```
PS C:\Users\Sumukh G> kubectl get deployment
NAME        READY   UP-TO-DATE   AVAILABLE   AGE
ngnix-img   0/1     1            0           46s
PS C:\Users\Sumukh G> kubectl get pod
NAME                         READY   STATUS    RESTARTS   AGE
ngnix-img-5c4fc679f9-52ftl   1/1     Running   0          61s
PS C:\Users\Sumukh G> kubectl get replicaset
NAME                   DESIRED   CURRENT   READY   AGE
ngnix-img-5c4fc679f9   1         1         1       83s
PS C:\Users\Sumukh G>
PS C:\Users\Sumukh G> kubectl describe deployment
Name:                   ngnix-img
Namespace:              default
CreationTimestamp:      Wed, 26 Apr 2023 16:00:48 +0530
Labels:                 app=ngnix-img
Annotations:            deployment.kubernetes.io/revision: 1
Selector:               app=ngnix-img
Replicas:               1 desired | 1 updated | 1 total | 1 available | 0 unavailable
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=ngnix-img
  Containers:
   nginx:
    Image:        nginx
    Port:         <none>
    Host Port:    <none>
    Environment:  <none>
    Mounts:       <none>
  Volumes:        <none>
Conditions:
  Type           Status  Reason
  ----           ------  ------
  Available      True    MinimumReplicasAvailable
  Progressing    True    NewReplicaSetAvailable
OldReplicaSets:  <none>
NewReplicaSet:   ngnix-img-5c4fc679f9 (1/1 replicas created)
Events:
  Type    Reason             Age    From                   Message
  ----    ------             ----   ----                   -------
  Normal  ScalingReplicaSet  3m15s  deployment-controller  Scaled up replica set ngnix-img-5c4fc679f9 to 1
PS C:\Users\Sumukh G>
```

```
Windows PowerShell                              □    ✕

PS C:\Users\Sumukh G> kubectl create deployment ngnix-img --image=nginx
deployment.apps/ngnix-img created
PS C:\Users\Sumukh G> kubctl get deployment
```

```
C:\Users\Sumukh G>minikube version
minikube version: v1.30.1
commit: 08896fd1dc362c097c925146c4a0d0dac715ace0

C:\Users\Sumukh G>kubectl config view
apiVersion: v1
clusters:
- cluster:
    certificate-authority: C:\Users\Sumukh G\.minikube\ca.crt
    extensions:
    - extension:
        last-update: Wed, 26 Apr 2023 13:18:41 IST
        provider: minikube.sigs.k8s.io
        version: v1.30.1
      name: cluster_info
    server: https://127.0.0.1:61626
  name: minikube
contexts:
- context:
    cluster: minikube
    extensions:
    - extension:
        last-update: Wed, 26 Apr 2023 13:18:41 IST
        provider: minikube.sigs.k8s.io
        version: v1.30.1
      name: context_info
    namespace: default
    user: minikube
  name: minikube
current-context: minikube
kind: Config
preferences: {}
users:
- name: minikube
  user:
    client-certificate: C:\Users\Sumukh G\.minikube\profiles\minikube\client.crt
    client-key: C:\Users\Sumukh G\.minikube\profiles\minikube\client.key

C:\Users\Sumukh G>kubectl get service
NAME         TYPE        CLUSTER-IP    EXTERNAL-IP   PORT(S)    AGE
kubernetes   ClusterIP   10.96.0.1     <none>        443/TCP    154m

C:\Users\Sumukh G>
```

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An image is a read-only template with instructions for creating a Docker container. Learn more

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1.05 GB / 710.79 MB in use   1 images   Last refresh: about 23 hours ago

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	Name	Tag	Status	Created	Size	Actions
☐	gcr.io/k8s-minikube/kicbase 67a4b1138d2d	v0.0.39	In use	22 days ago	1.05 GB	▶ ⋮ 🗑

Showing 1 item

RAM 6.25 GB   CPU 1.55%   Not connected to Hub   v4.18.0

ENG
IN   01:25 PM
26-04-2023

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A container packages up code and its dependencies so the application runs quickly and reliably from one computing environment to another. Learn more

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	Name	Image	Status	Port(s)	Last started	Actions
	minikube a472d8e536de	gcr.io/k8s-minikube/kicbase:v0.0.39	Running	61622:22 Show all ports (5)	8 minutes ago	

Showing 1 item

RAM 6.26 GB   CPU 2.46%   Not connected to Hub   v4.18.0

```
Microsoft Windows [Version 10.0.22621.1555]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Sumukh G>minikube start
* minikube v1.30.1 on Microsoft Windows 11 Pro 10.0.22621.1555 Build 22621.1555
* Automatically selected the docker driver. Other choices: virtualbox, ssh
* Using Docker Desktop driver with root privileges
* Starting control plane node minikube in cluster minikube
* Pulling base image ...
* Downloading Kubernetes v1.26.3 preload ...
    > preloaded-images-k8s-v18-v1...:  397.02 MiB / 397.02 MiB  100.00% 3.60 Mi
    > gcr.io/k8s-minikube/kicbase...:  373.53 MiB / 373.53 MiB  100.00% 3.08 Mi
* Creating docker container (CPUs=2, Memory=4000MB) ...
* Preparing Kubernetes v1.26.3 on Docker 23.0.2 ...
  - Generating certificates and keys ...
  - Booting up control plane ...
  - Configuring RBAC rules ...
* Configuring bridge CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: storage-provisioner, default-storageclass
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

C:\Users\Sumukh G>
```

```
PS C:\Users\Sumukh G> kubectl get deploy -A
NAMESPACE     NAME        READY   UP-TO-DATE   AVAILABLE   AGE
default       ngnix-img   2/2     2            2           28m
kube-system   coredns     1/1     1            1           3h10m
PS C:\Users\Sumukh G> kubectl expose deploy nginx-img --type=ClusterIP --port=8081
Error from server (NotFound): deployments.apps "nginx-img" not found
PS C:\Users\Sumukh G> ^C
PS C:\Users\Sumukh G> kubectl expose deploy ngnix-img --type=ClusterIP --port=8081
service/ngnix-img exposed
PS C:\Users\Sumukh G> kubectl get pod
NAME                         READY   STATUS    RESTARTS   AGE
ngnix-img-5c4fc679f9-52ftl   1/1     Running   0          34m
ngnix-img-5c4fc679f9-grv9x   1/1     Running   0          22m
PS C:\Users\Sumukh G> kubectl port-forward ngnix-img-5c4fc679f9-52ftl 8081:8081
Forwarding from 127.0.0.1:8081 -> 8081
Forwarding from [::1]:8081 -> 8081
Handling connection for 8081
E0426 16:36:05.426416   28152 portforward.go:406] an error occurred forwarding 8081 -> 8081: error forwarding port 8081 to pod 116851008d77c79acb63c1c252da9e794740f23e8883d0a4708a3a9f7be47a75, uid : exit statu
s 1: 2023/04/26 11:06:05 socat[111583] E connect(5, AF=2 127.0.0.1:8081, 16): Connection refused
E0426 16:36:05.436150   28152 portforward.go:234] lost connection to pod
Handling connection for 8081
PS C:\Users\Sumukh G> kubectl scale deployment --replicas=3 ngnix-img
deployment.apps/ngnix-img scaled
PS C:\Users\Sumukh G> kubectl get pod
NAME                         READY   STATUS    RESTARTS   AGE
ngnix-img-5c4fc679f9-52ftl   1/1     Running   0          36m
ngnix-img-5c4fc679f9-grv9x   1/1     Running   0          24m
ngnix-img-5c4fc679f9-v6vk8   1/1     Running   0          8s
PS C:\Users\Sumukh G> kubectl get deployment
NAME        READY   UP-TO-DATE   AVAILABLE   AGE
ngnix-img   3/3     3            3           37m
PS C:\Users\Sumukh G> kubectl delete deployment ngnix-img
deployment.apps "ngnix-img" deleted
PS C:\Users\Sumukh G> kubectl get deployment
No resources found in default namespace.
PS C:\Users\Sumukh G>
```
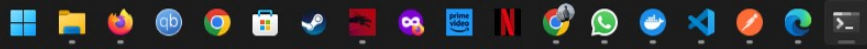
```
PS C:\Users\Sumukh G> kubectl get pod
NAME                       READY   STATUS    RESTARTS   AGE
ngnix-img-5c4fc679f9-52ftl  1/1     Running   0          19m
ngnix-img-5c4fc679f9-grv9x  1/1     Running   0          7m8s
PS C:\Users\Sumukh G> kubectl logs ngnix-img-5c4fc679f9-52ftl
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/04/26 10:31:42 [notice] 1#1: using the "epoll" event method
2023/04/26 10:31:42 [notice] 1#1: nginx/1.23.4
2023/04/26 10:31:42 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/04/26 10:31:42 [notice] 1#1: OS: Linux 5.10.16.3-microsoft-standard-WSL2
2023/04/26 10:31:42 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/04/26 10:31:42 [notice] 1#1: start worker processes
2023/04/26 10:31:42 [notice] 1#1: start worker process 29
2023/04/26 10:31:42 [notice] 1#1: start worker process 30
2023/04/26 10:31:42 [notice] 1#1: start worker process 31
2023/04/26 10:31:42 [notice] 1#1: start worker process 32
2023/04/26 10:31:42 [notice] 1#1: start worker process 33
2023/04/26 10:31:42 [notice] 1#1: start worker process 34
2023/04/26 10:31:42 [notice] 1#1: start worker process 35
2023/04/26 10:31:42 [notice] 1#1: start worker process 36
2023/04/26 10:31:42 [notice] 1#1: start worker process 37
2023/04/26 10:31:42 [notice] 1#1: start worker process 38
2023/04/26 10:31:42 [notice] 1#1: start worker process 39
2023/04/26 10:31:42 [notice] 1#1: start worker process 40
PS C:\Users\Sumukh G>
```
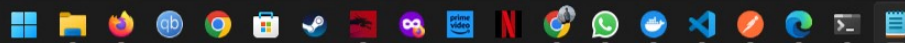
```
Windows PowerShell

PS C:\Users\Sumukh G> kubectl edit deployment
deployment.apps/ngnix-img edited
PS C:\Users\Sumukh G> kubectl get pod
NAME                        READY   STATUS    RESTARTS   AGE
ngnix-img-5c4fc679f9-52ftl   1/1     Running   0          12m
ngnix-img-5c4fc679f9-grv9x   1/1     Running   0          7s
PS C:\Users\Sumukh G>
```

```
PS C:\Users\Sumukh G> kubectl edit deployment
```

reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    deployment.kubernetes.io/revision: "1"
  creationTimestamp: "2023-04-26T10:30:48Z"
  generation: 1
  labels:
    app: ngnix-img
  name: ngnix-img
  namespace: default
  resourceVersion: "7123"
  uid: 80ebb3c3-1292-4fbb-9c04-338ab55a834f
spec:
  progressDeadlineSeconds: 600
  replicas: 2
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: ngnix-img
  strategy:
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:

Ln 20, Col 14   160%   Windows (CRLF)   UTF-8

PS C:\Users\Sumukh G> kubectl edit deployment

kubectl.exe-edit-3436320110

File   Edit   View

```
# Please edit the object below. Lines beginning with a '#' will be ignored,
# and an empty file will abort the edit. If an error occurs while saving this file will be
# reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    deployment.kubernetes.io/revision: "1"
  creationTimestamp: "2023-04-26T10:30:48Z"
  generation: 1
  labels:
    app: ngnix-img
  name: ngnix-img
  namespace: default
  resourceVersion: "7123"
  uid: 80ebb3c3-1292-4fbb-9c04-338ab55a834f
spec:
  progressDeadlineSeconds: 600
  replicas: 1
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: ngnix-img
  strategy:
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: ngnix-img
    spec:
      containers:
      - image: nginx
        imagePullPolicy: Always
        name: nginx
        resources: {}
        terminationMessagePath: /dev/termination-log
        terminationMessagePolicy: File
      dnsPolicy: ClusterFirst
```

Ln 45, Col 39   100%   Windows (CRLF)   UTF-8

```
Windows PowerShell                                                    ×   +   ∨

PS C:\Users\Sumukh G> kubectl describe deployment ngnix-img
Name:                   ngnix-img
Namespace:              default
CreationTimestamp:      Wed, 26 Apr 2023 16:00:48 +0530
Labels:                 app=ngnix-img
Annotations:            deployment.kubernetes.io/revision: 1
Selector:               app=ngnix-img
Replicas:               1 desired | 1 updated | 1 total | 1 available | 0 unavailable
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=ngnix-img
  Containers:
   nginx:
    Image:         nginx
    Port:          <none>
    Host Port:     <none>
    Environment:   <none>
    Mounts:        <none>
  Volumes:         <none>
Conditions:
  Type           Status  Reason
  ----           ------  ------
  Available      True    MinimumReplicasAvailable
  Progressing    True    NewReplicaSetAvailable
OldReplicaSets:  <none>
NewReplicaSet:   ngnix-img-5c4fc679f9 (1/1 replicas created)
Events:
  Type    Reason            Age    From                   Message
  ----    ------            ----   ----                   -------
  Normal  ScalingReplicaSet  4m48s  deployment-controller  Scaled up replica set ngnix-img-5c4fc679f9 to 1
PS C:\Users\Sumukh G> kubectl describe pod
Name:             ngnix-img-5c4fc679f9-52ftl
Namespace:        default
Priority:         0
Service Account:  default
Node:             minikube/192.168.49.2
Start Time:       Wed, 26 Apr 2023 16:00:50 +0530
Labels:           app=ngnix-img
                  pod-template-hash=5c4fc679f9
Annotations:      <none>
Status:           Running
IP:               10.244.0.3
IPs:
  IP:           10.244.0.3
Controlled By:  ReplicaSet/ngnix-img-5c4fc679f9
Containers:
  nginx:
    Container ID:   docker://0d264326c71031917f9318eb709ccf218bed3e192145a1ea1544be785166134d
    Image:          nginx
```