

## TP 6 Compte rendu Fabien Mauhourat

### Question 1

Source : <https://docs.docker.com/install/linux/docker-ce/debian/>

```
sudo apt-get install \
  apt-transport-https \
  ca-certificates \
  curl \
  gnupg2 \
  software-properties-common
```

```
curl -fsSL https://download.docker.com/linux/debian/gpg | sudo apt-key add -
```

```
sudo add-apt-repository \
  "deb [arch=amd64] https://download.docker.com/linux/debian \
  $(lsb_release -cs) \
  stable"
```

```
sudo apt-get update
```

```
sudo apt-get install docker-ce docker-ce-cli containerd.io
```

### Question 2

1. docker pull alpine
2. docker run -it alpine

```
3. ip a | awk '/eth0$/ {print $2}'
172.17.0.2/16
```

```
df -h /
```

Filesystem	Size	Used	Available	Use%	Mounted on
overlay	4.6G	196.7M	4.2G	4%	/

```
ps -ef
```

PID	USER	TIME	COMMAND
1	root	0:00	/bin/sh

free -m

```
cat /proc/cpuinfo | grep ^proc
processor      : 0
processor      : 1
```

4. docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
326bd24af060	alpine	"/bin/sh"	10 minutes ago	Up 10 minutes

5. touch /tmp/toto.txt

6. exit

### Question 3

1. docker run -dt alpine
2. docker exec id /bin/sh -c "ip a | awk '/eth0\$/ {print \\$2}';df -h /;ps -ef;free -m;cat /proc/cpuinfo | grep ^proc"
3. docker exec id ls /tmp → non présent car nouveau container
4. docker exec id touch /tmp/titi.txt
5. docker stop id

### Question 4

1. docker ps -a
2. for i in \$(sudo docker ps -a -q | head -2); do sudo docker start \$i;done
3. for i in \$(sudo docker ps -a -q | head -2); do sudo docker exec \$i /bin/sh -c "ip a | awk '/eth0\$/ {print \\$2}';df -h /;ps -ef;free -m;cat /proc/cpuinfo | grep ^proc";done
4. for i in \$(sudo docker ps -a -q | head -2); do sudo docker exec \$i ls /tmp;done
5. for i in \$(sudo docker ps -a -q | head -2); do sudo docker stop \$i;done
6. for i in \$(sudo docker ps -a -q | head -2); do sudo docker rm \$i;done

### Question 5

1. docker pull httpd
2. docker run -d httpd

3. docker inspect id | jq '.[].NetworkSettings.Networks.bridge.IPAddress'  
docker top id → processus httpd seulement.

4. docker stop id

## Question 6

1. docker run -p 10000:80 -it httpd

2. curl -I http://192.168.122.18:10000/

HTTP/1.1 200 OK

Date: Sat, 09 Nov 2019 18:07:43 GMT

Server: Apache/2.4.41 (Unix)

Last-Modified: Mon, 11 Jun 2007 18:53:14 GMT

ETag: "2d-432a5e4a73a80"

Accept-Ranges: bytes

Content-Length: 45

Content-Type: text/html

3. docker stop id

## Question 7

1. mkdir /html

cat <<EOF >/html/test.html

<html>

<body>

<h1>TP</h1>

</body>

</html>

EOF

2. docker run -p 10000:80 -v /html:/usr/local/apache2/htdocs/ -d httpd

3. curl http://192.168.122.18:10000/test.html

<html>

<body>

<h1>TP</h1>

</body>

</html>

4. docker stop id
5. docker ps -a
6. docker images

## Question 8

### Fichier httpd.conf :

LoadModule userdir\_module modules/mod\_userdir.so

### Dockerfile :

```
cat <<EOF >dockerfile
FROM alpine
VOLUME /home/toto/public_html
EXPOSE 80
CMD ["-D", "FOREGROUND"]
ENTRYPOINT ["/usr/sbin/httpd"]
RUN apk update &&\
    apk add apache2 &&\
    adduser --disabled-password toto
COPY httpd.conf /etc/apache2/
COPY test.html /home/toto/public_html/
EOF
```

### Exécution du container :

```
docker build -t tp6 .
docker run -p 10000:80 -d tp6
```

### Vérification :

```
curl http://192.168.122.18:10000/~toto/ → directory listing
curl http://192.168.122.18:10000/~toto/test.html
```

### Position du volume sur l'hôte :

```
docker inspect id | jq '[]Mounts'
[
```

```
{
  "Type": "volume",
  "Name":
"c8d96e89882a76cf2f5080442d65de04923de744905655de8ce29c1a5dab6272",
  "Source":
"/var/lib/docker/volumes/c8d96e89882a76cf2f5080442d65de04923de744905655de8ce2
9c1a5dab6272/_data",
  "Destination": "/home/toto/public_html",
  "Driver": "local",
  "Mode": "",
  "RW": true,
  "Propagation": ""
}
]
```

### **Fichier httpd.conf complet :**

```
ServerTokens OS
ServerRoot /var/www
Listen 80
```

```
LoadModule mpm_prefork_module modules/mod_mpm_prefork.so
LoadModule authn_file_module modules/mod_authn_file.so
LoadModule authn_core_module modules/mod_authn_core.so
LoadModule authz_host_module modules/mod_authz_host.so
LoadModule authz_groupfile_module modules/mod_authz_groupfile.so
LoadModule authz_user_module modules/mod_authz_user.so
LoadModule authz_core_module modules/mod_authz_core.so
LoadModule access_compat_module modules/mod_access_compat.so
LoadModule auth_basic_module modules/mod_auth_basic.so
LoadModule reqtimeout_module modules/mod_reqtimeout.so
LoadModule filter_module modules/mod_filter.so
LoadModule mime_module modules/mod_mime.so
LoadModule log_config_module modules/mod_log_config.so
LoadModule env_module modules/mod_env.so
LoadModule headers_module modules/mod_headers.so
LoadModule setenvif_module modules/mod_setenvif.so
LoadModule version_module modules/mod_version.so
LoadModule unixd_module modules/mod_unixd.so
LoadModule status_module modules/mod_status.so
LoadModule autoindex_module modules/mod_autoindex.so
```

## **LoadModule userdir\_module modules/mod\_userdir.so**

```
<IfModule !mpm_prefork_module>
```

```
</IfModule>
```

```
<IfModule mpm_prefork_module>
```

```
</IfModule>
```

```
LoadModule dir_module modules/mod_dir.so
```

```
LoadModule alias_module modules/mod_alias.so
```

```
LoadModule negotiation_module modules/mod_negotiation.so
```

```
<IfModule unixd_module>
```

```
User apache
```

```
Group apache
```

```
</IfModule>
```

```
ServerAdmin you@example.com
```

```
ServerSignature On
```

```
<Directory />
```

```
    AllowOverride none
```

```
    Require all denied
```

```
</Directory>
```

```
DocumentRoot "/var/www/localhost/htdocs"
```

```
<Directory "/var/www/localhost/htdocs">
```

```
    Options Indexes FollowSymLinks
```

```
    AllowOverride None
```

```
    Require all granted
```

```
</Directory>
```

```
<IfModule dir_module>
```

```
    DirectoryIndex index.html
```

```
</IfModule>
```

```
<Files ".ht*">
```

```
    Require all denied
```

```
</Files>
```

```
ErrorLog logs/error.log
```

LogLevel warn

<IfModule log\_config\_module>

LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\"" combined

LogFormat "%h %l %u %t \"%r\" %>s %b" common

<IfModule logio\_module>

LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\" %I %O"

combinedio

</IfModule>

CustomLog logs/access.log combined

</IfModule>

<IfModule alias\_module>

ScriptAlias /cgi-bin/ "/var/www/localhost/cgi-bin/"

</IfModule>

<IfModule cgid\_module>

</IfModule>

<Directory "/var/www/localhost/cgi-bin">

AllowOverride None

Options None

Require all granted

</Directory>

<IfModule headers\_module>

RequestHeader unset Proxy early

</IfModule>

<IfModule mime\_module>

TypesConfig /etc/apache2/mime.types

AddType application/x-compress .Z

AddType application/x-gzip .gz .tgz

</IfModule>

<IfModule mime\_magic\_module>

MIMEMagicFile /etc/apache2/magic

</IfModule>

IncludeOptional /etc/apache2/conf.d/\*.conf