

1.- install docker

2.- <https://hub.docker.com/>

3.- run hello-world

```
$ sudo docker run hello-world
$ sudo docker images
$ sudo docker ps
$ sudo docker ps -a
$ sudo docker rm xxx
```

4.- hello world Apache

```
$ sudo docker login
$ sudo docker pull httpd
$ sudo docker images httpd
$ sudo docker run --name container-httpd -p 80:80 -d httpd
$ curl localhost
$ sudo docker exec -it xxx bash
-----
# apt-get update
# apt-get install vim-tiny
# cd htdocs
# vi index.html
# exit
-----
$ curl localhost
$ sudo docker ps
$ sudo docker stop xxx
$ sudo docker ps
$ sudo docker ps -a
$ sudo docker start xxx
```

5.- create Dockerfile, push, pull

```
$ mkdir nodeimage
$ cd nodeimage
$ vi Dockerfile
```

```
# We use debian as our base distro for this container.
FROM debian:jessie
```

```
# Refresh apt-get.
RUN apt-get update
```

```
# Install some utilities needed by node, npm.
RUN apt-get install -y curl make g++
```

```
# Install Node.js and npm.
RUN curl -sL https://deb.nodesource.com/setup_10.x | bash -
RUN apt-get install -y nodejs
```

```
# Install required npm packages.
ADD package.json /package.json
RUN npm install
```

```
# Set /src as the working directory for this container.
WORKDIR /src
```

```
# Open up external access to port 80.  
EXPOSE 8080
```

```
# Run startup command.  
CMD ["node", "/src/server.js"]
```

```
$ vi package.json
```

```
{  
  "name": "node-image",  
  "private": true,  
  "version": "1.0.0",  
  "description": "Docker image - node",  
  "author": "Adolfo Centeno <adsoft@live.com.mx>",  
  "dependencies": {  
    "express": "3.2.4"  
  }  
}
```

```
$ mkdir src  
$ cd src  
$ vi server.js
```

```
var express = require('express');  
  
// Constants  
var PORT = 8080;  
  
// App  
var app = express();  
app.get('/', function (req, res) {  
  res.sendfile('/src/index.html');  
});  
  
app.listen(PORT);  
console.log('Running on port ' + PORT);
```

```
$ vi index.html
```

```
Hello World!  
<br>  
by adsoft
```

```
$ sudo docker build -t perfuse/test .
```

```
$ sudo docker run --name containernode -p 8080:8080 -v $PWD/src:/src -d adsoft/my-node  
$ sudo docker push adsoft/my-node
```

```
7.- block chain example  
8.- bot python example
```