LAB 5

A. create resources:

1. NameSpace:

```
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/la
bs_solutions$ kubectl create namespace lab3
namespace/lab3 created
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/la
bs_solutions$ kubectl get namespaces
NAME              STATUS    AGE
default           Active    7d12h
kube-node-lease   Active    7d12h
kube-public       Active    7d12h
kube-system       Active    7d12h
lab3              Active    12s
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/la
bs_solutions$
```

2. Deployment

```yaml
nginx-deployment.yaml > {} metadata > abc namespace
        io.k8s.api.apps.v1.Deployment (v1@deployment.json)
1    apiVersion: apps/v1
2    kind: Deployment
3    metadata:
4      name: nginx-deployment
5      namespace: lab3
6      labels:
7        app: nginx
8    spec:
9      replicas: 3
10     selector:
11       matchLabels:
12         app: nginx
13     template:
14       metadata:
15         labels:
16           app: nginx
17       spec:
18         containers:
19         - name: nginx
20           image: nginx:1.14.2
21           ports:
22           - containerPort: 80
```

```
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl apply
 -f nginx-deployment.yaml
deployment.apps/nginx-deployment created
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl get de
ployments --namespace=lab3
NAME                READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment    3/3     3            3           4s
```

3. Expose the deployment:

```
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl expose deployment nginx-de
ployment --type NodePort --port 80 --target-port=80 --name=my-service2 --namespace=lab3
service/my-service2 exposed
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl describe svc my-service2 -
-namespace=lab3
Name:                      my-service2
Namespace:                 lab3
Labels:                    app=nginx
Annotations:               <none>
Selector:                  app=nginx
Type:                      NodePort
IP Family Policy:          SingleStack
IP Families:               IPv4
IP:                        10.99.163.29
IPs:                       10.99.163.29
Port:                      <unset>  80/TCP
TargetPort:                80/TCP
NodePort:                  <unset>  32610/TCP
Endpoints:                 172.17.0.20:80,172.17.0.21:80,172.17.0.22:80
Session Affinity:          None
External Traffic Policy:   Cluster
Events:                    <none>
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$
```

B. Cronjob:

1.

```
● salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl create
  serviceaccount cronjob-sa
  serviceaccount/cronjob-sa created
● salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl get se
  rviceaccount
  NAME         SECRETS   AGE
  cronjob-sa   0         14s
  default      0         8d
○ salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ █
```

2.
create role:

```yaml
apiVersion: rbac.authorization.k8s.io/v1
kind: Role
metadata:
  namespace: lab3
  name: listing-services-endpoints
rules:
- apiGroups: [""]
  resources: ["services", "endpoints"]
  verbs: ["list"]
```

```
ents/ITI-devops/Kubernetes/lab1/webapp-dep.yaml • Untracked  B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl create
  -f my-role.yaml
  role.rbac.authorization.k8s.io/listing-services-endpoints created
● salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl get ro
  les -n lab3
  NAME                         CREATED AT
  listing-services-endpoints   2023-01-26T19:25:55Z
○ salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ █
```

role binding:

```yaml
apiVersion: rbac.authorization.k8s.io/v1
kind: RoleBinding
metadata:
  name: my-role-binding
  namespace: lab3
roleRef:
  apiGroup: rbac.authorization.k8s.io
  kind: Role
  name: listing-services-endpoints
subjects:
- kind: ServiceAccount
  name: cronjob-sa
  namespace: lab3
```

```
salmamyoussef@salmamyoussef-Satellite-C55-B:~/Documents/ITI-devops/Kubernetes/lab1$ kubectl descri
be rolebindings my-role-binding -n lab3
Name:           my-role-binding
Labels:         <none>
Annotations:    <none>
Role:
  Kind:  Role
  Name:  listing-services-endpoints
Subjects:
  Kind            Name        Namespace
  ----            ----        ---------
  ServiceAccount  cronjob-sa  lab3
```