

# Kubernetes KodeKloud:

## KUBERNETES FOR BEGINNERS LABS, LABS: FAMILIARIZE

Welcome to the KodeKloud Hands-On lab

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```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get node
NAME      STATUS   ROLES      AGE     VERSION
controlplane   Ready    control-plane,master   9m28s   v1.27.1+k3s1

controlplane ~ ➔
```

How many nodes are part of the cluster?

1 2 3 4

Feedback

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```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get node
NAME      STATUS   ROLES      AGE     VERSION
controlplane   Ready    control-plane,master   9m28s   v1.27.1+k3s1

controlplane ~ ➔ kubectl get node -o wide
NAME      STATUS   ROLES      AGE     VERSION   INTERNAL-IP   EXTERNAL-IP   OS-IMAGE          KERNEL-VERSION   CONTAINER-RUNTIME
controlplane   Ready    control-plane,master   9m56s   v1.27.1+k3s1   192.12.78.3   <none>   Alpine Linux v3.16   5.4.0-1106-gcp   containerd://1.6.19-k3s1

controlplane ~ ➔
```

What is the version of Kubernetes running on the nodes ?

v1.10.0 v1.2 v1.19.0 v0.11 v2.18 v1.27.1+k3s1

Feedback

KODEKLOUD LABS: FAMILIARIZE WITH LAB ENVIRONMENT

What is the flavor and version of Operating System on which the Kubernetes nodes are running?

Ubuntu 16.04  
Alpine Linux  
Debian 8.11  
Ubuntu 14.04  
CentOS 7

```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get node
NAME           STATUS   ROLES      AGE    VERSION
controlplane   Ready    control-plane,master   9m28s   v1.27.1+k3s1

controlplane ~ ➔ kubectl get node -o wide
NAME           STATUS   ROLES      AGE    VERSION   INTERNAL-IP   EXTERNAL-IP   OS-IMAGE          KERNEL-VERSION   CONTAINER-RUNTIME
controlplane   Ready    control-plane,master   9m56s   v1.27.1+k3s1   192.12.78.3   <none>        Alpine Linux v3.16   5.4.0-1106-gcp   containerd://1.6.19-k3s1

controlplane ~ ➔
```

## LABS: PODS WITH YAML:

KODEKLOUD LABS: PODS WITH YAML

Task Hint Solution 59:28

How many pods exist on the system?

In the current(default) namespace.

2  
1  
4  
0

```
Welcome to the KodeKloud Hands-On lab

controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔
```

KODEKLOUD LABS: PODS WITH YAML

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```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl run nginx --image=nginx
pod/nginx created

controlplane ~ ➔
```

Feedback

KODEKLOUD LABS: PODS WITH YAML

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```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl run nginx --image=nginx
pod/nginx created

controlplane ~ ➔ kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
nginx    1/1     Running   0          29s
newpods-ws9h5 1/1     Running   0          12s
newpods-pqbbv 1/1     Running   0          12s
newpods-lbrpc 1/1     Running   0          12s

controlplane ~ ➔
```

NAME	READY	STATUS	RESTARTS	AGE
nginx	1/1	Running	0	29s
newpods-ws9h5	1/1	Running	0	12s
newpods-pqbbv	1/1	Running	0	12s
newpods-lbrpc	1/1	Running	0	12s

What is the image used to create the new pods?

You must look at one of the new pods in detail to figure this out.

NEWPOD  
BUSYBOX  
JENKINS  
NGINX

```
Name: newpods-ws9h5
Namespace: default
Priority: 0
Service Account: default
Node: controlplane/192.12.116.3
Start Time: Tue, 05 Dec 2023 07:10:04 +0000
Labels: tier=busybox
Annotations: <none>
Status: Running
IP: 10.42.0.12
IPS:
  IP: 10.42.0.12
Controlled By: ReplicaSet/newpods
Containers:
  busybox:
    Container ID: containerd://a107272bdf951f4c0de855cc8c7c66c6965f23a074056236
    Image: busybox
    Image ID: docker.io/library/busybox@sha256:3fbcc632167424a6d997e74f52b87
    Port: <none>
    Host Port: <none>
```

Which nodes are these pods placed on?

You must look at all the pods in detail to figure this out.

CONTROLPLANE  
MASTER & NODE-1  
NODE-1  
MASTER  
NODE-2

```
Name: newpods-ws9h5
Namespace: default
Priority: 0
Service Account: default
Node: controlplane/192.12.116.3
Start Time: Tue, 05 Dec 2023 07:10:04 +0000
Labels: tier=busybox
Annotations: <none>
Status: Running
IP: 10.42.0.12
IPS:
  IP: 10.42.0.12
Controlled By: ReplicaSet/newpods
Containers:
  busybox:
    Container ID: containerd://a107272bdf951f4c0de855cc8c7c66c6965f23a074056236
    Image: busybox
    Image ID: docker.io/library/busybox@sha256:3fbcc632167424a6d997e74f52b87
    Port: <none>
    Host Port: <none>
```

KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

Containers:

```
nginx:
  Container ID: containerd://5e6fc当地...83eaf0cb6b121a40cee41f785e8b
45b4b58be9555e309
  Image: nginx
  Image ID: docker.io/library/nginx@sha256:10d1f5b58f74683ad34eb29287e07
dab1e90f10af243f151bb50aa5dbb4d62ee
  Port: <none>
  Host Port: <none>
  State: Running
  Started: Tue, 05 Dec 2023 07:12:22 +0000
  Ready: True
  Restart Count: 0
  Environment: <none>
  Mounts:
    /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-8ptlh (ro)
agentx:
  Container ID:
  Image: agentx
  Image ID:
  Port: <none>
```

KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

Containers:

```
nginx:
  Container ID: containerd://5e6fc当地...83eaf0cb6b121a40cee41f785e8b
45b4b58be9555e309
  Image: nginx
  Image ID: docker.io/library/nginx@sha256:10d1f5b58f74683ad34eb29287e07
dab1e90f10af243f151bb50aa5dbb4d62ee
  Port: <none>
  Host Port: <none>
  State: Running
  Started: Tue, 05 Dec 2023 07:12:22 +0000
  Ready: True
  Restart Count: 0
  Environment: <none>
  Mounts:
    /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-8ptlh (ro)
agentx:
  Container ID:
  Image: agentx
  Image ID:
  Port: <none>
```

Inbox (1,579) - prime.anu Course: Kubernetes for t... Labs: PODs with YAML GitHub kubectl create vs apply

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KodeKloud KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete < > My Account

What is the state of the container `agentx` in the pod `webapp`?  
Wait for it to finish the `ContainerCreating` state.

Running  
Error or Waiting  
Ready  
Success

Normal Scheduled 46s default-scheduler Successfully assigned webapp to controlplane  
Normal Pulling 45s kubelet Pulling image "nginx:latest"  
Normal Pulled 45s kubelet Successfully pulled image "nginx" in 169.438421ms (169.453127ms including waiting)  
Normal Created 45s kubelet Created container nginx  
Normal Started 45s kubelet Started container nginx  
Normal BackOff 19s (x3 over 44s) kubelet Back-off pulling image "agentx"  
Warning Failed 19s (x3 over 44s) kubelet Error: ImagePullBackOff  
Normal Pulling 4s (x3 over 45s) kubelet Pulling image "agentx"  
Warning Failed 3s (x3 over 44s) kubelet Failed to pull image "agentx": rpc error: code = Unknown desc = failed to pull and unpack image "docker.io/library/agentx:latest": failed to resolve reference "docker.io/library/agentx:latest": pull access denied, repository does not exist or may require authorization: server message: insufficient\_scope: authorization failed  
Warning Failed 3s (x3 over 44s) kubelet Error: ErrImagePull

Feedback

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Why do you think the container `agentx` in pod `webapp` is in error?  
Try to figure it out from the events section of the pod.

Faulty Kubernetes cluster  
NGINX application isn't configured to communicate to this image  
A Docker image with this name doesn't exist on Docker Hub  
The application inside this image is faulty

```
controlplane ~ ➔ kubectl run nginx --image=nginx
pod/nginx created

controlplane ~ ➔ kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
nginx     1/1     Running   0          29s
newpods-ws9h5 1/1     Running   0          12s
newpods-pqbbv 1/1     Running   0          12s
newpods-lbrpc  1/1    Running   0          12s

controlplane ~ ➔ kubectl describe pod newpods| less
[1]+  Stopped                  kubectl describe pod newpods | less

controlplane ~ ➔ ✘ kubectl describe pod newpods| less
[2]+  Stopped                  kubectl describe pod newpods | less

controlplane ~ ➔ ✘ kubectl describe pod webapp| less
[3]+  Stopped                  kubectl describe pod webapp | less

controlplane ~ ➔ ✘
```

Feedback

KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

controlplane ~ → kubectl run nginx --image=nginx  
pod/nginx created

controlplane ~ → kubectl get pods

NAME	READY	STATUS	RESTARTS	AGE
nginx	1/1	Running	0	29s
newpods-ws9h5	1/1	Running	0	12s
newpods-pqbbv	1/1	Running	0	12s
newpods-lbrpc	1/1	Running	0	12s

controlplane ~ → kubectl describe pod newpods| less

[1]+ Stopped kubectl describe pod newpods | less

controlplane ~ → kubectl describe pod newpods| less

[2]+ Stopped kubectl describe pod newpods | less

controlplane ~ → kubectl describe pod webapp| less

[3]+ Stopped kubectl describe pod webapp | less

controlplane ~ → 3 X

Total Containers in POD/Running Containers in POD

Total Pods/Running Pods

Running Containers in POD/Total Containers in POD

Running Pods/Total Pods

1 2 3 4 5 6 7 8 9 10 11 12 13

What does the READY column in the output of the `kubectl get pods` command indicate?

Feedback

KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

controlplane ~ → kubectl get pods

NAME	READY	STATUS	RESTARTS	AGE
nginx	1/1	Running	0	29s
newpods-ws9h5	1/1	Running	0	12s
newpods-pqbbv	1/1	Running	0	12s
newpods-lbrpc	1/1	Running	0	12s

controlplane ~ → kubectl describe pod newpods| less

[1]+ Stopped kubectl describe pod newpods | less

controlplane ~ → kubectl describe pod newpods| less

[2]+ Stopped kubectl describe pod newpods | less

controlplane ~ → kubectl describe pod webapp| less

[3]+ Stopped kubectl describe pod webapp | less

controlplane ~ → 3 X

Delete the `webapp` Pod.

Once deleted, wait for the pod to fully terminate.

Check

Name: webapp

1 2 3 4 5 6 7 8 9 10 11 12 13

KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

```
apiVersion: v1
kind: Pod
metadata:
  name: redis
spec:
  containers:
    - name: redis
      image: redis123
```

-- INSERT (paste) --

Create a new pod with the name `redis` and the image `redis123`.

Use a pod-definition YAML file. And yes the image name is wrong!

Name: redis  
 Image name: redis123

KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

```
controlplane ~ 4 ✘ kubectl describe pod newpods| less
[2]+  Stopped                  kubectl describe pod newpods | less
controlplane ~ 4 ✘ kubectl describe pod webapp| less
[3]+  Stopped                  kubectl describe pod webapp | less
controlplane ~ 4 ✘ kubectl delete pod webapp
pod "webapp" deleted
controlplane ~ 4 ✘ vim pd.yaml
controlplane ~ 4 ✘ kubectl create -f pd.yaml
pod/redis created
controlplane ~ 4 ✘ kubectl run redis --image=redis123
Error from server (AlreadyExists): pods "redis" already exists
controlplane ~ 4 ✘ kubectl run redis1 --image=redis123
pod/redis1 created
controlplane ~ 4 ✘
```

Create a new pod with the name `redis` and the image `redis123`.

Use a pod-definition YAML file. And yes the image name is wrong!

Name: redis  
 Image name: redis123

Kubernetes FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

Now change the image on this pod to `redis`.

Once done, the pod should be in a `running` state.

Name: redis  
 Image name: redis

```
apiVersion: v1
kind: Pod
metadata:
  name: redis
spec:
  containers:
    - name: redis
      image: nginx
```

-- INSERT (paste) --

Kubernetes FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

Now change the image on this pod to `redis`.

Once done, the pod should be in a `running` state.

Name: redis  
 Image name: redis

```
controlplane ~ 43 ✘ kubectl edit pod pd
Error from server (NotFound): pods "pd" not found

controlplane ~ 43 ✘ vim pd.yaml
controlplane ~ 43 ✘ kubectl apply -f pd.yaml
Warning: resource pods/redis is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should only be used on resources created declaratively by either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.

pod/redis configured
```

```
controlplane ~ 43 ✘ kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
nginx    1/1     Running   0          14m
newpods-ws9h5  1/1     Running   0          13m
newpods-pqbbv  1/1     Running   0          13m
newpods-lbrpc  1/1     Running   0          13m
redis1    0/1     ImagePullBackOff 0          2m57s
redis     1/1     Running   0          3m44s
```

controlplane ~ 43 ✘

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KUBERNETES FOR BEGINNERS LABS, LABS: PODS WITH YAML Complete

Task 43:12

**CONGRATULATIONS!!!**

You have successfully completed the challenge.

**End Lab session**

**End lab session**

**Feedback**

```

controlplane ~ 43 ✘ kubectl edit pod pd
Error from server (NotFound): pods "pd" not found

controlplane ~ 43 ✘ vim pd.yaml
Warning: resource pods/redis is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should only be used on resources created declaratively by either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.
pod/redis configured

controlplane ~ 43 ➔ kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
nginx    1/1     Running   0          14m
newpods-ws9h5 1/1     Running   0          13m
newpods-pqbbv 1/1     Running   0          13m
newpods-lbrpc 1/1     Running   0          13m
redis1   0/1     ImagePullBackOff 0          2m57s
redis    1/1     Running   0          3m44s

controlplane ~ 43 ➔

```

12:55 05-12-2023

## LABS: REPLICA SETS

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

Task Hint Solution 59:29

How many PODs exist on the system?

In the current(default) namespace.

4  
3  
2  
0  
1

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```

controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔

```

13:43 05-12-2023

KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

Task Hint 58:54

How many ReplicaSets exist on the system?  
In the current(default) namespace.

3  
1  
2  
4  
0

controlplane ~ ➔ kubectl get pods  
No resources found in default namespace.  
controlplane ~ ➔ kubectl get rs  
No resources found in default namespace.  
controlplane ~ ➔

KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

Task Hint 58:30

How about now? How many ReplicaSets do you see?  
We just made a few changes!

1  
4  
3  
2

controlplane ~ ➔ kubectl get pods  
No resources found in default namespace.  
controlplane ~ ➔ kubectl get rs  
No resources found in default namespace.  
controlplane ~ ➔ kubectl get rs  
NAME DESIRED CURRENT READY AGE  
new-replica-set 4 4 0 6s  
controlplane ~ ➔

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

Task Hint 57:34

How many PODs are DESIRED in the new-replica-set?

5  
0  
1  
2  
4

Terminal 1

```
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controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get rs
No resources found in default namespace.

controlplane ~ ➔ kubectl get rs
NAME      DESIRED   CURRENT   READY   AGE
new-replica-set  4        4        0       6s

controlplane ~ ➔
```

Feedback

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

What is the image used to create the pods in the new-replica-set?

BUSYBOX-POD  
BUSYBOX777  
NGINX  
NEWPOD  
BUSYBOX-CONTAINER

Selector: name=busybox-pod  
Labels: <none>  
Annotations: <none>  
Replicas: 4 current / 4 desired  
Pods Status: 0 Running / 4 Waiting / 0 Succeeded / 0 Failed  
Pod Template:  
Labels: name=busybox-pod  
Containers:  
busybox-container:  
Image: busybox777  
Port: <none>  
Host Port: <none>  
Command:  
sh  
-c  
echo Hello Kubernetes! && sleep 3600  
Environment: <none>  
Mounts: <none>  
Volumes: <none>  
Events:  
Type Reason Age From Message  
Normal SuccessfulCreate 116s replicaset-controller Created pod: new-replic

Feedback

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

Events:

```
sh
-c
echo Hello Kubernetes! && sleep 3600
Environment: <none>
Mounts: <none>
Volumes: <none>
```

Type	Reason	Age	From	Message
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-dx9qh
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-524c2
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-knmxp
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-mgdfn

```
controlplane ~ ➔ kubectl get replicaset
NAME      DESIRED   CURRENT   READY   AGE
new-replica-set   4         4         0      2m53s

controlplane ~ ➔ 
```

Feedback

How many PODs are READY in the new-replica-set ?

5  
0  
1  
4

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

Events:

```
sh
-c
echo Hello Kubernetes! && sleep 3600
Environment: <none>
Mounts: <none>
Volumes: <none>
```

Type	Reason	Age	From	Message
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-dx9qh
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-524c2
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-knmxp
Normal	SuccessfulCreate	116s	replicaset-controller	Created pod: new-replica-set-mgdfn

```
controlplane ~ ➔ kubectl get replicaset
NAME      DESIRED   CURRENT   READY   AGE
new-replica-set   4         4         0      2m53s

controlplane ~ ➔ 
```

The image BUSYBOX777 doesn't exist

Application has errors

Replicaset was not created correctly

Kubernetes is faulty

Feedback

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

1 2 3 4 5 6 7 8 9 10 11 12 13  
14 15 16

Delete any one of the 4 PODs.

Done

```
a-set-dx9qh
  Normal SuccessfulCreate 116s replicaset-controller Created pod: new-replica-set-dx9qh
a-set-524c2
  Normal SuccessfulCreate 116s replicaset-controller Created pod: new-replica-set-524c2
a-set-knmxp
  Normal SuccessfulCreate 116s replicaset-controller Created pod: new-replica-set-knmxp
a-set-mgdfn
  Normal SuccessfulCreate 116s replicaset-controller Created pod: new-replica-set-mgdfn

controlplane ~ ➔ kubectl get replicaset
NAME      DESIRED  CURRENT  READY   AGE
new-replica-set  4        4        0       2m53s

controlplane ~ ➔ kubectl get pods
NAME          READY  STATUS    RESTARTS  AGE
new-replica-set-dx9qh  0/1   ImagePullBackOff  0  3m51s
new-replica-set-knmxp  0/1   ImagePullBackOff  0  3m51s
new-replica-set-mgdfn  0/1   ImagePullBackOff  0  3m51s
new-replica-set-524c2  0/1   ImagePullBackOff  0  3m51s

controlplane ~ ➔ kubectl delete pod new-replica-set-dx9qh
pod "new-replica-set-dx9qh" deleted

controlplane ~ ➔
```

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KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

1 2 3 4 5 6 7 8 9 10 11 12  
13 14 15 16

How many PODs exist now?

1  
0  
4  
3  
2

```
controlplane ~ ➔ kubectl get replicaset
NAME      DESIRED  CURRENT  READY   AGE
new-replica-set  4        4        0       2m53s

controlplane ~ ➔ kubectl get pods
NAME          READY  STATUS    RESTARTS  AGE
new-replica-set-dx9qh  0/1   ImagePullBackOff  0  3m51s
new-replica-set-knmxp  0/1   ImagePullBackOff  0  3m51s
new-replica-set-mgdfn  0/1   ImagePullBackOff  0  3m51s
new-replica-set-524c2  0/1   ImagePullBackOff  0  3m51s

controlplane ~ ➔ kubectl delete pod new-replica-set-dx9qh
pod "new-replica-set-dx9qh" deleted

controlplane ~ ➔ kubectl get pods
NAME          READY  STATUS    RESTARTS  AGE
new-replica-set-knmxp  0/1   ImagePullBackOff  0  4m38s
new-replica-set-mgdfn  0/1   ImagePullBackOff  0  4m38s
new-replica-set-524c2  0/1   ImagePullBackOff  0  4m38s
new-replica-set-7w2jb  0/1   ImagePullBackOff  0  21s

controlplane ~ ➔
```

```
controlplane ~ ➔ kubectl get replicaset
NAME      DESIRED   CURRENT   READY   AGE
new-replica-set   4         4         0      2m53s

controlplane ~ ➔ kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
new-replica-set-dx9qh   0/1     ImagePullBackOff   0      3m51s
new-replica-set-knmxp   0/1     ImagePullBackOff   0      3m51s
new-replica-set-mgdfn   0/1     ImagePullBackOff   0      3m51s
new-replica-set-524c2   0/1     ImagePullBackOff   0      3m51s

controlplane ~ ➔ kubectl delete pod new-replica-set-dx9qh
pod "new-replica-set-dx9qh" deleted

controlplane ~ ➔ kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
new-replica-set-knmxp   0/1     ImagePullBackOff   0      4m38s
new-replica-set-mgdfn   0/1     ImagePullBackOff   0      4m38s
new-replica-set-524c2   0/1     ImagePullBackOff   0      4m38s
new-replica-set-7w2jb   0/1     ImagePullBackOff   0      21s

controlplane ~ ➔
```

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: replicaset-1
spec:
  replicas: 2
  selector:
    matchLabels:
      tier: frontend
  template:
    metadata:
      labels:
        tier: frontend
    spec:
      containers:
        - name: nginx
          image: nginx
```

-- INSERT (paste) --



KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

```
controlplane ~ ➔ kubectl get pods
NAME           READY   STATUS    RESTARTS   AGE
new-replica-set-dx9qh  0/1     ImagePullBackOff  0          3m51s
new-replica-set-knmxp  0/1     ImagePullBackOff  0          3m51s
new-replica-set-mgdfn  0/1     ImagePullBackOff  0          3m51s
new-replica-set-524c2  0/1     ImagePullBackOff  0          3m51s

controlplane ~ ➔ kubectl delete pod new-replica-set-dx9qh
pod "new-replica-set-dx9qh" deleted

controlplane ~ ➔ kubectl get pods
NAME           READY   STATUS    RESTARTS   AGE
new-replica-set-knmxp  0/1     ImagePullBackOff  0          4m38s
new-replica-set-mgdfn  0/1     ImagePullBackOff  0          4m38s
new-replica-set-524c2  0/1     ImagePullBackOff  0          4m38s
new-replica-set-7w2jb  0/1     ImagePullBackOff  0          21s

controlplane ~ ➔ vim replicaset-definition-1.yaml
controlplane ~ ➔ kubectl create -f replicaset-definition-1.yaml
replicaset.apps/replicaset-1 created

controlplane ~ ➔
```

KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Incomplete

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: replicaset-2
spec:
  replicas: 2
  selector:
    matchLabels:
      tier: nginx
  template:
    metadata:
      labels:
        tier: nginx
    spec:
      containers:
        - name: nginx
          image: nginx
```



KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

```
new-replica-set-524c2 0/1 ImagePullBackOff 0 3m51s
controlplane ~ → kubectl delete pod new-replica-set-dx9qh
pod "new-replica-set-dx9qh" deleted

controlplane ~ → kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-knmxp 0/1 ImagePullBackOff 0 4m38s
new-replica-set-mgdfn 0/1 ImagePullBackOff 0 4m38s
new-replica-set-524c2 0/1 ImagePullBackOff 0 4m38s
new-replica-set-7w2jb 0/1 ImagePullBackOff 0 21s

controlplane ~ → vim replicaset-definition-1.yaml
replicaset.apps/replicaset-1 created

controlplane ~ → vim replicaset-definition-2.yaml
replicaset.apps/replicaset-2 created

controlplane ~ →
```

KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

```
controlplane ~ → kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-knmxp 0/1 ImagePullBackOff 0 4m38s
new-replica-set-mgdfn 0/1 ImagePullBackOff 0 4m38s
new-replica-set-524c2 0/1 ImagePullBackOff 0 4m38s
new-replica-set-7w2jb 0/1 ImagePullBackOff 0 21s

controlplane ~ → vim replicaset-definition-1.yaml
replicaset.apps/replicaset-1 created

controlplane ~ → vim replicaset-definition-2.yaml
replicaset.apps/replicaset-2 created

controlplane ~ → kubectl delete rs replicaset-1 replicaset-2
replicaset.apps "replicaset-1" deleted
replicaset.apps "replicaset-2" deleted

controlplane ~ →
```



KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

```
name: new-replica-set
namespace: default
resourceVersion: "993"
uid: 670cb678-4db4-4849-908c-4af3f314c02b
spec:
  replicas: 4
  selector:
    matchLabels:
      name: busybox-pod
  template:
    metadata:
      creationTimestamp: null
      labels:
        name: busybox-pod
    spec:
      containers:
        - command:
            - sh
            - -c
            - echo Hello Kubernetes! && sleep 3600
          image: busybox
          imagePullPolicy: Always
:wq
```

KUBERNETES FOR BEGINNERS LABS, LABS: REPLICA SETS Complete

```
controlplane ~ ➔ vim replicaset-definition-2.yaml
controlplane ~ ➔ kubectl create -f replicaset-definition-2.yaml
replicaset.apps/replicaset-2 created

controlplane ~ ➔ kubectl delete rs replicaset-1 replicaset-2
replicaset.apps "replicaset-1" deleted
replicaset.apps "replicaset-2" deleted

controlplane ~ ➔ kubectl edit replicaset new-replica-set
replicaset.apps/new-replica-set edited

controlplane ~ ➔ kubectl delete pod --all\
> ^C

controlplane ~ ➔ kubectl delete pod --all
pod "new-replica-set-7w2jb" deleted
pod "new-replica-set-mgdfn" deleted
pod "new-replica-set-524c2" deleted
pod "new-replica-set-knmxp" deleted

controlplane ~ ➔ []
```



Kubernetes for Beginners Labs, Labs: Replica Sets

replicaset.apps/replicaset-2 created

```
controlplane ~ ➔ kubectl delete rs replicaset-1 replicaset-2
replicaset.apps "replicaset-1" deleted
replicaset.apps "replicaset-2" deleted

controlplane ~ ➔ kubectl edit replicaset new-replica-set
replicaset.apps/new-replica-set edited

controlplane ~ ➔ kubectl delete pod --all \
> ^C

controlplane ~ ➔ kubectl delete pod --all
pod "new-replica-set-7w2jb" deleted
pod "new-replica-set-mgdfn" deleted
pod "new-replica-set-524c2" deleted
pod "new-replica-set-knmxp" deleted

controlplane ~ ➔ kubectl get rs
NAME      DESIRED   CURRENT   READY   AGE
new-replica-set   4         4        4      13m
```

Feedback

Complete ✓ Next

✓ Replicas: 4

Kubernetes for Beginners Labs, Labs: Replica Sets

# 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: ReplicaSet
metadata:
  creationTimestamp: "2023-12-05T08:13:49Z"
  generation: 2
  name: new-replica-set
  namespace: default
  resourceVersion: "1367"
  uid: 670cb678-4db4-4849-908c-4af3f314c02b
spec:
  replicas: 5
  selector:
    matchLabels:
      name: busybox-pod
  template:
    metadata:
      creationTimestamp: null
-- INSERT (paste) --
```

Feedback

Check

Replicas: 5



Inbox (1,579) - pri | Course: Kubernetes | Labs: Replica Sets | GitHub | kubectl create vs a | Dastaan-E-On | + | - | X

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Scale the ReplicaSet to 5 PODs.

Use `kubectl scale` command or edit the replicaset using `kubectl edit replicaset`.

Complete Next ✓ Replicas: 5

```
pod "new-replica-set-mdgfn" deleted
pod "new-replica-set-524c2" deleted
pod "new-replica-set-knmp" deleted

controlplane ~ → kubectl get rs
NAME      DESIRED   CURRENT   READY   AGE
new-replica-set   4         4         4     13m

controlplane ~ → kubectl edit rs new-replicaset
Error from server (NotFound): replicases.apps "new-replicaset" not found

controlplane ~ ✘ kubectl edit rs new-replica-set
replicaset.apps/new-replica-set edited

controlplane ~ → kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
new-replica-set-kmtwd  1/1     Running   0          2m56s
new-replica-set-bwblk  1/1     Running   0          2m56s
new-replica-set-2tg42  1/1     Running   0          2m57s
new-replica-set-m8626  1/1     Running   0          2m56s
new-replica-set-9fwg6  1/1     Running   0          12s

controlplane ~ →
```

Inbox (1,579) - pri | Course: Kubernetes | Labs: Replica Sets | GitHub | kubectl create vs a | Dastaan-E-On | + | - | X

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Now scale the ReplicaSet down to 2 PODs.

Use the `kubectl scale` command or edit the replicaset using `kubectl edit replicaset`.

Check

Replicas: 2

```
# 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: ReplicaSet
metadata:
  creationTimestamp: "2023-12-05T08:13:49Z"
  generation: 3
  name: new-replica-set
  namespace: default
  resourceVersion: "1432"
  uid: 670cb678-4db4-4849-908c-4af3f314c02b
spec:
  replicas: 2
  selector:
    matchLabels:
      name: busybox-pod
  template:
    metadata:
      creationTimestamp: null
-- INSERT (paste) --
```

```
controlplane ~ ➔ kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-kmtwd 1/1 Running 0 4m31s
new-replica-set-bvwtk 1/1 Running 0 4m31s
new-replica-set-2tg42 1/1 Terminating 0 4m32s
new-replica-set-9fwg6 1/1 Terminating 0 107s
new-replica-set-m8626 1/1 Terminating 0 4m31s

controlplane ~ ➔ kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-kmtwd 1/1 Running 0 4m33s
new-replica-set-bvwtk 1/1 Running 0 4m33s
new-replica-set-2tg42 1/1 Terminating 0 4m34s
new-replica-set-9fwg6 1/1 Terminating 0 109s
new-replica-set-m8626 1/1 Terminating 0 4m33s

controlplane ~ ➔ kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-kmtwd 1/1 Running 0 4m35s
new-replica-set-bvwtk 1/1 Running 0 4m35s
```

```
controlplane ~ ➔ kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-kmtwd 1/1 Running 0 4m31s
new-replica-set-bvwtk 1/1 Running 0 4m31s
new-replica-set-2tg42 1/1 Terminating 0 4m32s
new-replica-set-9fwg6 1/1 Terminating 0 107s
new-replica-set-m8626 1/1 Terminating 0 4m31s

controlplane ~ ➔ kubectl get pods
NAME READY STATUS RESTARTS AGE
new-replica-set-kmtwd 1/1 Running 0 4m33s
new-replica-set-bvwtk 1/1 Running 0 4m33s
new-replica-set-2tg42 1/1 Terminating 0 4m34s
new-replica-set-9fwg6 1/1 Terminating 0 109s
new-replica-set-m8626 1/1 Terminating 0 4m33s

controlplane ~ ➔ kubectl get pods
NAME
```

Inbox (1,579) - pri Course: Kubernetes Labs: Deployments GitHub kubectl create vs Full video: Me

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KODEKLoud KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Task Hint Solution 59:27

Terminal 1 +

```
Welcome to the KodeKloud Hands-On lab
All rights reserved

controlplane ~ → kubectl get pods
No resources found in default namespace.

controlplane ~ →
```

Feedback

How many PODs exist on the system?  
In the current(default) namespace.

1  
3  
2  
4  
0

Inbox (1,579) - pri Course: Kubernetes Labs: Deployments GitHub kubectl create vs Full video: Me

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KODEKLoud KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Task Hint 58:56

Terminal 1 +

```
Welcome to the KodeKloud Hands-On lab
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controlplane ~ → kubectl get pods
No resources found in default namespace.

controlplane ~ → kubectl get rs
No resources found in default namespace.

controlplane ~ →
```

Feedback

How many ReplicaSets exist on the system?  
In the current(default) namespace.

1  
3  
2  
4  
0

KODEKLoud

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Welcome to the KodeKloud Hands-On lab

How many Deployments exist on the system?

In the current(default) namespace.

0  
3  
1  
4

```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get rs
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
No resources found in default namespace.

controlplane ~ ➔ 
```

KODEKLoud

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Welcome to the KodeKloud Hands-On lab

How many Deployments exist on the system now?

We just created a Deployment! Check again!

4  
2  
3  
0  
1

```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get rs
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
frontend-deployment   0/4       4           0           21s

controlplane ~ ➔ 
```

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

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```
controlplane ~ ➔ kubectl get pods
No resources found in default namespace.

controlplane ~ ➔ kubectl get rs
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
NAME          READY  UP-TO-DATE  AVAILABLE  AGE
frontend-deployment  0/4      4           0          21s

controlplane ~ ➔ kubectl get rs
NAME          DESIRED  CURRENT  READY  AGE
frontend-deployment-577494fd6f  4        4       0      54s

controlplane ~ ➔
```

How many ReplicaSets exist on the system now?

Feedback

1 2 3 4 5 6 7 8 9 10 11

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

```
controlplane ~ ➔ kubectl get rs
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment
NAME          READY  UP-TO-DATE  AVAILABLE  AGE
frontend-deployment  0/4      4           0          21s

controlplane ~ ➔ kubectl get rs
NAME          DESIRED  CURRENT  READY  AGE
frontend-deployment-577494fd6f  4        4       0      54s

controlplane ~ ➔ kubectl get pods
NAME          READY  STATUS    RESTARTS  AGE
frontend-deployment-577494fd6f-k55s6  0/1  ImagePullBackOff  0   93s
frontend-deployment-577494fd6f-hctfz  0/1  ImagePullBackOff  0   93s
frontend-deployment-577494fd6f-wwcck  0/1  ImagePullBackOff  0   93s
frontend-deployment-577494fd6f-zrjdd  0/1  ErrImagePull     0   93s

controlplane ~ ➔
```

How many PODs exist on the system now?

Feedback

0 1 2 3 4 5 6 7 8 9 10 11

controlplane ~ ➔ kubectl get rs  
No resources found in default namespace.

controlplane ~ ➔ kubectl get deployment  
NAME READY UP-TO-DATE AVAILABLE AGE  
frontend-deployment 0/4 4 0 21s

controlplane ~ ➔ kubectl get rs  
NAME DESIRED CURRENT READY AGE  
frontend-deployment-577494fd6f 4 4 0 54s

controlplane ~ ➔ kubectl get pods  
NAME READY STATUS RESTARTS AGE  
frontend-deployment-577494fd6f-k55s6 0/1 ImagePullBackOff 0 93s  
frontend-deployment-577494fd6f-hctfz 0/1 ImagePullBackOff 0 93s  
frontend-deployment-577494fd6f-wwckk 0/1 ImagePullBackOff 0 93s  
frontend-deployment-577494fd6f-zrjqd 0/1 ErrImagePull 0 93s

controlplane ~ ➔ [redacted]

StrategyType: RollingUpdate  
MinReadySeconds: 0  
RollingUpdateStrategy: 25% max unavailable, 25% max surge  
Pod Template:  
Labels: name=busybox-pod  
Containers:  
busybox-container:  
Image: busybox888  
Port: <none>  
Host Port: <none>  
Command:  
sh  
-c  
echo Hello Kubernetes! && sleep 3600  
Environment: <none>  
Mounts: <none>  
Volumes: <none>  
Conditions:  
Type Status Reason  
---- ----  
Available False MinimumReplicasUnavailable  
Progressing True ReplicaSetUpdated  
OldReplicaSets: <none>

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

```
Port: <none>
Host Port: <none>
Command:
  sh
  -c
  echo Hello Kubernetes! && sleep 3600
Environment: <none>
Mounts: <none>
Volumes: <none>
Conditions:
Type Status Reason
---- ------
Available False MinimumReplicasUnavailable
Progressing True ReplicaSetUpdated
OldReplicaSets: <none>
NewReplicaSet: frontend-deployment-577494fd6f (4/4 replicas created)
Events:
Type Reason Age From Message
---- ---- ---- -----
Normal ScalingReplicaSet 3m17s deployment-controller Scaled up replica set frontend-deployment-577494fd6f to 4
```

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

```
Port: <none>
Host Port: <none>
Command:
  sh
  -c
  echo Hello Kubernetes! && sleep 3600
Environment: <none>
Mounts: <none>
Volumes: <none>
Conditions:
Type Status Reason
---- ------
Available False MinimumReplicasUnavailable
Progressing True ReplicaSetUpdated
OldReplicaSets: <none>
NewReplicaSet: frontend-deployment-577494fd6f (4/4 replicas created)
Events:
Type Reason Age From Message
---- ---- ---- -----
Normal ScalingReplicaSet 3m17s deployment-controller Scaled up replica set frontend-deployment-577494fd6f to 4
```

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Create a new Deployment using the `deployment-definition-1.yaml` file located at `/root/`.

There is an issue with the file, so try to fix it.

Check

Name: deployment-1

```
---  
apiVersion: apps/v1  
kind: Deployment  
metadata:  
  name: deployment-1  
spec:  
  replicas: 2  
  selector:  
    matchLabels:  
      name: busybox-pod  
  template:  
    metadata:  
      labels:  
        name: busybox-pod  
    spec:  
      containers:  
        - name: busybox-container  
          image: busybox888  
          command:  
            - sh  
            - "-c"  
            - echo Hello Kubernetes! && sleep 3600  
:wq
```

KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Create a new Deployment using the `deployment-definition-1.yaml` file located at `/root/`.

There is an issue with the file, so try to fix it.

Complete Next

Name: deployment-1

```
echo Hello Kubernetes! && sleep 3600  
Environment: <none>  
Mounts: <none>  
Volumes: <none>  
Conditions:  
  Type Status Reason  
  ---- ----  
  Available False MinimumReplicasUnavailable  
  Progressing True ReplicaSetUpdated  
OldReplicaSets: <none>  
NewReplicaSet: frontend-deployment-577494fd6f (4/4 replicas created)  
Events:  
  Type Reason Age From Message  
  ---- ----  
  Normal ScalingReplicaSet 3m17s deployment-controller Scaled up replica set frontend-deployment-577494fd6f to 4  
  
controlplane ~ ➔ vim deployment-definition-1.yaml  
  
controlplane ~ ➔ kubectl create -f deployment-definition-1.yaml  
deployment.apps/deployment-1 created  
  
controlplane ~ ➔
```

Create a new Deployment with the below attributes using your own deployment definition file.

Name: `httpd-frontend` ;  
Replicas: `3` ;  
Image: `httpd:2.4-alpine`

`apiVersion: apps/v1  
kind: Deployment  
metadata:  
 name: httpd-frontend  
spec:  
 replicas: 3  
 selector:  
 matchLabels:  
 app: myapp  
 template:  
 metadata:  
 name: frontend  
 labels:  
 app: myapp  
 spec:  
 containers:  
 - name: frontend  
 image: httpd:2.4-alpine`

`:wq`

Create a new Deployment with the below attributes using your own deployment definition file.

Name: `httpd-frontend` ;  
Replicas: `3` ;  
Image: `httpd:2.4-alpine`

`Events:`

Type	Reason	Age	From	Message
Normal	ScalingReplicaSet	3m17s	deployment-controller	Scaled up replica set frontend-deployment-577494fd6f to 4

`controlplane ~ → vim deployment-definition-1.yaml`  
`controlplane ~ → kubectl create -f deployment-definition-1.yaml`  
`deployment.apps/deployment-1 created`  
`controlplane ~ → vim p.yaml`  
`controlplane ~ → kubectl create -f p.yaml`  
`deployment.apps/httpd-frontend created`

`controlplane ~ → kubectl get deployment`

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment-1	0/2	2	0	6m19s
frontend-deployment	0/4	4	0	12m
httpd-frontend	3/3	3	3	25s

`controlplane ~ → [ ]`

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KUBERNETES FOR BEGINNERS LABS, LABS: DEPLOYMENTS Complete

Events:

Type	Reason	Age	From	Message
Normal	ScalingReplicaSet	3m17s	deployment-controller	Scaled up replica set frontend-deployment-577494fd6f to 4

```
controlplane ~ ➔ vim deployment-definition-1.yaml
controlplane ~ ➔ kubectl create -f deployment-definition-1.yaml
deployment.apps/deployment-1 created

controlplane ~ ➔ vim p.yaml
controlplane ~ ➔ kubectl create -f p.yaml
deployment.apps/httpd-frontend created

controlplane ~ ➔ kubectl get deployment
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
deployment-1  0/2     2           0           6m19s
Frontend-deployment 0/4     4           0           12m
httpd-frontend 3/3     3           3           25s

controlplane ~ ➔
```

CONGRATULATIONS!!!!

You have successfully completed the challenge.

End Lab session

Feedback

14:20 05-12-2023

## LABS: PRACTICE TEST ROLLOUT

KODEKLOUD

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

Task 59:15

1 2 3 4 5 6 7 8 9 10 11 12 13

i We have deployed a simple web application. Inspect the PODs and the Services

Wait for the application to fully deploy and view the application using the link called Webapp Portal above your terminal.

Ok

Welcome to the KodeKloud Hands-On lab

```
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controlplane ~ ➔ kubectl get po
NAME          READY   STATUS    RESTARTS   AGE
frontend-58f7796bbb-b2qwf  1/1     Running   0          22s
frontend-58f7796bbb-xhcrq  1/1     Running   0          22s
frontend-58f7796bbb-84hwl  1/1     Running   0          22s
frontend-58f7796bbb-ffkwb  1/1     Running   0          22s

controlplane ~ ➔
```

14:22 05-12-2023

What is the current color of the web application?

Access the Webapp Portal.

yellow

red

green

orange

blue

Welcome to the KodeKloud Hands-On lab

```
controlplane ~ ➔ kubectl get po
NAME           READY   STATUS    RESTARTS   AGE
frontend-58f7796bbb-b2qwf  1/1     Running   0          22s
frontend-58f7796bbb-xhcrg  1/1     Running   0          22s
frontend-58f7796bbb-84hwl  1/1     Running   0          22s
frontend-58f7796bbb-ffkwb  1/1     Running   0          22s
```

What is the current color of the web application?

Access the Webapp Portal.

yellow

red

green

orange

blue

1 2 3 4 5 6 7 8 9 10 11 12 13

i

Run the script named `curl-test.sh` to send multiple requests to test the web application. Take a note of the output.

Execute the script at `/root/curl-test.sh`.

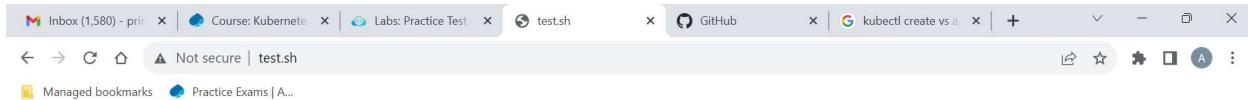
Ok

Welcome to the KodeKloud Hands-On lab

```
controlplane ~ ➔ kubectl get po
NAME           READY   STATUS    RESTARTS   AGE
frontend-58f7796bbb-b2qwf  1/1     Running   0          22s
frontend-58f7796bbb-xhcrg  1/1     Running   0          22s
frontend-58f7796bbb-84hwl  1/1     Running   0          22s
frontend-58f7796bbb-ffkwb  1/1     Running   0          22s
```

```
controlplane ~ ➔ curl test.sh
-bash: curl-test.sh: command not found
```

```
controlplane ~ ➔ curl test sh
curl: (6) Could not resolve host: test
curl: (6) Could not resolve host: sh
```



It works!

KODEKLOUD

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST... Complete < > My Account

1 2 3 4 5 6 7 8 9 10 11 12 13

Inspect the deployment and identify the number of PODs deployed by it

controlplane ~ → kubectl get po

NAME	READY	STATUS	RESTARTS	AGE
frontend-58f7796bbb-b2qwf	1/1	Running	0	22s
frontend-58f7796bbb-xhcrsg	1/1	Running	0	22s
frontend-58f7796bbb-84hwl	1/1	Running	0	22s
frontend-58f7796bbb-ffkwb	1/1	Running	0	22s

controlplane ~ → curl-test.sh  
-bash: curl-test.sh: command not found

controlplane ~ ✘ curl test.sh  
<html><body><h1>It works!</h1></body></html>

controlplane ~ → curl test sh  
curl: (6) Could not resolve host: test  
curl: (6) Could not resolve host: sh

controlplane ~ ✘ kubectl get deployment

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
frontend	4/4	4	4	6m13s

controlplane ~ → [ ]

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

Labels: name=webapp  
Containers:  
simple-webapp:  
Image: kodekloud/webapp-color:v1  
Port: 8080/TCP  
Host Port: 0/TCP  
Environment: <none>  
Mounts: <none>  
Volumes: <none>  
Conditions:  
Type Status Reason  
----  
Available True MinimumReplicasAvailable  
Progressing True NewReplicaSetAvailable  
OldReplicaSets: <none>  
NewReplicaSet: frontend-58f7796bbb (4/4 replicas created)  
Events:  
Type Reason Age From Message  
----  
Normal ScalingReplicaSet 7m56s deployment-controller Scaled up replica set frontend-58f7796bbb to 4

controlplane ~ →

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

Task Hint 49:29

1 2 3 4 5 6 7 8 9 10 11 12 13

Inspect the deployment and identify the current strategy

RollingUpdate

RollBack

ReCreate

RollOut

Terminal 1

```
controlplane ~ → kubectl describe deployment frontend
Name:           frontend
Namespace:      default
CreationTimestamp: Tue, 05 Dec 2023 08:52:25 +0000
Labels:          <none>
Annotations:    deployment.kubernetes.io/revision: 1
Selector:        name=webapp
Replicas:       4 desired | 4 updated | 4 total | 4 available | 0 unavailable
StrategyType:   RollingUpdate
MinReadySeconds: 20
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
  Labels:  name=webapp
  Containers:
    simple-webapp:
      Image:  kodekloud/webapp-color:v1
      Port:   8080/TCP
      Host Port: 0/TCP
      Environment: <none>
      Mounts: <none>
      Volumes: <none>
```

```
controlplane ~ ➔ kubectl describe deployment frontend
Name:           frontend
Namespace:      default
CreationTimestamp:  Tue, 05 Dec 2023 08:52:25 +0000
Labels:          <none>
Annotations:    deployment.kubernetes.io/revision: 1
Selector:        name=webapp
Replicas:       4 desired | 4 updated | 4 total | 4 available | 0 unavailable
StrategyType:   RollingUpdate
MinReadySeconds: 20
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
  Labels:  name=webapp
  Containers:
    simple-webapp:
      Image:  kodekcloud/webapp-color:v1
      Port:   8080/TCP
      Host Port:  0/TCP
      Environment:  <none>
      Mounts:   <none>
      Volumes:  <none>
```

```
revisionHistoryLimit: 10
selector:
  matchLabels:
    name: webapp
strategy:
  rollingUpdate:
    maxSurge: 25%
    maxUnavailable: 25%
    type: RollingUpdate
template:
  metadata:
    creationTimestamp: null
  labels:
    name: webapp
spec:
  containers:
    - image: kodekcloud/webapp-color:v2
      imagePullPolicy: IfNotPresent
      name: simple-webapp
      ports:
        - containerPort: 8080
          protocol: TCP
```

Inbox (1,579) - pri Course: Kubernetes Labs: Practice Test bash -c su - (control GitHub kubectl create vs ...

kodekloud.com/topic/labs-practice-test-rolling-updates-and-rollback...

Managed bookmarks Practice Exams | A...

KodeKloud KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

Task Hint Solution 44:59

1 2 3 4 5 6 7 8 9 10 11 12 13

Let us try that. Upgrade the application by setting the image on the deployment to `kodekloud/webapp-color:v2`

Do not delete and re-create the deployment. Only set the new image name for the existing deployment.

Check Deployment Name: frontend

Terminal 1

```
Environment: <none>
Mounts: <none>
Volumes: <none>
Conditions:
  Type        Status   Reason
  ----        ----   -----
  Available   True    MinimumReplicasAvailable
  Progressing True    NewReplicaSetAvailable
OldReplicaSets: <none>
NewReplicaSet:  frontend-58f7796bbb (4/4 replicas created)
Events:
  Type     Reason          Age   From           Message
  ----     ----          ----   ----           -----
  Normal   ScalingReplicaSet 7m56s  deployment-controller  Scaled up replica set
  frontend-58f7796bbb to 4

controlplane ~ → ls
curl-pod.yaml curl-test.sh

controlplane ~ → kubectl edit deployment frontend
deployment.apps/frontend edited

controlplane ~ →
```

Feedback

Inbox (1,580) - pri Course: Kubernetes terminal-88076d6d972945c6.labs.kodekloud.com

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Welcome to the KodeKloud Hands-On lab

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```
controlplane ~ → kubectl rollout status deployment/frontend
Waiting for deployment "frontend" rollout to finish: 2 out of 4 new replicas have been updated...
Waiting for deployment "frontend" rollout to finish: 2 out of 4 new replicas have been updated...
Waiting for deployment "frontend" rollout to finish: 2 out of 4 new replicas have been updated...
Waiting for deployment "frontend" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "frontend" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "frontend" rollout to finish: 1 old replicas are pending termination...
Waiting for deployment "frontend" rollout to finish: 1 old replicas are pending termination...
deployment "frontend" successfully rolled out

controlplane ~ →
```

14:37 05-12-2023

NewReplicaSet: frontend-58f7796bbb (4/4 replicas created)  
Events:  
Type Reason Age From Message  
Normal ScalingReplicaSet 7m56s deployment-controller Scaled up replica set frontend-58f7796bbb to 4

```
controlplane ~ → ls
curl-pod.yaml curl-test.sh

controlplane ~ → kubectl edit deployment frontend
deployment.apps/frontend edited

controlplane ~ → curl test.sh
<html><body><h1>It works!</h1></body></html>
controlplane ~ → kubectl rollout history deployment
deployment.apps/foreground
REVISION CHANGE-CAUSE
1 <none>
2 <none>

controlplane ~ →
```

```
minReadySeconds: 20
progressDeadlineSeconds: 600
replicas: 4
revisionHistoryLimit: 10
selector:
  matchLabels:
    name: webapp
strategy:
  rollingUpdate:
    maxSurge: 25%
    maxUnavailable: 25%
  type: RollingUpdate
template:
  metadata:
    creationTimestamp: null
    labels:
      name: webapp
spec:
  containers:
  - image: kodekcloud/webapp-color:v2
    imagePullPolicy: IfNotPresent
    name: simple-webapp
```

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

spec:

```
minReadySeconds: 20
progressDeadlineSeconds: 600
replicas: 4
revisionHistoryLimit: 10
selector:
  matchLabels:
    name: webapp
strategy:
  rollingUpdate:
    maxSurge: 25%
    maxUnavailable: 25%
  type: Recreate
template:
  metadata:
    creationTimestamp: null
  labels:
    name: webapp
spec:
  containers:
  - image: kodekloud/webapp-color:v2
    imagePullPolicy: IfNotPresent
```

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

```
<html><body><h1>It works!</h1></body></html>
controlplane ~ ➔ kubectl rollout history deployment
deployment.apps/frontend
REVISION  CHANGE-CAUSE
1          <none>
2          <none>

controlplane ~ ➔ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
A copy of your changes has been stored to "/tmp/kubectl-edit-1862588857.yaml"
error: Edit cancelled, no valid changes were saved.

controlplane ~ ➔ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
A copy of your changes has been stored to "/tmp/kubectl-edit-55140056.yaml"
error: Edit cancelled, no valid changes were saved.

controlplane ~ ➔ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
deployment.apps/frontend edited

controlplane ~ ➔
```

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

minReadySeconds: 20  
progressDeadlineSeconds: 600  
replicas: 4  
revisionHistoryLimit: 10  
selector:  
  matchLabels:  
    name: webapp  
strategy:  
  type: Recreate  
template:  
  metadata:  
    creationTimestamp: null  
  labels:  
    name: webapp  
spec:  
  containers:  
  - image: kodekcloud/webapp-color:v3  
    imagePullPolicy: IfNotPresent

KUBERNETES FOR BEGINNERS LABS, LABS: PRACTICE TEST ... Complete

REVISION CHANGE-CAUSE  
1 <none>  
2 <none>

controlplane ~ → kubectl edit deployment frontend  
error: deployments.apps "frontend" is invalid  
A copy of your changes has been stored to "/tmp/kubectl-edit-1862588857.yaml"  
error: Edit cancelled, no valid changes were saved.

controlplane ~ ✘ kubectl edit deployment frontend  
error: deployments.apps "frontend" is invalid  
A copy of your changes has been stored to "/tmp/kubectl-edit-55140056.yaml"  
error: Edit cancelled, no valid changes were saved.

controlplane ~ ✘ kubectl edit deployment frontend  
error: deployments.apps "frontend" is invalid  
deployment.apps/frontend edited

controlplane ~ → kubectl edit deployment frontend  
deployment.apps/frontend edited

Kubernetes For Beginners Labs, Labs: Practice Test

Task 27:48

Terminal 1

```
controlplane ~ ➔ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
A copy of your changes has been stored to "/tmp/kubectl-edit-1862588857.yaml"
error: Edit cancelled, no valid changes were saved.

controlplane ~ ✘ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
A copy of your changes has been stored to "/tmp/kubectl-edit-55140056.yaml"
error: Edit cancelled, no valid changes were saved.

controlplane ~ ✘ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
deployment.apps/frontend edited

controlplane ~ ➔ curl test.sh
<html><body><h1>It works!</h1></body></html>
controlplane ~ ➔
```

Run the script `curl-test.sh` again. Notice the failures. Wait for the new application to be ready. Notice that the requests now do not hit both the versions

Execute the script at `/root(curl-test.sh)`.

Ok

Kubernetes For Beginners Labs, Labs: Practice Test

Task 27:10

Terminal 1

```
controlplane ~ ➔ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
A copy of your changes has been stored to "/tmp/kubectl-edit-1862588857.yaml"
error: Edit cancelled, no valid changes were saved.

controlplane ~ ✘ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
A copy of your changes has been stored to "/tmp/kubectl-edit-55140056.yaml"
error: Edit cancelled, no valid changes were saved.

controlplane ~ ✘ kubectl edit deployment frontend
error: deployments.apps "frontend" is invalid
deployment.apps/frontend edited

controlplane ~ ➔ curl test.sh
<html><body><h1>It works!</h1></body></html>
controlplane ~ ➔
```

**CONGRATULATIONS!!!!**

You have successfully completed the challenge.

End Lab session

