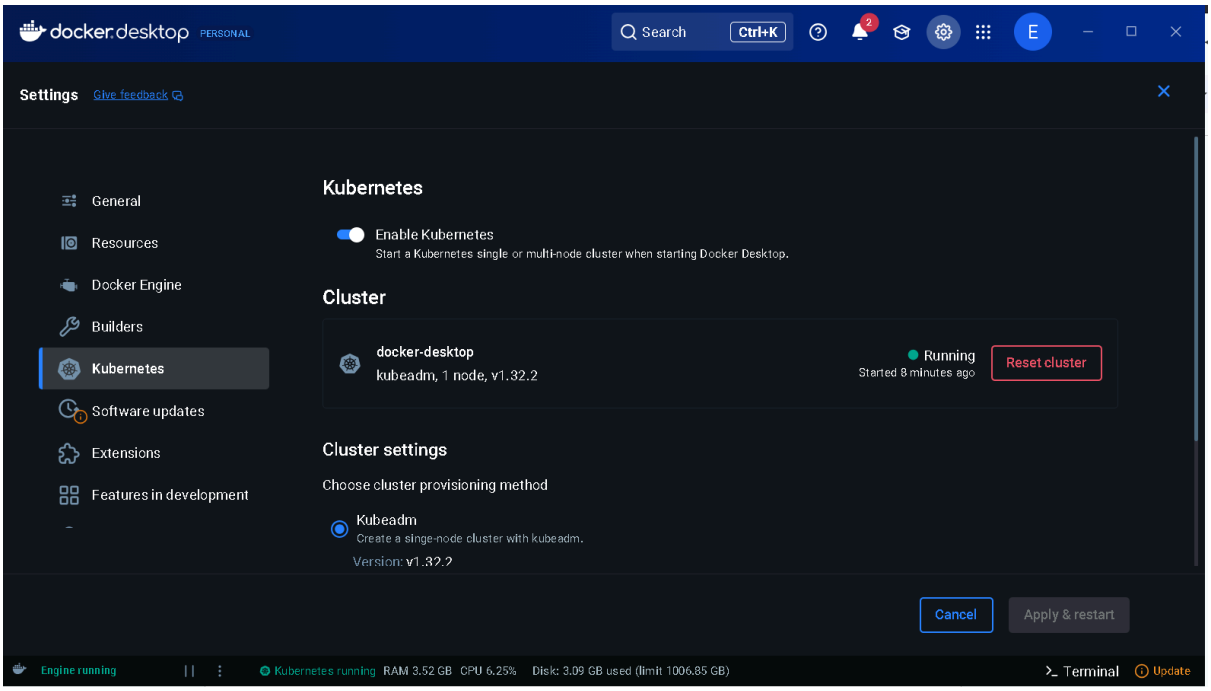
codelabsde kubernetes

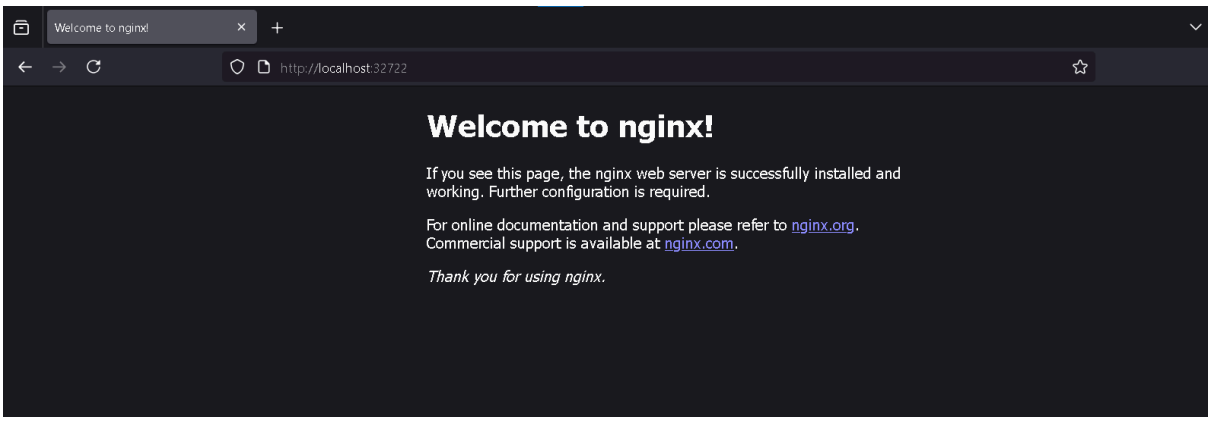



```
C:\Windows\system32>kubectl get nodes
NAME             STATUS   ROLES           AGE     VERSION
docker-desktop   Ready    control-plane   2m53s   v1.32.2
```

```
C:\Windows\system32>kubectl create deployment nginx-deploy --image=nginx
deployment.apps/nginx-deploy created
```

```
C:\Windows\system32>kubectl expose deployment nginx-deploy --type=NodePort --port=80
service/nginx-deploy exposed
```

```
C:\Windows\system32>kubectl get services
NAME           TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
kubernetes     ClusterIP   10.96.0.1       <none>        443/TCP        7m5s
nginx-deploy   NodePort    10.102.133.13   <none>        80:32722/TCP   43s
```



```
C:\Windows\system32>kubectl scale deployment nginx-deploy --replicas=3
deployment.apps/nginx-deploy scaled

C:\Windows\system32>kubectl get pods
NAME                            READY   STATUS    RESTARTS   AGE
nginx-deploy-c9d9f6c6c-2hbc5    1/1     Running   0          4m47s
nginx-deploy-c9d9f6c6c-jrvmn    1/1     Running   0          9s
nginx-deploy-c9d9f6c6c-w7gcv    1/1     Running   0          9s
```

```
C:\Windows\system32>kubectl delete service nginx-deploy
service "nginx-deploy" deleted

C:\Windows\system32>kubectl delete deployment nginx-deploy
deployment.apps "nginx-deploy" deleted
```

segundo

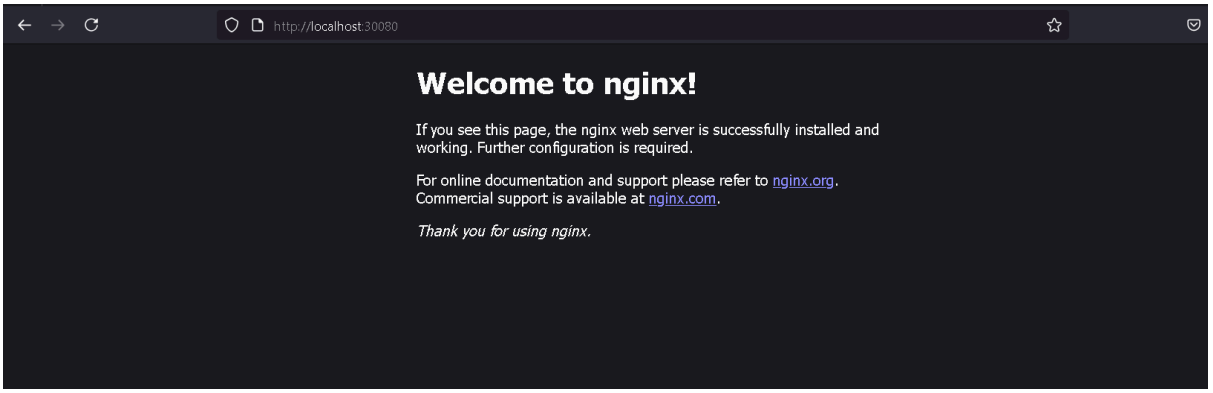
```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl apply -f webapp.yaml
deployment.apps/webapp created
service/webapp-service created
```

```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl get deployments
NAME     READY   UP-TO-DATE   AVAILABLE   AGE
webapp   2/2     2            2           82s

C:\Users\Cocodrelo\Documents\Kubernetes>kubectl get pods
NAME                      READY   STATUS    RESTARTS   AGE
webapp-869b646d9f-q2gfb   1/1     Running   0          91s
webapp-869b646d9f-xksqj   1/1     Running   0          91s

C:\Users\Cocodrelo\Documents\Kubernetes>kubectl get services
NAME             TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
kubernetes       ClusterIP   10.96.0.1       <none>        443/TCP        20m
webapp-service   NodePort    10.106.129.43   <none>        80:30080/TCP   99s
```

webapp.yaml ● | configmap.yaml

webapp.yaml

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: webapp
spec:
  replicas: 2
  selector:
    matchLabels:
      app: webapp
  template:
    metadata:
      labels:
        app: webapp
    spec:
      containers:
      - name: nginx
        image: nginx
        ports:
        - containerPort: 80

---
apiVersion: v1
kind: Service
metadata:
  name: webapp-service
spec:
  selector:
    app: webapp
  type: NodePort
  ports:
    - port: 80
      targetPort: 80
      nodePort: 30080
```




```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl apply -f configmap.yaml
configmap/webapp-config created
```

! webapp.yaml × ! configmap.yaml

! webapp.yaml

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: webapp
spec:
  replicas: 2
  selector:
    matchLabels:
      app: webapp
  template:
    metadata:
      labels:
        app: webapp
    spec:
      containers:
      - name: nginx
        image: nginx
        ports:
        - containerPort: 80
        env:
            - name: SALUDO
              valueFrom:
                configMapKeyRef:
                  name: webapp-config
                  key: SALUDO

---
apiVersion: v1
kind: Service
metadata:
  name: webapp-service
spec:
  selector:
    app: webapp
  type: NodePort
  ports:
    - port: 80
      targetPort: 80
      nodePort: 30080
```

```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl apply -f webapp.yaml
deployment.apps/webapp configured
service/webapp-service unchanged
```

```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl exec -it webapp-6b995fc796-bjj2g -- printenv SALUDO
¡Hola desde Kubernetes!
```

webapp.yaml | secret.yaml | configmap.yaml

secret.yaml

```yaml
apiVersion: v1
kind: Secret
metadata:
  name: webapp-secret
type: Opaque
data:
  PASSWORD: c2VjdXJvMTIz  # base64 de "seguro123"
```

```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl apply -f secret.yaml
secret/webapp-secret created
```

```yaml
        app: webapp
    spec:
      containers:
      - name: nginx
        image: nginx
        ports:
        - containerPort: 80
        env:
          - name: SALUDO
            valueFrom:
              configMapKeyRef:
                name: webapp-config
                key: SALUDO
          - name: PASSWORD
            valueFrom:
              secretKeyRef:
                name: webapp-secret
                key: PASSWORD

---
apiVersion: v1
kind: Service
metadata:
```

```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl exec -it webapp-894cd5756-bnpd8 -- printenv PASSWORD
securo123
```

```
C:\Users\Cocodrelo\Documents\Kubernetes>kubectl apply -f config-volume.yaml
configmap/html-config created

C:\Users\Cocodrelo\Documents\Kubernetes>kubectl apply -f webapp-volumen.yaml
deployment.apps/webapp-volumen created

C:\Users\Cocodrelo\Documents\Kubernetes>kubectl expose deployment webapp-volumen --type=NodePort --port=80 --name=webapp
-volumen-service
service/webapp-volumen-service exposed

C:\Users\Cocodrelo\Documents\Kubernetes>kubectl get services
NAME                     TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
kubernetes               ClusterIP   10.96.0.1       <none>        443/TCP        44m
webapp-service           NodePort    10.106.129.43   <none>        80:30080/TCP   25m
webapp-volumen-service   NodePort    10.109.56.121   <none>        80:31233/TCP   73s
```


```
C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl apply -f namespace.yaml
namespace/auth-demo created

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl config set-context --current --namespace=auth-demo
Context "docker-desktop" modified.

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl apply -f db1.yaml
persistentvolumeclaim/db1-pvc created
service/db1 created
deployment.apps/db1 created

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl apply -f db2.yaml
persistentvolumeclaim/db2-pvc created
service/db2 created
deployment.apps/db2 created

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl apply -f pais-service.yaml
service/pais-service created
deployment.apps/pais-service created

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl apply -f auth-service.yaml
service/auth-service created
deployment.apps/auth-service created
```

```
C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl get pods
NAME                            READY   STATUS              RESTARTS   AGE
auth-service-7df446bdbb-j6lgx   0/1     ContainerCreating   0          1s
db1-dbd647-zdzm4                0/1     ContainerCreating   0          15s
db2-6ddd5445f5-hlh46            0/1     ContainerCreating   0          15s
pais-service-796bb57fcc-8bbbv   0/1     ContainerCreating   0          15s

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl get svc
NAME           TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)    AGE
auth-service   ClusterIP   10.111.67.188    <none>        8080/TCP   3s
db1            ClusterIP   10.101.140.130   <none>        5432/TCP   18s
db2            ClusterIP   10.107.227.204   <none>        5432/TCP   17s
pais-service   ClusterIP   10.105.74.48     <none>        8080/TCP   17s
```

```
C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl port-forward svc/pais-service 8082:8080
Forwarding from 127.0.0.1:8082 -> 8080
Forwarding from [::1]:8082 -> 8080
Handling connection for 8082
```

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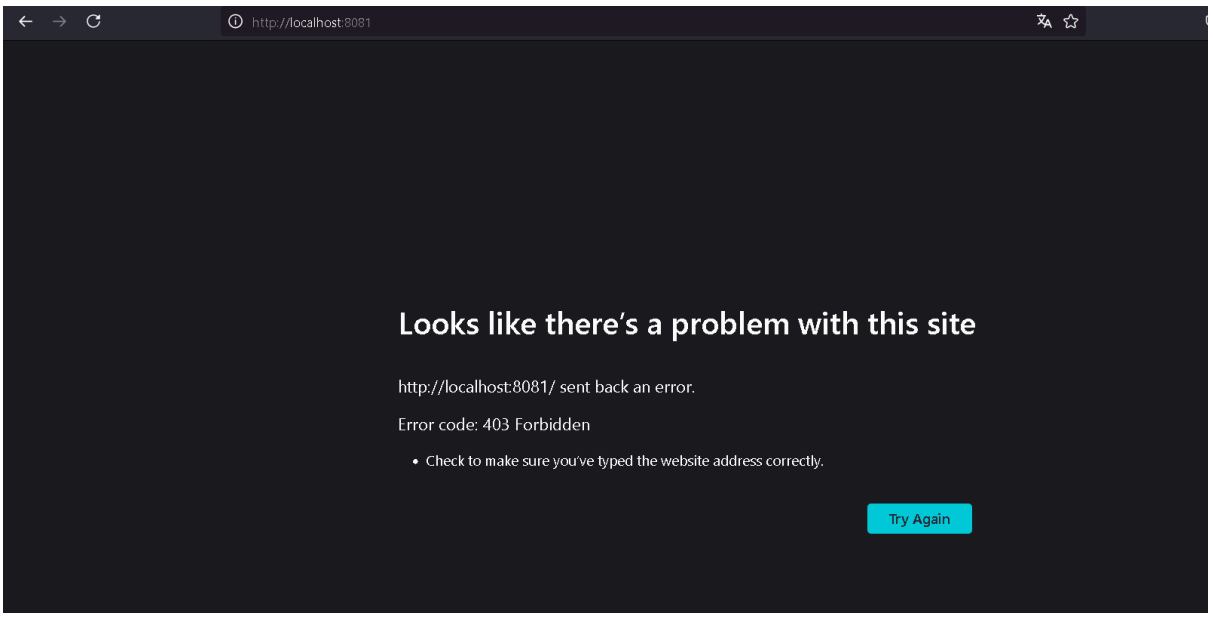
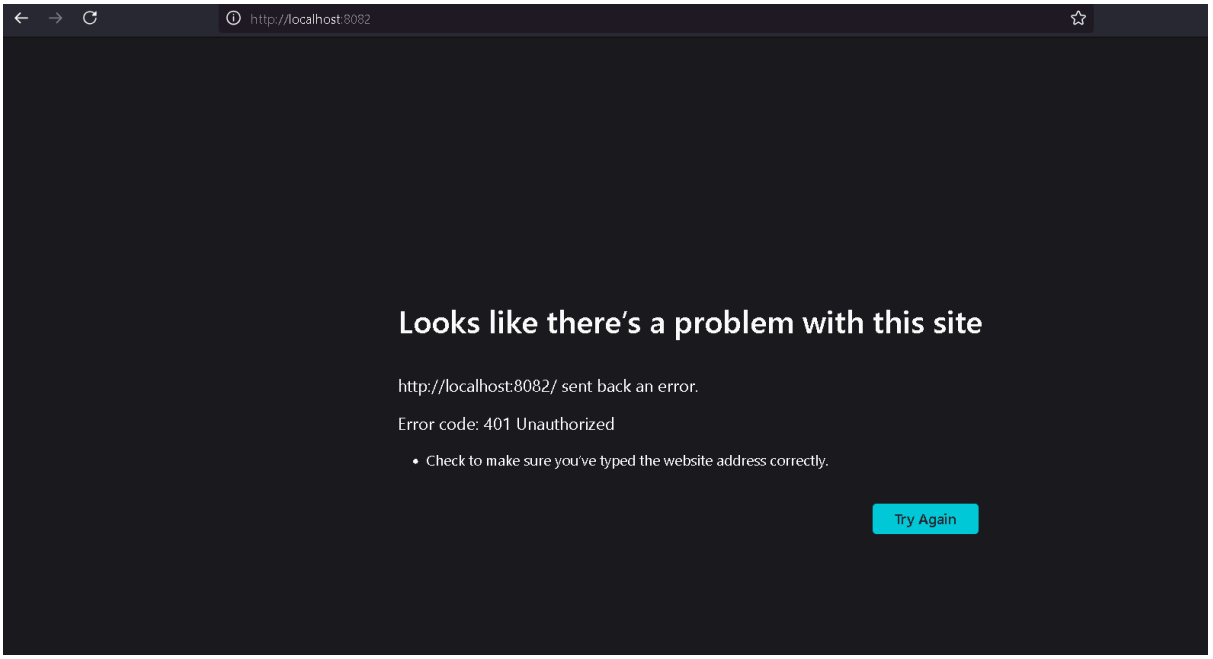
Seleccionar C:\Windows\System32\cmd.exe - kubectl port-forward svc/auth-service 8081:8080

```
Microsoft Windows [Versión 10.0.19045.5965]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\Cocodrelo\Documents\Kubernetes\k8s-auth-demo>kubectl port-forward svc/auth-service 8081:8080
Forwarding from 127.0.0.1:8081 -> 8080
Forwarding from [::1]:8081 -> 8080
Handling connection for 8081
```


http://localhost:8081
Looks like there's a problem with this site
http://localhost:8081/ sent back an error.
Error code: 403 Forbidden
• Check to make sure you've typed the website address correctly.
Try Again


http://localhost:8082
Looks like there's a problem with this site
http://localhost:8082/ sent back an error.
Error code: 401 Unauthorized
• Check to make sure you've typed the website address correctly.
Try Again