

به نام خدا

تهیه کننده: ابراهیم صدیقی شماره دانشجویی: ۹۹۳۱۰۹۸

در ابتدا برای راحتی کار یک برنامه shell ساده را می نویسیم:

```
1 #!/bin/bash
2
3 read -p "1) status 2) reset all 3) create all " input
4
5 if [ $input -eq 1 ]; then
6     # get data status
7     echo "//-- pods: --//"
8     kubectl get pods
9     echo "//-- services: --//"
10    kubectl get services
11    echo "//-- deployment: --//"
12    kubectl get deployment
13    echo "//-- pvc: --//"
14    kubectl get pvc
15    echo "//-- pv: --//"
16    kubectl get pv
17 elif [ $input -eq 2 ]; then
18
19     read -p "deleting all are you sure? (y)N " sure
20     if [ $sure == "y" ]; then
21         echo "deleting all deployment & services"
22         kubectl delete service python-app-service
23         kubectl delete service elasticsearch
24         kubectl delete service redis
25         kubectl delete deployment elasticsearch-deployment
26         kubectl delete deployment redis-deployment
27         kubectl delete deployment python-app-deployment
28     fi
29
30     read -p "deleting disks are you sure? (y)N " disk
31     if [ $disk == "y" ]; then
32         kubectl delete pv my-pv
33         kubectl delete pvc my-pvc
34     fi
35
36 elif [ $input -eq 3 ]; then
37     # create configs
38     kubectl apply -f .
39 else
40     echo "Wrong Input"
41 fi
```

سپس یک برنامه جدید برای نصب کوبر و نیازمندی های آن:

```
1 #!/bin/bash
2
3 # install k3s from https://k3s.io/
4 curl -sL https://get.k3s.io | sh -
5 # Check for Ready node, takes ~30 seconds
6 sudo k3s kubectl get node
7
8 # install kind from https://kind.sigs.k8s.io/
9 wget https://golang.org/dl/go1.17.2.linux-amd64.tar.gz
10 sudo tar -C /usr/local -xzf go1.17.2.linux-amd64.tar.gz
11 echo "export PATH=$PATH:/usr/local/go/bin"
12 export GOPATH=$HOME/go
13 export PATH=$PATH:$GOPATH/bin
14 " >> ~/.bashrc
15 source ~/.profile
16 go install sigs.k8s.io/kind@v0.22.0
17 echo 'export PATH="/home/lwall/go/bin/:$PATH"' >> ~/.bashrc
18
19 # install rancher from https://github.com/rancher/rancher?tab=readme-ov-file
20 sudo apt update
21 sudo apt install apt-transport-https ca-certificates curl software-properties-common
22 curl -fsSL https://download.docker.com/linux/debian/gpg | sudo apt-key add -
23 sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/debian $(lsb_release -cs) stable"
24 sudo apt update
25 sudo apt install docker-ce
26 sudo systemctl start docker
27 sudo systemctl enable docker
28 docker --version
29 sudo docker run -d --restart=unless-stopped -p 80:80 -p 443:443 --privileged rancher/rancher
30 docker pull rancher/shell:v0.1.22
31
32 # install minikube from https://minikube.sigs.k8s.io/docs/start/
33 curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
34 sudo install minikube-linux-amd64 /usr/local/bin/minikube && rm minikube-linux-amd64
35
36 mkdir /root/Documents/redis
```

و یک کانفیگ مپ ایجاد میکنیم:

```
1 apiVersion: v1
2 kind: ConfigMap
3 metadata:
4   name: sample-configmap
5 data:
6   env.json: |
7     {
8       "REDIS_HOST": "redis",
9       "ELASTICSEARCH_HOST": "elasticsearch",
10      "ELASTICSEARCH_USER": "elasti",
11      "ELASTICSEARCH_PASS": "12345"
12    }
```

حال برای تست یک بار برنامه مدیریت خود را اجرا میکنیم:

```
root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 1
//-- pods: --//
No resources found in default namespace.
//-- services: --//
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes    ClusterIP     10.43.0.1     <none>         443/TCP    3h2m
//-- deployment: --//
No resources found in default namespace.
//-- pvc: --//
No resources found in default namespace.
//-- pv: --//
No resources found
root@debian-8gb-nbg1-1:~/Documents#
```

برنامه آماده اجرا هست شروع به ساخت pod های خود می کنیم:

```
root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 3
deployment.apps/elasticsearch-deployment created
service/elasticsearch created
deployment.apps/python-app-deployment created
persistentvolume/my-pv created
persistentvolumeclaim/my-pvc created
service/python-app-service created
deployment.apps/redis-deployment created
service/redis created
root@debian-8gb-nbg1-1:~/Documents#
```

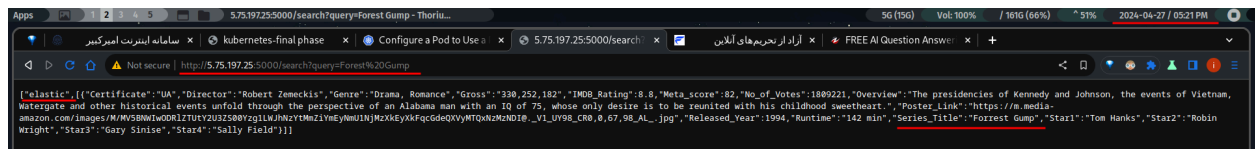
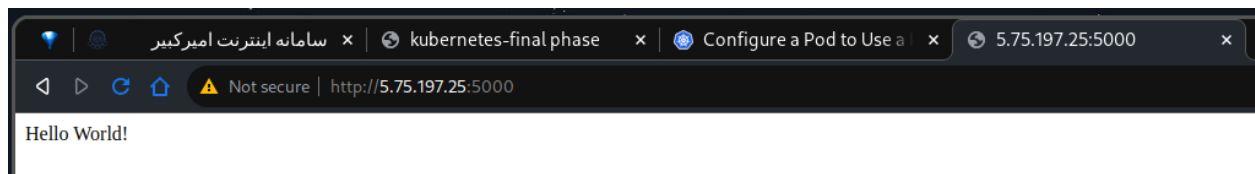
برنامه در حال اجرا استو یک status میگیریم:

```

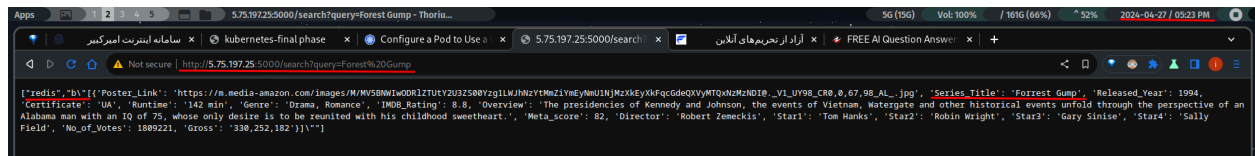
root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 1
//-- pods: --//
NAME                                READY    STATUS    RESTARTS   AGE
elasticsearch-deployment-76668f9487-xbzb 1/1      Running   0           16s
elasticsearch-deployment-76668f9487-vnvdz 1/1      Running   0           16s
elasticsearch-deployment-76668f9487-jj6kl 1/1      Running   0           16s
redis-deployment-bb7db6494-8lq6c        1/1      Running   0           16s
python-app-deployment-84886658f5-9wkb1   1/1      Running   0           16s
python-app-deployment-84886658f5-6dkgx   1/1      Running   0           16s
python-app-deployment-84886658f5-m7597   1/1      Running   0           16s
//-- services: --//
NAME      TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
kubernetes ClusterIP   10.43.0.1     <none>         443/TCP          168m
elasticsearch ClusterIP   10.43.78.164 <none>         9200/TCP         17s
redis      ClusterIP   10.43.84.157 <none>         6379/TCP         17s
python-app-service LoadBalancer 10.43.159.65  5.75.197.25    5000:30259/TCP  17s
//-- deployment: --//
NAME          READY    UP-TO-DATE    AVAILABLE    AGE
elasticsearch-deployment 3/3      3              3            17s
redis-deployment        1/1      1              1            17s
python-app-deployment    3/3      3              3            17s
//-- pvc: --//
NAME      STATUS    VOLUME          CAPACITY    ACCESS MODES    STORAGECLASS    VOLUMEATTRIBUTESCLASS    AGE
my-pvc    Bound     pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257 16Gi        RWO             local-path      <unset>                17s
//-- pv: --//
NAME      CAPACITY    ACCESS MODES    RECLAIM POLICY    STATUS    CLAIM          STORAGECLASS    VOLUMEATTRIBUTESCLASS    REASON    AGE
my-pv     16Gi        RWO             Retain            Available    default/my-pvc    local-path      <unset>                17s
pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257 16Gi        RWO             Delete            Bound     default/my-pvc    local-path      <unset>                15s
root@debian-8gb-nbg1-1:~/Documents#

```

برای app خود برای دسترسی از بیرون به Load Balancer قرار می‌دهیم و بقیه که نیازی به دسترسی بیرون ندارند را ClusterIP قرار می‌دهیم. حال یک تست و یک query را انجام می‌دهیم:



حال دوباره رفرش می‌کنیم تا cache بشود:



یک query را می‌دهیم که مجبور به استفاده از api بشود:

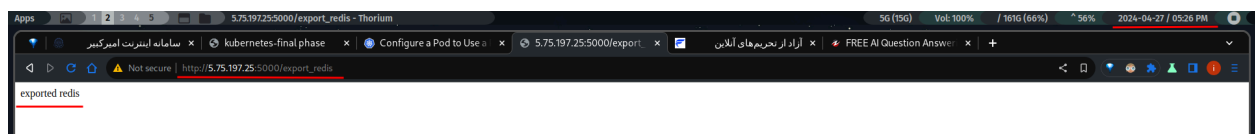


```

32
33     1 usage new *
34     def import_data(self):
35         with open(pv_file, 'r') as file:
36             imported_data = json.load(file)
37
38         # Insert data back into Redis
39         for key, value in imported_data.items():
40             self.r.set(key, value)
41
42     1 usage new *
43     def export_data(self):
44         keys = self.r.keys('*')
45
46         data = {}
47         for key in keys:
48             data[key.decode()] = self.r.get(key).decode()
49
50         with open(pv_file, 'w') as file:
51             json.dump(data, file)

```

حال ان api برای export را کال میکنیم:



و برای اطمینان بیشتر تمام پاد ها را به جز pv & pvc حذف میکنیم:

```

root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 1
//-- pods: --//
No resources found in default namespace.
//-- services: --//
NAME      TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
Kubernetes ClusterIP   10.43.0.1     <none>        443/TCP     177m
//-- deployment: --//
No resources found in default namespace.
//-- pvc: --//
NAME      STATUS    VOLUME                                     CAPACITY   ACCESS MODES   STORAGECLASS   VOLUMEATTRIBUTESCLASS   AGE
my-pvc    Bound     pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257   1Gi        RWO            local-path     <unset>                 9m9s
//-- pv: --//
NAME      CAPACITY   ACCESS MODES   RECLAIM POLICY   STATUS   CLAIM                STORAGECLASS   VOLUMEATTRIBUTESCLASS   REASON   AGE
my-pv     1Gi        RWO            Retain            Available      default/my-pvc       local-path     <unset>                 9m7s
pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257   1Gi        RWO            Delete            Bound                default/my-pvc       local-path     <unset>                 9m7s
root@debian-8gb-nbg1-1:~/Documents#

```

و دوباره همه را اضافه میکنیم:

```

root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 3
deployment.apps/elasticsearch-deployment created
service/elasticsearch created
deployment.apps/python-app-deployment created
persistentvolume/my-pv unchanged
persistentvolumeclaim/my-pvc unchanged
service/python-app-service created
deployment.apps/redis-deployment created
service/redis created
root@debian-8gb-nbg1-1:~/Documents#

```

```

root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
3) status 2) reset all 3) create all 1
//-- pods: --//

```

NAME	READY	STATUS	RESTARTS	AGE
elasticsearch-deployment-76668f9a87-vtth	1/1	Running	0	31s
elasticsearch-deployment-76668f9a87-c6ab	1/1	Running	0	31s
redis-deployment-bb7db6494-mm7x	1/1	Running	0	31s
elasticsearch-deployment-76668f9a87-546km	1/1	Running	0	31s
python-app-deployment-84886658f5-448lb	1/1	Running	0	31s
python-app-deployment-84886658f5-h87lw	1/1	Running	0	31s
python-app-deployment-84886658f5-crqs6	1/1	Running	0	31s

```

//-- Services: --//

```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
kubernetes	ClusterIP	10.43.0.1	<none>	443/TCP	179m
elasticsearch	ClusterIP	10.43.201.244	<none>	9200/TCP	31s
redis	ClusterIP	10.43.187.99	<none>	6379/TCP	31s
python-app-service	LoadBalancer	10.43.61.192	5.75.197.25	5000:32358/TCP	31s

```

//-- deployment: --//

```

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
elasticsearch-deployment	3/3	3	3	31s
redis-deployment	1/1	1	1	31s
python-app-deployment	3/3	3	3	31s

```

//-- pvc: --//

```

NAME	STATUS	VOLUME	CAPACITY	ACCESS MODES	STORAGECLASS	VOLUMEATTRIBUTESCLASS	AGE
my-pvc	Bound	pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257	10i	RWO	local-path	<unset>	10m

```

//-- pv: --//

```

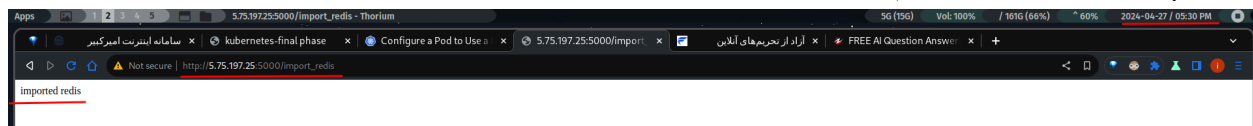
NAME	CAPACITY	ACCESS MODES	RECLAIM POLICY	STATUS	CLAIM	STORAGECLASS	VOLUMEATTRIBUTESCLASS	REASON	AGE
my-pv	10i	RWO	Retain	Available	Bound	default/my-pvc	local-path	<unset>	10m
pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257	10i	RWO	Delete	Bound	default/my-pvc	local-path	<unset>		10m

```

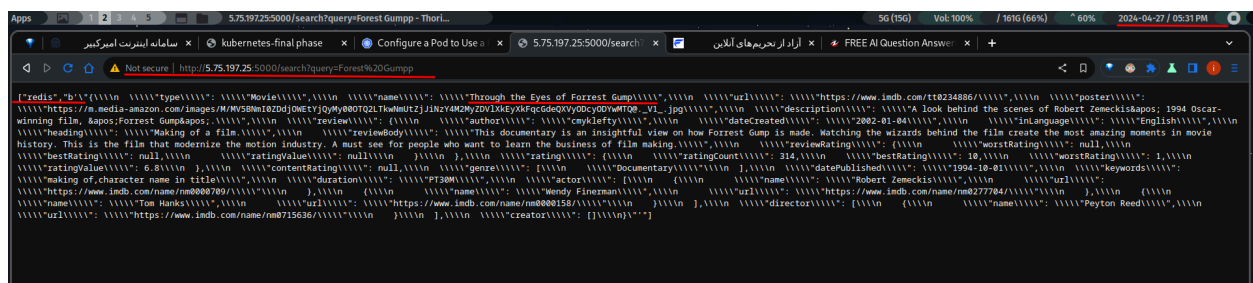
root@debian-8gb-nbg1-1:~/Documents#

```

و حال api اضافه کردن را کال میکنیم:



و همان query را که import کردیم را کال میکنیم:



سوال ها:

بخش ۱:

- پادها بر اساس فیلد name.metadata ساخته می شوند

```

root@dockerForTest:~/kuberfinal# kubectl describe pod python-65fc9fbd5-jt7ct
Name:          python-65fc9fbd5-jt7ct
Namespace:     default
Priority:       0
Service Account: default
Node:          dockerfortest/5.75.207.167
Start Time:    Thu, 02 May 2024 14:12:43 +0000
Labels:        app=python
               pod-template-hash=65fc9fbd5
Annotations:   <none>
Status:        Running
IP:            10.42.0.103
IPs:
  IP:          10.42.0.103
Controlled By: ReplicaSet/python-65fc9fbd5
Containers:
  python:
    Container ID:   containerd://bdf2feaa312e47b57730e40884639896b2d6cb8723ffcc741eabe4e6d4e9153a
    Image:          mhdasdeghzadeh/app:latest
    Image ID:       docker.io/mhdasdeghzadeh/app@sha256:65d4f62a12a8aea8cfec2a40865a9566511399ccbdd6c128
    Port:          5000/TCP
    Host Port:      0/TCP
    State:          Running
      Started:      Thu, 02 May 2024 14:12:46 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /root/kuberfinal/redis from python-pvc (rw)
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-cfgn7 (ro)
Conditions:
  Type                                Status
  PodReadyToStartContainers           True
  Initialized                          True
  Ready                               True
  ContainersReady                     True
  PodScheduled                        True
Volumes:
  python-pvc:
    Type:          PersistentVolumeClaim (a reference to a PersistentVolumeClaim in the same namespace)
    ClaimName:     python-pvc
    ReadOnly:      false
  kube-api-access-cfgn7:
    Type:          Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:  kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:    true
QoS Class:          BestEffort
Node-Selectors:     <none>
Tolerations:        node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                    node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:             <none>

```



```

root@dockerForTest:~/kuberfinal# kubectl describe pod python-65fc9fbd5-b2m8w
Name:          python-65fc9fbd5-b2m8w
Namespace:     default
Priority:       0
Service Account: default
Node:          dockerfortest/5.75.207.167
Start Time:    Thu, 02 May 2024 14:12:43 +0000
Labels:        app=python
                pod-template-hash=65fc9fbd5
Annotations:   <none>
Status:        Running
IP:            10.42.0.101
IPs:           IP: 10.42.0.101
Controlled By: ReplicaSet/python-65fc9fbd5
Containers:
  python:
    Container ID:  containerd://b6a6ea180ce6fcbe03961e15c4b2732f5f581bfb658e5014d2cb798f2e644894
    Image:         mhdasdeghzadeh/app:latest
    Image ID:      docker.io/mhdasdeghzadeh/app@sha256:65d4f62a12a8aea8cfec2a40865a9566511399ccbdd6c128b04bbd7516e649cb
    Port:          5000/TCP
    Host Port:     0/TCP
    State:         Running
      Started:     Thu, 02 May 2024 14:12:45 +0000
    Ready:         True
    Restart Count: 0
    Environment:   <none>
    Mounts:
      /root/kuberfinal/redis from python-pvc (rw)
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-s8lxl (ro)
Conditions:
  Type                               Status
  PodReadyToStartContainers         True
  Initialized                        True
  Ready                             True
  ContainersReady                   True
  PodScheduled                      True
Volumes:
  python-pvc:
    Type:      PersistentVolumeClaim (a reference to a PersistentVolumeClaim in the same namespace)
    ClaimName: python-pvc
    ReadOnly:  false
  kube-api-access-s8lxl:
    Type:      Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName: kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:      true
QoS Class:           BestEffort
Node-Selectors:      <none>
Tolerations:         node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                     node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:              <none>

```

```

root@dockerForTest:~/kuberfinal# kubectl describe pod python-65fc9fbd5-qbd6d
Name:          python-65fc9fbd5-qbd6d
Namespace:     default
Priority:       0
Service Account: default
Node:          dockerfortest/5.75.207.167
Start Time:    Thu, 02 May 2024 14:12:43 +0000
Labels:        app=python
               pod-template-hash=65fc9fbd5
Annotations:   <none>
Status:        Running
IP:            10.42.0.100
IPs:
  IP:          10.42.0.100
Controlled By: ReplicaSet/python-65fc9fbd5
Containers:
  python:
    Container ID:  containerd://9ce1a2e5af12738896e2e9a59d6f6e14a31cca3ad25c08e77f503c09306f900e
    Image:         mhdasdeghzadeh/app:latest
    Image ID:      docker.io/mhdasdeghzadeh/app@sha256:65d4f62a12a8aea8cfec2a40865a9566511399ccbdd6c128b04bbd7516e649cb
    Port:         5000/TCP
    Host Port:    0/TCP
    State:        Running
      Started:    Thu, 02 May 2024 14:12:45 +0000
    Ready:        True
    Restart Count: 0
    Environment:  <none>
    Mounts:
      /root/kuberfinal/redis from python-pvc (rw)
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-mbwgd (ro)
Conditions:
  Type                               Status
  PodReadyToStartContainers          True
  Initialized                         True
  Ready                              True
  ContainersReady                    True
  PodScheduled                       True
Volumes:
  python-pvc:
    Type:      PersistentVolumeClaim (a reference to a PersistentVolumeClaim in the same namespace)
    ClaimName: python-pvc
    ReadOnly:  false
  kube-api-access-mbwgd:
    Type:      Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName: kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI:      true
QoS Class:           BestEffort
Node-Selectors:      <none>
Tolerations:         node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
                     node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:              <none>

```

- پورت های ما توی بخش سرویس ها در عکس زیر است:

```

root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 1
//-- pods: --//
NAME                                READY    STATUS    RESTARTS   AGE
elasticsearch-deployment-76668f9487-xbzbz  1/1      Running   0           16s
elasticsearch-deployment-76668f9487-vnvdz  1/1      Running   0           16s
elasticsearch-deployment-76668f9487-jj6kl  1/1      Running   0           16s
redis-deployment-bb7db6494-8lq6c          1/1      Running   0           16s
python-app-deployment-84886658f5-9wkb1    1/1      Running   0           16s
python-app-deployment-84886658f5-6dkgx    1/1      Running   0           16s
python-app-deployment-84886658f5-m7597    1/1      Running   0           16s
//-- services: --//
NAME      TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
kubernetes  ClusterIP   10.43.0.1     <none>          443/TCP          168m
elasticsearch  ClusterIP   10.43.78.164  <none>          9200/TCP          17s
redis        ClusterIP   10.43.84.157  <none>          6379/TCP          17s
python-app-service  LoadBalancer 10.43.159.65  5.75.197.25    5000:30259/TCP    17s
//-- deployment: --//
NAME                                READY    UP-TO-DATE    AVAILABLE    AGE
elasticsearch-deployment            3/3      3              3            17s
redis-deployment                    1/1      1              1            17s
python-app-deployment               3/3      3              3            17s
//-- pvc: --//
NAME      STATUS    VOLUME                                     CAPACITY   ACCESS MODES   STORAGECLASS   VOLUMEATTRIBUTESCLASS   AGE
my-pvc    Bound     pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257  1Gi        RWO            local-path     <unset>                 17s
//-- pv: --//
NAME      CAPACITY   ACCESS MODES   RECLAIM POLICY   STATUS    CLAIM                STORAGECLASS   VOLUMEATTRIBUTESCLASS   REASON   AGE
my-pv     1Gi        RWO            Retain           Available  default/my-pvc       local-path     <unset>                 17s
pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257  1Gi        RWO            Delete           Bound     default/my-pvc       local-path     <unset>                 15s
root@debian-8gb-nbg1-1:~/Documents#

```

بخش ۲:

- وضعیت pvc & pc در شکل بالا نیز قابل مشاهده است ولی دوباره نشان میدهم

```

root@debian-8gb-nbg1-1:~/Documents# ./commands.sh
1) status 2) reset all 3) create all 1
//-- pods: --//
NAME                                READY    STATUS    RESTARTS   AGE
elasticsearch-deployment-76668f9487-xbzbz  1/1      Running   0           16s
elasticsearch-deployment-76668f9487-vnvdz  1/1      Running   0           16s
elasticsearch-deployment-76668f9487-jj6kl  1/1      Running   0           16s
redis-deployment-bb7db6494-8lq6c          1/1      Running   0           16s
python-app-deployment-84886658f5-9wkb1    1/1      Running   0           16s
python-app-deployment-84886658f5-6dkgx    1/1      Running   0           16s
python-app-deployment-84886658f5-m7597    1/1      Running   0           16s
//-- services: --//
NAME      TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
kubernetes  ClusterIP   10.43.0.1     <none>          443/TCP          168m
elasticsearch  ClusterIP   10.43.78.164  <none>          9200/TCP          17s
redis        ClusterIP   10.43.84.157  <none>          6379/TCP          17s
python-app-service  LoadBalancer 10.43.159.65  5.75.197.25    5000:30259/TCP    17s
//-- deployment: --//
NAME                                READY    UP-TO-DATE    AVAILABLE    AGE
elasticsearch-deployment            3/3      3              3            17s
redis-deployment                    1/1      1              1            17s
python-app-deployment               3/3      3              3            17s
//-- pvc: --//
NAME      STATUS    VOLUME                                     CAPACITY   ACCESS MODES   STORAGECLASS   VOLUMEATTRIBUTESCLASS   AGE
my-pvc    Bound     pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257  1Gi        RWO            local-path     <unset>                 17s
//-- pv: --//
NAME      CAPACITY   ACCESS MODES   RECLAIM POLICY   STATUS    CLAIM                STORAGECLASS   VOLUMEATTRIBUTESCLASS   REASON   AGE
my-pv     1Gi        RWO            Retain           Available  default/my-pvc       local-path     <unset>                 17s
pvc-1a2d24c2-f808-4ea3-9aef-ac3481483257  1Gi        RWO            Delete           Bound     default/my-pvc       local-path     <unset>                 15s
root@debian-8gb-nbg1-1:~/Documents#

```

- توضیحات کاربرد آن در demo اولیه قابل مشاهده است

بخش ۳:

- همانطور که قبلاً گفته شد برای app خود برای دسترسی از بیرون به Load Balancer قرار میدهم

توضیح بار بر روی pod های مختلف:

```
root@dockerForTest:~# kubectl logs python-65fc9fbd5-qbd6d
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning:
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
/usr/local/lib/python3.9/site-packages/elasticsearch/_sync/client/__init__.py:399: SecurityWarn
_transport = transport_class(
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning:
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
.....
Elasticsearch database initialized successfully!
connected to Elasticsearch
* Serving Flask app 'server'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a producti
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://10.42.0.100:5000
Press CTRL+C to quit
10.42.0.1 - - [02/May/2024 14:15:55] "GET /favicon.ico HTTP/1.1" 404 -
10.42.0.1 - - [02/May/2024 14:16:47] "GET /find-movie?name=Forest%20Gump HTTP/1.1" 200 -
10.42.0.1 - - [02/May/2024 14:21:12] "GET /import HTTP/1.1" 200 -
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning:
```

```
root@dockerForTest:~# kubectl logs python-65fc9fbd5-b2m8w
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning:
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
/usr/local/lib/python3.9/site-packages/elasticsearch/_sync/client/__init__.py:399: SecurityWar
_transport = transport_class(
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning:
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
.....
Elasticsearch database initialized successfully!
connected to Elasticsearch
* Serving Flask app 'server'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a product
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://10.42.0.101:5000
Press CTRL+C to quit
10.42.0.1 - - [02/May/2024 14:47:12] "GET /find-movie?name=god%20father HTTP/1.1" 200 -
```

```

root@dockerForTest:~# kubectl logs python-65fc9fbdb5-jt7ct
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning: U
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
/usr/local/lib/python3.9/site-packages/elasticsearch/_sync/client/__init__.py:399: SecurityWarni
_transport = transport_class(
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning: U
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
.....
Elasticsearch database initialized successfully!
connected to Elasticsearch
* Serving Flask app 'server'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a productio
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://10.42.0.103:5000
Press CTRL+C to quit
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning: U
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
10.42.0.1 - - [02/May/2024 14:15:54] "GET /find-movie?name=Forest%20Gump HTTP/1.1" 200 -
10.42.0.1 - - [02/May/2024 14:17:27] "GET /export HTTP/1.1" 200 -
10.42.0.1 - - [02/May/2024 14:21:29] "GET /find-movie?name=Forest%20Gump HTTP/1.1" 200 -
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning: U
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
10.42.0.1 - - [02/May/2024 14:47:09] "GET /find-movie?name=god%20father HTTP/1.1" 200 -
/usr/local/lib/python3.9/site-packages/urllib3/connectionpool.py:1103: InsecureRequestWarning: U
ised. See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#tls-warnings
  warnings.warn(
10.42.0.1 - - [02/May/2024 14:47:22] "GET /find-movie?name=ajshflkdkzoodlgsj HTTP/1.1" 200 -
10.42.0.1 - - [02/May/2024 14:47:40] "GET /find-movie?name=game%20of%20terons HTTP/1.1" 200 -

```