1- How many DaemonSets are created in the cluster in all namespaces?

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> kubectl get daemonsets
No resources found in default namespace.
PS C:\WINDOWS\system32>
```

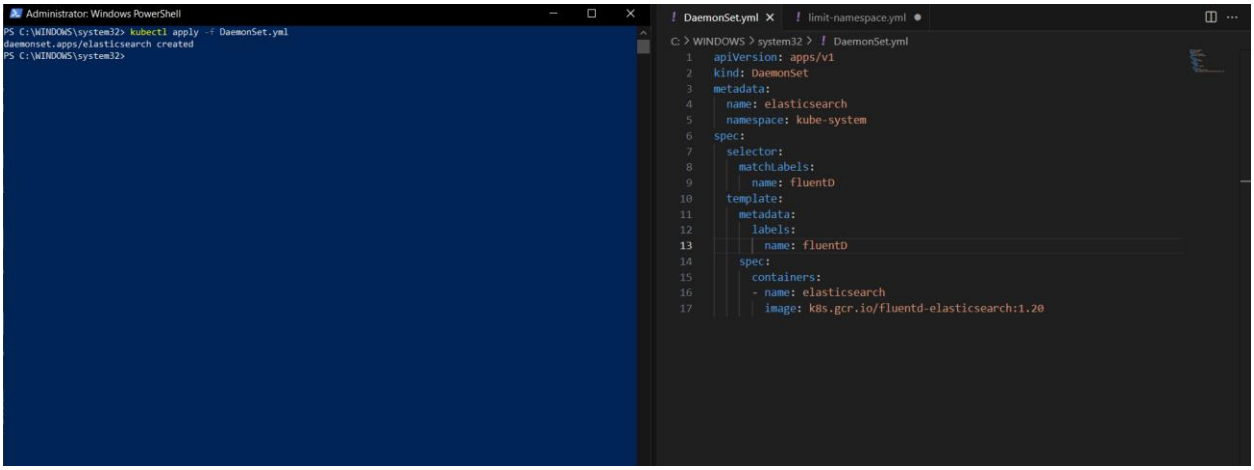
2- what DaemonSets exist on the kube-system namespace?

```
PS C:\WINDOWS\system32> kubectl get daemonsets -n kube-system
NAME         DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR            AGE
kube-proxy   1         1         1       1            1           kubernetes.io/os=linux   3d16h
PS C:\WINDOWS\system32>
```

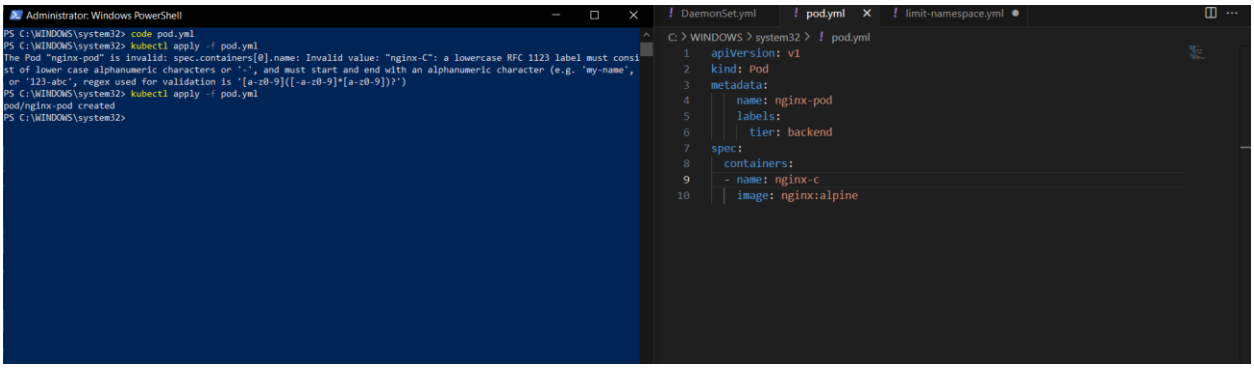
3- What is the image used by the POD deployed by the kube-proxy DaemonSet ?

```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> kubectl describe daemonset -n kube-system
Name:           kube-proxy
Selector:       k8s-app=kube-proxy
Node-Selector:  kubernetes.io/os=linux
Labels:         k8s-app=kube-proxy
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:           k8s-app=kube-proxy
  Service Account:  kube-proxy
  Containers:
   kube-proxy:
    Image:      registry.k8s.io/kube-proxy:v1.32.0
```

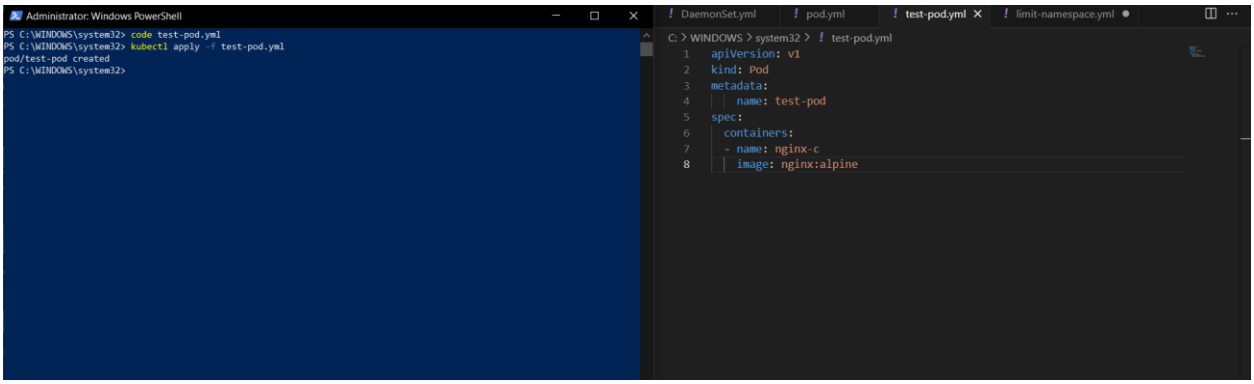
4- Deploy a DaemonSet for FluentD Logging. Use the given specifications. Name: elasticsearch Namespace: kube-system Image: k8s.gcr.io/fluentd-elasticsearch:1.20



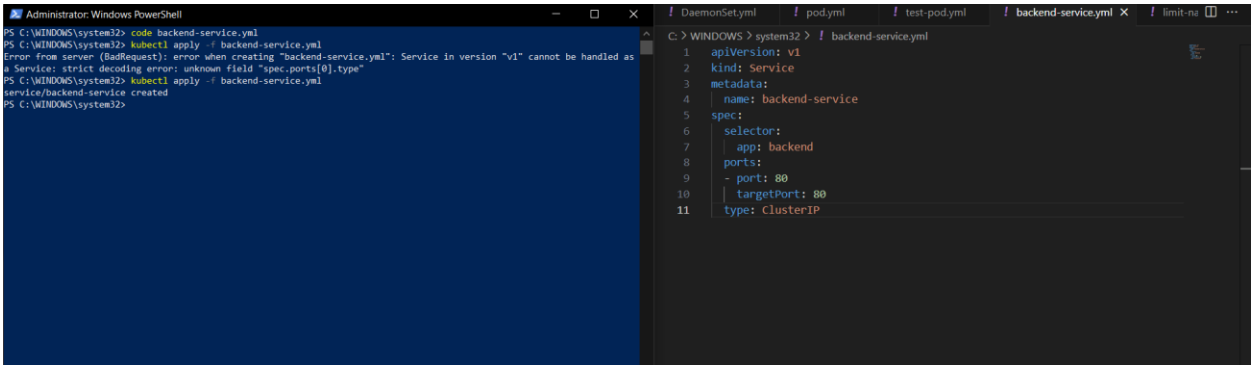
5- Deploy a pod named nginx-pod using the nginx:alpine image with the labels set to tier=backend



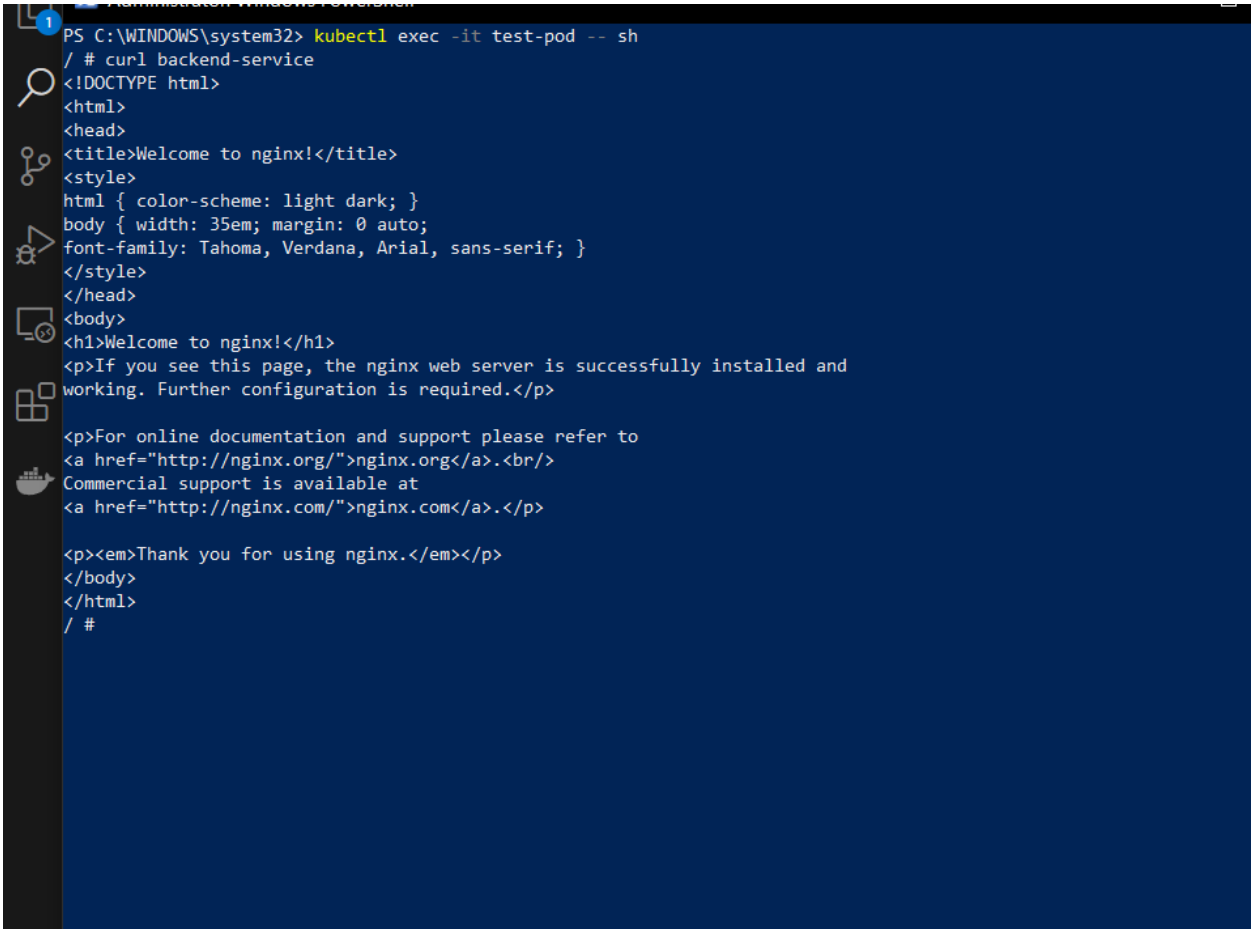
6- Deploy a test pod using the nginx:alpine image.



7- Create a service backend- 7- Create a service backend-service to expose the backend application within the cluster on port 80. to expose the backend



8- try to curl the backend-service from the test pod. What is the response?

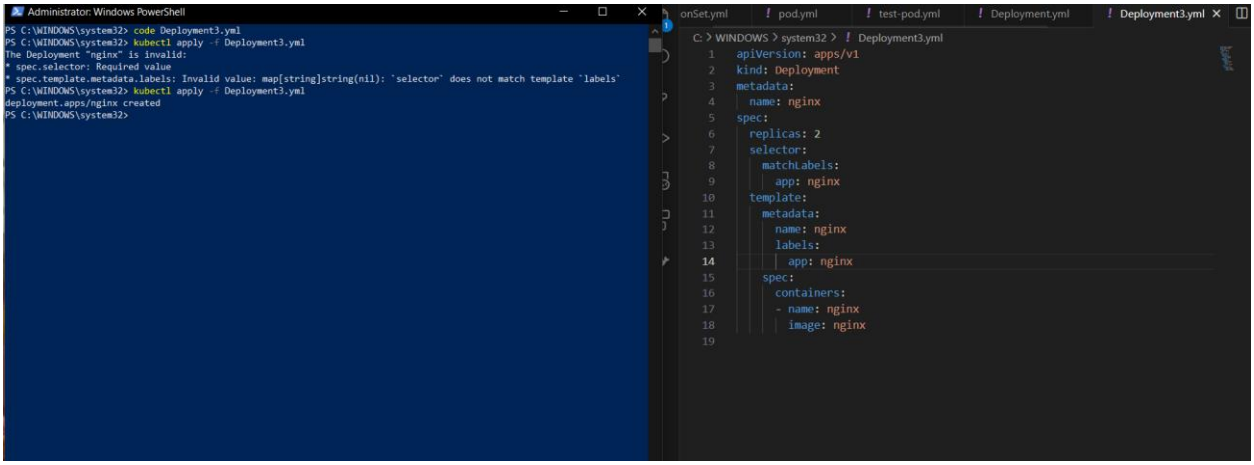


```
PS C:\WINDOWS\system32> kubectl exec -it test-pod -- sh
/ # curl backend-service
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
/ #
```

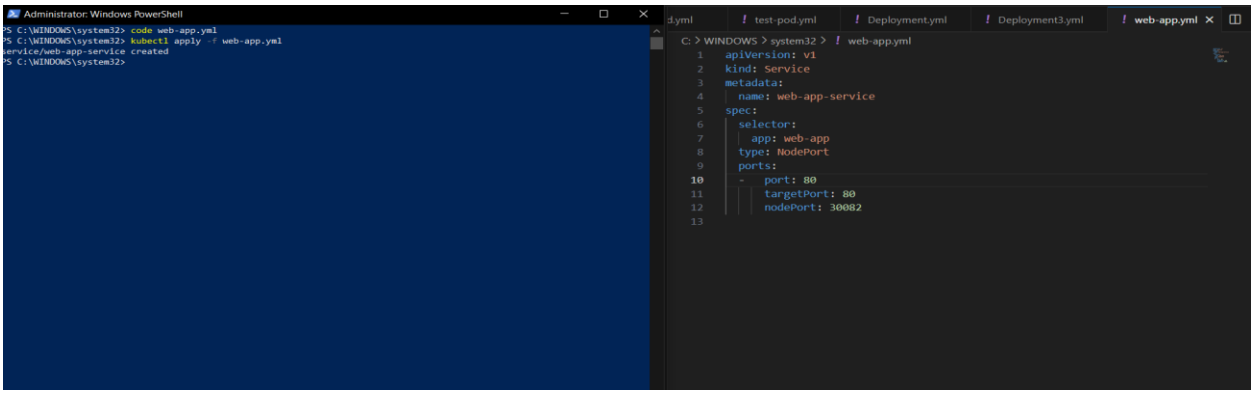
9- Create a deployment named web-app using the image nginx with 2 replicas



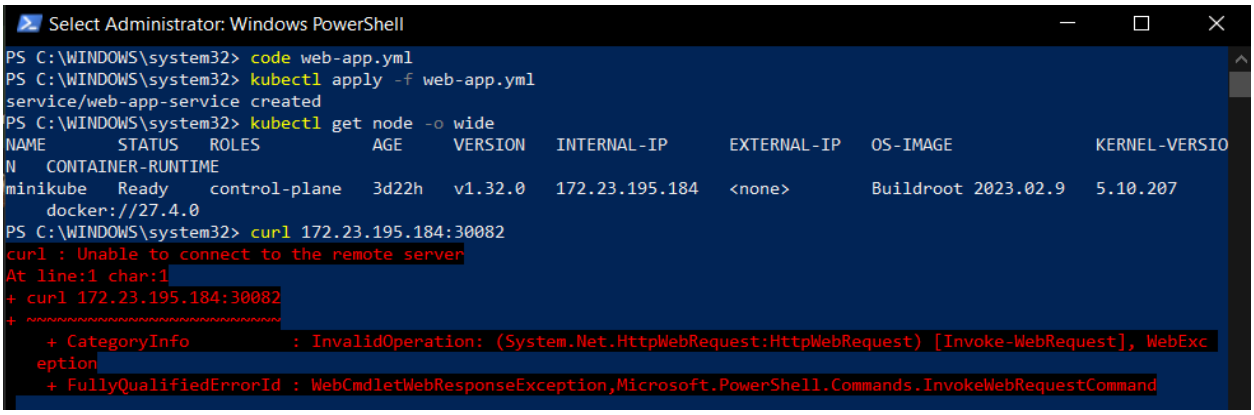
```
Administrator: Windows PowerShell
PS C:\WINDOWS\system32> code Deployment3.yml
PS C:\WINDOWS\system32> kubectl apply -f Deployment3.yml
The Deployment "nginx" is invalid:
* spec.selector: Required value
* spec.template.metadata.labels: Invalid value: map[string]string(nil): `selector` does not match template `labels`
PS C:\WINDOWS\system32> kubectl apply -f Deployment3.yml
deployment.apps/nginx created
PS C:\WINDOWS\system32>
```

```
onSet.yml | pod.yml | test-pod.yml | Deployment.yml | Deployment3.yml
C: > WINDOWS > system32 > Deployment3.yml
1  apiVersion: apps/v1
2  kind: Deployment
3  metadata:
4    name: nginx
5  spec:
6    replicas: 2
7    selector:
8      matchLabels:
9        app: nginx
10   template:
11     metadata:
12       name: nginx
13       labels:
14         app: nginx
15     spec:
16       containers:
17       - name: nginx
18         image: nginx
19
```

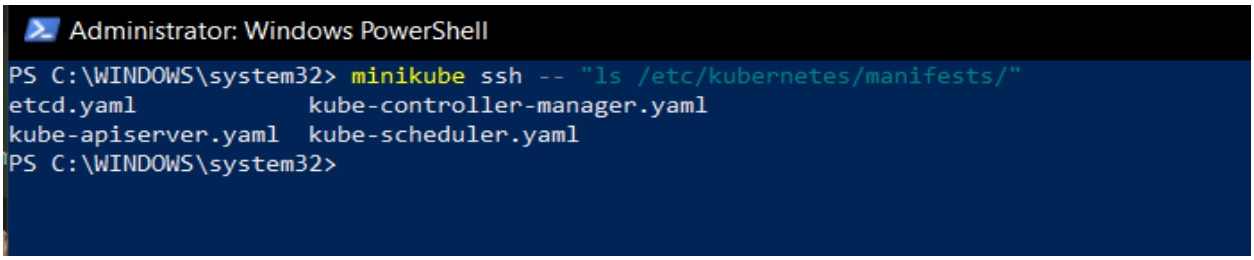
10- Expose the web-app as service web-app-service application on port 80 and nodeport 30082 on the nodes on the cluster



11- access the web app from the node



12- How many static pods exist in this cluster in all namespaces? (search)



13-On which nodes are the static pods created currently?