

01_dockerfiles

Information:

Общие советы: https://docs.docker.com/develop/develop-images/dockerfile_best-practices/

Язык докерфайлов:

<https://docs.docker.com/engine/reference/builder/#understand-how-arg-and-from-interact>

И про докер, и про файлы: <https://habr.com/ru/post/337306/>

<https://docs.docker.com/engine/reference/builder/>

The EXPOSE instruction does not actually publish the port. It functions as a type of documentation between the person who builds the image and the person who runs the container, about which ports are intended to be published. To actually publish the port when running the container, use the `-p` flag on `docker run` to publish and map one or more ports, or the `-P` flag to publish all exposed ports and map them to high-order ports. By default, EXPOSE assumes TCP. You can also specify UDP:

Necessary commands:

`docker build -f` - specify a different location for the Dockerfile

```
docker@Char:~$ sudo -i - переход на рут
root@Char:~#
```


```
docker rm --force $(docker ps -a -q) && docker rmi $(docker images -a -q)
docker-machine stop Char
```

```
docker-machine create --driver=virtualbox --virtualbox-memory "4096" --virtualbox-cpu-count
"4" New
```

```
docker exec -it [container-id] bash
```

Exercise 00

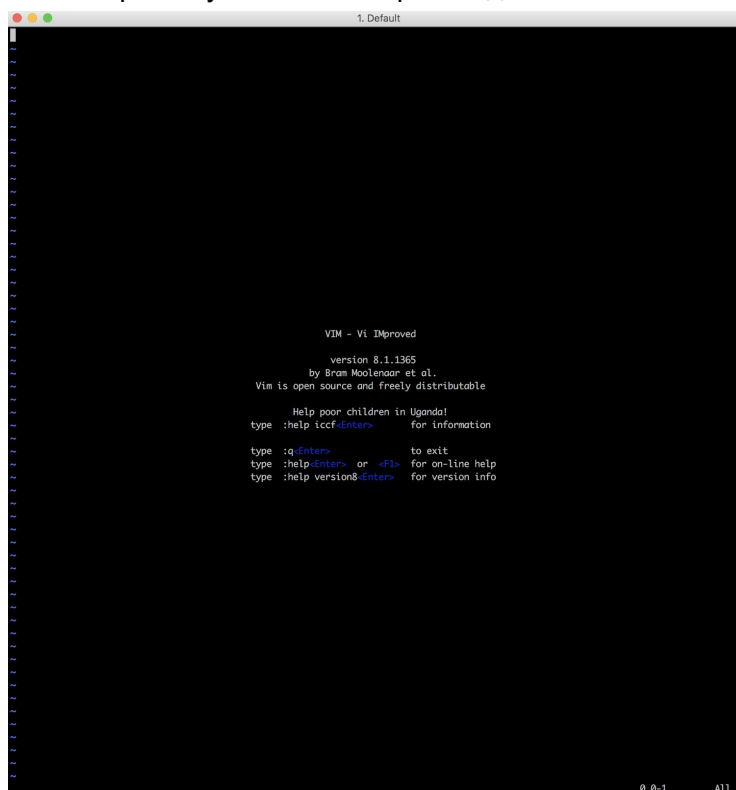
VI.1 Exercise 00: vim/emacs

	Exercise 00
Exercise 00: vim/emacs	
Turn-in directory : <i>ex00/</i>	
Files to turn in : Dockerfile	
Allowed functions : -	
Notes : n/a	

From an **alpine** image you'll add to your container your favorite text editor, **vim** or **emacs**, that will launch along with your container.

Из образа **alpine** (минимальный образ в линуксе) нужно запустить контейнер с нашим любимым текстовым редактором, **vim** или **emacs**, который запустится вместе с контейнером.

Result: при запуске контейнера мы должны зайти в **vim**



Commands to build and run:

`docker build -t 00 .` (ТУТ ВАЖНА ЭТА ТОЧКА ИМЕННО ЧЕРЕЗ ПРОБЕЛ) - имя можно поставить любое через флаг **t**, запуск из директории с **Dockerfile** или через флаг **-f** из другого места

Building the image:

```

Sending build context to Docker daemon 2.048kB
Step 1/3 : FROM alpine:latest
--> 961769676411
Step 2/3 : RUN apk add vim
--> Running in cd159398aeaa
fetch http://dl-cdn.alpinelinux.org/alpine/v3.10/main/x86_64/APKINDEX.tar.gz
fetch http://dl-cdn.alpinelinux.org/alpine/v3.10/community/x86_64/APKINDEX.tar.gz
(1/5) Installing lua5.3-libs (5.3.5-r2)
(2/5) Installing ncurses-terminfo-base (6.1_p20190518-r0)
(3/5) Installing ncurses-terminfo (6.1_p20190518-r0)
(4/5) Installing ncurses-libs (6.1_p20190518-r0)
(5/5) Installing vim (8.1.1365-r0)
Executing busybox-1.30.1-r2.trigger
OK: 40 MiB in 19 packages
Removing intermediate container cd159398aeaa
--> 99c94b24a097
Step 3/3 : ENTRYPOINT vim
--> Running in 393595c5866b
Removing intermediate container 393595c5866b
--> 5fdca8edc2e4
Successfully built 5fdca8edc2e4
Successfully tagged 00:latest


```

docker images				
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
<u>00</u>	latest	5fdca8edc2e4	35 seconds ago	34.7MB
alpine	latest	961769676411	6 weeks ago	5.58MB

`docker run -it 00`

Exercise 01

VI.2 Exercise 01: BYOTSS

	Exercise 01
Exercise 01: BYOTSS	
Turn-in directory : <i>ex01/</i>	
Files to turn in : Dockerfile + Scripts (if applicable)	
Allowed functions : -	
Notes : n/a	

From a **debian** image you will add the appropriate sources to create a TeamSpeak server, that will launch along with your container. It will be deemed valid if at least one user can connect to it and engage in a normal discussion (no far-fetched setup), so be sure to create your Dockerfile with the right options. Your program should get the sources when it builds, they cannot be in your repository.



For the smarty-pants using the official docker image of TeamSpeak is strictly FORBIDDEN, and will get you -42.

На основе образа **debian** нужно добавить все необходимое для создания TeamSpeak сервера, который будет запущен вместе с нашим контейнером. Задание будет выполнено, если хотя бы один юзер сможет подключиться к нему и попробовать задействовать, поэтому внимательно проследите за тем, что описали все необходимые настройки. Все настройки и программа должны запускаться по мере собраниа образа, их не должно быть в репозитории.

Официальный сайт для скачивания:

<https://files.teamspeak-services.com/releases/server/3.9.1/>

Result: Как минимум, информация по поводу подключения, которую нужно запоминать - полноценный запуск и функциональность не тестировала.

```

Wed Sep 4 19:02:58 UTC 2019 x86_64 Binary: 64bit
2019-10-02 16:45:20.181147|WARNING |ServerLibPriv | |The system locale is set to "C" this can cause unexp
ected behavior. We advice you to repair your locale!
2019-10-02 16:45:20.181608|INFO |ServerLibPriv | |Using hardware aes
2019-10-02 16:45:20.182612|INFO |DatabaseQuery | |ldbPlugin name: SQLite3 plugin, Version 3, (c)Team
Speak Systems GmbH
2019-10-02 16:45:20.183247|INFO |DatabaseQuery | |ldbPlugin version: 3.11.1
2019-10-02 16:45:20.183948|INFO |DatabaseQuery | |checking database integrity (may take a while)
2019-10-02 16:45:20.201868|INFO |SQL | |ldb_CreateTables() tables created

-----
I M P O R T A N T
-----
Server Query Admin Account created
loginname= "serveradmin", password= "mWj0qVFv"
-----

2019-10-02 16:45:20.237988|WARNING |Accounting | |Unable to open licensekey.dat, falling back to limit
ed functionality
2019-10-02 16:45:20.239325|INFO |Accounting | |Licensing Information
2019-10-02 16:45:20.240176|INFO |Accounting | |licensed to : Anonymous
2019-10-02 16:45:20.240720|INFO |Accounting | |ltype : No License
2019-10-02 16:45:20.241273|INFO |Accounting | |lstarting date : Tue Jan 1 00:00:00 2019
2019-10-02 16:45:20.241763|INFO |Accounting | |lending date : Fri Jan 31 00:00:00 2020
2019-10-02 16:45:20.242222|INFO |Accounting | |lmax virtualservers: 1
2019-10-02 16:45:20.243350|INFO |Accounting | |lmax slots : 32
2019-10-02 16:45:20.323039|INFO | | |lmyTeamSpeak identifier revocation list was downloade
d successfully - all related features are activated
2019-10-02 16:45:21.397896|INFO | | |lPuzzle precompute time: 1124
2019-10-02 16:45:21.399613|INFO |FileManager | |llistening on 0.0.0.0:30033, [::]:30033
2019-10-02 16:45:21.400707|INFO |VirtualSvrMgr | |lexecuting monthly interval
2019-10-02 16:45:21.401302|INFO |VirtualSvrMgr | |lreset virtualserver traffic statistics
2019-10-02 16:45:21.415606|INFO |VirtualServer | |llistening on 0.0.0.0:9987, [::]:9987
2019-10-02 16:45:21.416615|WARNING |VirtualServer | |l-----
-----
2019-10-02 16:45:21.417166|WARNING |VirtualServer | |lServerAdmin privilege key created, please use the li
ne below
2019-10-02 16:45:21.417553|WARNING |VirtualServer | |ltoken=RZygYWpuAVcHwR+XRpzHU2Rzn2guBBacBm64RZv
2019-10-02 16:45:21.418004|WARNING |VirtualServer | |l-----
-----

I M P O R T A N T
-----
ServerAdmin privilege key created, please use it to gain
serveradmin rights for your virtualserver. please
also check the doc/privilegekey_guide.txt for details.

token=RZygYWpuAVcHwR+XRpzHU2Rzn2guBBacBm64RZv
-----

2019-10-02 16:45:21.422457|INFO |Query | |llistening for query on 0.0.0.0:10011, [::]:10011
2019-10-02 16:45:21.423071|INFO |Query | |llistening for query ssh on 0.0.0.0:10022, [::]:10022
2019-10-02 16:45:21.423450|INFO |Query | |lcreating QUERY_SSH_RSA_HOST_KEY file: ssh_host_rsa_k
ey
2019-10-02 16:45:25.129719|INFO |CIDRManager | |lupdated query_ip_whitelist ips: 127.0.0.1/32, ::1/12
8,

```

Commands to build and run:

```
docker build -t 01 .
```

```
docker run -it -p 10011:10011 -p 30033:30033 -p 9987:9987/udp 01
```

Bloopers

Прошлый Dockerfile ex01:

```
FROM debian:latest
```

```
RUN apt-get update -y && apt-get upgrade -y
```

```
RUN apt-get -y install wget
```

```
RUN apt-get -y install tar
```

```
RUN apt-get -y install bzip2
```

```
WORKDIR /home/teamspeak
```

```
RUN wget
```

```
https://files.teamspeak-services.com/releases/server/3.9.1/teamspeak3-server\_linux\_x86-3.9.1.tar.bz2 && tar -xvf
```

```
teamspeak3-server_linux_x86-3.9.1.tar.bz2
```

```
RUN rm teamspeak3-server_linux_x86-3.9.1.tar.bz2
```

```
WORKDIR teamspeak3-server_linux_x86
```

```
ENV TS3SERVER_LICENSE=accept
```

```
EXPOSE 9987/udp
```

```
EXPOSE 10011/tcp
```

```
EXPOSE 30033/tcp
```

```
ENTRYPOINT ["/ts3server_minimal_runscript.sh"]
```

```
#docker build -t 01 . && docker run -it -p 10011:10011 -p 30033:30033 -p 9987:9987/udp 01
```

Выдавало ошибки:

```
./ts3server_minimal_runscript.sh: 4: exec: ./ts3server: not found
```

docker: Error response from daemon: OCI runtime create failed: container_linux.go:345: starting container process caused "exec: \"/ts3server_minimal_runscript.sh\": stat ./ts3server_minimal_runscript.sh: no such file or directory": unknown.

ЕМУ НЕ ПРАВИЛАСЬ ВЕРСИЯ - возможно, несовместимость версий

Все версии:

← → ↺ teamspeak3-server_linux_x86-3.9.1.tar.bz2

<https://files.teamspeak-services.com/releases/server/3.9.1/>

../		
teamspeak3-server_freebsd_amd64-3.9.1.tar.bz2	2019-07-02 14:27:53	7658029
teamspeak3-server_freebsd_x86-3.9.1.tar.bz2	2019-07-02 14:28:00	7589391
teamspeak3-server_linux_alpine-3.9.1.tar.bz2	2019-07-02 14:28:06	7905865
teamspeak3-server_linux_amd64-3.9.1.tar.bz2	2019-07-02 14:28:13	8907155
teamspeak3-server_linux_x86-3.9.1.tar.bz2	2019-07-02 14:28:21	8781184
teamspeak3-server_mac-3.9.1.zip	2019-07-02 14:28:27	6922883
teamspeak3-server_win32-3.9.1.zip	2019-07-02 14:28:33	7305018
teamspeak3-server_win64-3.9.1.zip	2019-07-02 14:28:39	8022476