

۱. ارسال ایمیج ساخته شده بر روی داکرهاب و نتیجه‌ی آن:

```
~/PycharmProjects/CC-2  DanielH daniels-MacBook-Pro-2:s002  
└─(18:02:21)─> docker push nialda/curl:latest  
The push refers to repository [docker.io/nialda/curl]  
79af4c8a0a00: Pushed  
4fc242d58285: Pushed  
latest: digest: sha256:5337a7b020821291fa749e1b61cc1f80fcfc4449bb8e1d0fcc4c75f23da89bb1 size: 738
```

۲ و ۳. دریافت ایمیج ساخته شده از داکرهاب، اجرا و خروجی دستور curl:

```
~/PycharmProjects/CC-2  DanielH daniels-MacBook-Pro-2:s002  
└─(18:05:37)─> docker run -it nialda/curl  
/ # curl google.com  
<HTML><HEAD><meta http-equiv="content-type" content="text/html; charset=utf-8">  
<TITLE>301 Moved</TITLE></HEAD><BODY>  
<H1>301 Moved</H1>  
The document has moved  
<A HREF="http://www.google.com/">here</A>.  
</BODY></HTML>  
/ #
```

۱. Build کردن ایمیج با استفاده از Dockerfile

```

~/PycharmProjects/CC-22
[18:14:17] → docker build -t server:latest -f docker/Dockerfile .
[+] Building 177.0s (12/12) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 327B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/python:latest
=> [1/6] FROM docker.io/library/python@sha256:edc8e6a550e4be7c340df18b25236455ea46a5ac14be4dcd4711c285d25d1db
138.5s
=> resolve docker.io/library/python@sha256:edc8e6a550e4be7c340df18b25236455ea46a5ac14be4dcd4711c285d25d1db
=> sha256:6aefca2dc61dcbcd268b8a9861e552f9c9db69e57242faec64ac120d2355a9c1a 54.94MB / 54.94MB
64.9s
=> sha256:967757d5652770cfa81b6cc7577d65e06d336173da116d1fb5b2d349d5d44127 5.16MB / 5.16MB
10.1s
=> sha256:c357e2c68cb3bf1e98dcb3eb6ceb16837253db71535921d6993c594588bffe04 10.87MB / 10.87MB
14.9s
=> sha256:edc8e6a550e4be7c340df18b25236455ea46a5ac14be4dcd4711c285d25d1db 2.14kB / 2.14kB
=> sha256:76f9e442f2df5c12efb5949407b0bb7ad28a413f8a5387a4243b1d43a14654060 2.22kB / 2.22kB
=> sha256:2b7ca628da40dc0dcdf6bf5180f8cc0c5c3b83e89960e265e540cc7502ceee5 8.53kB / 8.53kB
=> sha256:c766e27afb21eddf9ab3e439f700ebe697c32a4c6ada6af4f08282277a291a28 54.58MB / 54.58MB
53.6s
=> sha256:32a180f5cf85702e7680719c40c39c7972b1176355df5a621de9eb87ad07ce2 196.70MB / 196.70MB
119.5s
=> sha256:1535e3c1181a81ea66d5bacb16564e4da2ba96304506598be39afe9c82b21c5c 6.29MB / 6.29MB
70.8s
=> sha256:ca398dbb0a270570de44ac21ffb1854507bea6a66126fa3ad54c785174264511 19.74MB / 19.74MB
78.5s
=> extracting sha256:6aefca2dc61dcbcd268b8a9861e552f9c9db69e57242faec64ac120d2355a9c1a
4.7s
=> extracting sha256:967757d5652770cfa81b6cc7577d65e06d336173da116d1fb5b2d349d5d44127
0.4s
=> extracting sha256:c357e2c68cb3bf1e98dcb3eb6ceb16837253db71535921d6993c594588bffe04
0.5s
=> sha256:fc3fb1727276d6552df691c61e5c4cee8d978c088298d645492a175fe34b5cfc 233B / 233B
73.8s
=> extracting sha256:c766e27afb21eddf9ab3e439f700ebe697c32a4c6ada6af4f08282277a291a28
6.3s
=> sha256:13ca01dc6e0ba30bd4e2b1c52924ead46d206f45e1dd1da500a22a6c1697e9f4e 2.87MB / 2.87MB
78.5s
=> extracting sha256:32a180f5cf85702e7680719c40c39c7972b1176355df5a621de9eb87ad07ce2
15.3s
=> extracting sha256:1535e3c1181a81ea66d5bacb16564e4da2ba96304506598be39afe9c82b21c5c
0.5s
=> extracting sha256:ca398dbb0a270570de44ac21ffb1854507bea6a66126fa3ad54c785174264511
1.4s
=> extracting sha256:fc3fb1727276d6552df691c61e5c4cee8d978c088298d645492a175fe34b5cfc
0.5s
=> extracting sha256:13ca01dc6e0ba30bd4e2b1c52924ead46d206f45e1dd1da500a22a6c1697e9f4e
0.0s
=> [internal] load build context
=> => transferring context: 893.26kB
=> [auth] library/python:pull token for registry-1.docker.io
=> [2/6] WORKDIR /usr/src/app
=> [3/6] RUN pip install --upgrade pip
=> [4/6] COPY ./requirements.txt /usr/src/app
=> [5/6] RUN pip install -r requirements.txt
=> [6/6] COPY ./usr/src/app
=> exporting to image
=> exporting layers
=> writing image sha256:d4175c4b16def5abfe3a474126e527979bad40a1930093c563c41442d8ab5bf0
=> naming to docker.io/library/server:latest

```

## ۲. ارسال ایمیج ساخته شده بر روی داکرهاب و نتیجه‌ی آن:

```

~/PycharmProjects/CC-2
(18:20:04) → docker tag server:latest nialda/server:latest
~/PycharmProjects/CC-2
(18:20:06) → docker image push nialda/server:latest
The push refers to repository [docker.io/nialda/server]
12de22f387ba: Pushed
459cf7895168: Pushed
88da9d15259f: Pushed
af6e72ea561c: Pushed
ce9dd90a2d53: Pushed
709cf5ff5dbe: Mounted from library/python
3a0bf2cde803: Mounted from library/python
45618b844972: Mounted from library/python
6d95196cbe50: Mounted from library/python
5bdcc8e2060c: Mounted from library/python
08fa02ce37eb: Mounted from library/python
a037458de4e0: Mounted from library/python
bafdbe68de4ae: Mounted from library/python
a13c519c6361: Mounted from library/python
latest: digest: sha256:1b49458775a99b0f5a9556041f0afa28cfc10aeb2c02cccbd7f1c46ae632cfa size: 3265

```

```
~/PycharmProjects/CC-2
(20:51:38)→ kubectl get service
NAME          TYPE        CLUSTER-IP      EXTERNAL-IP  PORT(S)    AGE
kubernetes    ClusterIP   10.96.0.1        <none>       443/TCP    228d
server-service ClusterIP   10.108.138.252   <none>       80/TCP     132m

~/PycharmProjects/CC-2
(20:52:22)→ kubectl get configmap
NAME      DATA  AGE
kube-root-ca.crt  1      228d
server          1      134m
server-config    1      125m

~/PycharmProjects/CC-2
(20:52:38)→ kubectl get deployment
NAME    READY  UP-TO-DATE  AVAILABLE  AGE
server  2/2    2           2           131m

~/PycharmProjects/CC-2
(20:53:18)→ kubectl get replicaset
NAME                DESIRED  CURRENT  READY  AGE
server-5c87df6b9c   0        0        0      76m
server-5f86655787   0        0        0      77m
server-5fd6f545d6   0        0        0      79m
server-669dd7977d   2        2        2      2m19s
server-67d4bd7f86   0        0        0      83m
server-67d74c68d5   0        0        0      98m
server-76b96f665c   0        0        0      85m
server-85b9b4c94    0        0        0      99m
server-8657bcc87b   0        0        0      3m24s
server-86594b69b8   0        0        0      73m
server-bd6d9bb77    0        0        0      75m

~/PycharmProjects/CC-2
(20:53:23)→ kubectl get pod
NAME                READY  STATUS    RESTARTS  AGE
server-669dd7977d-8dmkj  1/1    Running   0          2m24s
server-669dd7977d-xpknl  1/1    Running   0          2m19s
```

## ۲. آدرس IP پادها و نحوه برقراری ارتباط میان آن‌ها و سرویس ساخته شده

```
~/PycharmProjects/CC-2
(20:54:43)→ kubectl describe service
Name:          kubernetes
Namespace:     default
Labels:        component=apiserver
               provider=kubernetes
Annotations:    <none>
Selector:      <none>
Type:          ClusterIP
IP Family Policy: SingleStack
IP Families:   IPv4
IP:            10.96.0.1
IPs:           10.96.0.1
Port:          https 443/TCP
TargetPort:    8443/TCP
Endpoints:     192.168.64.2:8443
Session Affinity: None
Events:        <none>

Name:          server-service
Namespace:     default
Labels:        <none>
Annotations:    <none>
Selector:      app=server
Type:          ClusterIP
IP Family Policy: SingleStack
IP Families:   IPv4
IP:            10.108.138.252
IPs:           10.108.138.252
Port:          <unset> 80/TCP
TargetPort:    8000/TCP
Endpoints:     172.17.0.4:8000,172.17.0.5:8000
Session Affinity: None
Events:        <none>
```

## ۱. با استفاده از دستور kubectl get صحت ایجاد پاد بر روی کلاستر

```
~/PycharmProjects/CC-2 20:55:27 → kubectl get pod
NAME                                READY   STATUS    RESTARTS   AGE
server-669dd7977d-8dmkj             1/1     Running   0           4m25s
server-669dd7977d-xpkn1             1/1     Running   0           4m20s
```

۲. چند مورد از درخواست‌های ارسال شده به پروژه خود همراه با توزیع بار میان پادها

```
...mProjects/CC-2 -- DaniaH@danials-MacBook-Pro-2:~/PycharmProjects/CC-2 | 158x45 | ttys002 -- zsh (figterm) • zsh
kubectl
/ # curl server-service/weather/
{"hostname": "server-7869678f74-zcrl", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ # curl server-service/weather/
{"hostname": "server-7869678f74-cq5tw", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ # curl server-service/weather/
{"hostname": "server-7869678f74-zcrl", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ # curl server-service/weather/
{"hostname": "server-7869678f74-zcrl", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ # curl server-service/weather/
{"hostname": "server-7869678f74-zcrl", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ # curl server-service/weather/
{"hostname": "server-7869678f74-cq5tw", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ # curl server-service/weather/
{"hostname": "server-7869678f74-zcrl", "temperature": 26, "weather_descriptions": ["Partly cloudy"], "wind_speed": 4, "humidity": 11, "feelslike": 24}/ #
/ #
```

۳. دستور مورد استفاده برای اجرا کردن ایمج گام اول

```
~/PycharmProjects/CC-2 20:56:56 → kubectl run curl-pod --image nialda/curl:latest -i -t
If you don't see a command prompt, try pressing enter.
/ # curl server-service
```