

1-Working

TerminalSessionsViewX serverToolsGamesSettingsMacrosHelp

SessionServersToolsGamesSessionsViewSplitMultiExecTunnelingPackagesSettingsHelp

1 Install Docker on Ubuntu

X serverExit

Quick connect...

6. 1-Working5. Windows Powershell

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home/ubuntu/

Name

...

Setting up docker-compose-plugin (2.14.1~ubuntu-bionic) ...
Setting up docker-ce-cli (5:20.10.22~3-0~ubuntu-bionic) ...
Setting up pigz (2.4-1) ...
Setting up docker-ce (5:20.10.22~3-0~ubuntu-bionic) ...
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/systemd/system/docker.socket.
Processing triggers for libc-bin (2.27-3ubuntu1.6) ...
Processing triggers for systemd (237-3ubuntu10.56) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ureadahead (0.100.0-21) ...
ubuntu@ip-172-31-36-163:~\$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:c77be1d3a47d0caf71a82dd893ee61ce01f32fc758031a6ec4cf1389248bb833
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
(amd64)
3. The Docker daemon created a new container from that image which runs the
executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
\$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
<https://hub.docker.com/>

For more examples and ideas, visit:

Remote monitoring

Follow terminal fold

ip-172-31-36-1630%0,31 GB / 0,95 GB0,01 Mb/s0,00 Mb/s36 minubuntu/: 26% /boot/efi: 5%

1-Working

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2 Making 1st container

X serverExit

Quick connect...

6. 1-Working5. Windows Powershell

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$ ll

total 16

drwxrwxr-x 2 ubuntu ubuntu 4096 Dec 1 2020 ./

drwxrwxr-x 5 ubuntu ubuntu 4096 Dec 1 2020 ../

-rw-rw-r-- 1 ubuntu ubuntu 115 Dec 1 2020 Dockerfile

-rw-rw-r-- 1 ubuntu ubuntu 72 Dec 1 2020 app.py

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$ cat app.py

import time

while True:

print("Hello, World!")

time.sleep(1)

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$ cat Dockerfile

FROM python:3.6

RUN mkdir -p /usr/src/app/

WORKDIR /usr/src/app/

COPY . /usr/src/app/

CMD ["python", "app.py"]

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/hello-world\$

Remote monitoring

Follow terminal fold

ip-172-31-36-1630%0,31 GB / 0,95 GB0,01 Mb/s0,00 Mb/s46 minubuntu/: 26% /boot/efi: 5%

1-Working

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4 Making app on Flask

X serverExit

Quick connect...6. 1-Working5. Windows Powershell

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Name

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Remote monitoring

Follow terminal fold

```
ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world$ cat Dockerfile
FROM python:3.6

RUN mkdir -p /usr/src/app/
WORKDIR /usr/src/app/

COPY . /usr/src/app/
RUN pip install --no-cache-dir -r requirements.txt

EXPOSE 8080

CMD ["python", "app.py"]
ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world$ cat app.py
import os
import json
import datetime
from flask import Flask

app = Flask(__name__)

BASE_FOLDER = os.path.dirname(os.path.abspath(__file__))
RESOURCE_DIR = os.path.join(BASE_FOLDER, "resources")

@app.route('/')
def hello_world():
    with open(os.path.join(RESOURCE_DIR, "response.json")) as f:
        return "%s - %s" % (json.loads(f.read()).get("payload"), datetime.datetime.now().strftime("%d.%m.%Y %H:%M:%S"))

if __name__ == "__main__":
    app.run(host="0.0.0.0", port=8080, debug=True)
ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world$
```

ip-172-31-36-1631%0,32 GB / 0,95 GB0,01 Mb/s0,00 Mb/s74 minubuntu/: 38% /boot/efi: 5%

1-Working

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5 Build image for app on Flask

X serverExit

Quick connect...

6. 1-Working5. Windows Powershell

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Name

YT-Docker-lesson

Remote monitoring

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```
ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world$ docker build -t web-hello .
Sending build context to Docker daemon 5.632kB
Step 1/7 : FROM python:3.6
--> 54260638d07c
Step 2/7 : RUN mkdir -p /usr/src/app/
--> Using cache
--> 8e2a9cde71e6
Step 3/7 : WORKDIR /usr/src/app/
--> Using cache
--> a1b1cefd5e03
Step 4/7 : COPY . /usr/src/app/
--> bbae33917c16
Step 5/7 : RUN pip install --no-cache-dir -r requirements.txt
--> Running in a80e99f5f536
Collecting flask==1.1.1
  Downloading Flask-1.1.1-py2.py3-none-any.whl (94 kB)
Collecting Werkzeug>=0.15
  Downloading Werkzeug-2.0.3-py3-none-any.whl (289 kB)
Collecting itsdangerous>=0.24
  Downloading itsdangerous-2.0.1-py3-none-any.whl (18 kB)
Collecting Jinja2>=2.10.1
  Downloading Jinja2-3.0.3-py3-none-any.whl (133 kB)
Collecting click>=5.1
  Downloading click-8.0.4-py3-none-any.whl (97 kB)
Collecting importlib-metadata
  Downloading importlib_metadata-4.8.3-py3-none-any.whl (17 kB)
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-2.0.1-cp36-cp36m-manylinux_2_5_x86_64.manylinux1_x86_64.manylinux2_12_x86_64.manylinux2010_x86_64.whl (30 kB)
Collecting dataclasses
  Downloading dataclasses-0.8-py3-none-any.whl (19 kB)
Collecting zipp>=0.5
  Downloading zipp-3.6.0-py3-none-any.whl (5.3 kB)
Collecting typing-extensions>=3.6.4
  Downloading typing_extensions-4.1.1-py3-none-any.whl (26 kB)
Installing collected packages: zipp, typing-extensions, MarkupSafe, importlib-metadata, dataclasses, Werkzeug, Jinja2, itsdangerous, click, flask
Successfully installed Jinja2-3.0.3 MarkupSafe-2.0.1 Werkzeug-2.0.3 click-8.0.4 dataclasses-0.8 flask-1.1.1 importlib-metadata-4.8.3 itsdangerous-
```

ip-172-31-36-1630%0,33 GB / 0,95 GB0,01 Mb/s0,00 Mb/s76 minubuntu/: 38% /boot/efi: 5%

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StarHome/ubuntufolder iconYT-Docker-lesson-master

YT-Docker-lesson-master

Remote monitoringFollow terminal fold

6 Run container with app on Flask

X serverExit

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world\$ docker images

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
web-hello	latest	de6fe46f0201	4 minutes ago	912MB
python	3.6	54260638d07c	12 months ago	902MB

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world\$ docker run -p 8080:8080 --name web --rm web-hello

* Serving Flask app "app" (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: on

* Running on all addresses.

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

* Running on http://172.17.0.2:8080/ (Press CTRL+C to quit)

* Restarting with stat

* Debugger is active!

* Debugger PIN: 600-293-500

188.247.96.26 - - [22/Dec/2022 12:47:42] "GET / HTTP/1.1" 200 -

188.247.96.26 - - [22/Dec/2022 12:47:44] "GET /favicon.ico HTTP/1.1" 404 -

ip-172-31-36-1631%0,38 GB / 0,95 GB0,01 Mb/s0,00 Mb/s86 minubuntu/: 38% /boot/efi: 5%

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7 Working Flask app

Anton Nevero. Testing Docker. - 22.12.2022 12:47:42

1-Working

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9 Push image to Dockerhub

X serverExit

Quick connect...

2. 1-Working

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Home

YT-Docker-lesson-1

YT-Docker-lesson-2

Name

YT-Docker-lesson-1

YT-Docker-lesson-2

8ba9f690e8ba: Preparing

3e607d59ef9f: Waiting

1e18e7e1fcc2: Waiting

c3a0d593ed24: Waiting

26a504e63be4: Waiting

8bf42db0de72: Waiting

31892cc314cb: Waiting

11936051f93b: Waiting

denied: requested access to the resource is denied

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world\$ docker login

Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to <https://hub.docker.com> to create one.

Username: farnsworth1988

Password:

WARNING! Your password will be stored unencrypted in /home/ubuntu/.docker/config.json.

Configure a credential helper to remove this warning. See <https://docs.docker.com/engine/reference/commandline/login/#credentials-store>

Login Succeeded

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world\$ docker push farnsworth1988/web-app

Using default tag: latest

The push refers to repository [docker.io/farnsworth1988/web-app]

5ac85a022e0a: Pushed

f684944ce906: Pushed

bed17009abd4: Pushed

aa4c808c19f6: Mounted from library/python

8ba9f690e8ba: Mounted from library/python

3e607d59ef9f: Mounted from library/python

1e18e7e1fcc2: Mounted from library/python

c3a0d593ed24: Mounted from library/python

26a504e63be4: Mounted from library/python

8bf42db0de72: Mounted from library/python

31892cc314cb: Mounted from library/python

11936051f93b: Mounted from library/python

latest: digest: sha256:75f61894fe0cb010f822689b6a63f1bbef75674866e2837b03c481b10f319f4d size: 2844

ubuntu@ip-172-31-36-163:~/YT-Docker-lesson-master/web-hello-world\$

Remote monitoring

Follow terminal fold

ip-172-31-36-163

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0,00 Mb/s

137 min

ubuntu

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/boot/efi: 5%

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10 Run app with docker-compose

X serverExit

Quick connect...2. 1-Working

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home/ubuntu/

Name

YT-Docker-lesson-1

YT-Docker-lesson-1

Remote monitoring

Follow terminal fold

```
ubuntu@ip-172-31-163:~/YT-Docker-lesson-master/pull_from_DH$ cat docker-compose.yml
version: "3"

services:
  webapplication:
    image: farnsworth1988/web-app
    restart: always
    ports:
      - 8080:8080

ubuntu@ip-172-31-163:~/YT-Docker-lesson-master/pull_from_DH$ docker compose up
[+] Running 1/0
 # Container pull_from_dh-webapplication-1 Created
Attaching to pull_from_dh-webapplication-1
pull_from_dh-webapplication-1 | * Serving Flask app "app" (lazy loading)
pull_from_dh-webapplication-1 | * Environment: production
pull_from_dh-webapplication-1 | WARNING: This is a development server. Do not use it in a production deployment.
pull_from_dh-webapplication-1 | Use a production WSGI server instead.
pull_from_dh-webapplication-1 | * Debug mode: on
pull_from_dh-webapplication-1 | * Running on all addresses.
pull_from_dh-webapplication-1 | WARNING: This is a development server. Do not use it in a production deployment.
pull_from_dh-webapplication-1 | * Running on http://172.18.0.2:8080/ (Press CTRL+C to quit)
pull_from_dh-webapplication-1 | * Restarting with stat
pull_from_dh-webapplication-1 | * Debugger is active!
pull_from_dh-webapplication-1 | * Debugger PIN: 105-632-168
```

ip-172-31-1630%0,37 GB / 0,95 GB0,01 Mb/s0,00 Mb/s160 minubuntu/: 39% /boot/efi: 5%