minikube status

```
 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage
Last login: Tue Nov  9 17:06:24 2021 from 109.252.20.121
tolstikov@my3vm:~$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured

tolstikov@my3vm:~$
```

vi daemonset1.yaml

```
  1 ---
  2 apiVersion: apps/v1
  3 kind: DaemonSet
  4 metadata:
  5   labels:
  6     app: node-exporter
  7   name: node-exporter
  8 spec:
  9   updateStrategy:
 10     rollingUpdate:
 11       maxUnavailable: 1
 12     type: RollingUpdate
 13   selector:
 14     matchLabels:
 15       app: node-exporter
 16   template:
 17     metadata:
 18       labels:
 19         app: node-exporter
 20     spec:
 21       containers:
 22       - args:
 23         - --web.listen-address=0.0.0.0:9101
 24         - --path.procfs=/host/proc
 25         - --path.sysfs=/host/sys
 26         - --collector.filesystem.ignored-mount-points=^/(dev|proc|sys|var/lib/docker/.+)($|/)
 27         - --collector.filesystem.ignored-fs-types=^(autofs|binfmt_misc|cgroup|configfs|debugfs|devpts|devtmpfs|fusectl|hugetlbfs|mqueue|overlay|proc|procfs|pstore|rpc_pipefs|securityfs|sysfs|tracefs)$
 28         image: quay.io/prometheus/node-exporter:v0.16.0
 29         imagePullPolicy: IfNotPresent
 30         name: node-exporter
 31         volumeMounts:
 32         - mountPath: /host/proc
 33           name: proc
 34         - mountPath: /host/sys
 35           name: sys
 36         - mountPath: /host/root
 37           name: root
 38           readOnly: true
 39       hostNetwork: true
 40       hostPID: true
 41       tolerations:
 42       - effect: NoSchedule
 43         operator: Exists
 44       nodeSelector:
 45         beta.kubernetes.io/os: linux
 46       volumes:
 47       - hostPath:
 48           path: /proc
 49           type: ""
 50         name: proc
 51       - hostPath:
 52           path: /sys
 53           type: ""
 54         name: sys
 55       - hostPath:
 56           path: /
 57           type: ""
 58         name: root
                                                                    1,1          All
```

kubectl create -f daemonset1.yaml
Unable to connect to the server: dial tcp 192.168.49.2:8443: connect: no route to host

```
Press ENTER or type command to continue
tolstikov@my3vm:~$ kubectl create -f daemonset1.yaml
Warning: spec.template.spec.nodeSelector[beta.kubernetes.io/os]: deprecated since v1.14; use "kubernetes.io/os" instead
daemonset.apps/node-exporter created
tolstikov@my3vm:~$
```

kubectl get pod -w

kubectl get daemonset

```
tolstikov@my3vm:~$ kubectl get daemonset
NAME            DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR                 AGE
node-exporter   1         1         1       1            1           beta.kubernetes.io/os=linux   2m29s
tolstikov@my3vm:~$
```

kubectl describe daemonset node-exporter

```
tolstikov@my3vm:~$ kubectl describe daemonset node-exporter
Name:            node-exporter
Selector:        app=node-exporter
Node-Selector:   beta.kubernetes.io/os=linux
Labels:          app=node-exporter
Annotations:     deprecated.daemonset.template.generation: 1
Desired Number of Nodes Scheduled: 1
Current Number of Nodes Scheduled: 1
Number of Nodes Scheduled with Up-to-date Pods: 1
Number of Nodes Scheduled with Available Pods: 1
Number of Nodes Misscheduled: 0
Pods Status:  1 Running / 0 Waiting / 0 Succeeded / 0 Failed
Pod Template:
  Labels:  app=node-exporter
  Containers:
   node-exporter:
    Image:       quay.io/prometheus/node-exporter:v0.16.0
    Port:        <none>
    Host Port:   <none>
    Args:
      --web.listen-address=0.0.0.0:9101
      --path.procfs=/host/proc
      --path.sysfs=/host/sys
      --collector.filesystem.ignored-mount-points=^/(dev|proc|sys|var/lib/docker/.+)($|/)
      --collector.filesystem.ignored-fs-types=^(autofs|binfmt_misc|cgroup|configfs|debugfs|devpts|devtmpfs|f
usectl|hugetlbfs|mqueue|overlay|proc|procfs|pstore|rpc_pipefs|securityfs|sysfs|tracefs)$
    Environment:  <none>
    Mounts:
      /host/proc from proc (rw)
      /host/root from root (ro)
      /host/sys from sys (rw)
  Volumes:
   proc:
    Type:          HostPath (bare host directory volume)
    Path:          /proc
    HostPathType:
   sys:
    Type:          HostPath (bare host directory volume)
    Path:          /sys
    HostPathType:
   root:
    Type:          HostPath (bare host directory volume)
    Path:          /
    HostPathType:
Events:
  Type     Reason          Age     From                  Message
  ----     ------          ----    ----                  -------
  Normal   SuccessfulCreate 5m18s  daemonset-controller  Created pod: node-exporter-jq92k
tolstikov@my3vm:~$
```

vi statefulset.yaml

```yaml
---
apiVersion: apps/v1
kind: StatefulSet
metadata:
  name: prometheus
  namespace: default
spec:
  serviceName: prometheus
  replicas: 1
  selector:
    matchLabels:
      app: prometheus
  template:
    metadata:
      labels:
        app: prometheus
    spec:
      serviceAccount: prometheus
      terminationGracePeriodSeconds: 10
      initContainers:
      - image: busybox
        name: mount-permissions-fix
        command: [ "sh", "-c", "chmod 777 /prometheus" ]
        volumeMounts:
          - name: data
            mountPath: /prometheus
      containers:
      - name: prometheus-k8s
        image: prom/prometheus:v2.19.2
        ports:
          - protocol: TCP
            containerPort: 9090
        imagePullPolicy: IfNotPresent
        volumeMounts:
          - name: config
            mountPath: /etc/prometheus
          - name: data
            mountPath: /prometheus
      volumes:
        - name: config
          configMap:
            name: prometheus-config
  volumeClaimTemplates:
    - metadata:
        name: data
      spec:
        accessModes: ["ReadWriteOnce"]
        resources:
          requests:
            storage: 5Gi
        storageClassName: csi-ceph-hdd-dp1
```

:wq

kubectl apply -f statefulset.yaml

```
tolstikov@my3vm:~$ kubectl apply -f statefulset.yaml
statefulset.apps/prometheus created
tolstikov@my3vm:~$
```

kubectl get pods


```
tolstikov@my3vm:~$ kubectl get pods
NAME                              READY   STATUS    RESTARTS        AGE
app-probe-f775c7b8f-kgrp8         1/1     Running   3 (28h ago)     4d5h
balanced-5744b548b4-ld6hl         1/1     Running   3 (28h ago)     4d5h
hello-minikube-6ddfcc9757-2xc5s   1/1     Running   3 (28h ago)     4d5h
my-deployment2-76499ffb7-fb6kl    1/1     Running   3 (28h ago)     4d5h
my-deployment2-76499ffb7-xr4g7    1/1     Running   3 (28h ago)     4d5h
my-replicaset-gzcsz               1/1     Running   3 (28h ago)     4d5h
my-replicaset-wr427               1/1     Running   3 (28h ago)     4d5h
my-replicaset-zxwjs               1/1     Running   3 (28h ago)     4d5h
node-exporter-jq92k               1/1     Running   0               20m
tolstikov@my3vm:~$
```

kubectl get statefulset


```
tolstikov@my3vm:~$ kubectl get statefulset
NAME         READY   AGE
prometheus   0/1     4m30s
tolstikov@my3vm:~$
```

kubectl describe prometheus


```
tolstikov@my3vm:~$ kubectl describe prometheus
error: the server doesn't have a resource type "prometheus"
tolstikov@my3vm:~$
```

kubectl describe statefulset prometheus

```
tolstikov@my3vm:~$ kubectl describe statefulset prometheus
Name:               prometheus
Namespace:          default
CreationTimestamp:  Wed, 10 Nov 2021 21:20:52 +0000
Selector:           app=prometheus
Labels:             <none>
Annotations:        <none>
Replicas:           1 desired | 0 total
Update Strategy:    RollingUpdate
  Partition:        0
Pods Status:        0 Running / 0 Waiting / 0 Succeeded / 0 Failed
Pod Template:
  Labels:           app=prometheus
  Service Account:  prometheus
  Init Containers:
   mount-permissions-fix:
    Image:          busybox
    Port:           <none>
    Host Port:      <none>
    Command:
      sh
      -c
      chmod 777 /prometheus
    Environment:  <none>
    Mounts:
      /prometheus from data (rw)
  Containers:
   prometheus-k8s:
    Image:          prom/prometheus:v2.19.2
    Port:           9090/TCP
    Host Port:      0/TCP
    Environment:  <none>
    Mounts:
      /etc/prometheus from config (rw)
      /prometheus from data (rw)
  Volumes:
   config:
    Type:       ConfigMap (a volume populated by a ConfigMap)
    Name:       prometheus-config
    Optional:   false
Volume Claims:
  Name:          data
  StorageClass:  csi-ceph-hdd-dp1
  Labels:        <none>
  Annotations:   <none>
  Capacity:      5Gi
  Access Modes:  [ReadWriteOnce]
Events:
  Type     Reason          Age                   From                    Message
  ----     ------          ----                  ----                    -------
  Normal   SuccessfulCreate  9m7s                statefulset-controller  create Claim data-prometheus-0 Pod prometheus-0 in
StatefulSet prometheus success
  Warning  FailedCreate    3m39s (x17 over 9m7s)  statefulset-controller  create Pod prometheus-0 in StatefulSet prometheus f
ailed error: pods "prometheus-0" is forbidden: error looking up service account default/prometheus: serviceaccount "prometheus"
 not found
tolstikov@my3vm:~$
```

vi job2.yaml


```
 1  ---
 2  apiVersion: batch/v1
 3  kind: Job
 4  metadata:
 5    name: hello
 6  spec:
 7    backoffLimit: 2
 8    activeDeadlineSeconds: 60
 9    template:
10      spec:
11        containers:
12        - name: hello
13          image: busybox
14          args:
15          - /bin/sh
16          - -c
17          - while true; do slip 1; date; echo Hello from the Kubernetes cluster; done
18        restartPolicy: Never
:wq
```

kubectl apply -f job2.yaml

kubectl get pods

kubectl get jobs

kubectl describe job hello-job

```
tolstikov@my3vm:~$ kubectl get jobs
NAME        COMPLETIONS   DURATION   AGE
hello-job   0/1           2m52s      2m52s
tolstikov@my3vm:~$ kubectl describe job hello-job
Name:                   hello-job
Namespace:              default
Selector:               controller-uid=3d4a6e62-4b8a-4d2f-9dae-149a68cf10ee
Labels:                 controller-uid=3d4a6e62-4b8a-4d2f-9dae-149a68cf10ee
                        job-name=hello-job
Annotations:            <none>
Parallelism:            1
Completions:            1
Completion Mode:        NonIndexed
Start Time:             Sat, 13 Nov 2021 16:05:59 +0000
Active Deadline Seconds: 60s
Pods Statuses:          0 Running / 0 Succeeded / 0 Failed
Pod Template:
  Labels:   controller-uid=3d4a6e62-4b8a-4d2f-9dae-149a68cf10ee
            job-name=hello-job
  Containers:
   hello-job:
    Image:       busybox
    Port:        <none>
    Host Port:   <none>
    Args:
      /bin/sh
      -c
      while true; do slip 1; date; echo Hello from the Kubernetes cluster; done
    Environment:   <none>
    Mounts:        <none>
  Volumes:         <none>
Events:
  Type     Reason           Age                 From            Message
  ----     ------           ----                ----            -------
  Normal   SuccessfulCreate 3m19s               job-controller  Created pod: hello-job--
1-85rnb
  Normal   SuccessfulDelete 2m19s               job-controller  Deleted pod: hello-job--
1-85rnb
  Warning  DeadlineExceeded 2m19s (x2 over 2m19s) job-controller  Job was active longer th
an specified deadline
tolstikov@my3vm:~$
```

kubectl get pods -all

```
my-replicaset-wr427            1/1    Running  3 (28h ago)   4d5h
my-replicaset-zxwjs            1/1    Running  3 (28h ago)   4d5h
node-exporter-jq92k            1/1    Running  0             52m
tolstikov@my3vm:~$ kubectl get pods -all
Error: unknown shorthand flag: 'a' in -all
See 'kubectl get --help' for usage.
tolstikov@my3vm:~$
```

kubectl get pods --all-namespaces

kubectl describe job hello-job

vi cronjob.yaml

```
  1 apiVersion: batch/v1beta1
  2 kind: CronJob
  3 metadata:
  4   name: hello-cron-job
  5 spec:
  6   schedule: "*/1 * * * *"
  7   concurrencyPolicy: Allow
  8   jobTemplate:
  9     spec:
 10       backoffLimit: 2
 11       activeDeadlineSeconds: 100
 12       template:
 13         spec:
 14           containers:
 15           - name: hello-cron-job
 16             image: busybox
 17             args:
 18             - /bin/sh
 19             - -c
 20             - date; echo Hello from the Kubernetes cluster
 21           restartPolicy: Never
~
:wq
```

kubectl apply -f cronjob.yaml


```
pg              app-probe-f775c7b8f-prn4r        1/1    Running    1 (29h ago)    3d3h
pg              pg-db-ff476d4cf-xkxhn            1/1    Running    1 (29h ago)    3d4h
redmine         pg-db-56dd9b6975-5k8wl           1/1    Running    1 (29h ago)    3d1h
redmine         redmine-app-58fc94cf66-xww6t     1/1    Running    2 (29h ago)    3d
tolstikov@my3vm:~$ kubectl describe job hello-job
Error from server (NotFound): jobs.batch "hello-job" not found
tolstikov@my3vm:~$ vi cronjob.yaml
Error detected while processing /home/tolstikov/.vimrc:
line    3:
E487: Argument must be positive: tabstop=0
Press ENTER or type command to continue
tolstikov@my3vm:~$ kubectl apply -f cronjob.yaml
Warning: batch/v1beta1 CronJob is deprecated in v1.21+, unavailable in v1.25+; use batch/v1 CronJob
cronjob.batch/hello-cron-job created
tolstikov@my3vm:~$
```

kubectl get pods


```
cronjob.batch/hello-cron-job created
tolstikov@my3vm:~$ kubectl get pods
NAME                              READY   STATUS      RESTARTS      AGE
app-probe-f775c7b8f-kgrp8         1/1     Running     3 (29h ago)   4d6h
balanced-5744b548b4-ld6hl         1/1     Running     3 (29h ago)   4d6h
hello-cron-job-27276388--1-p7zfp  0/1     Completed   0             68s
hello-cron-job-27276389--1-kj9rh  0/1     Completed   0             8s
hello-minikube-6ddfcc9757-2xc5s   1/1     Running     3 (29h ago)   4d6h
my-deployment2-76499ffb7-fb6kl    1/1     Running     3 (29h ago)   4d6h
my-deployment2-76499ffb7-xr4g7    1/1     Running     3 (29h ago)   4d6h
my-replicaset-gzcsz               1/1     Running     3 (29h ago)   4d6h
my-replicaset-wr427               1/1     Running     3 (29h ago)   4d6h
my-replicaset-zxwjs               1/1     Running     3 (29h ago)   4d6h
node-exporter-jq92k               1/1     Running     0             87m
tolstikov@my3vm:~$
```

 kubectl get cronjobs


```
app-probe-f775c7b8f-kgrp8         1/1     Running     3 (29h ago)   4d6h
balanced-5744b548b4-ld6hl         1/1     Running     3 (29h ago)   4d6h
hello-cron-job-27276388--1-p7zfp  0/1     Completed   0             68s
hello-cron-job-27276389--1-kj9rh  0/1     Completed   0             8s
hello-minikube-6ddfcc9757-2xc5s   1/1     Running     3 (29h ago)   4d6h
my-deployment2-76499ffb7-fb6kl    1/1     Running     3 (29h ago)   4d6h
my-deployment2-76499ffb7-xr4g7    1/1     Running     3 (29h ago)   4d6h
my-replicaset-gzcsz               1/1     Running     3 (29h ago)   4d6h
my-replicaset-wr427               1/1     Running     3 (29h ago)   4d6h
my-replicaset-zxwjs               1/1     Running     3 (29h ago)   4d6h
node-exporter-jq92k               1/1     Running     0             87m
tolstikov@my3vm:~$ kubectl get cronjobs
NAME            SCHEDULE      SUSPEND   ACTIVE   LAST SCHEDULE   AGE
hello-cron-job  */1 * * * *   False     0        28s             2m45s
tolstikov@my3vm:~$
```

kubectl describe job hello-cron-job

```
tolstikov@my3vm: ~ - Терминал                                    — + ×

Файл   Правка   Вид   Терминал   Вкладки   Справка

Name:                          hello-cron-job-27276391
Namespace:                     default
Selector:                      controller-uid=bdbdee1a-5460-412d-ad12-8f1af9992965
Labels:                        controller-uid=bdbdee1a-5460-412d-ad12-8f1af9992965
                               job-name=hello-cron-job-27276391
Annotations:                   <none>
Controlled By:                 CronJob/hello-cron-job
Parallelism:                   1
Completions:                   1
Completion Mode:               NonIndexed
Start Time:                    Wed, 10 Nov 2021 22:31:00 +0000
Completed At:                  Wed, 10 Nov 2021 22:31:04 +0000
Duration:                      4s
Active Deadline Seconds:       100s
Pods Statuses:                 0 Running / 1 Succeeded / 0 Failed
Pod Template:
  Labels:  controller-uid=bdbdee1a-5460-412d-ad12-8f1af9992965
           job-name=hello-cron-job-27276391
  Containers:
   hello-cron-job:
    Image:       busybox
    Port:        <none>
    Host Port:   <none>
    Args:
      /bin/sh
      -c
      date; echo Hello from the Kubernetes cluster
    Environment:   <none>
    Mounts:        <none>
  Volumes:         <none>
Events:
  Type     Reason           Age    From            Message
  ----     ------           ----   ----            -------
  Normal   SuccessfulCreate 72s    job-controller  Created pod: hello-cron-job-27276391--1-rdch4
  Normal   Completed        68s    job-controller  Job completed

Name:                          hello-cron-job-27276392
Namespace:                     default
Selector:                      controller-uid=429539a3-f0ff-45bb-9a1b-73e2c43c0a5f
Labels:                        controller-uid=429539a3-f0ff-45bb-9a1b-73e2c43c0a5f
                               job-name=hello-cron-job-27276392
Annotations:                   <none>
Controlled By:                 CronJob/hello-cron-job
Parallelism:                   1
Completions:                   1
Completion Mode:               NonIndexed
Start Time:                    Wed, 10 Nov 2021 22:32:00 +0000
Completed At:                  Wed, 10 Nov 2021 22:32:03 +0000
Duration:                      3s
Active Deadline Seconds:       100s
Pods Statuses:                 0 Running / 1 Succeeded / 0 Failed
Pod Template:
  Labels:  controller-uid=429539a3-f0ff-45bb-9a1b-73e2c43c0a5f
           job-name=hello-cron-job-27276392
  Containers:
   hello-cron-job:
    Image:       busybox
    Port:        <none>
    Host Port:   <none>
    Args:
      /bin/sh
      -c
      date; echo Hello from the Kubernetes cluster
    Environment:   <none>
    Mounts:        <none>
  Volumes:         <none>
Events:
  Type     Reason           Age    From            Message
  ----     ------           ----   ----            -------
  Normal   SuccessfulCreate 12s    job-controller  Created pod: hello-cron-job-27276392--1-d8p28
  Normal   Completed        9s     job-controller  Job completed

tolstikov@my3vm:~$
```

kubectl describe cronjob hello-cron-job

```
tolstikov@my3vm:~ - Терминал                                                    _ + x
Файл   Правка   Вид   Терминал   Вкладки   Справка
tolstikov@my3vm:~$ kubectl describe cronjob hello-cron-job
Name:                        hello-cron-job
Namespace:                   default
Labels:                      <none>
Annotations:                 <none>
Schedule:                    */1 * * * *
Concurrency Policy:          Allow
Suspend:                     False
Successful Job History Limit: 3
Failed Job History Limit:    1
Starting Deadline Seconds:   <unset>
Selector:                    <unset>
Parallelism:                 <unset>
Completions:                 <unset>
Active Deadline Seconds:     100s
Pod Template:
  Labels:   <none>
  Containers:
   hello-cron-job:
    Image:        busybox
    Port:         <none>
    Host Port:    <none>
    Args:
      /bin/sh
      -c
      date; echo Hello from the Kubernetes cluster
    Environment:      <none>
    Mounts:           <none>
  Volumes:            <none>
Last Schedule Time:   Wed, 10 Nov 2021 22:34:00 +0000
Active Jobs:          <none>
Events:
  Type     Reason           Age     From               Message
  ----     ------           ----    ----               -------
  Normal   SuccessfulCreate 6m40s   cronjob-controller  Created job hello-cron-job-27276388
  Normal   SawCompletedJob  6m35s   cronjob-controller  Saw completed job: hello-cron-job-27276388, status: Complete
  Normal   SuccessfulCreate 5m40s   cronjob-controller  Created job hello-cron-job-27276389
  Normal   SawCompletedJob  5m37s   cronjob-controller  Saw completed job: hello-cron-job-27276389, status: Complete
  Normal   SuccessfulCreate 4m40s   cronjob-controller  Created job hello-cron-job-27276390
  Normal   SawCompletedJob  4m37s   cronjob-controller  Saw completed job: hello-cron-job-27276390, status: Complete
  Normal   SuccessfulCreate 3m40s   cronjob-controller  Created job hello-cron-job-27276391
  Normal   SawCompletedJob  3m36s   cronjob-controller  Saw completed job: hello-cron-job-27276391, status: Complete
  Normal   SuccessfulDelete 3m36s   cronjob-controller  Deleted job hello-cron-job-27276388
  Normal   SuccessfulCreate 2m40s   cronjob-controller  Created job hello-cron-job-27276392
  Normal   SawCompletedJob  2m37s   cronjob-controller  Saw completed job: hello-cron-job-27276392, status: Complete
  Normal   SuccessfulDelete 2m37s   cronjob-controller  Deleted job hello-cron-job-27276389
  Normal   SuccessfulCreate 100s    cronjob-controller  Created job hello-cron-job-27276393
  Normal   SawCompletedJob  96s     cronjob-controller  Saw completed job: hello-cron-job-27276393, status: Complete
  Normal   SuccessfulDelete 96s     cronjob-controller  Deleted job hello-cron-job-27276390
  Normal   SuccessfulCreate 40s     cronjob-controller  Created job hello-cron-job-27276394
  Normal   SawCompletedJob  37s     cronjob-controller  Saw completed job: hello-cron-job-27276394, status: Complete
  Normal   SuccessfulDelete 37s     cronjob-controller  Deleted job hello-cron-job-27276391
tolstikov@my3vm:~$
```

kubectl get pods

```
tolstikov@my3vm:~ - Терминал                                                    _ + x
Файл   Правка   Вид   Терминал   Вкладки   Справка
tolstikov@my3vm:~$ kubectl get pods
NAME                              READY   STATUS      RESTARTS       AGE
app-probe-f775c7b8f-kgrp8         1/1     Running     3 (29h ago)    4d6h
balanced-5744b548b4-ld6hl         1/1     Running     3 (29h ago)    4d6h
hello-cron-job-27276394--1-pnv84  0/1     Completed   0              2m37s
hello-cron-job-27276395--1-jncnr  0/1     Completed   0              97s
hello-cron-job-27276396--1-rprzs  0/1     Completed   0              37s
hello-minikube-6ddfcc9757-2xc5s   1/1     Running     3 (29h ago)    4d6h
my-deployment2-76499ffb7-fb6kl    1/1     Running     3 (29h ago)    4d6h
my-deployment2-76499ffb7-xr4g7    1/1     Running     3 (29h ago)    4d6h
my-replicaset-gzcsz               1/1     Running     3 (29h ago)    4d6h
my-replicaset-wr427               1/1     Running     3 (29h ago)    4d6h
my-replicaset-zxwjs               1/1     Running     3 (29h ago)    4d6h
node-exporter-jq92k               1/1     Running     0              95m
tolstikov@my3vm:~$
```

kubectl get jobs

```
tolstikov@my3vm:~$ kubectl get jobs
NAME                     COMPLETIONS   DURATION   AGE
hello-cron-job-27276395  1/1           4s         2m51s
hello-cron-job-27276396  1/1           3s         111s
hello-cron-job-27276397  1/1           3s         51s
tolstikov@my3vm:~$
```

kubectl get cronjobs

```
hello-cron-job-27276396  1/1          3s        111s
hello-cron-job-27276397  1/1          3s        51s
tolstikov@my3vm:~$ kubectl get cronjobs
NAME            SCHEDULE      SUSPEND   ACTIVE   LAST SCHEDULE   AGE
hello-cron-job  */1 * * * *   False     0        60s             11m
tolstikov@my3vm:~$
```

kubectl delete cronjob hello-cron-job

```
hello-cron-job  */1 * * * *   False     0        60s             11m
tolstikov@my3vm:~$ kubectl delete cronjob
error: resource(s) were provided, but no name was specified
tolstikov@my3vm:~$ kubectl delete cronjob hello-cron-job
cronjob.batch "hello-cron-job" deleted
tolstikov@my3vm:~$
```

vi php-apache.yaml

```
 1 apiVersion: apps/v1
 2 kind: Deployment
 3 metadata:
 4   name: php-apache-hps
 5 spec:
 6   selector:
 7     matchLabels:
 8       run: php-apache
 9   replicas: 1
10   template:
11     metadata:
12       labels:
13         run: php-apache-hps
14     spec:
15       containers:
16       - name: php-apache-hps
17         image: k8s.gcr.io/hpa-example
18         ports:
19         - containerPort: 80
20         resources:
21           limits:
22             cpu: 500m
23           requests:
24             cpu: 200m
25 ---
26 apiVersion: v1
27 kind: Service
28 metadata:
29   name: php-apache-hps
30   labels:
31     run: php-apache-hps
32 spec:
33   ports:
34   - port: 80
35   selector:
36     run: php-apache-hps
~
                                                              1,1           All
```

kubectl apply -f php-apache.yaml

```
E487: Argument must be positive: tabstop=0
Press ENTER or type command to continue
tolstikov@my3vm:~$ vi php-apache.yaml
Error detected while processing /home/tolstikov/.vimrc:
line    3:
E487: Argument must be positive: tabstop=0
Press ENTER or type command to continue
tolstikov@my3vm:~$ kubectl apply -f php-apache.yaml
service/php-apache-hps created
The Deployment "php-apache-hps" is invalid: spec.template.metadata.labels: Invalid value: map[string]string{"run":"php-apache-hps"}: `selector`
 does not match template `labels`
tolstikov@my3vm:~$
```

kubectl get pods

```
tolstikov@my3vm:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS      AGE
app-probe-f775c7b8f-kgrp8           1/1     Running   3 (2d ago)    5d1h
balanced-5744b548b4-ld6hl           1/1     Running   3 (2d ago)    5d1h
hello-minikube-6ddfcc9757-2xc5s     1/1     Running   3 (2d ago)    5d1h
my-deployment2-76499ffb7-fb6kl      1/1     Running   3 (2d ago)    5d1h
my-deployment2-76499ffb7-xr4g7      1/1     Running   3 (2d ago)    5d1h
my-replicaset-gzcsz                 1/1     Running   3 (2d ago)    5d1h
my-replicaset-wr427                 1/1     Running   3 (2d ago)    5d1h
my-replicaset-zxwjs                 1/1     Running   3 (2d ago)    5d1h
node-exporter-jq92k                 1/1     Running   0             20h
tolstikov@my3vm:~$
```

kubectl describe pod

```
    HostPathType:
  root:
    Type:           HostPath (bare host directory volume)
    Path:           /
    HostPathType:
  kube-api-access-szg5w:
    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:              beta.kubernetes.io/os=linux
Tolerations:                 :NoSchedule op=Exists
                             node.kubernetes.io/disk-pressure:NoSchedule op=Exists
                             node.kubernetes.io/memory-pressure:NoSchedule op=Exists
                             node.kubernetes.io/network-unavailable:NoSchedule op=Exists
                             node.kubernetes.io/not-ready:NoExecute op=Exists
                             node.kubernetes.io/pid-pressure:NoSchedule op=Exists
                             node.kubernetes.io/unreachable:NoExecute op=Exists
                             node.kubernetes.io/unschedulable:NoSchedule op=Exists
Events:                      <none>
tolstikov@my3vm:~$
```

kubectl get pods

```
tolstikov@my3vm:~$ kubectl get pods
NAME                                READY   STATUS    RESTARTS      AGE
app-probe-f775c7b8f-kgrp8           1/1     Running   3 (2d ago)    5d1h
balanced-5744b548b4-ld6hl           1/1     Running   3 (2d ago)    5d1h
hello-minikube-6ddfcc9757-2xc5s     1/1     Running   3 (2d ago)    5d1h
my-deployment2-76499ffb7-fb6kl      1/1     Running   3 (2d ago)    5d1h
my-deployment2-76499ffb7-xr4g7      1/1     Running   3 (2d ago)    5d1h
my-replicaset-gzcsz                 1/1     Running   3 (2d ago)    5d1h
my-replicaset-wr427                 1/1     Running   3 (2d ago)    5d1h
my-replicaset-zxwjs                 1/1     Running   3 (2d ago)    5d1h
node-exporter-jq92k                 1/1     Running   0             20h
tolstikov@my3vm:~$
```

kubbectl delete pod app-probe-f775c7b8f-kgrp8

```
app-probe-f775c7b8f-kgrp8            1/1     Running   3 (2d ago)   5d1h
balanced-5744b548b4-ld6hl            1/1     Running   3 (2d ago)   5d1h
hello-minikube-6ddfcc9757-2xc5s      1/1     Running   3 (2d ago)   5d1h
my-deployment2-76499ffb7-fb6kl       1/1     Running   3 (2d ago)   5d1h
my-deployment2-76499ffb7-xr4g7       1/1     Running   3 (2d ago)   5d1h
my-replicaset-gzcsz                  1/1     Running   3 (2d ago)   5d1h
my-replicaset-wr427                  1/1     Running   3 (2d ago)   5d1h
my-replicaset-zxwjs                  1/1     Running   3 (2d ago)   5d1h
node-exporter-jq92k                  1/1     Running   0            20h
tolstikov@my3vm:~$ kubbectl delete pod app-probe-f775c7b8f-kgrp8
kubbectl: command not found
tolstikov@my3vm:~$
```

```
my-deployment2-76499ffb7-xr4g7       1/1     Running   3 (2d ago)   5d1h
my-replicaset-gzcsz                  1/1     Running   3 (2d ago)   5d1h
my-replicaset-wr427                  1/1     Running   3 (2d ago)   5d1h
my-replicaset-zxwjs                  1/1     Running   3 (2d ago)   5d1h
node-exporter-jq92k                  1/1     Running   0            20h
tolstikov@my3vm:~$ kubbectl delete pod app-probe-f775c7b8f-kgrp8
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod balanced-5744b548b4-ld6hl
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod ^C
tolstikov@my3vm:~$ kubbectl delete pod hello-minikube-6ddfcc9757-2xc5s
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod my-deployment2-76499ffb7-fb6kl
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod my-deployment2-76499ffb7-xr4g7
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod my-replicaset-gzcsz
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod my-replicaset-wr427
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete pod my-replicaset-zxwjs
kubbectl: command not found
```

kubectl get replicaset

```
tolstikov@my3vm:~$ kubectl get replicaset
NAME                    DESIRED   CURRENT   READY   AGE
app-probe-f775c7b8f     1         1         1       5d7h
balanced-5744b548b4     1         1         1       5d4h
hello-minikube-6ddfcc9757  1      1         1       8d
my-deployment2-76499ffb7   2      2         2       6d10h
my-replicaset           3         3         3       6d11h
tolstikov@my3vm:~$
```

```
app-probe-f775c7b8f          1        1        1        5d7h
balanced-5744b548b4          1        1        1        5d4h
hello-minikube-6ddfcc9757    1        1        1        8d
my-deployment2-76499ffb7     2        2        2        6d10h
my-replicaset                3        3        3        6d11h
tolstikov@my3vm:~$ kubbectl delete hello-minikube-6ddfcc9757
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete balanced-5744b548b4
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete app-probe-f775c7b8f
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete my-deployment2-76499ffb7
kubbectl: command not found
tolstikov@my3vm:~$ kubbectl delete my-replicaset
kubbectl: command not found
tolstikov@my3vm:~$ kubectl delete replicaset app-probe-f775c7b8f
replicaset.apps "app-probe-f775c7b8f" deleted
tolstikov@my3vm:~$ kubectl delete replicaset balanced-5744b548b4
replicaset.apps "balanced-5744b548b4" deleted
tolstikov@my3vm:~$ kubectl delete replicaset hello-minikube-6ddfcc9757
replicaset.apps "hello-minikube-6ddfcc9757" deleted
tolstikov@my3vm:~$ kubectl delete replicaset my-deployment2-76499ffb7
replicaset.apps "my-deployment2-76499ffb7" deleted
tolstikov@my3vm:~$ kubectl delete replicaset my-replicaset
replicaset.apps "my-replicaset" deleted
tolstikov@my3vm:~$
```

kubectl get deployments


```
replicaset.apps "app-probe-f775c7b8f" deleted
tolstikov@my3vm:~$ kubectl delete replicaset balanced-5744b548b4
replicaset.apps "balanced-5744b548b4" deleted
tolstikov@my3vm:~$ kubectl delete replicaset hello-minikube-6ddfcc9757
replicaset.apps "hello-minikube-6ddfcc9757" deleted
tolstikov@my3vm:~$ kubectl delete replicaset my-deployment2-76499ffb7
replicaset.apps "my-deployment2-76499ffb7" deleted
tolstikov@my3vm:~$ kubectl delete replicaset my-replicaset
replicaset.apps "my-replicaset" deleted
tolstikov@my3vm:~$ kubectl get replicaset
NAME                         DESIRED   CURRENT   READY   AGE
app-probe-f775c7b8f          1         1         1       94s
balanced-5744b548b4          1         1         1       79s
hello-minikube-6ddfcc9757    1         1         1       52s
my-deployment2-76499ffb7     2         2         2       39s
tolstikov@my3vm:~$ kubectl get deployments
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
app-probe        1/1     1            1           5d7h
balanced         1/1     1            1           5d4h
hello-minikube   1/1     1            1           8d
my-deployment2   2/2     2            2           6d10h
tolstikov@my3vm:~$
```

```
replicaset.apps "my-replicaset" deleted
tolstikov@my3vm:~$ kubectl get replicaset
NAME                     DESIRED   CURRENT   READY   AGE
app-probe-f775c7b8f      1         1         1       94s
balanced-5744b548b4      1         1         1       79s
hello-minikube-6ddfcc9757 1       1         1       52s
my-deployment2-76499ffb7  2        2         2       39s
tolstikov@my3vm:~$ kubectl get deployments
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
app-probe        1/1     1            1           5d7h
balanced         1/1     1            1           5d4h
hello-minikube   1/1     1            1           8d
my-deployment2   2/2     2            2           6d10h
tolstikov@my3vm:~$ kubectl delete deployment app-probe
deployment.apps "app-probe" deleted
tolstikov@my3vm:~$ kubectl delete deployment balanced
deployment.apps "balanced" deleted
tolstikov@my3vm:~$ kubectl delete deployment hello-minikube
deployment.apps "hello-minikube" deleted
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$
```

```
NAME                     DESIRED   CURRENT   READY   AGE
app-probe-f775c7b8f      1         1         1       94s
balanced-5744b548b4      1         1         1       79s
hello-minikube-6ddfcc9757 1       1         1       52s
my-deployment2-76499ffb7  2        2         2       39s
tolstikov@my3vm:~$ kubectl get deployments
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
app-probe        1/1     1            1           5d7h
balanced         1/1     1            1           5d4h
hello-minikube   1/1     1            1           8d
my-deployment2   2/2     2            2           6d10h
tolstikov@my3vm:~$ kubectl delete deployment app-probe
deployment.apps "app-probe" deleted
tolstikov@my3vm:~$ kubectl delete deployment balanced
deployment.apps "balanced" deleted
tolstikov@my3vm:~$ kubectl delete deployment hello-minikube
deployment.apps "hello-minikube" deleted
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$ kubectl get deployments
No resources found in default namespace.
tolstikov@my3vm:~$
```

```
                                      tolstikov@my3vm: ~ - Терминал                    —  +  ✕
  Файл    Правка    Вид    Терминал    Вкладки    Справка

balanced-5744b548b4              1            1            1         79s
hello-minikube-6ddfcc9757       1            1            1         52s
my-deployment2-76499ffb7        2            2            2         39s
tolstikov@my3vm:~$ kubectl get deployments
NAME            READY   UP-TO-DATE   AVAILABLE    AGE
app-probe       1/1     1            1            5d7h
balanced        1/1     1            1            5d4h
hello-minikube  1/1     1            1            8d
my-deployment2  2/2     2            2            6d10h
tolstikov@my3vm:~$ kubectl delete deployment app-probe
deployment.apps "app-probe" deleted
tolstikov@my3vm:~$ kubectl delete deployment balanced
deployment.apps "balanced" deleted
tolstikov@my3vm:~$ kubectl delete deployment hello-minikube
deployment.apps "hello-minikube" deleted
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$ kubectl get deployments
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get replicaset
No resources found in default namespace.
tolstikov@my3vm:~$
```

```
                                      tolstikov@my3vm: ~ - Терминал                    —  +  ✕
  Файл    Правка    Вид    Терминал    Вкладки    Справка

tolstikov@my3vm:~$ kubectl get deployments
NAME            READY   UP-TO-DATE   AVAILABLE    AGE
app-probe       1/1     1            1            5d7h
balanced        1/1     1            1            5d4h
hello-minikube  1/1     1            1            8d
my-deployment2  2/2     2            2            6d10h
tolstikov@my3vm:~$ kubectl delete deployment app-probe
deployment.apps "app-probe" deleted
tolstikov@my3vm:~$ kubectl delete deployment balanced
deployment.apps "balanced" deleted
tolstikov@my3vm:~$ kubectl delete deployment hello-minikube
deployment.apps "hello-minikube" deleted
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$ kubectl get deployments
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get replicaset
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get pods
NAME                READY    STATUS     RESTARTS    AGE
node-exporter-jq92k 1/1      Running    0           21h
tolstikov@my3vm:~$
```

```
app-probe           1/1     1          1          5d7h
balanced            1/1     1          1          5d4h
hello-minikube      1/1     1          1          8d
my-deployment2      2/2     2          2          6d10h
tolstikov@my3vm:~$ kubectl delete deployment app-probe
deployment.apps "app-probe" deleted
tolstikov@my3vm:~$ kubectl delete deployment balanced
deployment.apps "balanced" deleted
tolstikov@my3vm:~$ kubectl delete deployment hello-minikube
deployment.apps "hello-minikube" deleted
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$ kubectl get deployments
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get replicaset
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get pods
NAME                READY   STATUS     RESTARTS   AGE
node-exporter-jq92k 1/1     Running    0          21h
tolstikov@my3vm:~$ kubectl delete pods node-exporter-jq92k
pod "node-exporter-jq92k" deleted
tolstikov@my3vm:~$
```

```
tolstikov@my3vm:~$ kubectl delete deployment hello-minikube
deployment.apps "hello-minikube" deleted
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$ kubectl get deployments
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get replicaset
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get pods
NAME                READY   STATUS     RESTARTS   AGE
node-exporter-jq92k 1/1     Running    0          21h
tolstikov@my3vm:~$ kubectl delete pods node-exporter-jq92k
pod "node-exporter-jq92k" deleted
tolstikov@my3vm:~$ kubectl get pods
NAME                READY   STATUS     RESTARTS   AGE
node-exporter-hwkqq 1/1     Running    0          49s
tolstikov@my3vm:~$ kubectl get daemonset
NAME           DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR              AGE
node-exporter  1         1         1       1            1           beta.kubernetes.io/os=linux   21h
tolstikov@my3vm:~$ kubectl delete daemonset node-exporter
daemonset.apps "node-exporter" deleted
tolstikov@my3vm:~$
```

```
tolstikov@my3vm:~$ kubectl delete deployment my-deployment2
deployment.apps "my-deployment2" deleted
tolstikov@my3vm:~$ kubectl get deployments
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get replicaset
No resources found in default namespace.
tolstikov@my3vm:~$ kubectl get pods
NAME                READY   STATUS     RESTARTS   AGE
node-exporter-jq92k 1/1     Running    0          21h
tolstikov@my3vm:~$ kubectl delete pods node-exporter-jq92k
pod "node-exporter-jq92k" deleted
tolstikov@my3vm:~$ kubectl get pods
NAME                READY   STATUS     RESTARTS   AGE
node-exporter-hwkqq 1/1     Running    0          49s
tolstikov@my3vm:~$ kubectl get daemonset
NAME           DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR              AGE
node-exporter  1         1         1       1            1           beta.kubernetes.io/os=linux   21h
tolstikov@my3vm:~$ kubectl delete daemonset node-exporter
daemonset.apps "node-exporter" deleted
tolstikov@my3vm:~$ kubectl get daemonset
No resources found in default namespace.
tolstikov@my3vm:~$
```

kubectl top pods

```
                                  tolstikov@my3vm: ~ - Терминал                        — + ×
 Файл   Правка   Вид   Терминал   Вкладки   Справка
 tolstikov@my3vm:~$ kubectl delete pods node-exporter-jq92k
 pod "node-exporter-jq92k" deleted
 tolstikov@my3vm:~$ kubectl get pods
 NAME                   READY   STATUS    RESTARTS   AGE
 node-exporter-hwkqq    1/1     Running   0          49s
 tolstikov@my3vm:~$ kubectl get daemonset
 NAME           DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR              AGE
 node-exporter  1         1         1       1            1           beta.kubernetes.io/os=linux  21h
 tolstikov@my3vm:~$ kubectl delete daemonset node-exporter
 daemonset.apps "node-exporter" deleted
 tolstikov@my3vm:~$ kubectl get daemonset
 No resources found in default namespace.
 tolstikov@my3vm:~$ kubectl get pods
 No resources found in default namespace.
 tolstikov@my3vm:~$ kubectl top pods
 error: Metrics API not available
 tolstikov@my3vm:~$
```

kubectl autoscale deployment php-apache-hps – cpu-persent=50 —min=1 --max=5

```
                                  tolstikov@my3vm: ~ - Терминал                        — + ×
 Файл   Правка   Вид   Терминал   Вкладки   Справка
 node-exporter  1         1         1       1            1           beta.kubernetes.io/os=linux  21h
 tolstikov@my3vm:~$ kubectl delete daemonset node-exporter
 daemonset.apps "node-exporter" deleted
 tolstikov@my3vm:~$ kubectl get daemonset
 No resources found in default namespace.
 tolstikov@my3vm:~$ kubectl get pods
 No resources found in default namespace.
 tolstikov@my3vm:~$ kubectl top pods
 error: Metrics API not available
 tolstikov@my3vm:~$ kubectl get deployments
 No resources found in default namespace.
 tolstikov@my3vm:~$ kubectl autoscale deployment php-apache-hps — cpu-persent=50 —min=1 --max=5
 Error from server (NotFound): deployments.apps "php-apache-hps" not found
 Error from server (NotFound): deployments.apps "—" not found
 Error from server (NotFound): deployments.apps "cpu-persent=50" not found
 Error from server (NotFound): deployments.apps "—min=1" not found
 tolstikov@my3vm:~$
```