

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

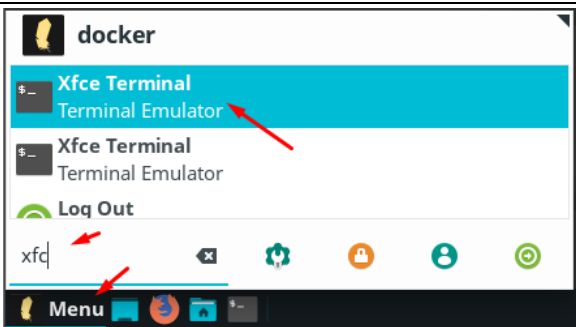
- 01 - Install Vim and Terminator and VSCode
- 02 - Install Docker CE for Ubuntu
- 03 - Hello from Busybox
- 04 - Webapp with Docker
- 05a - Webapp with Docker - My first Dockerfile – Nginx
- 05b.1 - Webapp with Docker - My first Dockerfile - Dotnet Core
- 05b.2 - Webapp with Docker - My first Dockerfile 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

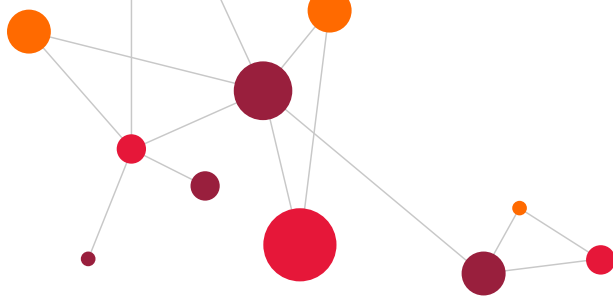
06 - SAVE AND RESTORE AND PUSH TO DOCKER HUB

Objective

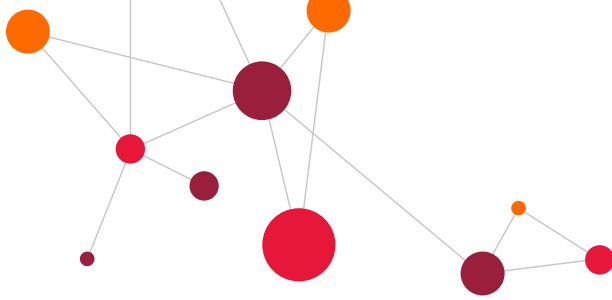
- Save and restore a docker image
- Push a local docker image to docker hub

Step by Step

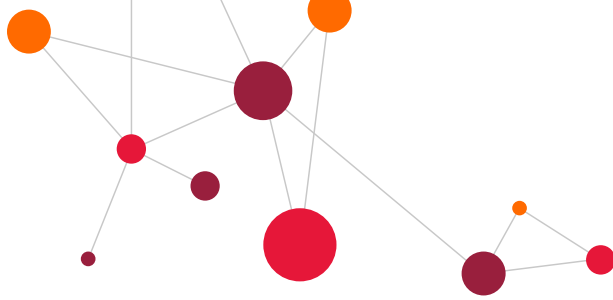
Open a terminal windows															
List docker images	<div><div>docker</div><div>~</div><div>docker images</div></div> <table><thead><tr><th>REPOSITORY</th><th>TAG</th><th>IMAGE ID</th><th>CREATED</th><th>SIZE</th></tr></thead><tbody><tr><td>my-custom-nginx</td><td>latest</td><td>67c388f94320</td><td>3 hours ago</td><td>109MB</td></tr></tbody></table>					REPOSITORY	TAG	IMAGE ID	CREATED	SIZE	my-custom-nginx	latest	67c388f94320	3 hours ago	109MB
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE											
my-custom-nginx	latest	67c388f94320	3 hours ago	109MB											



	<pre> nginx latest 53f3fd8007f7 9 hours ago 109MB busybox latest af2f74c517aa 5 weeks ago 1.2MB </pre>
Save docker image to file	<pre> docker ~ docker save busybox > busybox.tar docker ~ ls -lrt total 1432 drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Documents drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Public drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Desktop drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Templates drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Music drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Videos drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Pictures drwxr-xr-x 2 docker docker 4096 mai 8 08:08 Downloads -rw-r--r-- 1 docker docker 660 mai 8 09:57 index.html -rw-rw-r-- 1 docker docker 57 mai 8 10:02 Dockerfile -rw-rw-r-- 1 docker docker 1424896 mai 8 12:39 busybox.tar </pre>
Load docker from file to local docker registry	<pre> docker ~ cat busybox.tar docker import - importedbusybox:mytag sha256:f2990efd90b32e94f0a8f92dd25ed85a89e4b4e73f9eb499bd9a01ee107613db docker ~ docker images REPOSITORY TAG IMAGE ID CREATED SIZE importedbusybox mytag f2990efd90b3 3 seconds ago 1.42MB my-custom-nginx latest 67c388f94320 3 hours ago 109MB nginx latest 53f3fd8007f7 9 hours ago 109MB busybox latest af2f74c517aa 5 weeks ago 1.2MB </pre>
Login to docker hub If you don't have an account you can create one for free. You just need a valid email address.	<pre> docker ~ docker login </pre> <p>Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com to create one.</p> <p>Username: dagot</p> <p>Password:</p> <p>WARNING! Your password will be stored unencrypted in <code>/home/docker/.docker/config.json</code>. Configure a credential helper to remove this warning. See https://docs.docker.com/engine/reference/commandline/login/#credentials-store</p> <p>Login Succeeded</p>



<p>We tag the image in order to identify the user, the image name and tag we wish to push.</p> <p>For this example we have: dagot – the account on docker hub my-custom-nginx – the image name v1 – the tag that is going to be associated with the image</p> <p>Use docker push to send the image to docker hub.</p>	<pre>docker tag my-custom-nginx:latest dagot/my-custom-nginx:v1</pre> <pre>docker push dagot/my-custom-nginx:v1</pre> <p>The push refers to repository [docker.io/dagot/my-custom-nginx] 88bb4ce19299: Pushed 332fa54c5886: Mounted from library/nginx 6ba094226eea: Mounted from library/nginx 6270adb5794c: Mounted from library/nginx v1: digest: sha256:52bdadd6502d77eb309a5320c7cc6914c15ccbeb68c5a4caf52a4d11ae8d8eb3 size: 1155</p>
<p>Looking at the docker hub account I can see the image was uploaded and is available.</p>	



Lessons learned

We learned to save a docker image to a tar format and then restore it.

We also learned how to push a local image to docker hub. This gives us the freedom to share easily all our dockerized application.

Revision History

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