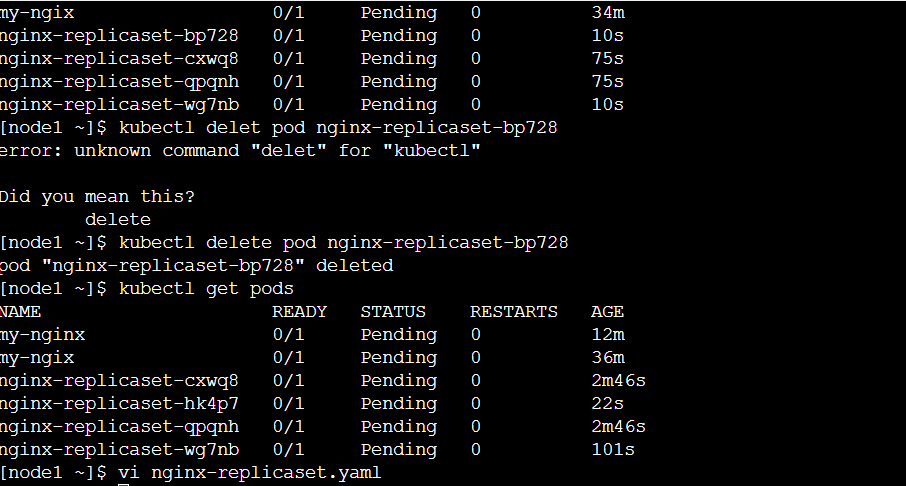
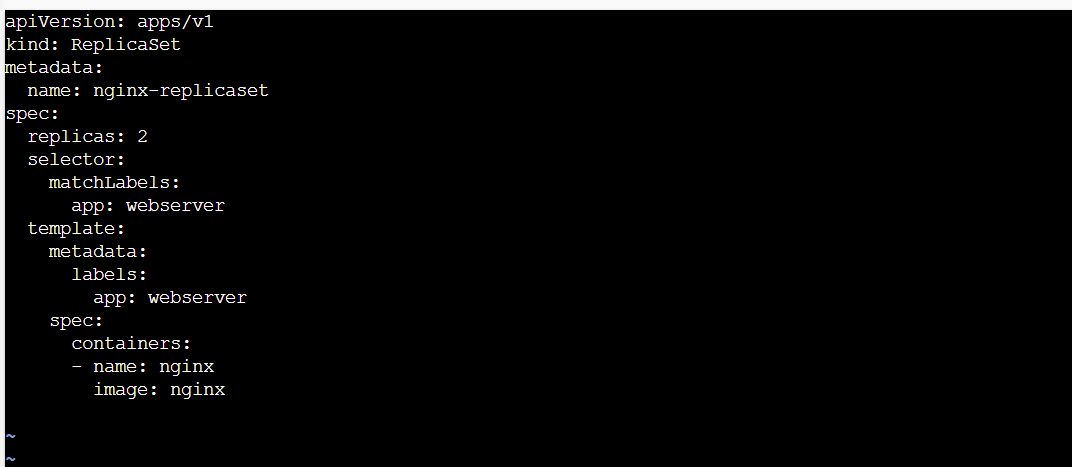


Since ReplicaSet ensures the desired number of replicas, Kubernetes will automatically create a new Pod to maintain 5 replicas.



**Step 10: scaling the replicas to 2** 

**Step 11:**

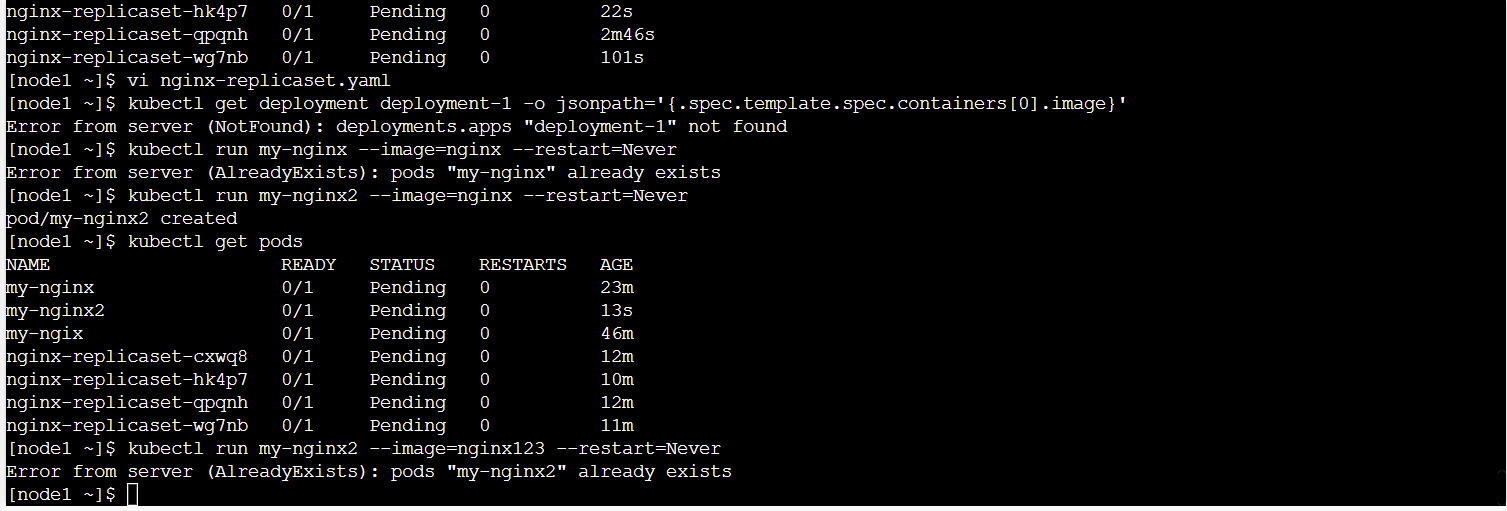
The issue is that The selector.matchLabels is tier: frontend, but the Pod template has tier: nginx. They must match.

**Step 12:**

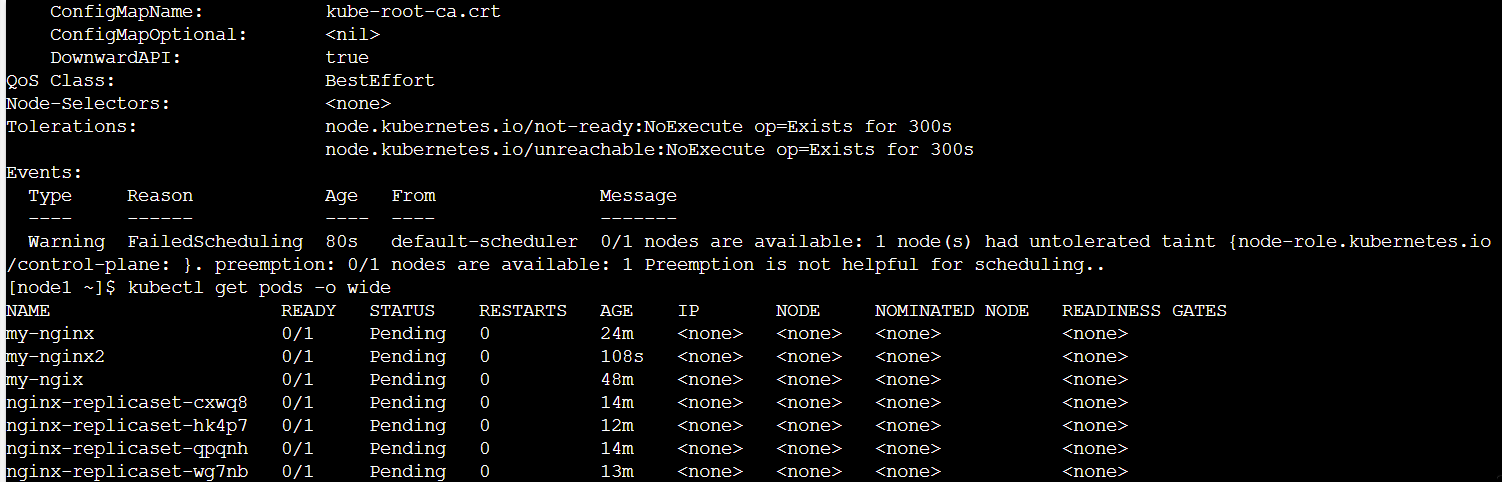
The command section must use -c 'echo Hello Kubernetes! && sleep 3600' instead of separate lines.

**PART 2**

**Steps: 1,2,3**

****

**Step 4:**

****

**Kubernates Concepts:**

**Namespace: kubectl create namespace my-namespace**

### ConfigMap:

### apiVersion: v1

### kind: ConfigMap

### metadata:

### name: my-config

### namespace: my-namespace

### data:

### config.json: |

### { "key": "value" }

### Command used: kubectl apply -f configmap.yaml

**Secret:**

apiVersion: v1

kind: Secret

metadata:

name: my-secret

namespace: my-namespace

type: Opaque

data:

password: cGFzc3dvcmQ=

Command: kubectl apply -f secret.yaml

**Network Policy:**

**apiVersion: networking.k8s.io/v1**

**kind: NetworkPolicy**

**metadata:**

**name: allow-frontend**

**namespace: my-namespace**

**spec:**

**podSelector:**

**matchLabels:**

**app: frontend**

**policyTypes:**

**- Ingress**

**ingress:**

**- from:**

**- podSelector:**

**matchLabels:**

**app: backend**

**Command: kubectl apply -f networkpolicy.yaml**

### Taints and Tolerations

### Command: kubectl taint nodes <node-name> key=db:NoSchedule

### apiVersion: apps/v1

### kind: Deployment

### metadata:

### name: mongodb

### namespace: my-namespace

### spec:

### replicas: 1

### template:

### metadata:

### labels:

### app: mongodb

### spec:

### tolerations:

### - key: "db"

### operator: "Equal"

### value: "NoSchedule"

### effect: "NoSchedule"

### containers:

### - name: mongo

### image: mongo

### command: kubectl apply deployment.yaml

### Volume:

### apiVersion: v1

### kind: PersistentVolumeClaim

### metadata:

### name: my-pvc

### namespace: my-namespace

### spec:

### accessModes:

### - ReadWriteOnce

### resources:

### requests:

### storage: 1Gi

### command: kubectl apply –f pvc.yaml

### 

### Step 23:

### 