

# Tutorial of Dockerized App Registration on OpenNEX

0: Download prepared python-equipped docker container

#Pull docker to local machine

```
docker pull cmusvsc/opennex-python
```

1. Install docker

2.Run docker

```
docker run -it cmusvsc/opennex-python /bin/bash
```

You will see something as follows, which means you have entered the docker container:

```
root@05c1e43d5a42:/home....
```

3. Install environment and code in the docker container as if you are in a local Ubuntu environment.

4. Prepare a script that can auto start your docker container:

4.1 Install a text editor (such as vim):

```
apt-get install vim
```

4.2 Edit the auto starter script:

```
vim /root/.bashrc
```

4.3 Enter your bash command lines for automatically kick-start upon docker launch in the future.

E.g. If you need to automatically start Mysql once the docker is running, append the following code into the .bashrc file:

```
'service mysql start'
```

4.4 Save the .bashrc file.

5. Enter 'exit' to stop your current docker container.

6. Find id of your docker container:

6.1 List all closed docker processes:

```
sudo docker ps -a
```

You will get a list of closed docker processes as shown below:

|                  |                           |             |              |                          |
|------------------|---------------------------|-------------|--------------|--------------------------|
| 2454a17aee0c     | qihaobao/envjava:fall2017 | "/bin/bash" | 23 hours ago | Exited (0) 3 seconds ago |
| 0b987f725cdf     | qihaobao/envjava:fall2017 | "/bin/bash" | 23 hours ago | Exited (0) 23 hours ago  |
| suspicious_euler | qihaobao/envjava:fall2017 | "/bin/bash" | 23 hours ago | Exited (0) 23 hours ago  |

6.2 Pick up the id of the docker processes with the latest timestamp.

E.g., "2454a17aee0c" refers to your prepared docker id since it is timestamped 3 seconds ago.

7. Upload your filled docker container to docker hub:

7.1 Create your own docker hub repository:

7.1.1 Go to docker hub (<https://hub.docker.com>), create an account if you did not have one.

7.1.2 Create a repository as below:

The screenshot shows the Docker Hub interface for creating a new repository. At the top, there is a dark header bar with navigation links: Dashboard, Explore, Organizations, Create (with a dropdown arrow), and a search bar. Below the header, a large button labeled 'Create Repository' with a pencil icon is centered. The main form area has a light gray background and is titled 'Create Repository'. On the left, a vertical list of steps is displayed:

1. Choose a namespace (Required)
2. Add a repository name (Required)
3. Add a short description
4. Add markdown to the full description field
5. Set it to be a private or public repository

The right side of the form contains several input fields and dropdown menus:

- A dropdown menu for 'Namespace' containing the value 'qihaoao'.
- An 'Enter Name' input field.
- A 'Short Description (100 Characters)' input field.
- A 'Full Description' text area.
- A 'Visibility' dropdown menu set to 'public'.
- A blue 'Create' button at the bottom.

7.2 commit your modified docker image to your recently created docker repo (you could write a comment here):

```
docker commit <docker id> cmusvsc/opennex-python:<tag>
```

E.g. `docker commit 2454a17aee0c <Your_Docker_ID>/<Your_repo>:v1`

7.3 push your committed docker image to docker hub physically:

E.g `docker push <Your_Docker_ID>/<Your_repo>:v1`