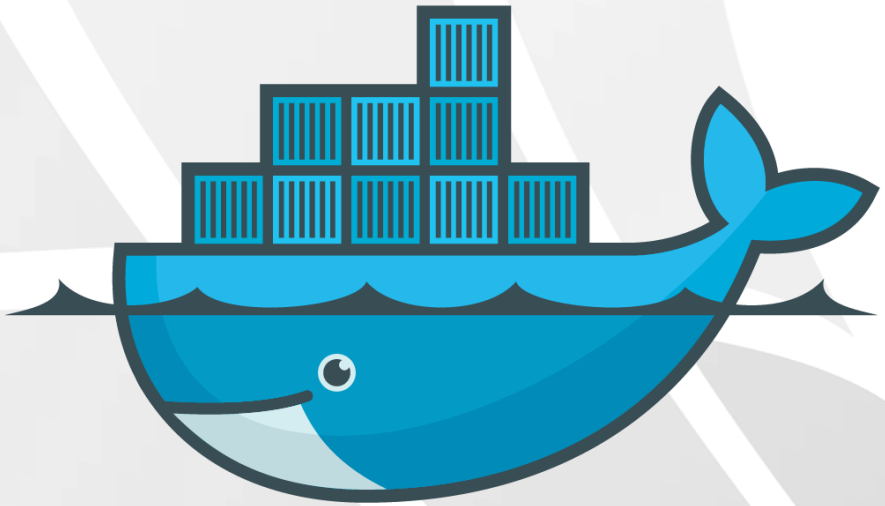
SELA

Module 05: Docker Basics

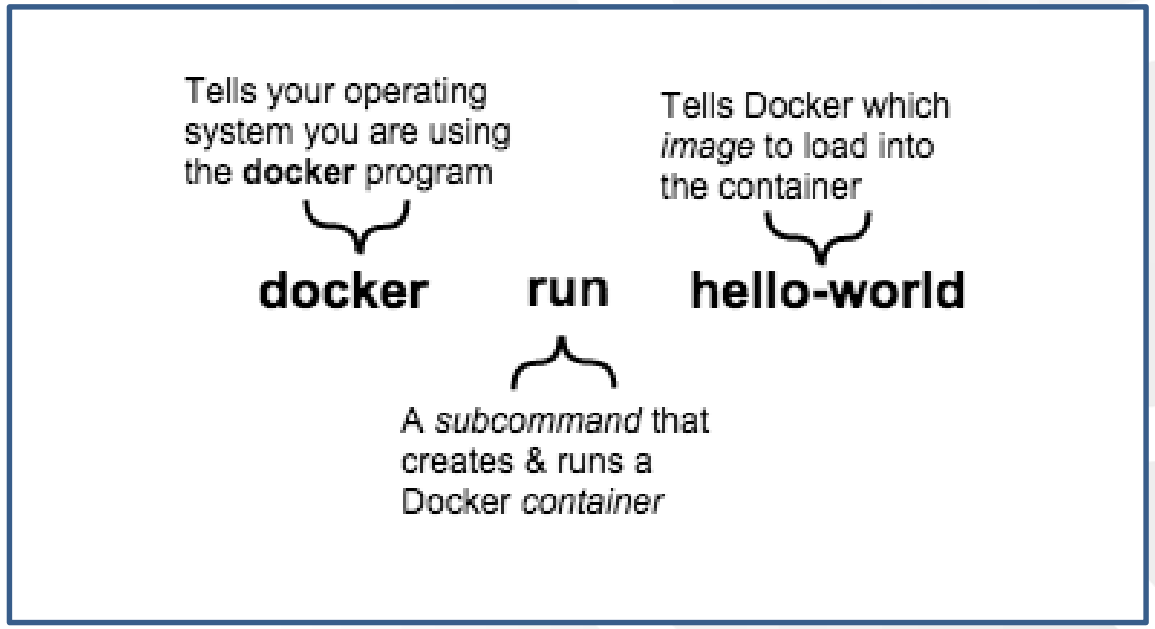
Docker Workshop



Agenda

- Docker CLI
- $ docker run
- $ docker ps
- $ docker images
- $ docker attach
- $ docker exec
- $ docker rm
- $ docker rmi
- $ docker save
- $ docker load
- $ docker commit

The Docker CLI



- Docker commands reference : https://docs.docker.com/engine/reference/commandline/cli/

$ docker run

```
$ docker run [OPTIONS] IMAGE[:TAG|@DIGEST] [COMMAND] [ARG...]
```

- Create a new container based in an specific image
- If the image is not found locally, it's pulled from the Docker Hub
- Each container have it's own Id
- The container exits once the command running inside of it exits
- Detached vs Foreground

$ docker ps

```
$ docker ps
```

- Will list the running container in your host

```
$ docker ps
CONTAINER ID    IMAGE         COMMAND                  CREATED       STATUS       PORTS                    NAMES
5f35bb815832    registry:2    "/bin/registry /etc/d"   8 months ago  Up 3 hours   0.0.0.0:5000->5000/tcp   registry
```

- "docker ps -a" command show all containers that have run in the past, but are not necessarily running now.

$ docker images

```
$ docker images
```

- Show all top level images, their repository and tags, and their size.
- Intermediate layers are not shown by default.
- To see the intermediate layer as well use the flag “-a”

$ docker rm

```
$ docker rm <container-id>
```

- Delete a container
- The container must be stopped in order to be removed
- The flag “-f” can be used to remove running containers
- You can remove all the containers at once using the command:
  - $ docker rm $(docker ps -a -q)

$ docker rmi

```
$ docker rmi <image-id>
```

- Delete the specified image
- You can delete multiple images in the same commands passing them as arguments, for example:

  $ docker rmi 18wj2 as83j a92k4

- You can remove all the images at once using the command:

  $ docker rmi $(docker images -a -q)

Questions

Lab 01: Basic commands

Lab

https://gitlab.com/sela-docker-workshop/lab-01

$ docker attach

```
$ docker attach <container-id>
```

- Attaches to PID1 inside the container
- To detach from the container use “Ctrl + P + Q”
- Using “Ctrl + C” will stop the process in the container (and therefore stop the container itself)

$ docker exec

```
$ docker exec <container-id> <tool>
```

- Runs a new command (process) in a running container
- Useful when the PID1 is not a shell
- You can use the flag -it to run the command interactively

Questions

Lab 02: Running commands inside the container

Lab

https://gitlab.com/sela-docker-workshop/lab-02

$ docker save

```
$ docker save -o <path/to/file.tar> <image-id>
```

- Save a container image in a file
- Useful to share containers without a container registry

$ docker load

```
$ docker load -i <path/to/file.tar>
```

- Load a container image from a file
- Useful to share containers without a container registry

$ docker commit

```
$ docker commit <container-id> <new-image-name>
```

- Save container status creating a new image
- By default, the container being committed and its processes will be paused while the image is committed
- Use the flag “-p=false” to avoid this behavior

Questions

Lab 03: Updating and Sharing Containers

Lab

https://gitlab.com/sela-docker-workshop/lab-03