From Zero to Docker

Training | 2019.05.16 | Mário Dagot, Jorge Dias

Docker is an open platform for developing, shipping, and running applications. Through the course of this training we will guide you to the most common feature and use cases of docker. Take this as an introduction and an opportunity to dive into the docker world.
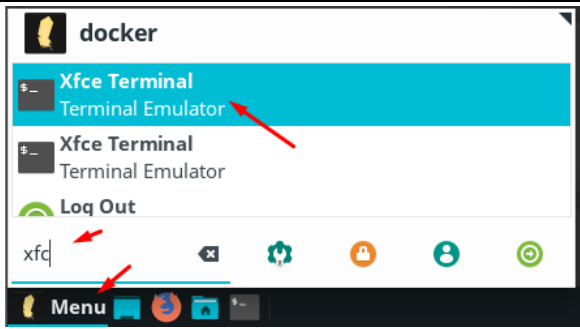
AGENDA

- 01 - Install Vim and Terminator and VSCode
- 02 - Install Docker CE for Ubuntu
- 03 - Hello from Busybox
- 04 - Webapp with Docker
- **05a - Webapp with Docker - My first Dockerfile – Nginx**
- 05b.1 - Webapp with Docker - My first Dockerfile - Dotnet Core
- 05b.2 - Webapp with Docker - My first Dockerfile MultiStage - Dotnet Core
- 06 - Save and Restore and Push to Docker Hub
- 07a - Webapp with database integration - My first network – SpringBoot
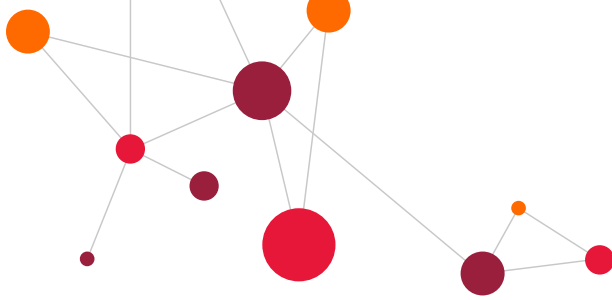- 07b - Webapp with database integration - My first docker-compose – SpringBoot

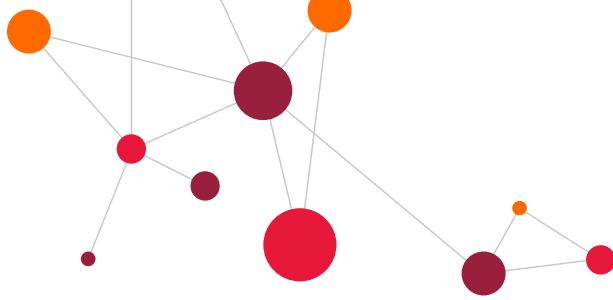## 05A - WEBAPP WITH DOCKER - MY FIRST DOCKERFILE – NGINX

Objective

- Containerize a static web application
- Run the containerized web application
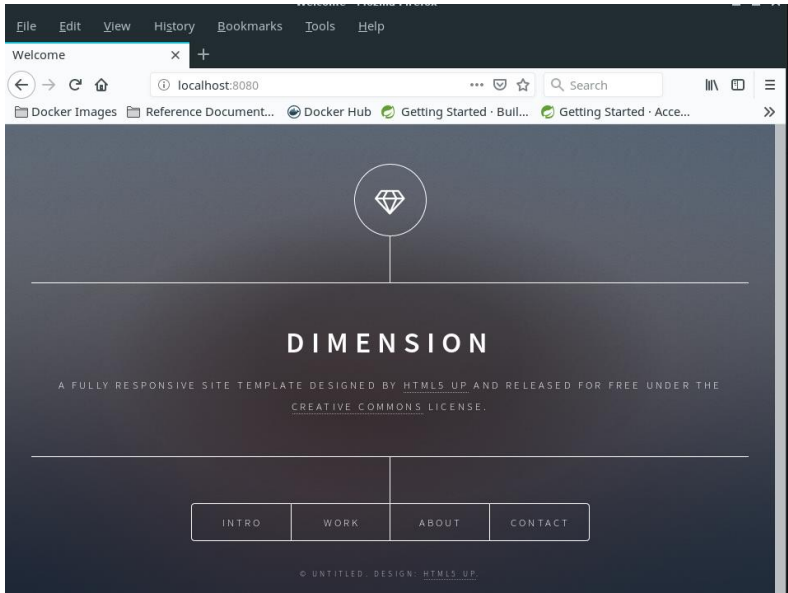
Step by Step

Open a terminal windows	
Let's clone an existing static web site	`docker` `~` `cd ~/workspace/` `docker` `~` `workspace` `git clone https://github.com/cloudacademy/static-website-example.git`

```
Cloning into 'static-website-example'...
remote: Enumerating objects: 69, done.
remote: Total 69 (delta 0), reused 0 (delta 0), pack-reused 69
Unpacking objects: 100% (69/69), done.
```

`docker` ~ `workspace` `ls -lrt`

```
total 20
drwxr-xr-x 7 root    root    4096 mai  8 22:39 myapp
drwxr-xr-x 5 docker docker 4096 mai  8 23:14 myapp-java
drwxrwxr-x 6 docker docker 4096 mai  9 14:30 gs-accessing-data-mysql-complete
drwxrwxr-x 6 docker docker 4096 mai  9 15:55 gs-accessing-data-mysql
drwxrwxr-x 6 docker docker 4096 mai 11 15:01 static-website-example
```

`docker` ~ `workspace` `cd static-website-example/`
`docker` ~ `workspace` `static-website-example` `ls -lrt`

```
total 52
-rw-rw-r-- 1 docker docker   648 mai 11 15:01 README.MD
-rw-rw-r-- 1 docker docker 17128 mai 11 15:01 LICENSE.MD
drwxrwxr-x 6 docker docker  4096 mai 11 15:01 assets
-rw-rw-r-- 1 docker docker 14522 mai 11 15:01 index.html
drwxrwxr-x 2 docker docker  4096 mai 11 15:01 images
drwxrwxr-x 2 docker docker  4096 mai 11 15:01 error
```

Let's create the docker image using a Dockerfile
 	
The image will contain nginx and everything from our root folder to the html folder of nginx.
	`docker` ~ `workspace` `static-website-example` `vi Dockerfile`
	`docker` ~ `workspace` `static-website-example` `cat Dockerfile`
	
	`FROM nginx:latest`
	`COPY . /usr/share/nginx/html/`

Build the image	`docker` ~ `workspace` `static-website-example` `docker build --tag mywebsite`
	`.`
	`Sending build context to Docker daemon  2.162MB`
	`Step 1/2 : FROM nginx:latest`
	` ---> 53f3fd8007f7`
	`Step 2/2 : COPY . /usr/share/nginx/html/`
	` ---> 8c031f7a5cfb`
	`Successfully built 8c031f7a5cfb`
	`Successfully tagged mywebsite:latest`

	`docker` ~ > workspace > **static-website-example** > `docker images	grep mywebsite`  `mywebsite latest 8c031f7a5cfb 5 seconds ago 111MB`

Run the image	`docker` ~ > workspace > **static-website-example** > `docker run --rm -d --name mywebsite -p 8080:80 mywebsite`
	
	`159f37d89f402722656cca67c68a40ddd88215db078208845eed9c1e50908492`

Open your browser and check the website	

Lessons learned

Out of scope, but we pulled a basic webapp from github: https://github.com/cloudacademy/static-website-example.

We learned to create a Dockerfile that allowed us to pack the static web site in a sharable docker image.

We run it and saw out beautiful creation.

Revision History

Version	Date	Author	Description
1.0	2019.05.01	Mário Dagot, Jorge Dias	Initial Version