```
minikube start

vi pod_.yaml
```

```
igor@ubuntu-server:~$ minikube start
😄  minikube v1.23.2 on Ubuntu 20.04 (vbox/amd64)
✨  Using the docker driver based on existing profile
👍  Starting control plane node minikube in cluster minikube
🚜  Pulling base image ...
🔄  Restarting existing docker container for "minikube" ...
🐳  Preparing Kubernetes v1.22.2 on Docker 20.10.8 ...
🔎  Verifying Kubernetes components...
    ▪ Using image k8s.gcr.io/ingress-nginx/kube-webhook-certgen:v1.0
    ▪ Using image k8s.gcr.io/ingress-nginx/kube-webhook-certgen:v1.0
    ▪ Using image k8s.gcr.io/ingress-nginx/controller:v1.0.0-beta.3
    ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🔎  Verifying ingress addon...
🌟  Enabled addons: storage-provisioner, ingress, default-storageclass
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
igor@ubuntu-server:~$ vi pod_.yaml
igor@ubuntu-server:~$ 
```

```
---

apiVersion: v1

kind: Pod

metadata:

  name: my-pod

spec:

  containers:

  - image: nginx:1.12

    name: nginx

    ports:

    - containerPort: 82
```

```
--
apiVersion: v1
kind: Pod
metadata:
  name: my-pod
spec:
  containers:
  - image: nginx:1.12
    name: nginx
    ports:
    - containerPort: 80
~
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```

```
kubectl apply -f pod_.yaml

kubectl get pod

kubectl get pod my-pod
```

```
igor@ubuntu-server:~$ kubectl apply -f pod_.yaml
pod/my-pod created
igor@ubuntu-server:~$ kubectl get pod
NAME                          READY   STATUS    RESTARTS         AGE
database-0                    0/1     Pending   0                128d
geekbrains-55df48c88d-klqx7   1/1     Running   8 (44m ago)      128d
geekbrains-55df48c88d-rz2qz   1/1     Running   8 (44m ago)      128d
gitlab-runner-7467648488-jmlsl 1/1    Running   101 (2m36s ago)  129d
my-pod                        1/1     Running   0                16s
node-exporter-n5xqk           1/1     Running   11 (44m ago)     132d
prometheus-0                  0/1     Pending   0                133d
igor@ubuntu-server:~$ kubectl get pod my-pod
NAME     READY   STATUS    RESTARTS   AGE
my-pod   1/1     Running   0          11m
igor@ubuntu-server:~$
```

```
kubectl describe pod my-pod
```

```
igor@ubuntu-server:~$ kubectl describe pod my-pod
Name:         my-pod
Namespace:    default
Priority:     0
Node:         minikube/192.168.49.2
Start Time:   Fri, 25 Mar 2022 18:45:18 +0000
Labels:       <none>
Annotations:  <none>
Status:       Running
IP:           172.17.0.13
IPs:
  IP:  172.17.0.13
Containers:
  nginx:
    Container ID:   docker://9b401b3cc5868d3c04d5ad73fe9ef85516eb264dc2ffa6db90b6a6e8dd6a6b5d
    Image:          nginx:1.12
    Image ID:       docker-pullable://nginx@sha256:72daaf46f11cc753c4eab981cbf869919bd1fee3d2170a2adeac12400f494728
    Port:           80/TCP
    Host Port:      0/TCP
    State:          Running
      Started:      Fri, 25 Mar 2022 18:45:19 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-b8dpj (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-b8dpj:
    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  13m   default-scheduler  Successfully assigned default/my-pod to minikube
  Normal  Pulled     13m   kubelet            Container image "nginx:1.12" already present on machine
  Normal  Created    13m   kubelet            Created container nginx
  Normal  Started    13m   kubelet            Started container nginx
igor@ubuntu-server:~$
```

```
kubectl delete pod my-pod

kubectl describe pod my-pod
```

```
igor@ubuntu-server:~$ kubectl delete pod my-pod
pod "my-pod" deleted
igor@ubuntu-server:~$ kubectl describe pod my-pod
Error from server (NotFound): pods "my-pod" not found
igor@ubuntu-server:~$
```

```
vi replicaset_.yaml


---


apiVersion: apps/v1
```

```
kind: ReplicaSet

metadata:

  name: my-replicaset

spec:

  replicas: 2

  selector:

    matchLabels:

      app: my-app

  template:

    metadata:

      labels:

        app: my-app

    spec:

      containers:

      - image: nginx:1.12

        name: nginx

        ports:

        - containerPort: 80
```

```
---
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: my-replicaset
spec:
  replicas: 2
  selector:
    matchLabels:
      app: my-app
  template:
    metadata:
      labels:
        app: my-app
    spec:
      containers:
      - image: nginx:1.12
        name: nginx
        ports:
        - containerPort: 80
~
~
~
:wq
```

```
kubectl apply -f replicaset_.yaml

kubectl get pods
```

```
igor@ubuntu-server:~$ kubectl apply -f replicaset_.yaml
replicaset.apps/my-replicaset created
igor@ubuntu-server:~$ kubectl get pods
NAME                           READY   STATUS    RESTARTS        AGE
database-0                     0/1     Pending   0               128d
geekbrains-55df48c88d-klqx7    1/1     Running   8 (75m ago)     128d
geekbrains-55df48c88d-rz2qz    1/1     Running   8 (75m ago)     128d
gitlab-runner-7467648488-jmlsl 0/1     Running   106 (7m59s ago) 129d
my-replicaset-47chw            1/1     Running   0               2m10s
my-replicaset-xqjt7            1/1     Running   0               2m10s
node-exporter-n5xqk            1/1     Running   11 (75m ago)    133d
prometheus-0                   0/1     Pending   0               133d
igor@ubuntu-server:~$
```

```
vi replicaset_.yaml
```

  replicas: 3

Файл   Правка   Вид   Терминал   Вкладки   Справка
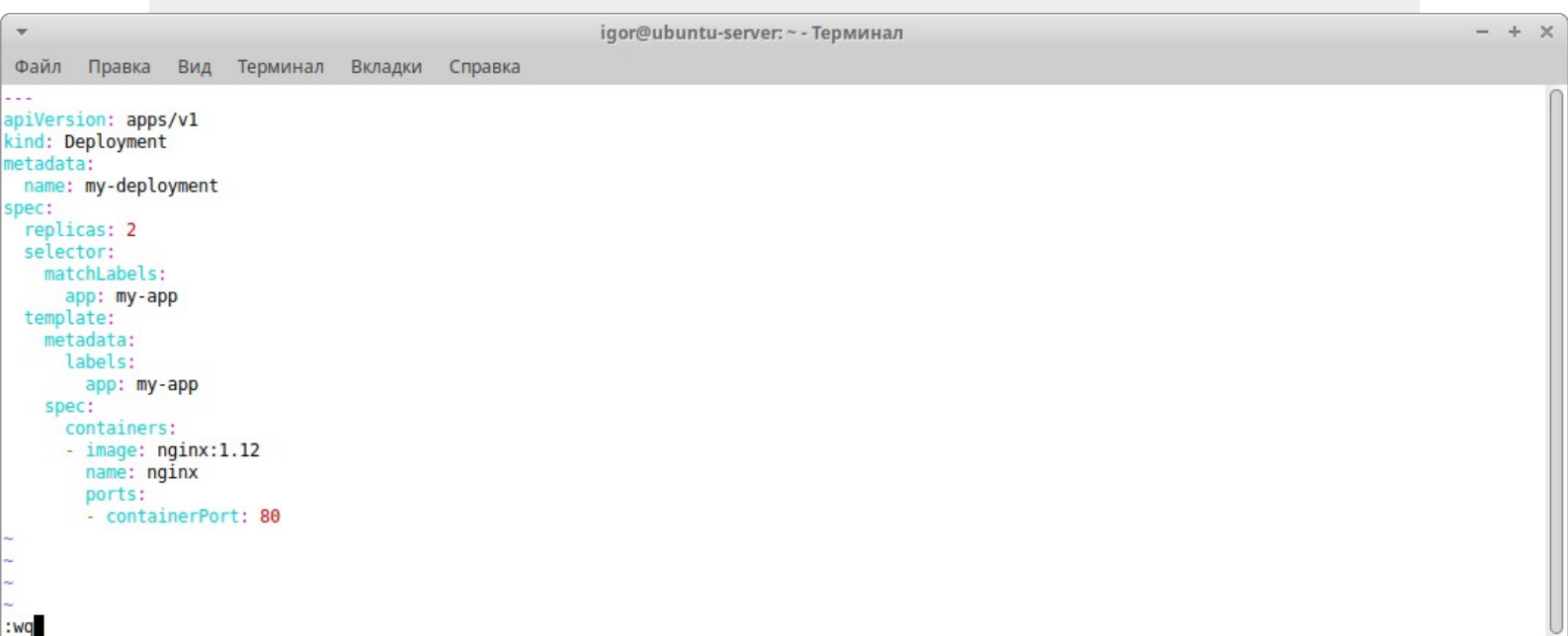
```
---
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: my-replicaset
spec:
  replicas: 3
  selector:
    matchLabels:
      app: my-app
  template:
    metadata:
      labels:
        app: my-app
    spec:
      containers:
      - image: nginx:1.12
        name: nginx
        ports:
        - containerPort: 80
~
```

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Файл   Правка   Вид   Терминал   Вкладки   Справка

```
igor@ubuntu-server:~$ kubectl describe pod my-replicaset-rcb4c
Name:         my-replicaset-rcb4c
Namespace:    default
Priority:     0
Node:         minikube/192.168.49.2
Start Time:   Fri, 25 Mar 2022 19:20:41 +0000
Labels:       app=my-app
Annotations:  <none>
Status:       Running
IP:           172.17.0.15
IPs:
  IP:         172.17.0.15
Controlled By:  ReplicaSet/my-replicaset
Containers:
  nginx:
    Container ID:   docker://587bf111ae3326d57514d30f1bd486f4bc8e33254c6dc74c4450cda39d994b2e
    Image:          nginx:1.12
    Image ID:       docker-pullable://nginx@sha256:72daaf46f11cc753c4eab981cbf869919bd1fee3d2170a2adeac12400f494728
    Port:           80/TCP
    Host Port:      0/TCP
    State:          Running
      Started:      Fri, 25 Mar 2022 19:20:42 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-hqm6d (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-hqm6d:
    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  4m21s  default-scheduler  Successfully assigned default/my-replicaset-rcb4c to minikube
  Normal  Pulled     4m20s  kubelet            Container image "nginx:1.12" already present on machine
  Normal  Created    4m20s  kubelet            Created container nginx
  Normal  Started    4m20s  kubelet            Started container nginx
igor@ubuntu-server:~$
```

```
kubectl apply -f replicaset_.yaml
```

```
  template:
    kubectl get pods
    metadata:
      labels:
        app: my-app
    spec:
      containers:
      - image: nginx:1.12
        name: nginx
        ports:
        - containerPort: 80
```

```
---
apiVersion: apps/v1
kind: Deployment
metadata:
  name: my-deployment
spec:
  replicas: 2
  selector:
    matchLabels:
      app: my-app
  template:
    metadata:
      labels:
        app: my-app
    spec:
      containers:
      - image: nginx:1.12
        name: nginx
        ports:
        - containerPort: 80
~
~
~
~
:wq
```

```
kubectl apply -f deployment_.yaml

kubectl get pods
```

```
igor@ubuntu-server:~$ kubectl apply -f deployment_.yaml
deployment.apps/my-deployment created
igor@ubuntu-server:~$ kubectl get pods
NAME                          READY   STATUS             RESTARTS         AGE
database-0                    0/1     Pending            0                128d
geekbrains-55df48c88d-klqx7   1/1     Running            8 (91m ago)      128d
geekbrains-55df48c88d-rz2qz   1/1     Running            8 (91m ago)      128d
gitlab-runner-7467648488-jmlsl 0/1    CrashLoopBackOff   108 (46s ago)    129d
my-deployment-76499ffb7-5cj6v 1/1     Running            0                18s
my-deployment-76499ffb7-5jcmc 1/1     Running            0                18s
my-replicaset-47chw           1/1     Running            0                18m
my-replicaset-rcb4c           1/1     Running            0                11m
my-replicaset-xqjt7           1/1     Running            0                18m
node-exporter-n5xqk           1/1     Running            11 (91m ago)     133d
prometheus-0                  0/1     Pending            0                133d
igor@ubuntu-server:~$
```

kubectl describe pod my-deployment-76499ffb7-5cj6v

```
igor@ubuntu-server:~$ kubectl describe pod my-deployment-76499ffb7-5cj6v
Name:          my-deployment-76499ffb7-5cj6v
Namespace:     default
Priority:      0
Node:          minikube/192.168.49.2
Start Time:    Fri, 25 Mar 2022 19:32:18 +0000
Labels:        app=my-app
               pod-template-hash=76499ffb7
Annotations:   <none>
Status:        Running
IP:            172.17.0.17
IPs:
  IP:          172.17.0.17
Controlled By:  ReplicaSet/my-deployment-76499ffb7
Containers:
  nginx:
    Container ID:   docker://6d68d1ed55ac8efa5a1e7c1cc367f0622a3d8feba1ad2cd8ccd62beed65d6666
    Image:          nginx:1.12
    Image ID:       docker-pullable://nginx@sha256:72daaf46f11cc753c4eab981cbf869919bd1fee3d2170a2adeac12400f494728
    Port:           80/TCP
    Host Port:      0/TCP
    State:          Running
      Started:      Fri, 25 Mar 2022 19:32:19 +0000
    Ready:          True
    Restart Count:  0
    Environment:    <none>
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-7cwxn (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-7cwxn:
    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  16m   default-scheduler  Successfully assigned default/my-deployment-76499ffb7-5cj6v to minikube
  Normal  Pulled     16m   kubelet            Container image "nginx:1.12" already present on machine
  Normal  Created    16m   kubelet            Created container nginx
  Normal  Started    16m   kubelet            Started container nginx
igor@ubuntu-server:~$
```

kubectl get deployments

```
igor@ubuntu-server:~$ kubectl get deployments
NAME           READY   UP-TO-DATE   AVAILABLE   AGE
geekbrains     2/2     2            2           128d
gitlab-runner  0/1     1            0           129d
my-deployment  2/2     2            2           18m
igor@ubuntu-server:~$
```

kubectl describe deployments my-deployment

```
igor@ubuntu-server:~$ kubectl describe deployments my-deployment
Name:                   my-deployment
Namespace:              default
CreationTimestamp:      Fri, 25 Mar 2022 19:32:18 +0000
Labels:                 <none>
Annotations:            deployment.kubernetes.io/revision: 1
Selector:               app=my-app
Replicas:               2 desired | 2 updated | 2 total | 2 available | 0 unavailable
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=my-app
  Containers:
   nginx:
    Image:         nginx:1.12
    Port:          80/TCP
    Host Port:     0/TCP
    Environment:   <none>
    Mounts:        <none>
  Volumes:         <none>
Conditions:
  Type           Status  Reason
  ----           ------  ------
  Available      True    MinimumReplicasAvailable
  Progressing    True    NewReplicaSetAvailable
OldReplicaSets:  <none>
NewReplicaSet:   my-deployment-76499ffb7 (2/2 replicas created)
Events:
  Type    Reason             Age   From                   Message
  ----    ------             ----  ----                   -------
  Normal  ScalingReplicaSet  20m   deployment-controller  Scaled up replica set my-deployment-76499ffb7 to 2
igor@ubuntu-server:~$
```

kubectl get pods

```
igor@ubuntu-server:~$ kubectl get pods
NAME                             READY   STATUS    RESTARTS        AGE
database-0                       0/1     Pending   0               128d
geekbrains-55df48c88d-klqx7      1/1     Running   8 (113m ago)    128d
geekbrains-55df48c88d-rz2qz      1/1     Running   8 (113m ago)    128d
gitlab-runner-7467648488-jmlsl   0/1     Running   111 (6m56s ago) 129d
my-deployment-76499ffb7-5cj6v    1/1     Running   0               22m
my-deployment-76499ffb7-5jcmc    1/1     Running   0               22m
my-replicaset-47chw              1/1     Running   0               40m
my-replicaset-rcb4c              1/1     Running   0               33m
my-replicaset-xqjt7              1/1     Running   0               40m
node-exporter-n5xqk              1/1     Running   11 (113m ago)   133d
prometheus-0                     0/1     Pending   0               133d
igor@ubuntu-server:~$
```