# Module 5: Managing State with Deployments

## DEMO-5

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# DEMO Steps:

Taints and tolerations:

1. List all the nodes you have in your cluster

   Syntax: kubectl get nodes

   ```
   ubuntu@kmaster:~$ kubectl get nodes
   NAME                                         STATUS   ROLES    AGE   VERSION
   ip-172-20-37-223.us-east-2.compute.internal  Ready    master   9m    v1.10.6
   ip-172-20-39-238.us-east-2.compute.internal  Ready    node     7m    v1.10.6
   ip-172-20-47-125.us-east-2.compute.internal  Ready    node     7m    v1.10.6
   ```

2. Now, taint one of the nodes with color=red and the other one with color=blue

   Syntax: kubectl taint nodes <node-name> <label-key>=<label-value>:Effect

   ```
   ubuntu@kmaster:~$ kubectl taint nodes ip-172-20-39-238.us-east-2.compute.internal color=red:NoSchedule
   node/ip-172-20-39-238.us-east-2.compute.internal tainted
   ubuntu@kmaster:~$ kubectl taint nodes ip-172-20-47-125.us-east-2.compute.internal color=blue:NoSchedule
   node/ip-172-20-47-125.us-east-2.compute.internal tainted
   ```

3. Schedule two separate pods having color toleration red and blue

   ```
   apiVersion: v1
   kind: Pod
   metadata:
     name: pod1
     labels:
       app: nginx
   spec:
     tolerations:
     - key: "color"
       operator: "Equal"
       value: "red"
     containers:
     - name: nginx
       image: nginx:1.7.9
       ports:
         - containerPort: 80
   ```

```
ubuntu@kmaster:~$ vi pod1.yaml
ubuntu@kmaster:~$ vi pod2.yaml
ubuntu@kmaster:~$ kubectl create -f pod1.yaml
pod/pod1 created
ubuntu@kmaster:~$ kubectl create -f pod2.yaml
pod/pod2 created
```

4. Check where the pods are scheduled

Syntax: kubectl get pods -o wide

```
ubuntu@kmaster:~$ kubectl get pods -o wide
NAME                   READY   STATUS    RESTARTS   AGE   IP           NODE
httpd-fcdb8b4d8-bsd4x  1/1     Running   0          24m   100.96.1.2   ip-172-20-47-125.us-east-2.compute.internal
httpd-fcdb8b4d8-h2jn1  1/1     Running   0          24m   100.96.1.8   ip-172-20-47-125.us-east-2.compute.internal
httpd-fcdb8b4d8-qhh2d  1/1     Running   0          24m   100.96.1.4   ip-172-20-47-125.us-east-2.compute.internal
pod1                   1/1     Running   0          1m    100.96.2.3   ip-172-20-39-238.us-east-2.compute.internal
pod2                   1/1     Running   0          1m    100.96.1.9   ip-172-20-47-125.us-east-2.compute.internal
```

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