

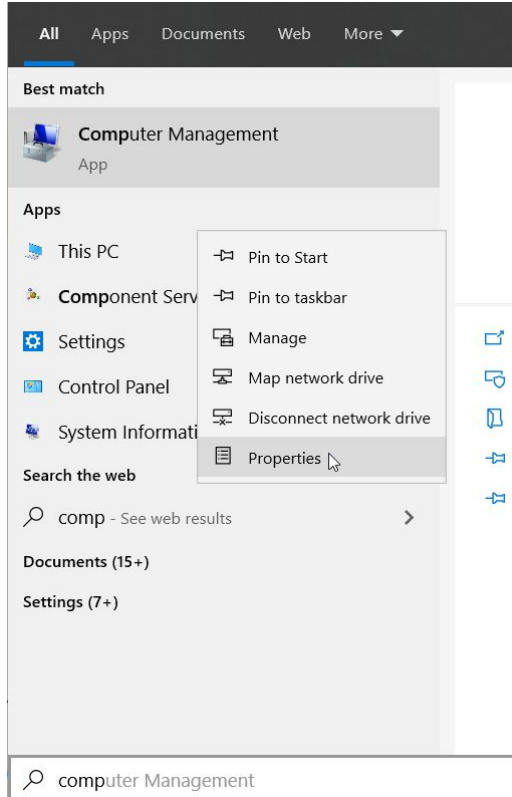


Docker

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Requisitos



View basic information about your computer

Windows edition _____

Windows 10 Pro

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Requisitos - Windows

Hyper-V existe em windows para:

- Pro, Enterprise, Education
- Home a instalação é separada [[link](#)]
- Hyper-V e windows containers devem estar habilitados

Configurações comuns e necessárias:

- Processador 64bit
- 4Gb RAM

Requisitos - Linux

- Ubuntu Xenial 16.04 LTS -> atual 18.04.4
- Ubuntu Trusty 14.04 LTS -> atual 14.04.6 (mar/2019)
- Debian testing stretch -> atual 10
- Ubuntu Precise 12.04 LTS -> atual 12.04 (✂ aug/2014)
- Ubuntu Wily 15.10 -> atual 15.10 (✂ oct/2016)

Configurações comuns e necessárias:

- Processador 64bit
- 4Gb RAM

Requisitos - macOS

- 2010 ou novo com Intel MMU (Memory Management Unit)
- OS X 10.10.3 Yosemite +
- Se tiver VirtualBox, deve ser anterior a 4.3.30

Configurações comuns e necessárias:

- Processador 64bit
- 4Gb RAM



Install docker

Configuration

- ☒ Enable Hyper-V Windows Features
- ☐ Add shortcut to desktop

Ok

Docker Desktop 2.3.0.3

Installation succeeded

You must log out of Windows to complete installation.

Close and log out



Docker Desktop is running

Open Powershell and start hacking
with docker or compose

Docker Desktop

About Docker Desktop

Settings

Check for Updates

Troubleshoot

Switch to Windows containers...

Documentation

Learn

Docker Hub

Dashboard

Sign in / Create Docker ID...

Repositories

Kubernetes



Restart...

Quit Docker Desktop



Settings



General



Resources



Docker Engine



Command Line



Kubernetes

General

Adjust how Docker Desktop behaves according to your preferences.



Start Docker Desktop when you log in



Automatically check for updates



Expose daemon on tcp://localhost:2375 without TLS

Exposing daemon on TCP without TLS helps legacy clients connect to the daemon. It also makes yourself vulnerable to remote code execution attacks. Use with caution.



Use the WSL 2 based engine (requires Win 10 build 19018+)

WSL 2 provides better performance than the legacy Hyper-V backend. [Learn more.](#)



Send usage statistics

Send error reports, system version and language as well as Docker Desktop lifecycle information (e.g., starts, stops, resets).

Discover experimental features. [Switch to the Edge version.](#)

Docker *running*

Cancel

Apply & Restart

DOCKERFILE

Dockerfile

- O que é
- Onde achar exemplos
- Como rodar

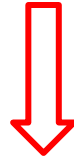
```
1  FROM <code_version>
2  WORKDIR /<workdir>
3  ADD . /<workdir_necessary_path>
4  RUN pip install -r requirements.txt
5  CMD [<language_caller>,<main_code_file>]
```

Docker para python

```
1 FROM <code_version>
2 WORKDIR /<workdir>
3 ADD . /<workdir_necessary_path>
4 RUN pip install -r requirements.txt
5 CMD [<language_caller>,<main_code_file>]
```

+

```
D:\Users\julianag>python --version
Python 3.8.3
```



```
1 FROM python:3.8.4-slim
2 WORKDIR /
3 ADD . /
4 RUN pip install -r requirements.txt
5 CMD ["python","basic_1.py"]
```

CREATING CONTAINER



Windows **PowerShell**

App



Run as administrator

STEP 1 - BUILD

```
Directory: D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1
```

Mode	LastWriteTime		Length	Name
----	-----	-----	-----	-----
a----	16/07/2020	01:36	279	basic_1.py
a----	16/07/2020	21:51	108	Dockerfile
a----	16/07/2020	21:48	0	requirements.txt

Command:

```
$docker build .
```

```
$docker build . -t tagname
```

```
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker build . -t basic1
```

```
Sending build context to Docker daemon 4.096kB
```

```
Step 1/5 : FROM python:3.8.4-slim
```

```
---> 772edcebc686
```

```
Step 2/5 : WORKDIR /
```

```
---> Using cache
```

```
---> 977dd89acdb5
```

```
Step 3/5 : COPY . /
```

```
---> a0d9c51ec1b0
```

```
Step 4/5 : RUN pip install -r requirements.txt
```

```
---> Running in 4437512ad3d5
```

```
Collecting Flask==1.1.2
```

```
  Downloading Flask-1.1.2-py2.py3-none-any.whl (94 kB)
```

```
Collecting itsdangerous>=0.24
```

```
  Downloading itsdangerous-1.1.0-py2.py3-none-any.whl (16 kB)
```

```
Collecting Werkzeug>=0.15
```

```
  Downloading Werkzeug-1.0.1-py2.py3-none-any.whl (298 kB)
```

```
Collecting Jinja2>=2.10.1
```

```
  Downloading Jinja2-2.11.2-py2.py3-none-any.whl (125 kB)
```

```
Collecting click>=5.1
```

```
  Downloading click-7.1.2-py2.py3-none-any.whl (82 kB)
```

```
Collecting MarkupSafe>=0.23
```

```
  Downloading MarkupSafe-1.1.1-cp38-cp38-manylinux1_x86_64.whl (32 kB)
```

```
Installing collected packages: itsdangerous, Werkzeug, MarkupSafe, Jinja2, click, Flask
```

```
Successfully installed Flask-1.1.2 Jinja2-2.11.2 MarkupSafe-1.1.1 Werkzeug-1.0.1 click-7.1.2 itsdangerous-1.1.0
```

```
Removing intermediate container 4437512ad3d5
```

```
---> 3ba04d6d4c62
```

```
Step 5/5 : CMD ["python", "basic_1.py"]
```

```
---> Running in 22012565893d
```

```
Removing intermediate container 22012565893d
```

```
---> ba41309a6797
```

```
Successfully built ba41309a6797
```

```
Successfully tagged basic1:latest
```

```
SECURITY WARNING: You are building a Docker image from Windows against a non-Windows Docker host. All files and directories added to build context will have '-rwxr-xr-x' permissions. It is recommended to double check and reset permissions for sensitive files and directories.
```

```
1 FROM python:3.8.4-slim
2 WORKDIR /
3 ADD . /
4 RUN pip install -r requirements.txt
5 CMD ["python", "basic_1.py"]
```

STEP 2 - RUN

```
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker run basic1
* Serving Flask app "basic_1" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Command:

`$docker run tagname`

`$docker run -name container_name tagname`

`$docker run -p port:port -name container_name tagname`

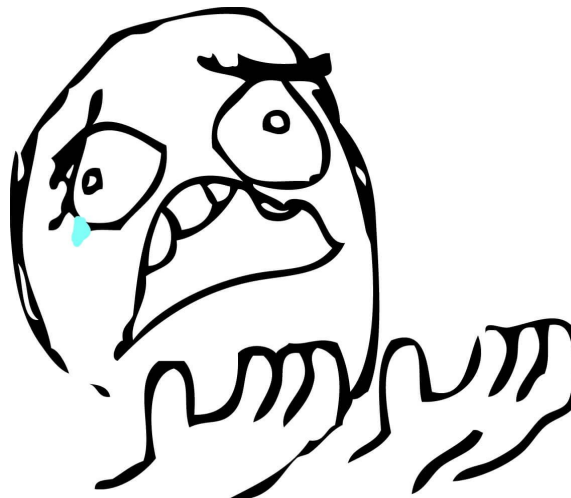
```
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker run -p 8080:8080 basic1
* Serving Flask app "basic_1" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

Port mapping for docker

```
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker container list
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
d96ec19635ff	basic1	"python basic_1.py"	3 minutes ago	Up 3 minutes
b67e3b88fbc	basic1	"python basic_1.py"	6 minutes ago	Up 6 minutes
eb1bb26ec572	3f4c1b092ae5	"python basic_1.py"	16 minutes ago	Up 16 minutes
e45c0612b4f2	3f4c1b092ae5	"python basic_1.py"	17 minutes ago	Up 17 minutes

PORTS	NAMES
0.0.0.0:8080->8080/tcp	vibrant_lichterman
	hardcore_volhard
	ecstatic_proskuriakova
0.0.0.0:5000->5000/tcp	recursing_germain



```
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker run -p 5000:5000 --name basic_1 basic1
```

```
* Serving Flask app "basic_1" (lazy loading)
```

```
* Environment: production
```

```
WARNING: This is a development server. Do not use it in a production deployment.
```

```
Use a production WSGI server instead.
```

```
* Debug mode: off
```

```
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```

```
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker container stop basic_1
basic_1
PS D:\Users\julianag\Documents\repositorios\python_api_docker\basic_1> docker container rm basic_1
basic_1
PS D:\Users\julianag\Documents\repositorios\python api docker\basic 1>
```