

به نام خدا

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گام اول

در ابتدا نیاز داریم که docker و minikube را برای این کار از دستورات و لینکی که در صورت پروژه آمده استفاده می‌کنیم.

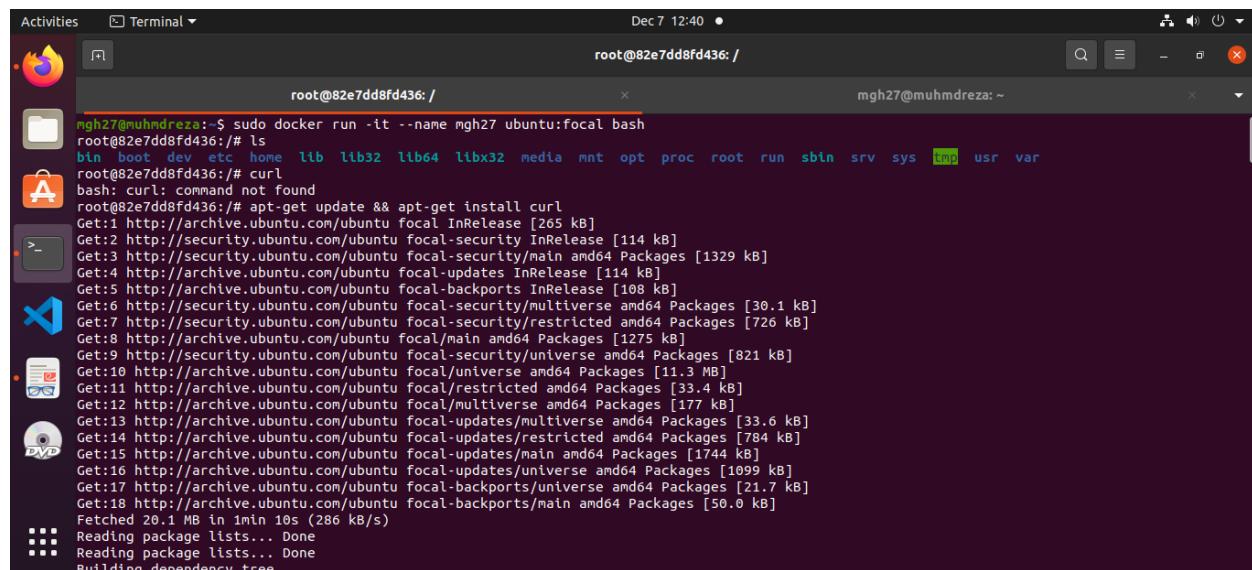
حالا برای ایجاد image توسط داکر به صورت زیر عمل می‌کنیم.(image که موجود باشد)

Docker pull ubuntu

چون نیاز به استفاده از curl داریم با دستور زیر برای نصب آن اقدام می‌کنم که در ابتدا باید این image را run کنیم.

docker run -it –name mgh27 ubuntu bash

apt-get update && apt-get install curl



```
ngh27@muhmdreza:~$ sudo docker run -it --name mgh27 ubuntu:focal bash
root@82e7dd8fd436:/# ls
bin  boot  dev  etc  home  lib  lib32  lib64  libx32  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
root@82e7dd8fd436:/# curl
bash: curl: command not found
root@82e7dd8fd436:/# apt-get update && apt-get install curl
Get: http://archive.ubuntu.com/ubuntu focal InRelease [265 kB]
Get: http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get: 3 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1329 kB]
Get: 4 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get: 5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get: 6 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [30.1 kB]
Get: 7 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [726 kB]
Get: 8 http://archive.ubuntu.com/ubuntu focal/main amd64 Packages [1275 kB]
Get: 9 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [821 kB]
Get: 10 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [11.3 MB]
Get: 11 http://archive.ubuntu.com/ubuntu focal/restricted amd64 Packages [33.4 kB]
Get: 12 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [177 kB]
Get: 13 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [33.0 kB]
Get: 14 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [784 kB]
Get: 15 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1744 kB]
Get: 16 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1099 kB]
Get: 17 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [21.7 kB]
Get: 18 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [50.0 kB]
Fetched 20.1 MB in 1min 10s (286 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree
```

حالا برای ارسال روی داکر هاب ابتدا بایستی یک اکانت داکر هاب داشته باشیم.

```

mgh27@muhmdreza:~$ sudo docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
82e7dd8fd436 ubuntu:focal "bash" 53 minutes ago Exited (2) 44 minutes ago mgh27
mgh27@muhmdreza:~$ docker commit -m "The first image for dochub" -a "MohammadReza Qaderi" 82e7dd8fd436 mohammadrezaqaderi/mgh27:v1.0
Got permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://<host>/v1.24/commit?author=MohammadRezaQaderi&comment=The+first+image+for+dochub&container=82e7dd8fd436&repo=mohammadrezaqaderi%2Fmgh27&tag=v1.0": dial unix /var/run/docker.sock: connect: permission denied
mgh27@muhmdreza:~$ sudo docker commit -m "The first image for dochub" -a "MohammadReza Qaderi" 82e7dd8fd436 mohammadrezaqaderi/mgh27:v1.0
sha256:93142a7aac96b91728eb583f72d94eifa8201b68162488a75b16a6fb8d9a714
mgh27@muhmdreza:~$ sudo 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: mohammadrezaqaderi
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
mgh27@muhmdreza:~$ sudo docker push mgh27:v1.0
The push refers to repository [docker.io/library/mgh27]
An image does not exist locally with the tag: mgh27
mgh27@muhmdreza:~$ sudo docker push mgh27-up:v1.0
The push refers to repository [docker.io/library/mgh27-up]
tag does not exist: mgh27-up:v1.0
mgh27@muhmdreza:~$ sudo docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
mohammadrezaqaderi/mgh27 v1.0 93142a7aac96b91728eb583f72d94eifa8201b68162488a75b16a6fb8d9a714 about a minute ago 121MB

```

با دستورات بالا image مورد نظر روی داکر هاب فرار گرفت.

This repository does not have a description

Last pushed: 2 hours ago

Tags and Scans

This repository contains 1 tag(s).

TAG	OS	PULLED	PUSHED
v1.0		2 hours ago	2 hours ago

[See all](#)

VULNERABILITY SCANNING - DISABLED

To push a new tag to this repository,

`docker push mohammadrezaqaderi/mgh27:tagname`

Automated Builds

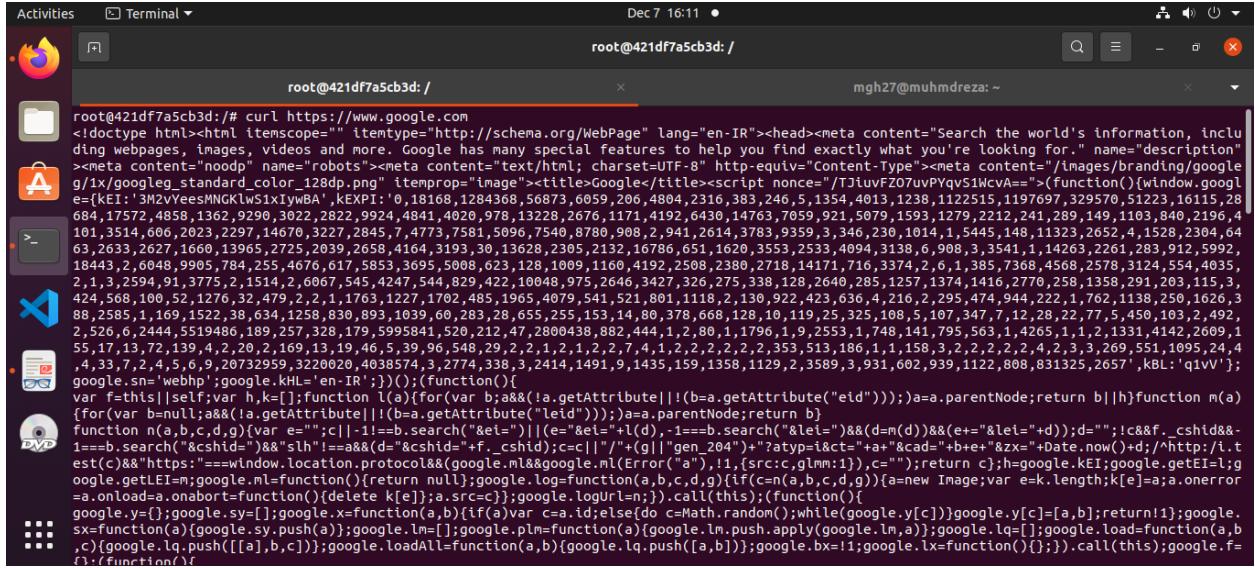
Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new Images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions.

[Upgrade to Pro](#) [Learn more](#)

حالا image را از روی داکر هاب دریافت می کنیم و اجرا می کنیم

و در نهایت دستور curl به google میز نیم.

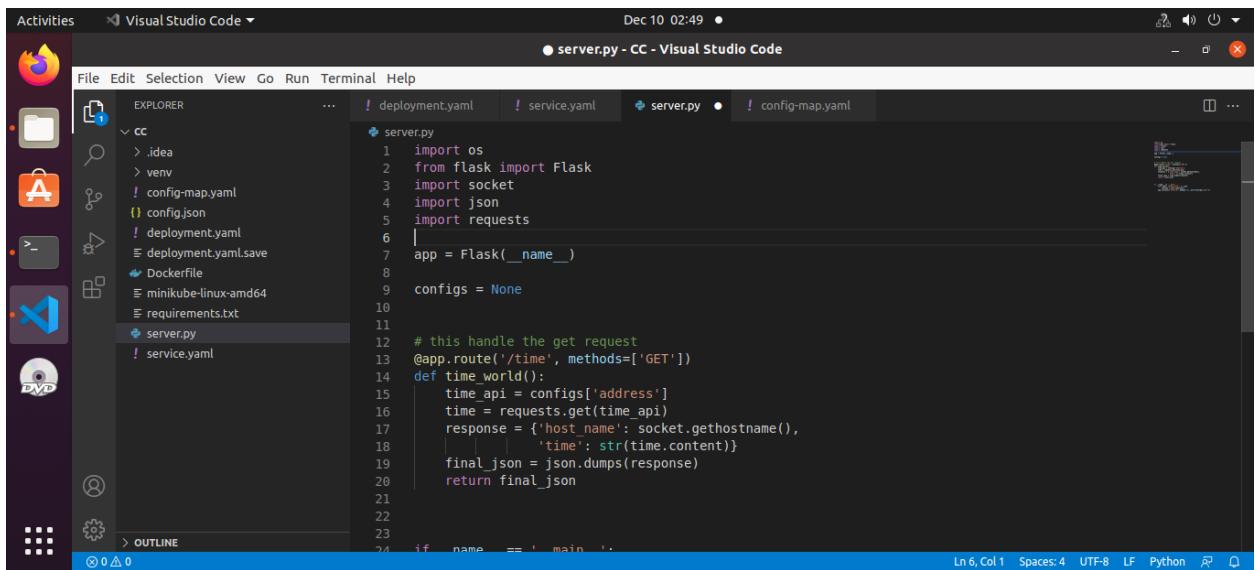


```
root@421df7a5cb3d:/# curl https://www.google.com
<!DOCTYPE html><html itemscope="" itemtype="http://schema.org/WebPage" lang="en-IR"><head><meta content="Search the world's information, including webpages, images, videos and more. Google has many special features to help you find exactly what you're looking for." name="description"><meta content="nooodp" name="robots"><meta content="text/html; charset=UTF-8" http-equiv="Content-Type"><meta content="/images/branding/google_g/1/x/glog_standard_color_128dp.png" itemprop="image"/><title>Google</title><script nonce="/JjiuvFZ07uvPYqv51NcvA==>function(){(window.google[e={kEI:3M2VfeesMNGLw51xIywbA',kEXPt:0,18168,1284368,56873,6059,206,4884,2316,383,246,5,1354,4013,1238,1122515,1197697,329570,51223,16115,2868,17572,4858,1362,9290,3822,9924,4841,4020,978,13228,2676,1171,4192,6430,14763,7059,921,5079,1593,1279,2212,241,289,149,1103,840,2196,4663,2633,2627,1660,13965,2725,2039,2658,4164,3193,30,13628,2305,212,16786,651,1620,3553,2533,4094,3138,6,908,3,3541,1,14263,2261,283,912,5992,18443,2,6049,9905,784,255,4676,617,5853,3695,5088,623,128,1009,1160,4192,2508,2380,2718,14171,716,3374,2,6,1,385,7368,4568,2578,3124,554,4035,2,1,3,2594,91,3775,2,1514,2,6067,545,4247,544,829,422,10048,975,2646,3427,326,275,338,128,2640,285,1257,1374,1416,2770,258,1358,291,203,115,3,424,568,100,52,1276,32,479,2,2,1,1763,1227,1702,485,1965,4079,541,521,801,1118,2,130,922,423,636,4,216,2,295,474,944,222,1,762,1138,250,1626,388,2585,1,169,1522,38,634,1258,830,893,1039,60,283,28,655,255,153,14,86,378,668,128,10,119,25,325,168,5,107,347,7,12,28,22,77,5,456,103,2,492,2,526,6,2444,5519486,189,257,328,179,5995841,520,212,47,2800438,882,444,1,2,80,1,1796,1,9,2553,1,748,141,795,563,1,4265,1,1,2,1331,4142,2069,155,17,13,72,139,4,2,20,2,169,13,19,46,5,39,96,548,29,2,2,1,2,1,2,2,7,4,1,2,2,2,2,2,2,353,513,186,1,1,158,3,2,2,2,2,2,4,2,3,3,269,551,1095,24,4,4,33,7,2,4,5,6,9,20732959,3220020,4038574,3,2774,338,3,2414,1491,9,1435,159,1358,1129,2,3589,3,931,602,939,1122,808,831325,2657',kBL:'q1vV'};

google.sns='webp';google.kHL='en-IR';})();(function(){
var f=this||self;var h=[];function l(a){for(var b;a&&(a.getAttribute||!(b=a.getAttribute("eid")));)a=a.parentNode;return b||h}function m(a){
for(var b=null;a&&(!a.getAttribute||!(b=a.getAttribute("leid"))));)a=a.parentNode;return b}
function n(a,b,c,d,g){var e="" ;c|-1==b.search("&lel=")||!(e+="&lel=")+(d=m(d))&&(e+="&lel="+d));d="" ;c&&f._cshid&&1==b.search("8cshid=")||!(d=b.search("#cshid=")+f._cshid);c=c||"/"+(g||"gen_204")+"?atyp=i&t="+(a+cad)+"b=es"+"&z=x"+Date.now()+(d||"/http://i.test()&&"https":=="window.location.protocol&&(google.ml&&google.ml.getError("a"),!1,[src:c,gLmn:1]),c="");return c};h=google.kEI;google.getEI=l;g=google.getLEI=m;google.ml=function(){return null};google.log=function(a,b,c,d,g){if(c=n(a,b,c,d,g)){a=new Image;var e=k.length;h[e]=a;a.onerror=a.onload=a.onerror=function(){delete h[e];a.src=c};google.logUrl=a};call(this)};function(){
google.y=y;google.x=function(a,b){if(a){var c=a.id;else{do c=Math.random();while(google.y[c])google.y[c]=[a,b];return c}};google.y[c]=[a,b];return c};google.sx=function(a){google.sy.push(a);google.lm=[].concat(google.plm=function(a){google.lm.push.apply(google.lm,a)});google.lq=[].concat(google.load=function(a,b,c){google.lq.push([a,b]);google.loadAll=function(a,b){google.lq.push([a,b]);google.bx=!1;google.lx=function(){}.call(this);google.f=f;});(function(){f
});}};
```

گام دوم

در این گام ابتدا برای ایجاد سرور از flask استفاده می‌کنیم که یک فایل پایتون برای اجرای این دستور به صورت زیر نوشته شده است که در صورت زدن دستور به آدرس time/ میتواند با خواندن آدرس مورد نظر در config فایل مقدار مورد نیاز را برگرداند.



```
File Edit Selection View Go Run Terminal Help
Dec 10 02:49 ● server.py - CC - Visual Studio Code
EXPLORER
✓ cc
  > .idea
  > venv
  ! config-map.yaml
  () config.json
  ! deployment.yaml
  & deployment.yaml.save
  & Dockerfile
  & minikube-linux-amd64
  requirements.txt
  & server.py
  ! service.yaml
  > OUTLINE
  & 0 △ 0
server.py
import os
from flask import Flask
import socket
import json
import requests
app = Flask(__name__)
configs = None
# this handle the get request
@app.route('/time', methods=['GET'])
def time_world():
    time_api = configs['address']
    time = requests.get(time_api)
    response = {'host_name': socket.gethostname(),
                'time': str(time.content)}
    final_json = json.dumps(response)
    return final_json
if __name__ == '__main__':
    app.run()
```

Activities Visual Studio Code • Dec 10 02:51 •

File Edit Selection View Go Run Terminal Help

EXPLORER deployment.yaml service.yaml server.py config-map.yaml

server.py

```
11
12     # this handle the get request
13     @app.route('/time', methods=['GET'])
14     def time_world():
15         time_api = configs['address']
16         time = requests.get(time_api)
17         response = {'host_name': socket.gethostname(),
18                     'time': str(time.content)}
19         final_json = json.dumps(response)
20
21
22
23
24     if __name__ == '__main__':
25         with open('config.json') as conf:
26             configs = json.load(conf)
27         app.run(host='0.0.0.0', debug=True, port=configs['port'])
```

Ln 6, Col 1 Spaces: 4 UTF-8 LF Python ⚙️

Activities Visual Studio Code • Dec 10 02:51 •

File Edit Selection View Go Run Terminal Help

EXPLORER deployment.yaml service.yaml config.json config-map.yaml

config.json

```
1  {
2     "address": "http://worldtimeapi.org/api/timezone/Asia/Tehran.txt",
3     "port" : 8080
4 }
```

Ln 4, Col 2 Spaces: 4 UTF-8 LF JSON ⚙️

Activities Visual Studio Code ▾ Dec 10 02:51 •

File Edit Selection View Go Run Terminal Help

EXPLORER deployment.yaml service.yaml requirements.txt config-map.yaml

cc .idea venv config-map.yaml config.json deployment.yaml deployment.yaml.save Dockerfile minikube-linux-amd64 requirements.txt server.py service.yaml

OUTLINE

Ln 1, Col 1 Spaces:4 UTF-8 LF Plain Text ⌂ ⌂

The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left lists files and folders, including '.idea', 'venv', 'config-map.yaml', 'config.json', 'deployment.yaml', 'deployment.yaml.save', 'Dockerfile', 'minikube-linux-amd64', 'requirements.txt' (which is selected), 'server.py', and 'service.yaml'. The main editor area displays the contents of 'requirements.txt':

```
1 requests==2.26.0
2 Flask==2.0.2
```

Dockerfile

Activities Terminal ▾ Dec 8 16:34 •

CC_HW2.docx mgh27@muhmdreza: ~/Desktop/CC mgh27@muhmdreza: ~/Desktop/CC

FROM python
WORKDIR /app
COPY .
RUN pip install -r requirements.txt
CMD ["python", "./server.py"]

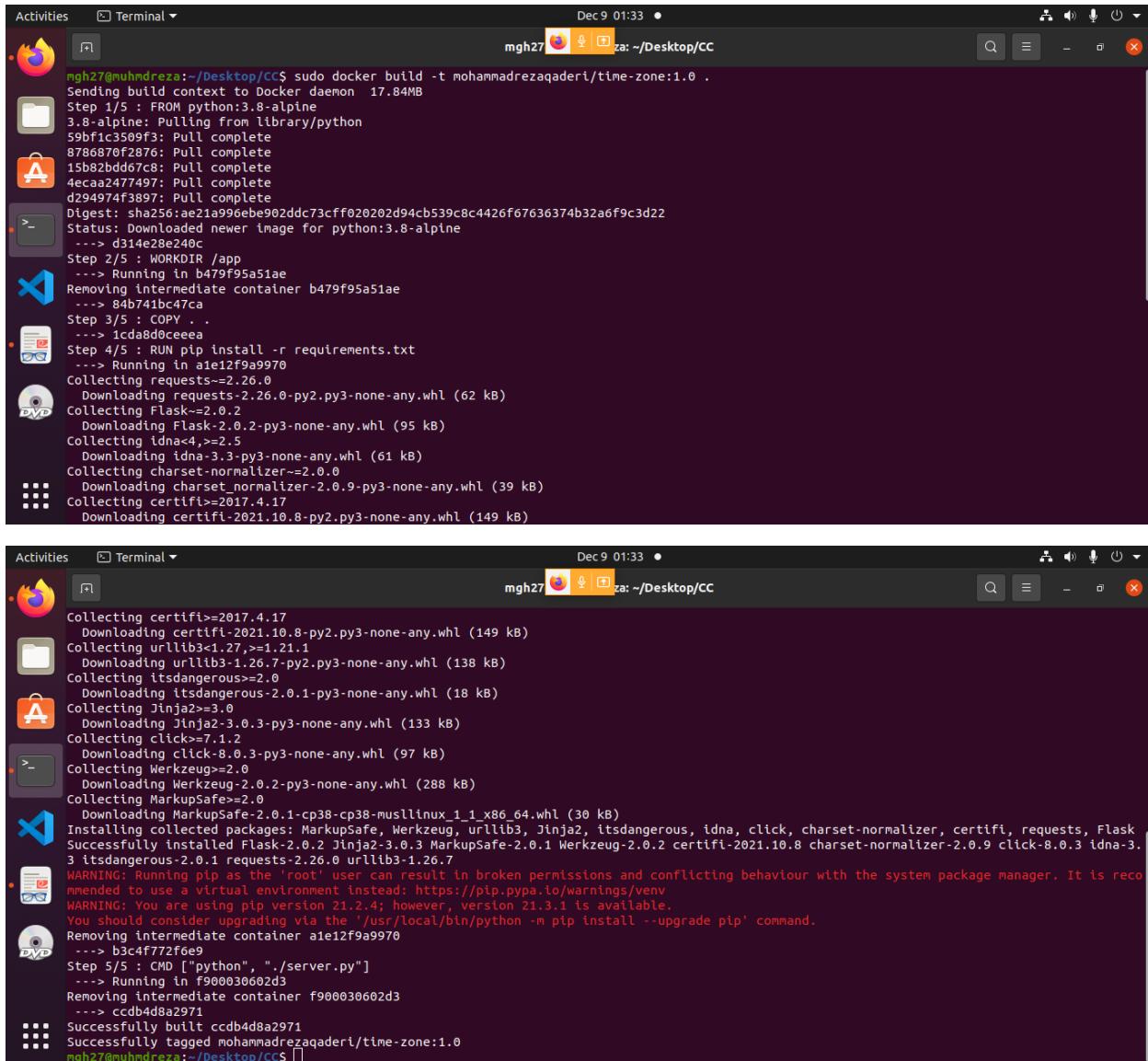
-- INSERT -- 5,8 All

The screenshot shows a terminal window with the command 'mgh27@muhmdreza: ~/Desktop/CC' and the Dockerfile content:

```
FROM python
WORKDIR /app
COPY .
RUN pip install -r requirements.txt
CMD ["python", "./server.py"]
```

Three numbered callouts (1, 2, 3) point to the first four lines of the Dockerfile: 'FROM python', 'WORKDIR /app', 'COPY .', and 'RUN pip install -r requirements.txt'. The status bar at the bottom indicates 'Ln 5, Col 8' and 'All'.

اجرا ایمیج با داکرفایل



```
ngh27@muhndreza:~/Desktop/CC$ sudo docker build -t mohammadrezaqaderi/time-zone:1.0 .
Sending build context to Docker daemon 17.84MB
Step 1/5 : FROM python:3.8-alpine
3.8-alpine: Pulling from library/python
59bf1c3509f3: Pull complete
8786870f2876: Pull complete
15b82bdd67c8: Pull complete
4eca2477497: Pull complete
d294974f3897: Pull complete
Digest: sha256:ae21a996ebe902ddc73cff020202d94cb539c8c4426f67636374b32a6f9c3d22
Status: Downloaded newer image for python:3.8-alpine
--> d314e28e240c
Step 2/5 : WORKDIR /app
--> Running in b479f95a51ae
Removing intermediate container b479f95a51ae
--> 84b741bc47ca
Step 3/5 : COPY . .
--> 1cd8ad0ceeeaa
Step 4/5 : RUN pip install -r requirements.txt
--> Running in a1e12f9a9970
Collecting requests==2.26.0
  Downloading requests-2.26.0-py2.py3-none-any.whl (62 kB)
Collecting Flask==2.0.2
  Downloading Flask-2.0.2-py3-none-any.whl (95 kB)
Collecting idna<4,>=2.5
  Downloading idna-3.3-py3-none-any.whl (61 kB)
Collecting charset-normalizer==2.0.0
  Downloading charset_normalizer-2.0.0.9-py3-none-any.whl (39 kB)
Collecting certifi>=2017.4.17
  Downloading certifi-2021.10.8-py3-none-any.whl (149 kB)

Activities Terminal Dec 9 01:33 • mgh27 mohndreza: ~/Desktop/CC
```



```
Collecting certifi==2017.4.17
  Downloading certifi-2021.10.8-py3-none-any.whl (149 kB)
Collecting urllib3<1.27,>=1.21.1
  Downloading urllib3-1.26.7-py3-none-any.whl (138 kB)
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.0.1-py3-none-any.whl (18 kB)
Collecting Jinja2>=3.0
  Downloading Jinja2-3.0.3-py3-none-any.whl (133 kB)
Collecting click>=7.1.2
  Downloading click-8.0.3-py3-none-any.whl (97 kB)
Collecting Werkzeug>=2.0
  Downloading Werkzeug-2.0.2-py3-none-any.whl (288 kB)
Collecting MarkupSafe==2.0
  Downloading MarkupSafe-2.0.1-cp38-cp38-musllinux_1_1_x86_64.whl (30 kB)
Installing collected packages: MarkupSafe, Werkzeug, urllib3, Jinja2, itsdangerous, idna, click, charset-normalizer, certifi, requests, Flask
Successfully installed Flask-2.0.2 Jinja2-3.0.3 MarkupSafe-2.0.1 Werkzeug-2.0.2 certifi-2021.10.8 charset-normalizer-2.0.9 click-8.0.3 idna-3
3 itsdangerous-2.0.1 requests-2.26.0 urllib3-1.26.7
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pypa.io/warnings/venv
WARNING: You are using pip version 21.2.4; however, version 21.3.1 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.
Removing intermediate container a1e12f9a9970
--> b3c4f772f6e9
Step 5/5 : CMD ["python", "./server.py"]
--> Running in f900030602d3
Removing intermediate container f900030602d3
--> ccd84d8a2971
Successfully built ccd84d8a2971
Successfully tagged mohammadrezaqaderi/time-zone:1.0
ngh27@muhndreza:~/Desktop/CC$
```

ارسال بر روی داکر هاب

The screenshot shows a Linux desktop environment with a dock containing icons for various applications like a terminal, file manager, and system monitor. A Firefox browser window is open to the Docker Hub repository page for 'mohammadrezaqaderi/time-zone'. The repository has one tag, '1.0', which was pushed 3 minutes ago. The OS listed is 'Alpine'. On the right side of the page, there are 'Docker commands' and a button to 'Push a new tag', along with an 'Automated Builds' section.

نتیجه تست

که در ابتدا بایستی سرور را ران و در ادامه نتیجه را داشته باشیم.

The screenshot shows a terminal window with a dark theme. The user runs 'sudo docker images' to list available images, then 'sudo docker run --name t1 --rm mohammadrezaqaderi/time-zone:1.0' to start a container. The logs show the Flask application starting and receiving several requests from IP 172.17.0.1, indicating it is running correctly.

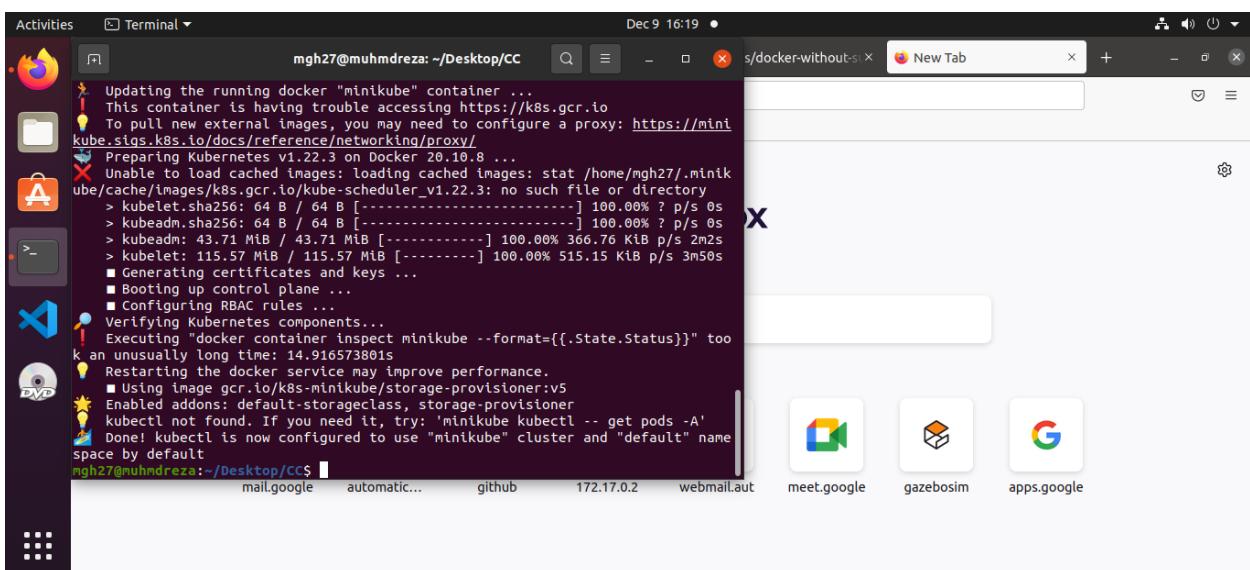
```
mgh27@muhndreza:~/Desktop/CC$ sudo docker images
REPOSITORY          TAG      IMAGE ID      CREATED       SIZE
mohammadrezaqaderi/time-zone   1.0      ccdb4d8a2971  41 seconds ago  72.9MB
mohammadrezaqaderi/mgh27     v1.0      93142a7aaac9  36 hours ago   121MB
python               3.8-alpine  d314e28e240c  9 days ago    43.2MB
ubuntu               focal      ba6acc22d29   7 weeks ago   72.8MB
ubuntu               latest     ba6acc22d29   7 weeks ago   72.8MB

mgh27@muhndreza:~/Desktop/CC$ sudo docker run --name t1 --rm mohammadrezaqaderi/time-zone:1.0
 * Serving Flask app 'server' (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: 139-943-775
172.17.0.1 - - [09/Dec/2021 06:35:50] "GET /time HTTP/1.1" 200 -
172.17.0.1 - - [09/Dec/2021 06:35:52] "GET /favicon.ico HTTP/1.1" 404 -
172.17.0.1 - - [09/Dec/2021 06:37:38] "GET /time HTTP/1.1" 200 -
172.17.0.1 - - [09/Dec/2021 06:37:42] "GET /time HTTP/1.1" 200 -
172.17.0.1 - - [09/Dec/2021 06:38:17] "GET /time HTTP/1.1" 200 -
172.17.0.1 - - [09/Dec/2021 06:38:18] "GET /favicon.ico HTTP/1.1" 404 -
```



کام سوم

در اینجا ابتدا بایستی minikube را نصب کرده باشیم



بعد از این بایستی برای آن فایل‌های deployment , configMap , service را فیکس کنیم.

Activities Visual Studio Code • Dec 10 02:51 •

service.yaml - CC - Visual Studio Code

The screenshot shows the Visual Studio Code interface with the title bar "service.yaml - CC - Visual Studio Code". The status bar at the bottom right indicates "Ln 11, Col 23 Spaces: 2 UTF-8 LF YAML". The Explorer sidebar on the left shows a project structure with files like ".idea", "venv", "config-map.yaml", "config.json", "deployment.yaml", "Dockerfile", "minikube-linux-amd64", "requirements.txt", "server.py", and "service.yaml". The main editor area displays the following YAML code:

```
! service.yaml
1 apiVersion: v1
2 kind: Service
3 metadata:
4   name: time-zone-service
5 spec:
6   selector:
7     app: time-zone
8   ports:
9     - protocol: TCP
10    port: 8888
11    targetPort: 8080
```

Activities Visual Studio Code • Dec 10 02:51 •

config-map.yaml - CC - Visual Studio Code

The screenshot shows the Visual Studio Code interface with the title bar "config-map.yaml - CC - Visual Studio Code". The status bar at the bottom right indicates "Ln 10, Col 6 Spaces: 2 UTF-8 LF YAML". The Explorer sidebar on the left shows a project structure with files like ".idea", "venv", "config-map.yaml", "config.json", "deployment.yaml", "Dockerfile", "minikube-linux-amd64", "requirements.txt", "server.py", and "service.yaml". The main editor area displays the following YAML code:

```
! config-map.yaml
1 apiVersion: v1
2 kind: ConfigMap
3 metadata:
4   name: time-zone-config
5 data:
6   config-cluster.json: |
7     {
8       "address": "http://worldtimeapi.org/api/timezone/Asia/Tehran.txt",
9       "port": 8080
10 }
```

```
deployment.yaml - CC - Visual Studio Code
File Edit Selection View Go Run Terminal Help
EXPLORER deployment.yaml service.yaml requirements.txt config-map.yaml
! deployment.yaml
1 apiVersion: apps/v1
2 kind: Deployment
3 metadata:
4 creationTimestamp: null
5 labels:
6 app: time-zone
7 name: time-zone
8 spec:
9 replicas: 2
10 selector:
11 matchLabels:
12 app: time-zone
13 strategy: {}
14 template:
15 metadata:
16 creationTimestamp: null
17 labels:
18 app: time-zone
19 spec:
20 containers:
21 - image: mohammadrezaqaderi/time-zone:1.0
22 name: time
23 resources: {}
24 ports:
```

Ln 28, Col 22 (19 selected) Spaces: 2 UTF-8 LF YAML ⚡

```
deployment.yaml - CC - Visual Studio Code
File Edit Selection View Go Run Terminal Help
EXPLORER deployment.yaml service.yaml requirements.txt config-map.yaml
! deployment.yaml
14 template:
15 metadata:
16 creationTimestamp: null
17 labels:
18 app: time-zone
19 spec:
20 containers:
21 - image: mohammadrezaqaderi/time-zone:1.0
22 name: time
23 resources: {}
24 ports:
25 - containerPort: 8080
26 volumeMounts:
27 - mountPath: /app/config-cluster.json
28 subPath: config-cluster.json
29 name: config-map
30 readOnly: true
31 volumes:
32 - name: config-map
33 configMap:
34 name: time-zone-config
35 status: {}
```

Ln 28, Col 22 (19 selected) Spaces: 2 UTF-8 LF YAML ⚡

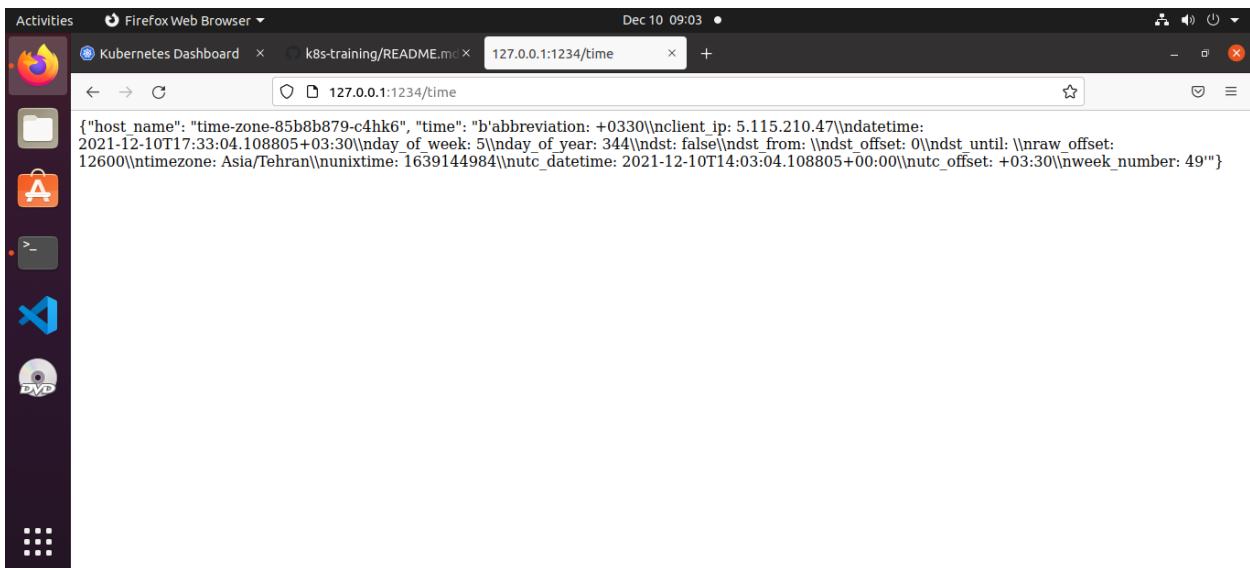
در ادامه بایستی چک کنیم آیا دیپلولیمنت ما فعال هست که با توجه به داشبورد مینی کوب به صورت زیر داریم.

The screenshot shows the Kubernetes Dashboard interface. On the left, there's a sidebar with icons for Workloads, Cron Jobs, Daemon Sets, Deployments (which is selected), Jobs, Pods, Replica Sets, Replication Controllers, Stateful Sets, and Services. The main area has a blue header bar with the text 'Workloads > Deployments'. Below it, a table lists a single deployment named 'time-zone' under the 'Deployments' section. The table includes columns for Name, Namespace, Images, and Labels. The 'time-zone' entry has a green status dot, the namespace is 'default', the image is 'mohammadrezaqaderi/time-zone:1.0', and the label is 'app: time-zone'.

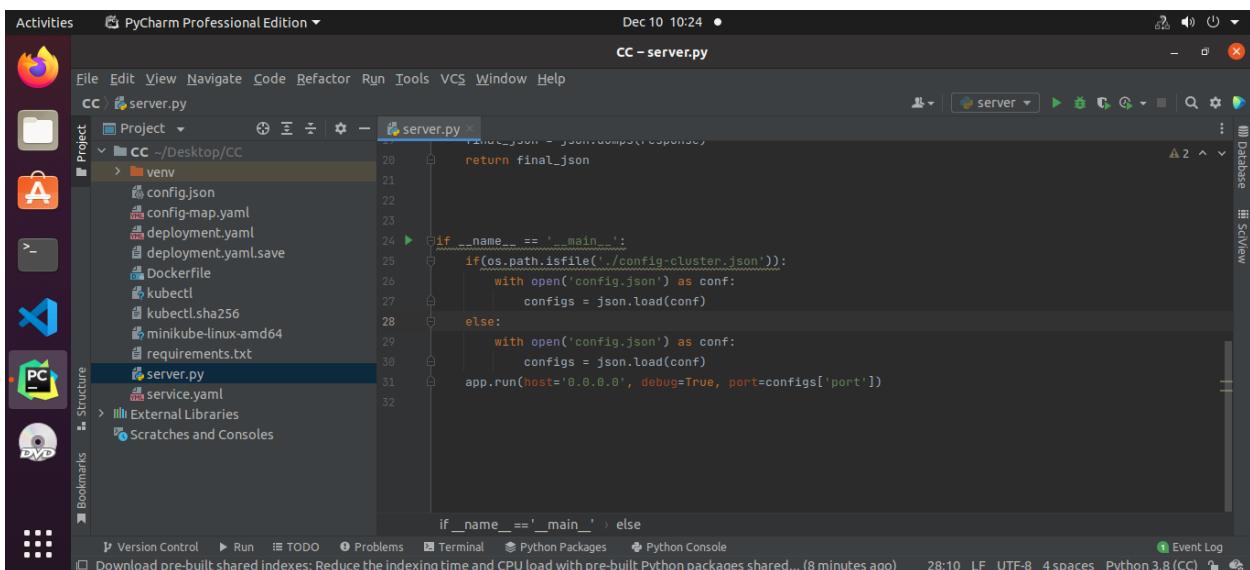
که ورژن ابتدایی time-zone فعال هست.

در ادامه با روش port-forward در ابتدا یک درخواست برای بررسی میزnim.

The screenshot shows a terminal window with a GitHub tab open. The terminal itself has two tabs: 'mgh27@muhndreza: ~/Desktop/CC' and 'mgh27@muhndreza: ~/Desktop/CC'. The first tab contains a log of commands related to creating a deployment, including 'kubectl run', 'curl', and 'kubectl apply'. The second tab shows the output of 'curl localhost:8888', which returns a JSON response indicating the deployment is up and running. The GitHub tab shows a file named 'k8s-training/README.md' with some code snippets.



در ادامه چون ما در فایل‌های کانفیگ مپ یک json دیگر در نظر گرفتیم باید چک کنیم آیا آن دارای مقدار هست یا نه.



و با این تغییر ایمیج ما نیز تغییر میکند و ورژن جدید آنرا داریم:

گام چهارم

حالا میبایستی اینمیج که در ابتدای آنرا کانفیگ کردیم را بالا بیاوریم و توسط آن به سرور خود درخواست بدیم

```
mgh27@muhmdreza:~/Desktop/CC$ kubectl port-forward service/time-zone-service 1234:8088
Forwarding from 127.0.0.1:1234 -> 8088
Forwarding from [::]:1234 -> 8088
Handling connection for 1234
^Cmgh27@muhmdreza:~/Desktop/CC$ docker image ls
REPOSITORY          TAG      IMAGE ID      CREATED       SIZE
mohammadrezaqaderi/time-zone   1.2      fc7764f6a756  55 minutes ago  72.9MB
python               3.8-alpine  d314e28e240c  10 days ago   43.2MB
gcr.io/k8s-minikube/kicbase   v0.0.28   e2a6c047bedd  2 months ago   1.08GB
mgh27@muhndreza:~/Desktop/CC$ docker pull mohammadrezaqaderi/mgh27:v1.0
v1.0: Pulling from mohammadrezaqaderi/mgh27
7bia6ab2e44d: Pull complete
2421c8ae9a78: Pull complete
Digest: sha256:531b379c287b6714797e54f87fa68962a71b360fa9d0ab39e3adf107a25d679
Status: Downloaded newer image for mohammadrezaqaderi/mgh27:v1.0
docker.io/mohammadrezaqaderi/mgh27:v1.0
mgh27@muhndreza:~/Desktop/CC$ docker image ls
REPOSITORY          TAG      IMAGE ID      CREATED       SIZE
mohammadrezaqaderi/time-zone   1.2      fc7764f6a756  57 minutes ago  72.9MB
mohammadrezaqaderi/mgh27     v1.0      93142a7aac9   2 days ago    121MB
python               3.8-alpine  d314e28e240c  10 days ago   43.2MB
gcr.io/k8s-minikube/kicbase   v0.0.28   e2a6c047bedd  2 months ago   1.08GB
mgh27@muhndreza:~/Desktop/CC$ kubectl run -i -t net-utils --image=mohammadrezaqaderi/mgh27:v1.0
error: timed out waiting for the condition
mgh27@muhndreza:~/Desktop/CC$ kubectl run -i -t net-utils --image=mohammadrezaqaderi/mgh27:v1.0
Error from server (AlreadyExists): pods "net-utils" already exists
mgh27@muhndreza:~/Desktop/CC$ 
```

حالا داشبورد را بعد از استارت مینی کیوب را بالا می آوریم.

The screenshot shows a Linux desktop environment with a dark theme. In the top bar, it says "Activities Terminal" and the date "Dec 10 12:50". There are two terminal windows open, both titled "mgh27@muhmdreza: ~/Desktop/CC". The left terminal window shows the output of a command that creates several Kubernetes resources:

```
clusterrolebinding.rbac.authorization.k8s.io/storage-provisioner created
role.rbac.authorization.k8s.io/system:persistent-volume-provisioner created
rolebinding.rbac.authorization.k8s.io/system:persistent-volume-provisioner created
endpoints/k8s.io-minikube-hostpath created
```

The right terminal window shows the output of another command, likely related to minikube, with some error messages:

```
stderr:
Error from server (Timeout): error when creating "/etc/kubernetes/addons/storage-provisioner.yaml": Timeout: request did not complete within requested timeout - context deadline exceeded
Error from server (Forbidden): error when creating "/etc/kubernetes/addons/storage-provisioner.yaml": pods "storage-provisioner" is forbidden: error looking up service account kube-system/storage-provisioner: serviceaccount "storage-provisioner" not found
]
🌟 Enabled addons: default-storageclass, dashboard
💡 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
mgh27@muhmdreza:~/Desktop/CC$ minikube dashboard
💡 Launching dashboard health ...
💡 Verifying proxy health ...
💡 Opening http://127.0.0.1:41239/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
.
ATTENTION: default value of option mesa_glthread overridden by environment.
ATTENTION: default value of option mesa_glthread overridden by environment.
[GFX1-]: Couldn't sanitize RENDERER device: SVGA3D; build: RELEASE; LLVM;
ATTENTION: default value of option mesa_glthread overridden by environment.
[GFX1-]: Couldn't sanitize RENDERER device: SVGA3D; build: RELEASE; LLVM;
ATTENTION: default value of option mesa_glthread overridden by environment.
[GFX1-]: Couldn't sanitize RENDERER device: SVGA3D; build: RELEASE; LLVM;
```

در ادامه با داشتن این ها درخواست برای سرور از طریق کرل ایمیج اولی ارسال می‌کنیم.

Activities Firefox Web Browser • Dec 10 12:49 •

Kubernetes Dashboard x Kubernetes Dashboard x Kubernetes f PLAYING x Meet - phv-wiku-ov PLAYING x +

127.0.0.1:41239/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard/proxy/#/shell/

kubernetes default Search

Workloads > Pods > net-utils > Shell

```
root@net-utils:/# curl time-zone-service:8888
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>404 Not Found</title>
<h1>Not Found</h1>
<p>The requested URL was not found on the server. If you entered the URL manually please check your spelling and try again.</p>
root@net-utils:/# curl time-zone-service:8888
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>404 Not Found</title>
<h1>Not Found</h1>
<p>The requested URL was not found on the server. If you entered the URL manually please check your spelling and try again.</p>
root@net-utils:/# curl time-zone-service:8888/time
("host_name": "time-zone-f97764955-9ccf1", "time": "b'abbreviation: +0330\\nclient_ip: 5.115.71.184\\ndatetime: 2021-12-10T21
of_year: 344\\ndst: false\\ndst_from: \\ndst_offset: 0\\ndst_until: \\nraw_offset: 12600\\ntimezone: Asia/Tehran\\nunixtime:
:32.238888+00:00\\nutc_offset: +03:30\\nweek_number: 49'"})root@net-utils:/# curl time-zone-service:8888/time
("host_name": "time-zone-f97764955-f9tgb", "time": "b'abbreviation: +0330\\nclient_ip: 5.115.71.184\\ndatetime: 2021-12-10T21
of_year: 344\\ndst: false\\ndst_from: \\ndst_offset: 0\\ndst_until: \\nraw_offset: 12600\\ntimezone: Asia/Tehran\\nunixtime:
:42.885358+00:00\\nutc_offset: +03:30\\nweek_number: 49'"})root@net-utils:/# curl time-zone-service:8888/time
("host_name": "time-zone-f97764955-9ccf1", "time": "b'abbreviation: +0330\\nclient_ip: 5.115.71.184\\ndatetime: 2021-12-10T21
of_year: 344\\ndst: false\\ndst_from: \\ndst_offset: 0\\ndst_until: \\nraw_offset: 12600\\ntimezone: Asia/Tehran\\nunixtime:
:45.577720+00:00\\nutc_offset: +03:30\\nweek_number: 49'"})root@net-utils:/#
```

Activities Firefox Web Browser • Dec 10 12:49 •

Kubernetes Dashboard x Kubernetes Dashboard x Kubernetes f PLAYING x Meet - phv-wiku-ov PLAYING x +

127.0.0.1:41239/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard/proxy/#/shell/

kubernetes default Search

Workloads > Pods > net-utils > Shell

```
root@net-utils:/# curl time-zone-service:8888
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>404 Not Found</title>
<h1>Not Found</h1>
<p>The requested URL was not found on the server. If you entered the URL manually please check your spelling and try again.</p>
root@net-utils:/# curl time-zone-service:8888
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
<title>404 Not Found</title>
<h1>Not Found</h1>
<p>The requested URL was not found on the server. If you entered the URL manually please check your spelling and try again.</p>
root@net-utils:/# curl time-zone-service:8888/time
("host_name": "time-zone-f97764955-9ccf1", "time": "b'abbreviation: +0330\\nclient_ip: 5.115.71.184\\ndatetime: 2021-12-10T21
of_year: 344\\ndst: false\\ndst_from: \\ndst_offset: 0\\ndst_until: \\nraw_offset: 12600\\ntimezone: Asia/Tehran\\nunixtime:
:32.238888+00:00\\nutc_offset: +03:30\\nweek_number: 49'"})root@net-utils:/# curl time-zone-service:8888/time
("host_name": "time-zone-f97764955-f9tgb", "time": "b'abbreviation: +0330\\nclient_ip: 5.115.71.184\\ndatetime: 2021-12-10T21
of_year: 344\\ndst: false\\ndst_from: \\ndst_offset: 0\\ndst_until: \\nraw_offset: 12600\\ntimezone: Asia/Tehran\\nunixtime:
:42.885358+00:00\\nutc_offset: +03:30\\nweek_number: 49'"})root@net-utils:/# curl time-zone-service:8888/time
("host_name": "time-zone-f97764955-9ccf1", "time": "b'abbreviation: +0330\\nclient_ip: 5.115.71.184\\ndatetime: 2021-12-10T21
of_year: 344\\ndst: false\\ndst_from: \\ndst_offset: 0\\ndst_until: \\nraw_offset: 12600\\ntimezone: Asia/Tehran\\nunixtime:
:45.577720+00:00\\nutc_offset: +03:30\\nweek_number: 49'"})root@net-utils:/#
```

The image consists of two vertically stacked screenshots of the Kubernetes Dashboard, both captured at 12:50 on December 10. Both screenshots show the 'Logs' page for a pod named 'time-zone-f97764955-9ccf1' and 'time-zone-f97764955-f9tg6' respectively, running in the 'default' namespace.

Screenshot 1 (Top): This screenshot shows the logs for the pod 'time-zone-f97764955-9ccf1'. The log output is as follows:

```
* Serving Flask app 'server' (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://172.17.0.9:8080/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 145-639-644
172.17.0.1 - - [10/Dec/2021 17:48:32] "GET /time HTTP/1.1" 200 -
172.17.0.1 - - [10/Dec/2021 17:48:45] "GET /time HTTP/1.1" 200 -
```

Screenshot 2 (Bottom): This screenshot shows the logs for the pod 'time-zone-f97764955-f9tg6'. The log output is as follows:

```
* 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://172.17.0.7:8080/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 640-117-748
127.0.0.1 - - [10/Dec/2021 16:57:49] "GET /time HTTP/1.1" 200 -
172.17.0.1 - - [10/Dec/2021 17:44:54] "[33mGET / HTTP/1.1[0m" 404 -
172.17.0.1 - - [10/Dec/2021 17:46:19] "[33mGET / HTTP/1.1[0m" 404 -
172.17.0.1 - - [10/Dec/2021 17:48:43] "GET /time HTTP/1.1" 200 -
```

با توجه به تعداد درخواست ها سرور ما بالانس را ایجاد کرده و بین همه پادهای موجود پخش میکند.