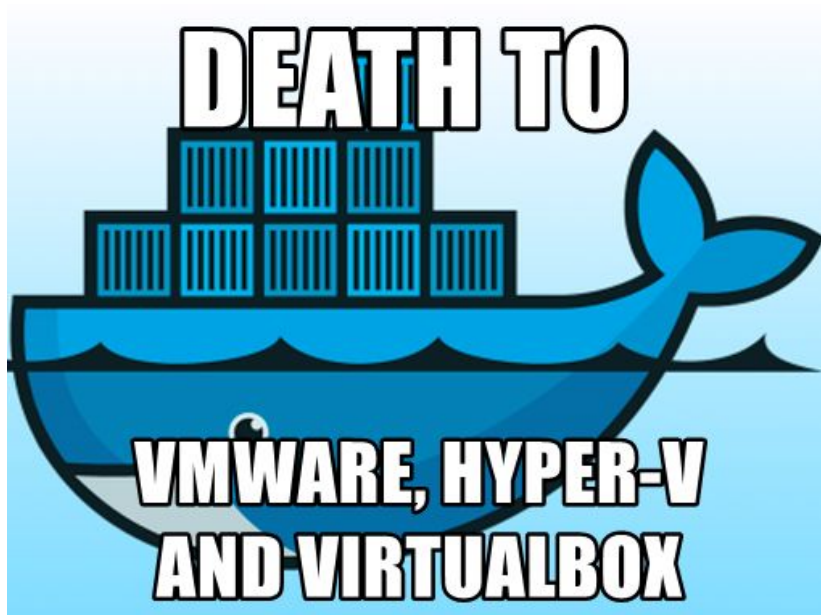


Common theme

- ▶ It runs on my machine.
- ▶ We **don't** ship your machine!
- ▶ Windows on a workstation, Linux on the server
- ▶ Different configuration on each env
- ▶ Technical gap between teams:
- ▶ don't expect a tester to configure a JDBC driver
- ▶ don't expect your sysadmin to debug your code
- ▶ don't expect your developer to configure the routing
- ▶ why does it build on machine A and not on B nor C

Virtualization

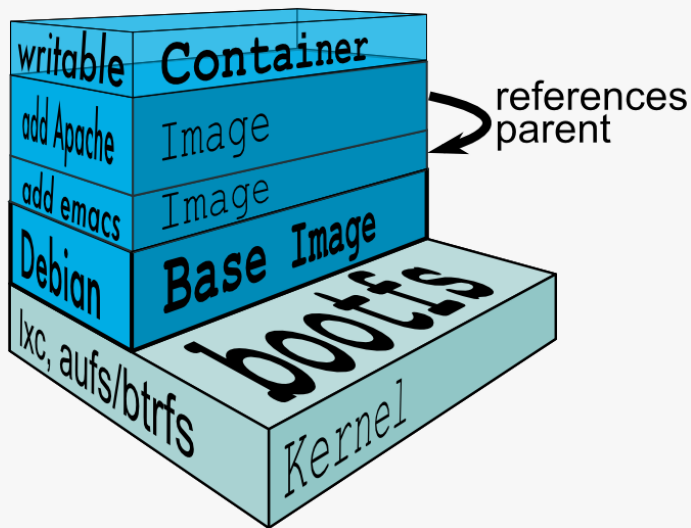
- ▶ A resource hog
- ▶ Disk
- ▶ Memory
- ▶ Slightly Awkward to configure
- ▶ Once set up, begins to deteriorate
- ▶ PITA to redeploy a clean environment
- ▶ I'm quite confident that I will spin up a full docker env in the time that takes you to spin up one vmdk.



Common Advantages

- ▶ All containers share the same base image - less download
- ▶ Updates are just diff snapshots
- ▶ Semi platform independent
- ▶ Provides a comfortable level of isolation

Docker is like a Ogre: it has layers



On a desktop?

- ▶ Run insecure applications in an isolated, yet seamless environment
- ▶ Run the same scenario on the same configuration, on different app versions, at the same time



Webbrowser with an insecure plugin - Dockerfile

```
FROM debian
RUN apt-get update && apt-get install -y iceweasel
RUN export uid=1000 gid=1000
RUN mkdir -p /home/developer
RUN echo "developer:x:${uid}:${gid}:Developer,,,:/h"
RUN echo "developer:x:${uid}:" >> /etc/group && \
RUN chown ${uid}:${gid} -R /home/developer
RUN wget --no-check-certificate https://swdl.blueje
RUN dpkg -i bjnplugin_2.90.399.5-1_amd64.deb
USER developer
ENV HOME /home/developer
CMD /usr/bin/iceweasel
```

Webbrowser with an insecure plugin - Running

```
docker build -t bj - < Dockerfile.bj
docker run \
  --env=DISPLAY=$DISPLAY \
  --volume=/tmp/.X11-unix:/tmp/.X11-unix \
  --rm \
  --tty \
  bj
```

Endless possibilities

Exaplme docker code

```
1 func init() {  
2     dispatch = map[string]func(string) ....  
3         "user"      : parseString,  
4         "onbuild"   : parseSubCommand,  
5         "workdir"   : parseString,  
6         "env"       : parseEnv,  
7         "maintainer": parseString,  
8         "from"      : parseString,  
9         "add"       : parseMaybeJSONToList,  
10        "copy"      : parseMaybeJSONToList,  
11        "run"       : parseMaybeJSON,  
12        "cmd"       : parseMaybeJSON,  
13        "entrypoint": parseMaybeJSON,  
14        "expose"    : parseStringsWhitespaceDelimited,  
15        "volume"    : parseMaybeJSONToList,  
16        "insert"    : parseIgnore,  
17 }
```

Thanks @GrzegorzNosek

Thank You

