

Projet Docker

AIRBUS

Etape 2:

Liste des commandes

```
# docker run -d -p 9000:9000 -v /var/run/docker.sock:/var/run/docker.sock -v portainer_data:/data portainer/portainer
```

```
#ls /usr/share/nginx/html
```

```
#mkdir "nom dossier image"
```

```
#vi /var/lib/docker/volumes/Mydata/_data/index.html
```

```
#apt update
```

```
# apt install -y iputils-ping
```

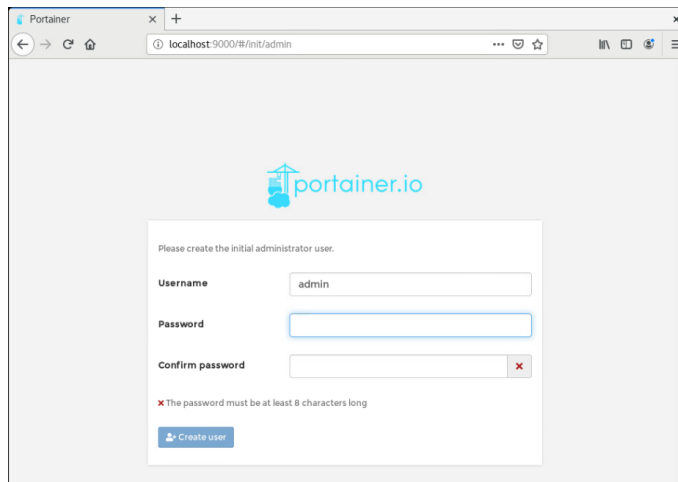
```
# apt install -y iproute2
```

Connexion à la BD : `#mysql -u root -p`

Installation de portainer

```
[root@LAPTOP-0UP80P22 ~]# docker run -d -p 9000:9000 -v /var/run/docker.sock:/var/run/docker.sock -v portainer_data:/data portainer/portainer
Unable to find image 'portainer/portainer:latest' locally
latest: Pulling from portainer/portainer
94cfa856b2b1: Pull complete
49d59ee0881a: Pull complete
a2300fd28637: Pull complete
Digest: sha256:fb45b43738646048a0a0cc74fcee2865b69efde857e710126084ee5de9be0f3f
Status: Downloaded newer image for portainer/portainer:latest
04fd25944a6af65a3c77c4ff22942dbdb1afdcde46382601455fc3cc4ab1c687
[root@LAPTOP-0UP80P22 ~]# docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
04fd25944a6a   portainer/portainer   "/portainer"           17 seconds ago   Up 12 seconds   0.0.0.0:9000->9000/tcp
brave_kepler
```

Visualisation de Portainer en mode graphique sur navigateur



Portainer

localhost:9000/#/init/admin

portainer.io


Please create the initial administrator user.


Username: admin

Password:

Confirm password:

The password must be at least 8 characters long

**local** up 2021-04-26 02:28:37

Group: Unassigned 

0 stacks 13 containers - 12 / 0 0 1 volume 4 images

1 1.9 GB - No tags

Standalone 20.10.5

/var/run/docker.sock

Endpoint info

Endpoint	local 1 1.9 GB - Standalone 20.10.5
URL	/var/run/docker.sock
Tags	

0

Stacks

13

Containers

0 healthy 1 running 0 unhealthy 12 stopped

4

Images

90.3 MB


1

Volume

3


Networks


Première création du premier conteneur

 Pull image

Registry

Image

 Advanced mode

Download in progress... 

Vérification de la présence du conteneur

<input type="checkbox"/> sha256:49f356fa4513676c5e22e3a8404aad...	<input type="checkbox"/> sha256:c57951700312e3e0cece8e15a7492f...	Unused	alpine:latest	5.6 MB	2021-03-31 16:10:06
<input type="checkbox"/> sha256:d1165f2212346b2bab48cb01c1e39e...	<input type="checkbox"/> sha256:62d49f9bab677c70ac3395855b01...	Unused	gh/alpine_modif:latest	5.6 MB	2021-04-09 07:51:24
<input type="checkbox"/> sha256:580c0e4e98b06d258754cf28c55f21...			hello-world:latest	13.3 kB	2021-03-05 18:25:25
			nginx:latest	133.1 MB	2021-04-13 15:20:40
			portainer/portainer:latest	79.1 MB	2021-03-18 15:53:42


Premier déploiement du premier conteneur


Name

Image configuration


Registry


Image


 Advanced mode

Always pull the image 


Network ports configuration


Publish all exposed network ports to random host ports 


Manual network port publishing  publish a new network port

host → container TCP UDP 


Access control






Enable access control 

 **Administrators**
I want to restrict the management of this resource to administrators only

 **Restricted**
I want to restrict the management of this resource to a set of users and/or teams

Actions

Auto remove 

☐ Mynginx running    - nginx:latest 2021-04-26 02:38:00  8088.80  administrators

Test du déploiement précédent

la page web de base de Nginx est affichée donc le service est fonctionnel

Welcome to nginx! x +

localhost:8088

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working.
Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Création de l'image du conteneur

Connexion au panneau de commande pour modifier le fichier index.html

>_ Execute

Exec into container as **default user** using command **bash**

Disconnect

```
root@c65cda2faf52:/# ls /usr/share/nginx/html
50x.html  index.html
root@c65cda2faf52:/#
```

Création du dossier de l'image et de l'image

```
root@c65cda2faf52:/# mkdir oe
root@c65cda2faf52:/# ls
bin  docker-entrypoint.d  home  media  opt  run  sys  var
boot docker-entrypoint.sh  lib   mnt    proc sbin  tmp
dev  etc                  lib64 oe     root  srv   usr
root@c65cda2faf52:/#
```

création de l'image avec portainer
équivalent en commande (docker commit)

Create image

You can create an image from this container, this allows you to backup important data or save helpful configurations. You'll be able to spin up another container based on this image afterward.

Registry

Image

[Advanced mode](#)

Note: if you don't specify the tag in the image name, **latest** will be used.

Create

☐ **sha256:58105154fa822be567f71367817bab...** **Unused** **nginx:oe** 133.1 MB 2021-04-26 02:50:11

Création du volume

☐ **Mydata** **Unused** - local /var/lib/docker/volumes/Mydata/_data 2021-04

Deuxième création du premier conteur

localhost:9000/#/containers/new

Create container Portainer support admin
[Containers > Add container](#) [my account](#) [log out](#)

Name

Image configuration

Registry

Image

[Advanced mode](#)

Always pull the image ☐

Network ports configuration

Publish all exposed network ports to random host ports ☒

Manual network port publishing

host → container

Access control

Enable access control ☒

☒ **Administrators**
I want to restrict the management of this resource to administrators only

☐ **Restricted**
I want to restrict the management of this resource to a set of users and/or teams

Actions

Auto remove ☐

Advanced container settings

[Command & logging](#) **Volumes** [Network](#) [Env](#) [Labels](#) [Restart policy](#) [Runtime & Resources](#) [Capabilities](#)

Volume mapping

container

→ volume

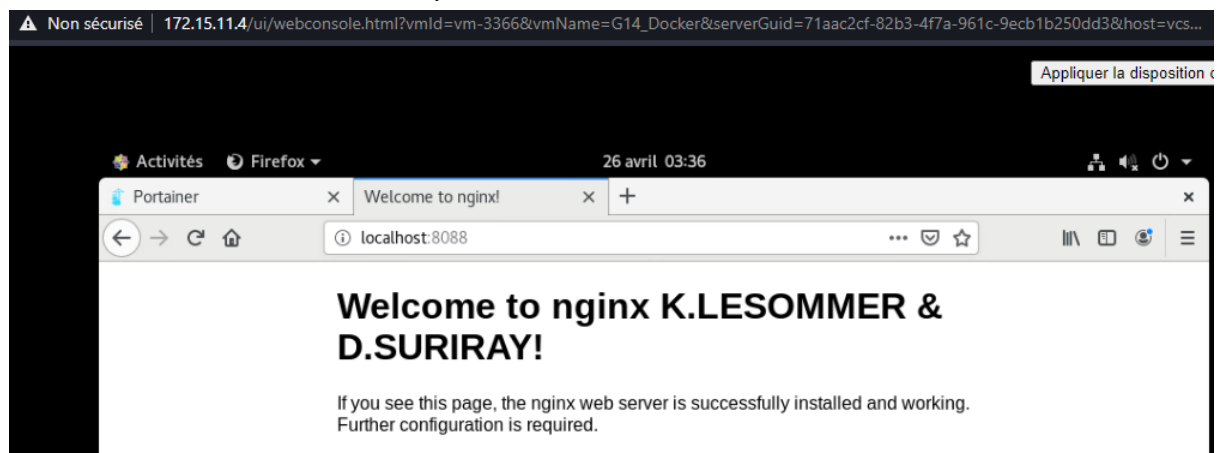
Modification test sur le conteneur

```
Fichier  Édition  Affichage  Rechercher  Terminal  Aide
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
  body {
    width: 35em;
    margin: 0 auto;
    font-family: Tahoma, Verdana, Arial, sans-serif;
  }
</style>
</head>
<body>
<h1>Welcome to nginx K.LESOMMER & D.SURIRAY ^^!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

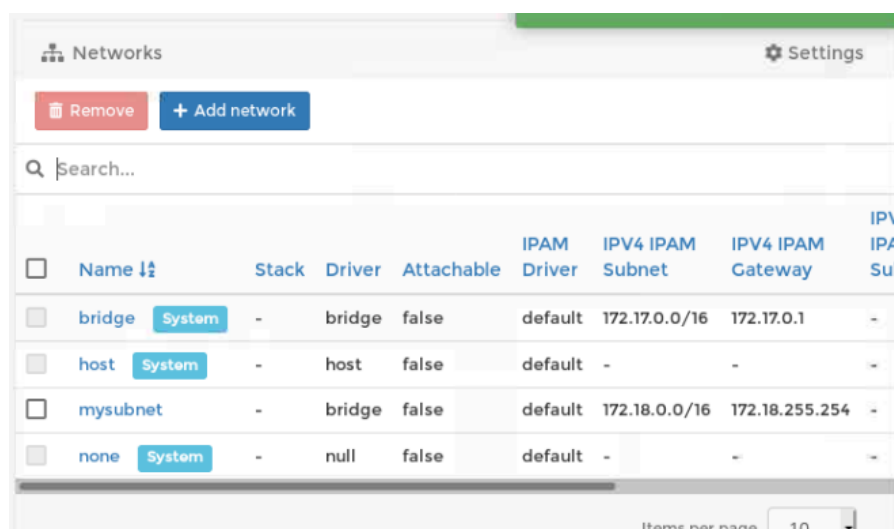
<p><em>Thank you for using nginx.</em></p>
</body>
</html>
~
```

voici le fichier index.html modifié pour tests








voici le résultat

Création et placement des conteneurs dans un réseau



création d'un sous réseau
équivalent commandes (docker network create)

<input type="checkbox"/> mynginxkd	running	   	-	nginx:kd	2021-04-26 04:07:23	8089.80	 administrators
<input type="checkbox"/> mynginx	running	   	-	nginx:latest	2021-04-26 03:59:51	8088.80	 administrators

IP mynginx : 172.18.0.1

IP mynginxkd : 172.18.0.2

Test de communication entre les machines

```
root@f7fae021eb40:/# ping 172.18.0.1
PING 172.18.0.1 (172.18.0.1) 56(84) bytes of data.
64 bytes from 172.18.0.1: icmp_seq=1 ttl=64 time=0.211 ms
64 bytes from 172.18.0.1: icmp_seq=2 ttl=64 time=0.125 ms
64 bytes from 172.18.0.1: icmp_seq=3 ttl=64 time=0.128 ms
64 bytes from 172.18.0.1: icmp_seq=4 ttl=64 time=0.120 ms
64 bytes from 172.18.0.1: icmp_seq=5 ttl=64 time=0.129 ms
64 bytes from 172.18.0.1: icmp_seq=6 ttl=64 time=0.276 ms
64 bytes from 172.18.0.1: icmp_seq=7 ttl=64 time=0.099 ms
^C
--- 172.18.0.1 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 152ms
rtt min/avg/max/mdev = 0.099/0.155/0.276/0.060 ms
root@f7fae021eb40:/#
```

On remarque que les machines communiquent donc le réseau créé est fonctionnel

Création du conteneur mariadb

Create container

Containers > Add container

Portainer support

admin

[my account](#)

[log out](#)

Name

mariadb

Image configuration

Registry

DockerHub

Image

docker.io mariadb

Advanced mode

Always pull the image

?

Network ports configuration

Publish all exposed network ports to random host ports

?

création de la variable d'environnement

Env

Labels

Restart policy

Runtime & Resources

Capabilities

Environment variables + add environment variable

name	MYSQL_ROOT_PASSWORD
value	joliverie

Test d'accès à la base de données

```
root@f2fb1c50ad0d:/# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 10.5.9-MariaDB-1:10.5.9+maria~focal mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases
->
-> ;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
+-----+
3 rows in set (0.001 sec)

MariaDB [(none)]>
```


Vérification des logs du conteneur
docker logs (id conteneur)

```
2021-04-26 8:22:46 0 [Note] Plugin 'FEEDBACK' is disabled.
2021-04-26 8:22:46 0 [Note] InnoDB: Loading buffer pool(s) from /var/lib/mysql/ib_b
uffer_pool
2021-04-26 8:22:46 0 [Note] InnoDB: Buffer pool(s) load completed at 210426 8:22:4
6
2021-04-26 8:22:46 0 [Note] Server socket created on IP: '::'.
2021-04-26 8:22:46 0 [Warning] 'proxies_priv' entry '@% root@f2fb1c50ad0d' ignored
in --skip-name-resolve mode.
2021-04-26 8:22:46 0 [Note] Reading of all Master_info entries succeeded
2021-04-26 8:22:46 0 [Note] Added new Master_info '' to hash table
2021-04-26 8:22:46 0 [Note] mysqld: ready for connections.
Version: '10.5.9-MariaDB-1:10.5.9+maria~focal' socket: '/run/mysqld/mysqld.sock' p
ort: 3306 mariadb.org binary distribution
```

l'accès est bien fait mais il y a deux heures d'écart notés dans les logs lors de la réalisation de l'étape