

Atividade 06 - Criando aplicação web a partir do docker

Removendo container antigo e criando um novo a partir da imagem alpine

```
tiago @ tiago-VirtualBox:~$ docker rm container
container
tiago @ tiago-VirtualBox:~$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
tiago @ tiago-VirtualBox:~$ docker run --name container -it alpine
/ # apk install update
fetch https://dl-cdn.alpinelinux.org/alpine/v3.16/main/x86_64/APKINDEX.tar.gz
fetch https://dl-cdn.alpinelinux.org/alpine/v3.16/community/x86_64/APKINDEX.tar.g
z
v3.16.0-196-g143603d2cf [https://dl-cdn.alpinelinux.org/alpine/v3.16/main]
v3.16.0-201-g5317e55db7 [https://dl-cdn.alpinelinux.org/alpine/v3.16/community]
OK: 17026 distinct packages available
```

Dando upgrade após o update

```
/ # apk upgrade
(1/4) Upgrading alpine-baselayout-data (3.2.0-r20 -> 3.2.0-r22)
(2/4) Upgrading busybox (1.35.0-r13 -> 1.35.0-r14)
Executing busybox-1.35.0-r14.post-upgrade
(3/4) Upgrading alpine-baselayout (3.2.0-r20 -> 3.2.0-r22)
Executing alpine-baselayout-3.2.0-r22.pre-upgrade
Executing alpine-baselayout-3.2.0-r22.post-upgrade
(4/4) Upgrading ssl_client (1.35.0-r13 -> 1.35.0-r14)
Executing busybox-1.35.0-r14.trigger
OK: 6 MiB in 14 packages
```

Instalando pacote do servidor web Apache

```
/ # apk add apache2
(1/6) Installing libuuid (2.38-r1)
(2/6) Installing apr (1.7.0-r2)
(3/6) Installing expat (2.4.8-r0)
(4/6) Installing apr-util (1.6.1-r12)
(5/6) Installing pcre (8.45-r2)
(6/6) Installing apache2 (2.4.54-r0)
Executing apache2-2.4.54-r0.pre-install
Executing busybox-1.35.0-r14.trigger
OK: 9 MiB in 20 packages
```

Adicionando o pacote do mariaDB e o mariaDB client

```
/ # apk add mariadb mariadb-client
(1/16) Installing mariadb-common (10.6.8-r0)
(2/16) Installing libaio (0.3.112-r2)
(3/16) Installing ca-certificates (20211220-r0)
(4/16) Installing brotli-libs (1.0.9-r6)
(5/16) Installing nghttp2-libs (1.47.0-r0)
(6/16) Installing libcurl (7.83.1-r1)
(7/16) Installing libgcc (11.2.1_git20220219-r2)
(8/16) Installing xz-libs (5.2.5-r1)
(9/16) Installing ncurses-terminfo-base (6.3_p20220521-r0)
(10/16) Installing ncurses-libs (6.3_p20220521-r0)
(11/16) Installing linux-pam (1.5.2-r0)
(12/16) Installing pcre2 (10.40-r0)
(13/16) Installing libstdc++ (11.2.1_git20220219-r2)
(14/16) Installing libxml2 (2.9.14-r0)
(15/16) Installing mariadb (10.6.8-r0)
Executing mariadb-10.6.8-r0.pre-install
(16/16) Installing mariadb-client (10.6.8-r0)
Executing busybox-1.35.0-r14.trigger
Executing ca-certificates-20211220-r0.trigger
OK: 185 MiB in 36 packages
```

Atualizando apk para pesquisar php packages

```
/ # cd /etc/apk/  
/etc/apk # ls  
arch                protected_paths.d  world  
keys                repositories  
/etc/apk # apk add nano  
(1/1) Installing nano (6.3-r0)  
Executing busybox-1.35.0-r14.trigger  
OK: 186 MiB in 37 packages  
/etc/apk # nano repositories  
/etc/apk # apk update  
fetch https://dl-cdn.alpinelinux.org/alpine/v3.16/main/x86_64/APKINDEX.tar.gz  
fetch https://dl-cdn.alpinelinux.org/alpine/v3.16/community/x86_64/APKINDEX.tar.gz  
v3.16.0-196-g143603d2cf [https://dl-cdn.alpinelinux.org/alpine/v3.16/main]  
v3.16.0-201-g5317e55db7 [https://dl-cdn.alpinelinux.org/alpine/v3.16/community]  
OK: 17022 distinct packages available  
/etc/apk # apk search php  
php81-pdo_dblib-8.1.7-r0  
php8-imap-8.0.20-r0  
php8-ftp-8.0.20-r0  
php81-embed-8.1.7-r0  
php8-pspell-8.0.20-r0  
php8-phar-8.0.20-r0  
php81-enchanted-8.1.7-r0
```

Instalando pacotes php necessários na stack LAMP

```

/etc/apk # apk add php8 php8-mysqli phpmyadmin php8-apache2
(1/33) Installing php8-common (8.0.20-r0)
(2/33) Installing argon2-libs (20190702-r1)
(3/33) Installing libedit (20210910.3.1-r0)
(4/33) Installing php8 (8.0.20-r0)
(5/33) Installing php8-apache2 (8.0.20-r0)
(6/33) Installing php8-openssl (8.0.20-r0)
(7/33) Installing php8-mysqlnd (8.0.20-r0)
(8/33) Installing php8-mysqli (8.0.20-r0)
(9/33) Installing libbz2 (1.0.8-r1)
(10/33) Installing php8-bz2 (8.0.20-r0)
(11/33) Installing php8-ctype (8.0.20-r0)
(12/33) Installing php8-curl (8.0.20-r0)
(13/33) Installing libxau (1.0.9-r0)
(14/33) Installing libxdmcp (1.1.3-r0)
(15/33) Installing libxcb (1.15-r0)
(16/33) Installing libx11 (1.8-r0)
(17/33) Installing libxext (1.3.4-r0)
(18/33) Installing libice (1.0.10-r0)
(19/33) Installing libsm (1.2.3-r0)
(20/33) Installing libxt (1.2.1-r0)
(21/33) Installing libxpm (3.5.13-r0)
(22/33) Installing libpng (1.6.37-r1)
(23/33) Installing freetype (2.12.1-r0)
(24/33) Installing libjpeg-turbo (2.1.3-r1)
(25/33) Installing libwebp (1.2.2-r0)
(26/33) Installing php8-gd (8.0.20-r0)
(27/33) Installing oniguruma (6.9.8-r0)
(28/33) Installing php8-mbstring (8.0.20-r0)
(29/33) Installing php8-session (8.0.20-r0)
(30/33) Installing zstd-libs (1.5.2-r1)
(31/33) Installing libzip (1.8.0-r1)
(32/33) Installing php8-zip (8.0.20-r0)
(33/33) Installing phpmyadmin (5.2.0-r0)
Executing phpmyadmin-5.2.0-r0.post-install
*
* phpmyadmin has been installed to:
*   /usr/share/webapps/phpmyadmin
* phpmyadmin config file has been installed to:
*   /etc/phpmyadmin/config.inc.php
* If you use apache2:
*   1) Change the ownership of the config directory:
*       chown -R apache:apache /etc/phpmyadmin
*   2) See if you need to modify the apache2 config:
*       /etc/apache2/conf.d/phpmyadmin.conf
*   3) Restart apache2 when done.
*
Executing busybox-1.35.0-r14.trigger
OK: 283 MiB in 70 packages

```

Adicionando open rc para o gerenciamento do sistema de inicialização

```

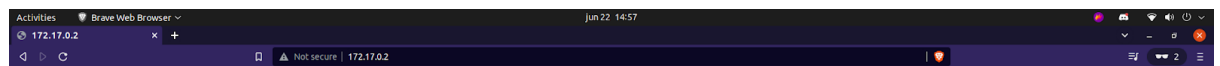
/etc/apk # apk add openrc
(1/3) Installing ifupdown-ng (0.12.1-r0)
(2/3) Installing openrc (0.44.10-r7)
Executing openrc-0.44.10-r7.post-install
(3/3) Installing mariadb-openrc (10.6.8-r0)
Executing busybox-1.35.0-r14.trigger
OK: 285 MiB in 73 packages
/etc/apk # rc-status
* Caching service dependencies ...
Service 'hwdrivers' needs non existent service 'dev'
Service 'machine-id' needs non existent service 'dev'
Runlevel: sysinit
Dynamic Runlevel: hotplugged
Dynamic Runlevel: needed/wanted
Dynamic Runlevel: manual

```

Inicializando servidor apache

```
/etc/apk # rc-service apache2 start
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/blkio/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpu/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpu,cpuacct/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpuacct/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpuset/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/devices/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/freezer/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/hugetlb/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/memory/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/net_cls/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/net_cls,net_prio/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/net_prio/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/perf_event/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/pids/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/rdma/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/systemd/tasks: Read-only file system
* You are attempting to run an openrc service on a
* system which openrc did not boot.
* You may be inside a chroot or you may have used
* another initialization system to boot this system.
* In this situation, you will get unpredictable results!
* If you really want to do this, issue the following command:
* touch /run/openrc/softlevel
ERROR: apache2 failed to start
/etc/apk # touch /run/openrc/softlevel
/etc/apk # rc-service apache2 start
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/blkio/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpu/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpu,cpuacct/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpuacct/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/cpuset/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/devices/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/freezer/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/hugetlb/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/memory/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/net_cls/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/net_cls,net_prio/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/net_prio/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/perf_event/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/pids/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/rdma/tasks: Read-only file system
/lib/rc/sh/openrc-run.sh: line 108: can't create /sys/fs/cgroup/systemd/tasks: Read-only file system
* Starting apache2 ...
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to suppress this message
```

E funciona!



It works!

Commitando imagem

```

tiago @ tiago-VirtualBox:~$ docker commit e1c121185b5d lamp-alpine
sha256:1106a2d733a0a651fcbdfd6f0c138d579cd28733c34fc8999e0b1542bf488e43
tiago @ tiago-VirtualBox:~$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
lamp-alpine          latest          1106a2d733a0    15 seconds ago  285MB
ubuntu/phpmyadmin    latest          e4bf6c24302b    21 hours ago    846MB
ubuntu               latest          27941809078c    2 weeks ago     77.8MB
alpine               latest          e66264b98777    4 weeks ago     5.53MB
bash                 latest          f6cdab9d8531    2 months ago    13MB

```

Logando em minha conta do docker Hub
Criando tag da imagem para o repositório desejado
Pushing para o repositório no Docker Hub

```


tiago @ tiago-VirtualBox:~$ docker logout
Removing login credentials for https://index.docker.io/v1/
tiago @ tiago-VirtualBox:~$ docker login
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.
Username: tiagotarso
Password:
Error response from daemon: Get "https://registry-1.docker.io/v2/": unauthorized: incorrect username or password
tiago @ tiago-VirtualBox:~$ docker login
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.
Username: tiagotarso
Password:
WARNING! Your password will be stored unencrypted in /home/raquel/snap/docker/1779/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
tiago @ tiago-VirtualBox:~$ docker tag lamp-alpine:latest tiagotarso/repositorio
tiago @ tiago-VirtualBox:~$ docker push tiagotarso/repositorio
Using default tag: latest
The push refers to repository [docker.io/tiagotarso/repositorio]
423656ef3e99: Pushing 156.3MB/279.6MB

24302eb7d908: Mounted from library/alpine
latest: digest: sha256:f34a174b5d8d58812d59b4635a31063f82ca9b9781ad86e64c2787d7932f7c62 size: 740


```


Por fim tenho minha imagem guardada remotamente



tiagotarso/repositorio

This repository does not have a description






Last pushed: 20 minutes ago

Docker commands

To push a new tag to this repository,

docker push tiagotarso/repositorio:tagname



Tags and Scans



 VULNERABILITY SCANNING - DISABLED

[Enable](#)

This repository contains 1 tag(s).

TAG	OS	PULLED	PUSHED
 latest		---	3 minutes ago

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