

Лабораторная работа №3

1.

Скрины:

```
UW PICO 5.09

apiVersion: v1
kind: Pod
metadata:
  name: explore-pod
spec:
  containers:
    - name: busybox
      image: busybox:latest
      ports:
        - containerPort: 80
      command: ["sh", "-c", "sleep 3600"]
```

```
ptashko@MacBook-Air--Artem ~ % kubectl cluster-info
Kubernetes control plane is running at https://127.0.0.1:52114
CoreDNS is running at https://127.0.0.1:52114/api/v1/namespaces/kube-system/services/kube-dns:dns/proxy

To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.
ptashko@MacBook-Air--Artem ~ % kubectl create namespace test
namespace/test created
ptashko@MacBook-Air--Artem ~ % kubectl get namespaces
NAME      STATUS   AGE
default   Active   118s
kube-node-lease   Active   118s
kube-public   Active   118s
kube-system   Active   118s
test       Active   13s
ptashko@MacBook-Air--Artem ~ % kubectl config set-context --current --namespace=test
Context "minikube" modified.
ptashko@MacBook-Air--Artem ~ % kubectl get pod
No resources found in test namespace.
```

```
ptashko@MacBook-Air--Artem K8S % kubectl apply -f test1.yaml
pod/explore-pod created
ptashko@MacBook-Air--Artem K8S % kubectl get pod explore-pod -o wide
NAME      READY   STATUS    RESTARTS   AGE     IP          NODE   NOMINATED NODE   READINESS GATES
explore-pod  1/1    Running   0          36s   10.244.0.3  minikube  <none>        <none>
```

```
ptashko@MacBook-Air--Artem K8S % kubectl exec -it explore-pod -- uname -a
Linux explore-pod 6.10.14-linuxkit #1 SMP Tue Apr 15 16:00:54 UTC 2025 aarch64 GNU/Linux
ptashko@MacBook-Air--Artem K8S %
```

```
ptashko@MacBook-Air--Artem K8S % kubectl describe pod explore-pod
Name:           explore-pod
Namespace:      test
Priority:       0
Service Account: default
Node:          minikube/192.168.49.2
Start Time:    Thu, 02 Oct 2025 11:47:11 +0300
Labels:         <none>
Annotations:   <none>
Status:        Running
IP:            10.244.0.3
IPs:
  IP: 10.244.0.3
Containers:
  busybox:
    Container ID: docker://84be58399b6c2123a339e818ff66fb4656ce9c55958f1a2b689151bbac1a9485
    Image:        busybox:latest
    Image ID:    docker-pullable://busybox@sha256:d82f458899c9696cb26a7c02d5568f81c8c8223f8661bb2a7988b269c8b9051e
    Port:        80/TCP
    Host Port:  0/TCP
    Command:
      sh
      -c
      sleep 3600
    State:       Running
    Started:    Thu, 02 Oct 2025 11:47:15 +0300
    Ready:      True
    Restart Count: 0
    Environment: <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-t9bwf (ro)
Conditions:
  Type        Status
  PodReadyToStartContainers  True
  Initialized  True
  Ready        True
  ContainersReady  True
  PodScheduled  True
Volumes:
  kube-api-access-t9bwf:
    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:
  Type  Reason     Age   From           Message
  ----  -----     ---   ----           -----
  Normal Scheduled  7m48s  default-scheduler  Successfully assigned test/explore-pod to minikube
  Normal Pulling   7m48s  kubelet        Pulling image "busybox:latest"
  Normal Pulled   7m44s  kubelet        Successfully pulled image "busybox:latest" in 3.499s (3.499s including waiting). Image size: 4170766 bytes.
```

Ответы на вопросы:

На каком узле запущен Pod?

Ответ: minikube/192.168.49.2

Каков текущий статус Pod'а и контейнера?

Ответ: Running

Какой IP-адрес был назначен Pod'у?

Ответ: 10.244.0.3

Какая операционная система используется в контейнере busybox?

Ответ: Linux explore-pod 6.10.14-linuxkit

2.

Скрины:

```
UW PICO 5.09                                         File: test1.yaml

apiVersion: v1
kind: Pod
metadata:
  name: debug-pod
  labels:
    env: test
    app: debug
spec:
  volumes:
  - name: shared
    emptyDir: {}

  containers:
  - name: nginx
    image: nginx:alpine
    ports:
      - containerPort: 80
    volumeMounts:
      - name: shared
        mountPath: /usr/share/nginx/html

  - name: busybox
    image: busybox:latest
    ports:
      - containerPort: 8080
    command: ["sh", "-c", "while true; do echo $(date) >> /shared/log.txt; sleep 5; done"]
    volumeMounts:
      - name: shared
        mountPath: /usr/shared-data
```

```
ptashko@MacBook-Air--Artem K8S % nano test1.yaml
ptashko@MacBook-Air--Artem K8S % kubectl apply -f test1.yaml
pod/debug-pod created
ptashko@MacBook-Air--Artem K8S % kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
debug-pod  2/2     Running   0          22s
ptashko@MacBook-Air--Artem K8S % kubectl port-forward debug-pod 5555:80 5556:8080
Forwarding from 127.0.0.1:5555 -> 80
Forwarding from [::1]:5555 -> 80
Forwarding from 127.0.0.1:5556 -> 8080
Forwarding from [::1]:5556 -> 8080
Handling connection for 5555
Handling connection for 5555
Handling connection for 5556
```