Contain Yourself!

The Exciting World of Docker

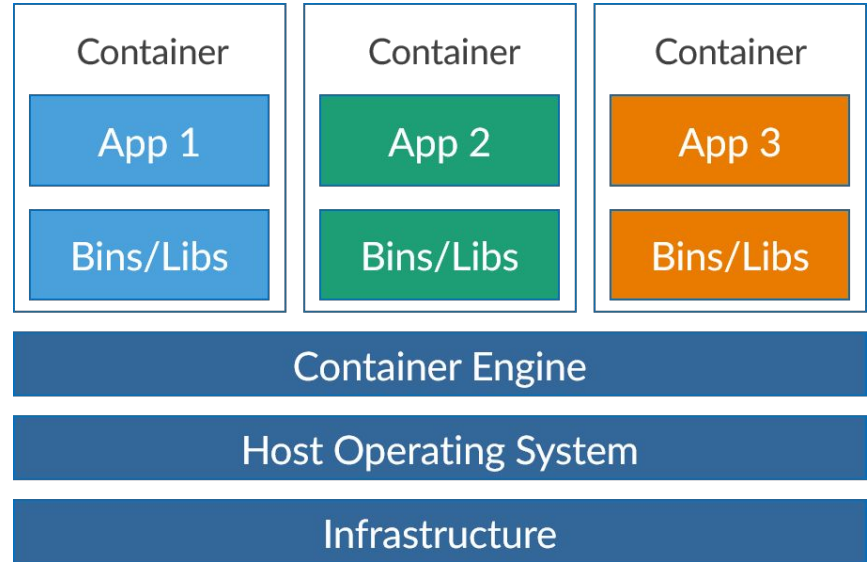*Megan Robertson - Data Scientist*
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What is a Container?

- "standard unit of software that packages up code and all its dependencies" (Docker)

Why Use Containers?

- Run reliably on different environments
- Divide into multiple modules

Vocabulary

Image

- Executable package with everything you need
- Packages, code, config file, etc.

Container

- "Runtime instance of an image" (Docker)
- Run image to launch

Docker

- Tool that simplifies building applications via containers
- Open source so can be expanded

Dockerfile

```
FROM r-base
COPY . /usr/local/src/my_code
WORKDIR . /usr/local/src/my_code
RUN R CMD install.packages('data.table', 'string', 'tidyr')
```

Makefile

```
.PHONY: build shell push

build:
	sudo docker build --file='Dockerfile' -t gcr.io/your_host/my_container/R_code:latest .

run:
	sudo docker run -it -e  gcr.io/your_host/my_container/R_code::latest bash -c "./cron.sh -c config.ini"
```