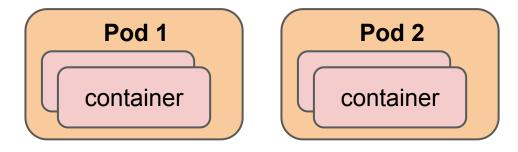
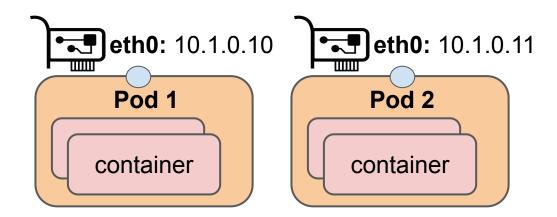
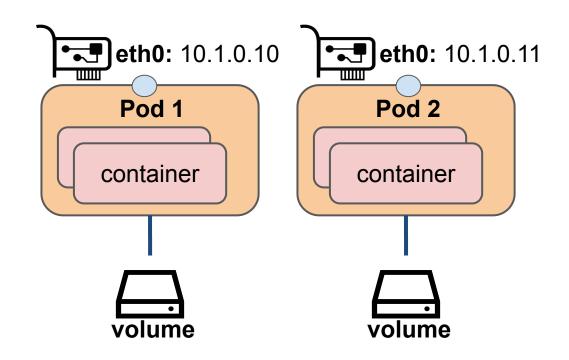
The K8s Abstraction

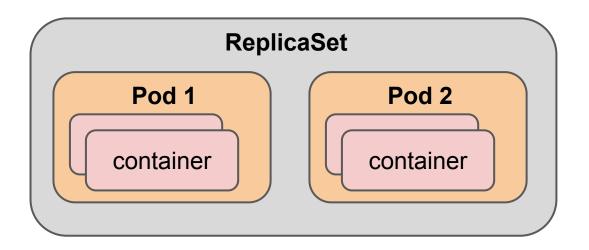
https://github.com/paulopez78/k8s-abstraction

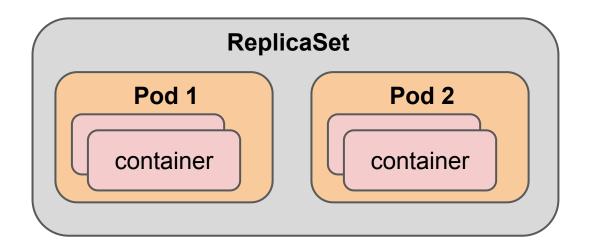
Abstractions = Resources

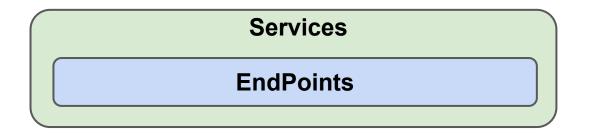


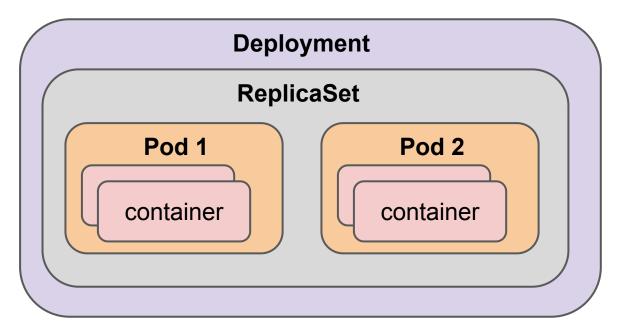










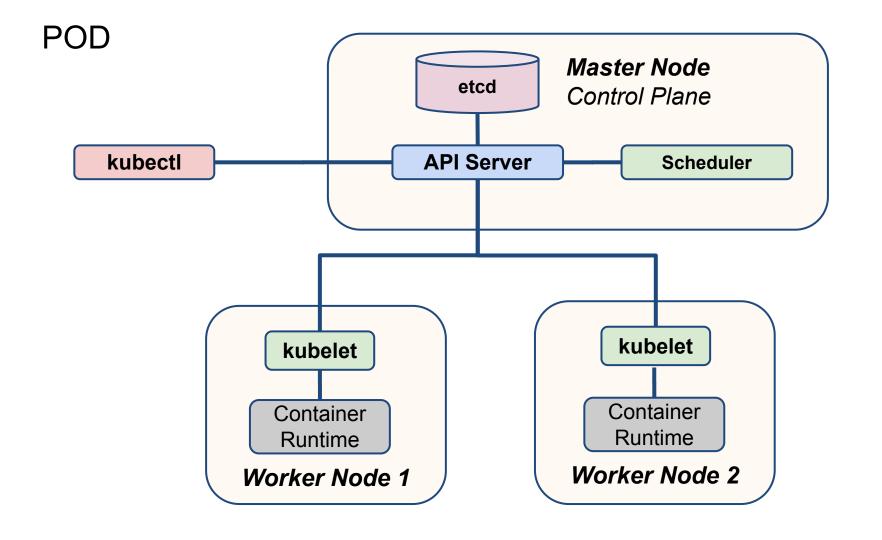


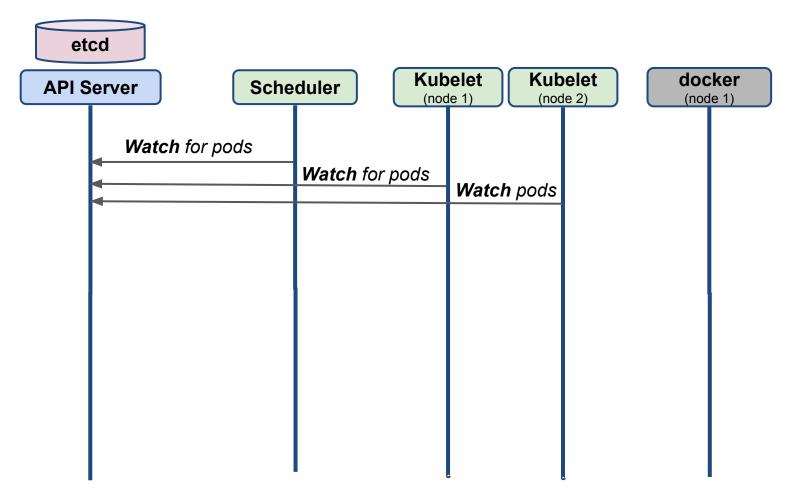
Services

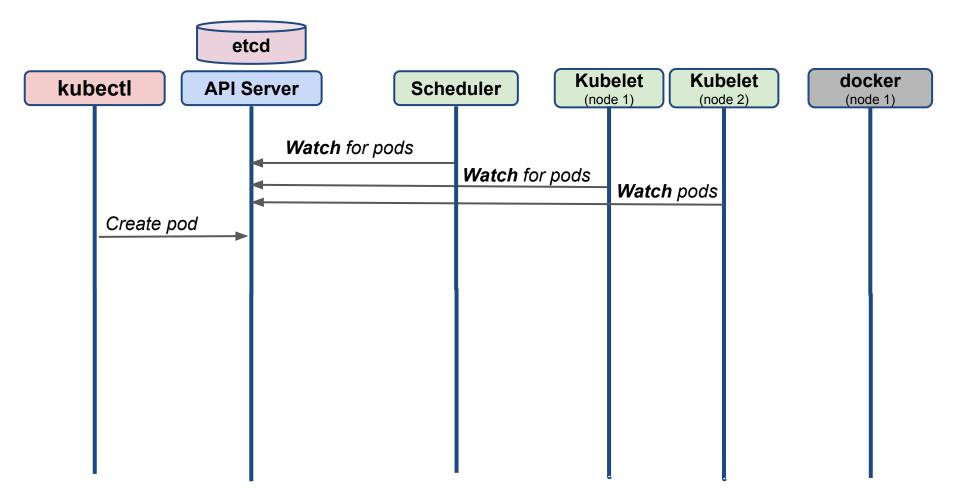
EndPoints

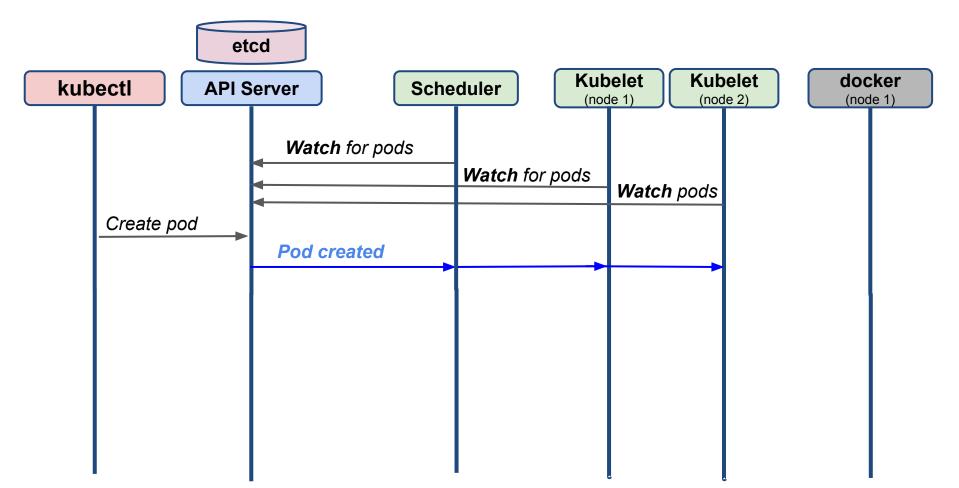
POD

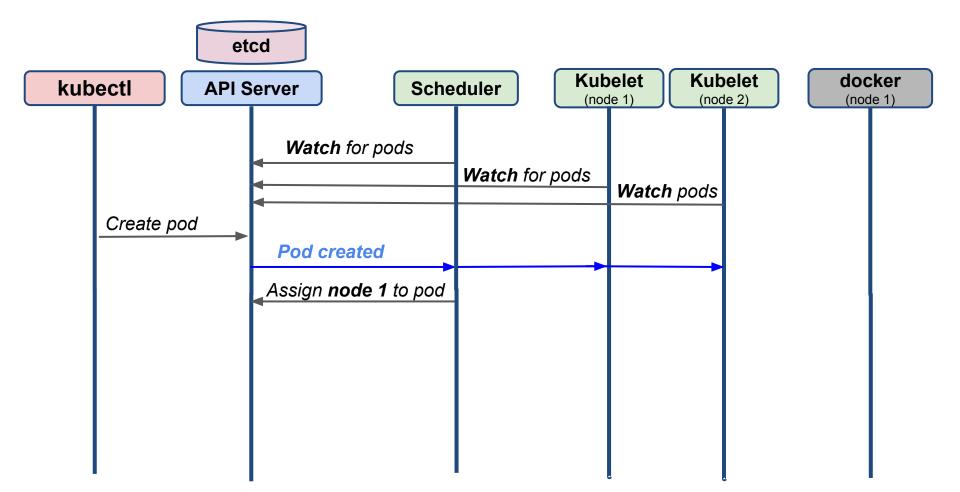
```
apiVersion: v1
kind: Pod
metadata:
  name: votingapp
  labels:
    app: votingapp
spec:
  containers:
    - image: paulopez/votingapp:0.1
      name: votingapp
```

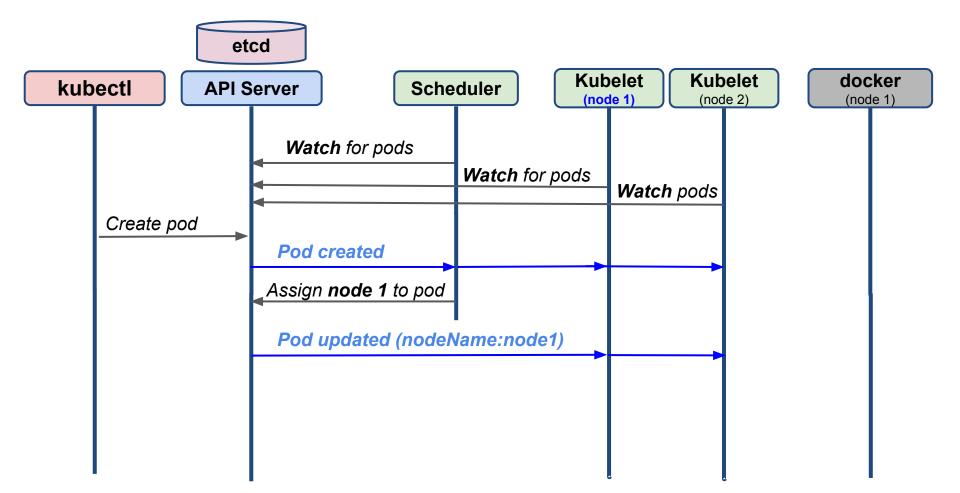


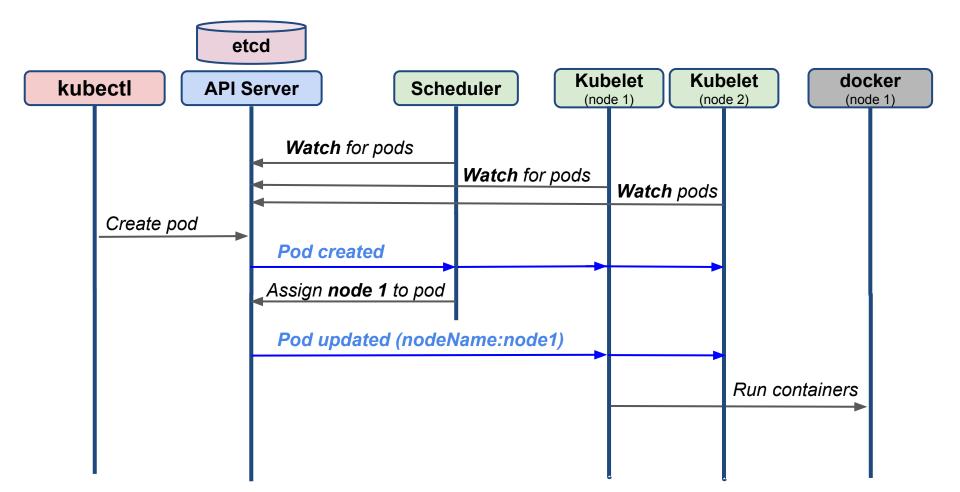


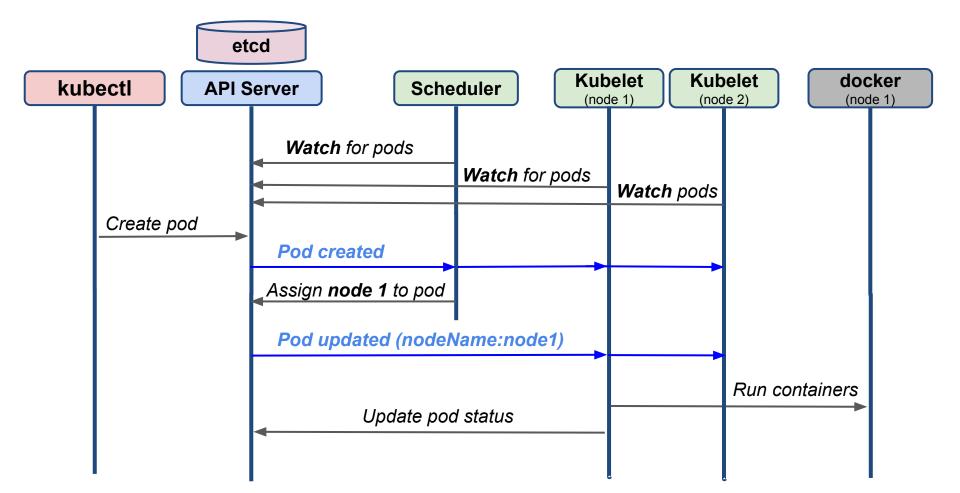


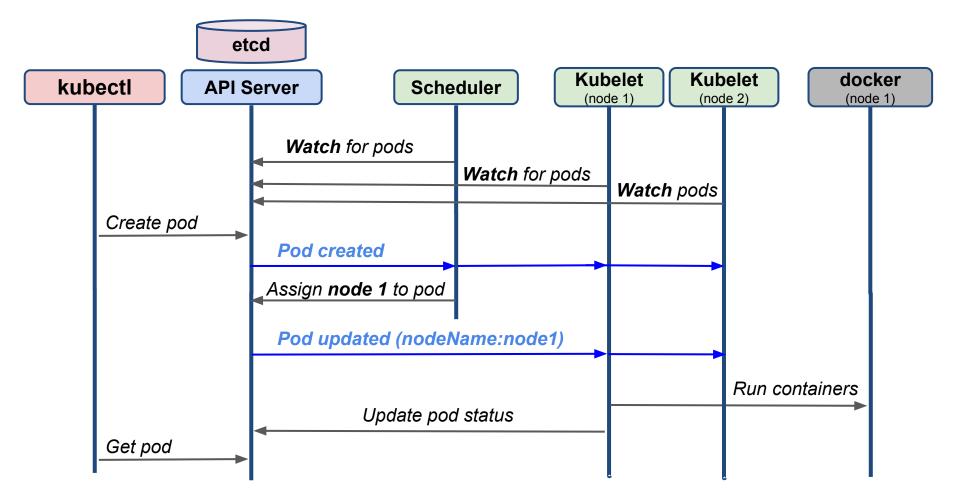












REPLICASET

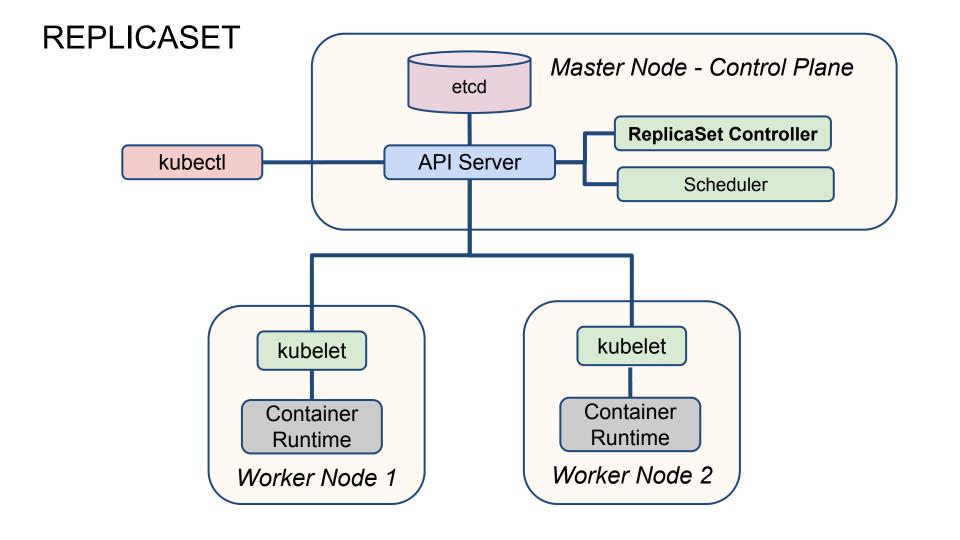
```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: votingapp
spec:
  replicas: 3
  selector:
    matchLabels:
      app: votingapp
  template:
    metadata:
      labels:
        app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.1
          name: votingapp
```

REPLICASET

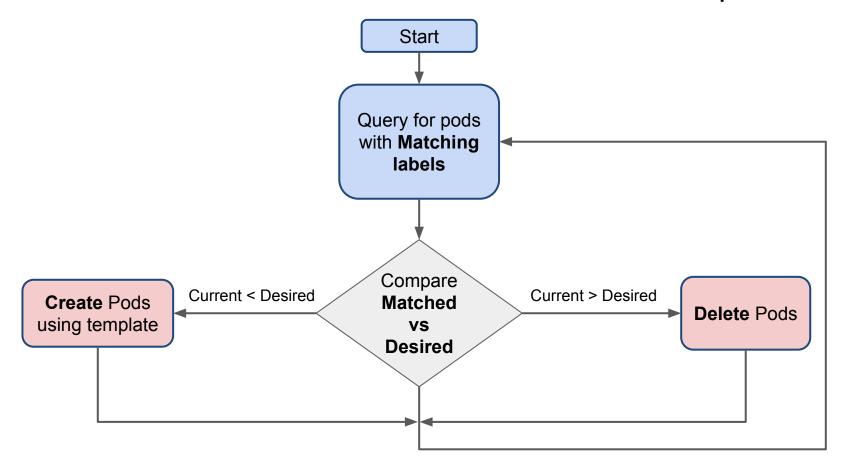
```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: votingapp
spec:
  replicas: 3
  selector:
    matchLabels:
      app: votingapp
  template:
    metadata:
                                     POD
      labels:
        app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.1
          name: votingapp
```

REPLICASET

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: votingapp
spec:
  replicas: 3
  selector:
    matchLabels:
     -app: votingapp
  template:
    metadata:
                                     POD
      labels:
      app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.1
          name: votingapp
```



REPLICASET CONTROLLER: Reconciliation Loop



```
apiVersion: v1
kind: Service
metadata:
  name: votingapp
spec:
  ports:
  - port: 8080
    targetPort: 5000
  selector:
    app: votingapp
  type: ClusterIP
```

SERVICE apiVersion: apps/v1 kind: ReplicaSet metadata: name: votingapp apiVersion: v1 spec: kind: Service replicas: 3 metadata: selector: name: votingapp matchLabels: spec: app: votingapp ports: template: - port: 8080 metadata: targetPort: 5000 POD labels: selector: → app: votingapp app: votingapp type: ClusterIP spec: containers: - image: paulopez/votingapp:0.1 name: votingapp

Cluster IP

10.96.138.12:**8080**

VotingApp Service

app=votingapp

eth0:10.244.1.2

VotingApp Pod 1 localhost:5000 app=votingapp

eth0:10.244.2.3

VotingApp Pod 2 localhost:**5000**

app=votingapp

Cluster IP

10.96.138.12:**8080**

VotingApp Service

app=votingapp

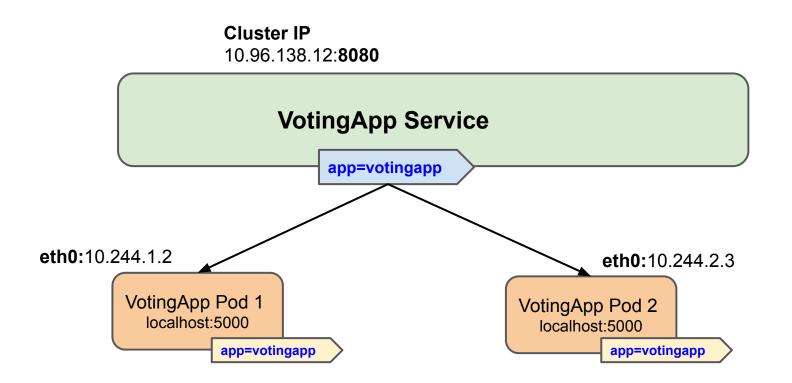
eth0:10.244.1.2

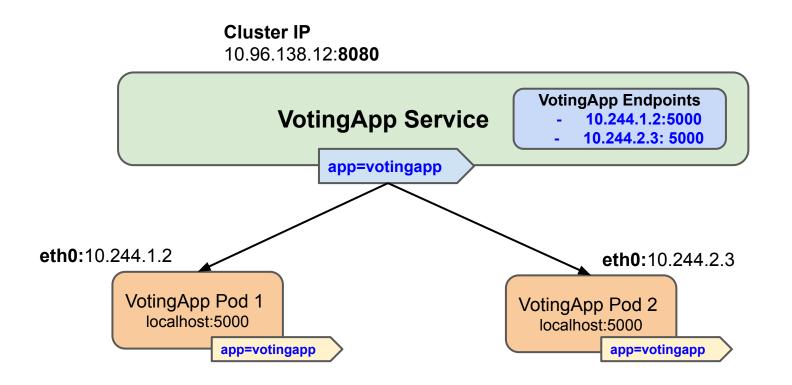
VotingApp Pod 1
localhost:5000
app=votingapp

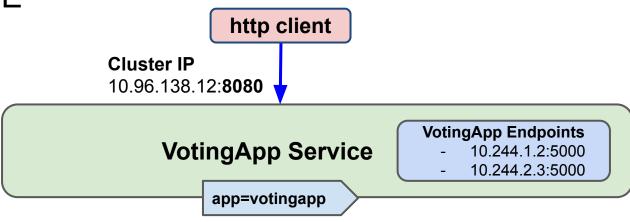
eth0:10.244.2.3

VotingApp Pod 2 localhost:5000

app=votingapp



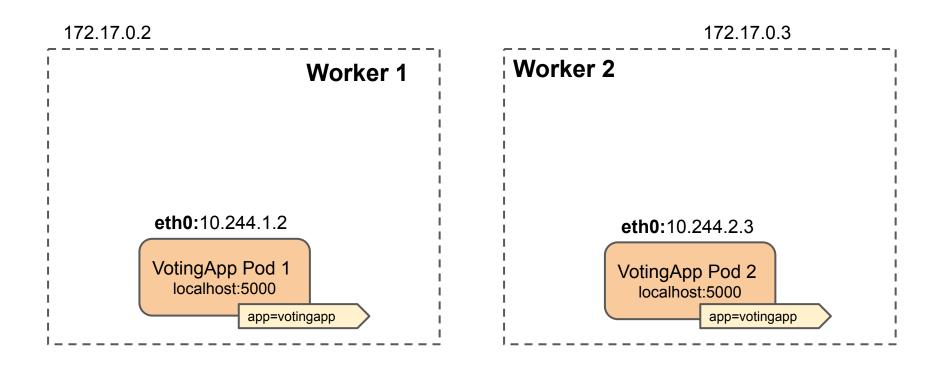


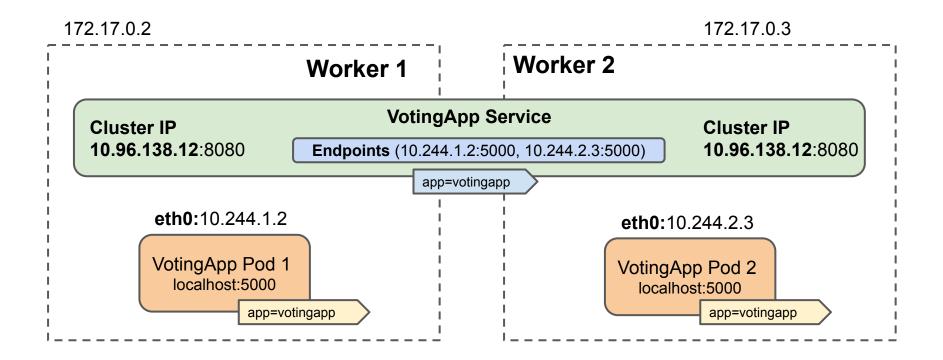


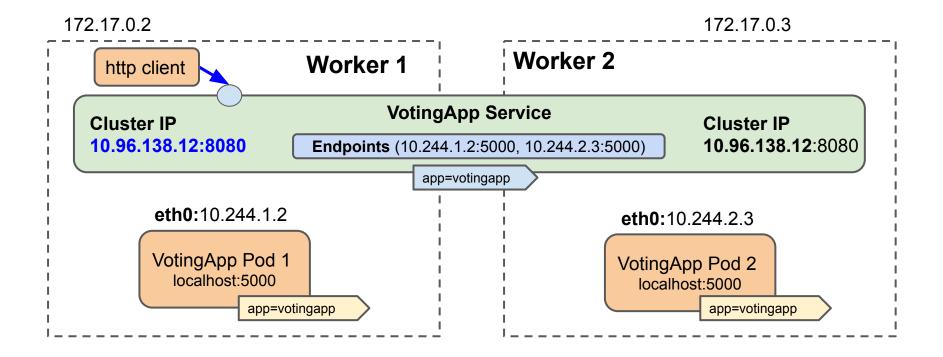


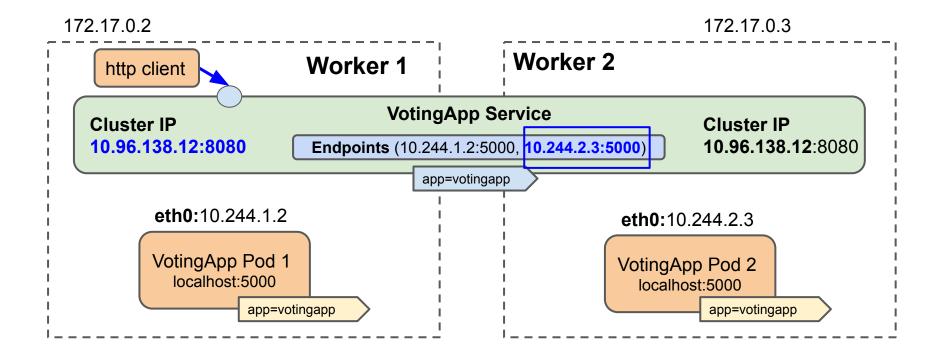
SERVICE http client **Cluster IP** 10.96.138.12:**8080 VotingApp Endpoints VotingApp Service** 10.244.1.2:5000 10.244.2.3:5000 app=votingapp eth0:10.244.1.2 eth0:10.244.2.3 VotingApp Pod 1 VotingApp Pod 2 localhost:5000 localhost:5000 app=votingapp app=votingapp

SERVICE http client **Cluster IP** 10.96.138.12:**8080 VotingApp Endpoints VotingApp Service** 10.244.1.2:5000 10.244.2.3:5000 app=votingapp eth0:10.244.1.2 eth0:10.244.2.3 VotingApp Pod 1 VotingApp Pod 2 localhost:5000 localhost:5000 app=votingapp app=votingapp

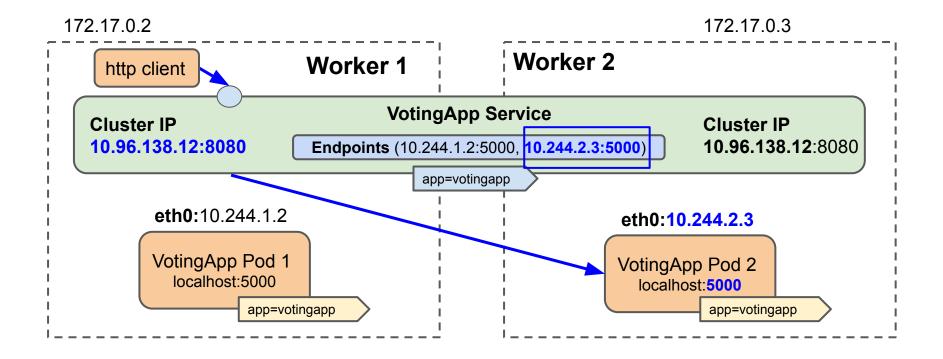




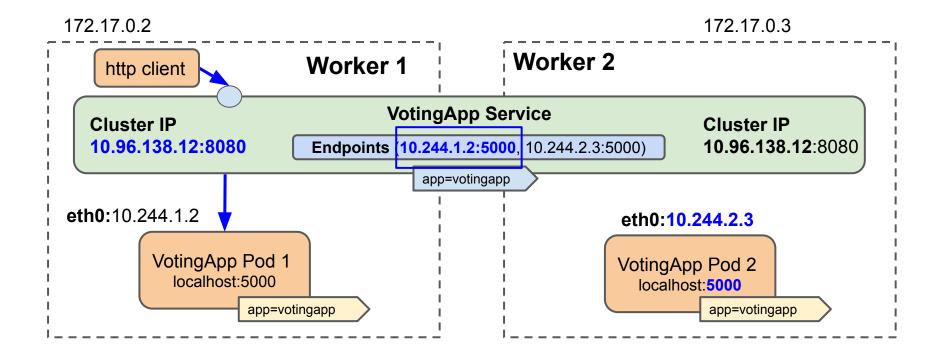




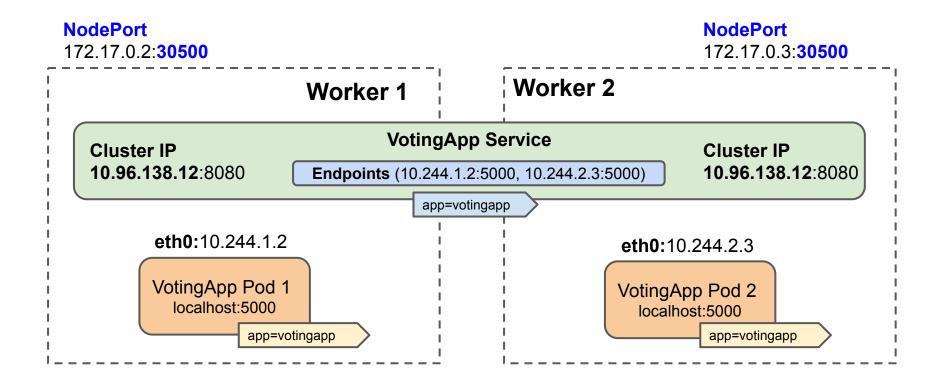
SERVICE: CLUSTER IP



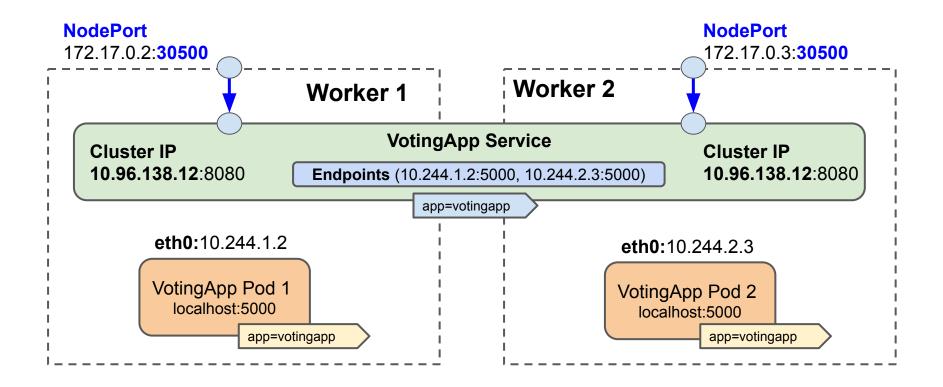
SERVICE: CLUSTER IP

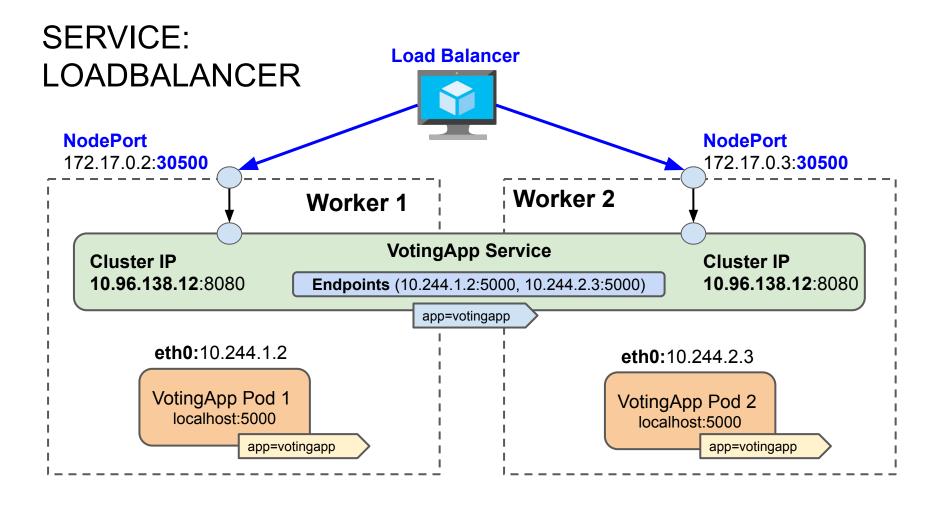


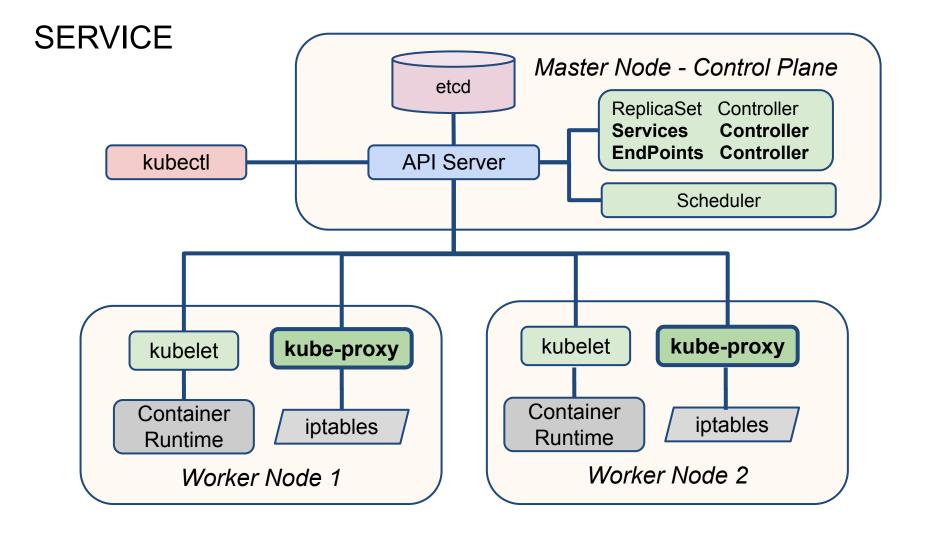
SERVICE: NODEPORT

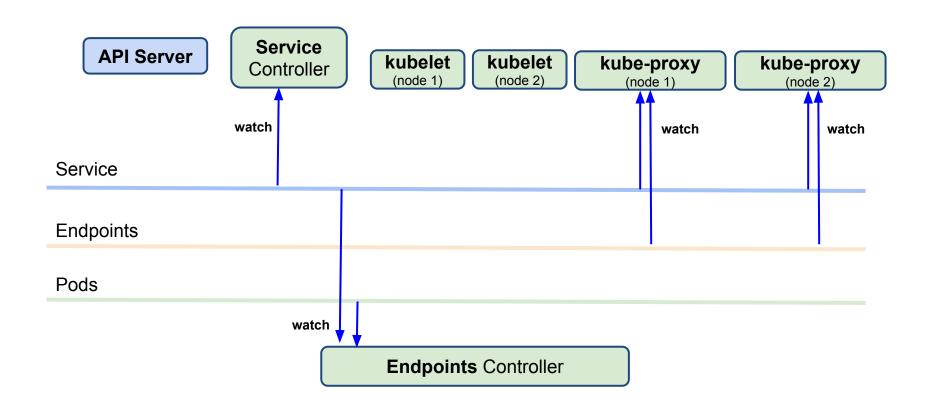


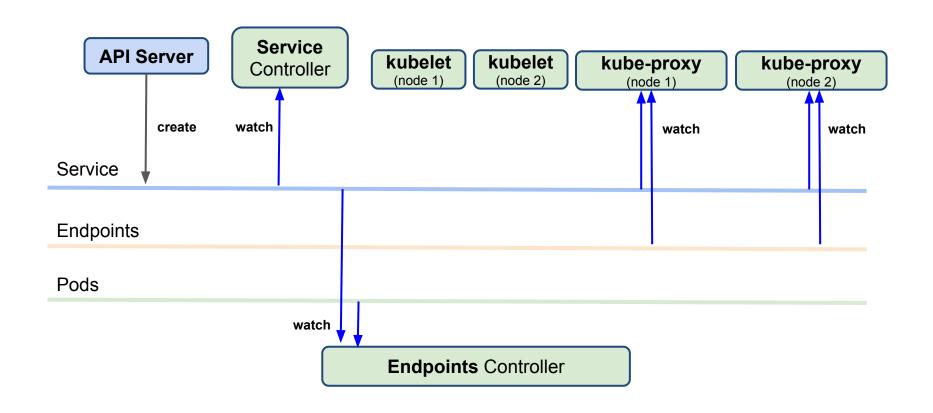
SERVICE: NODEPORT

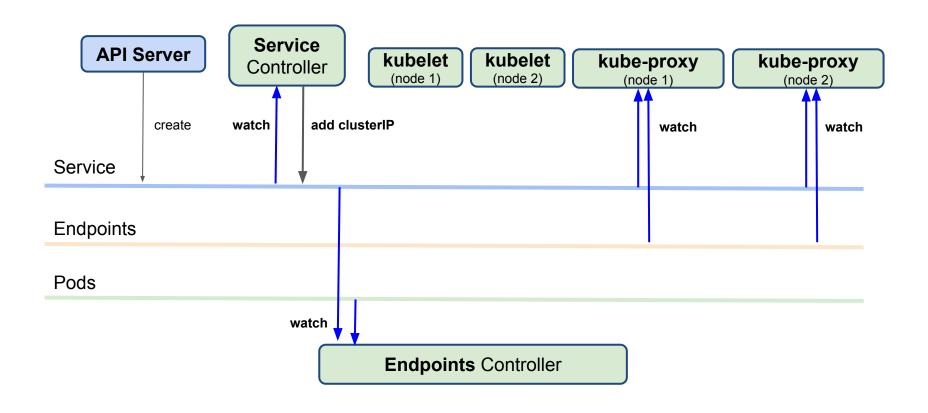


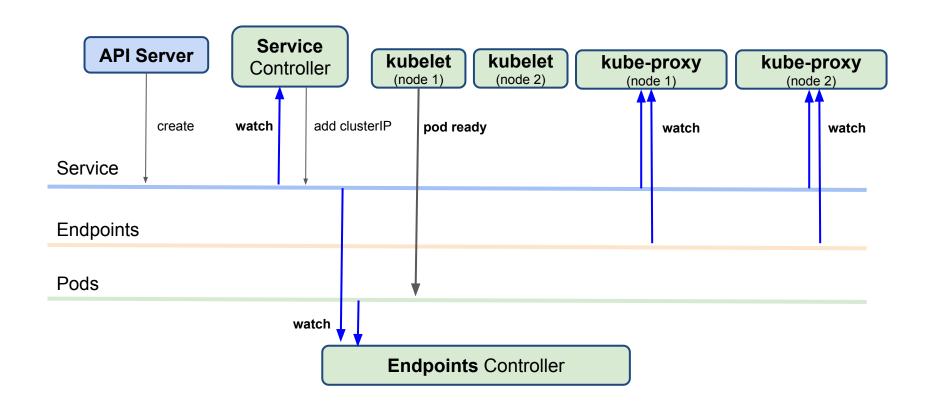


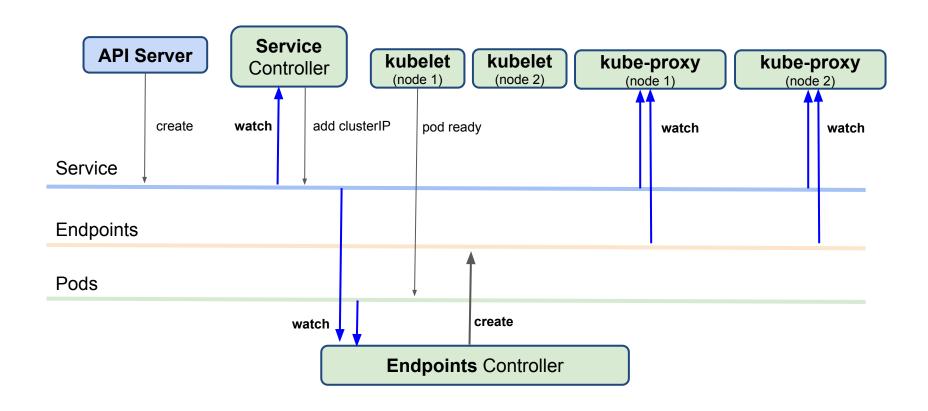


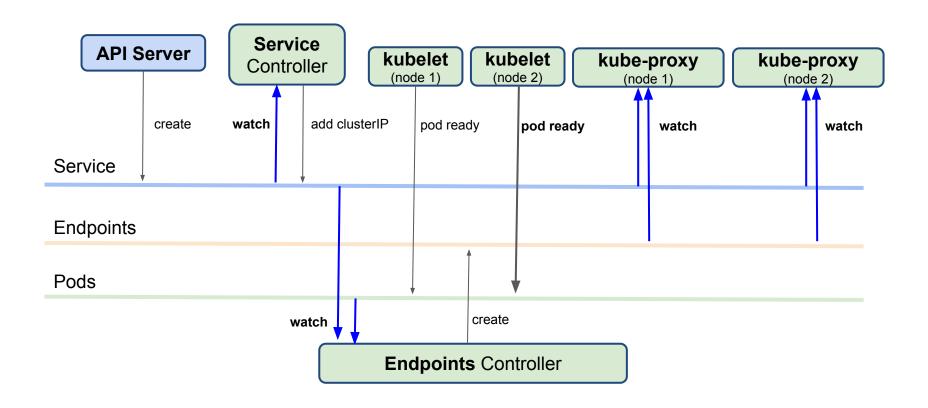


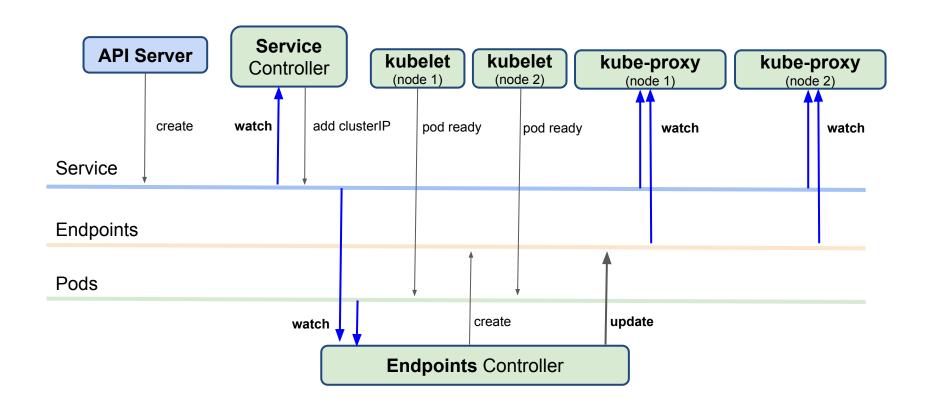


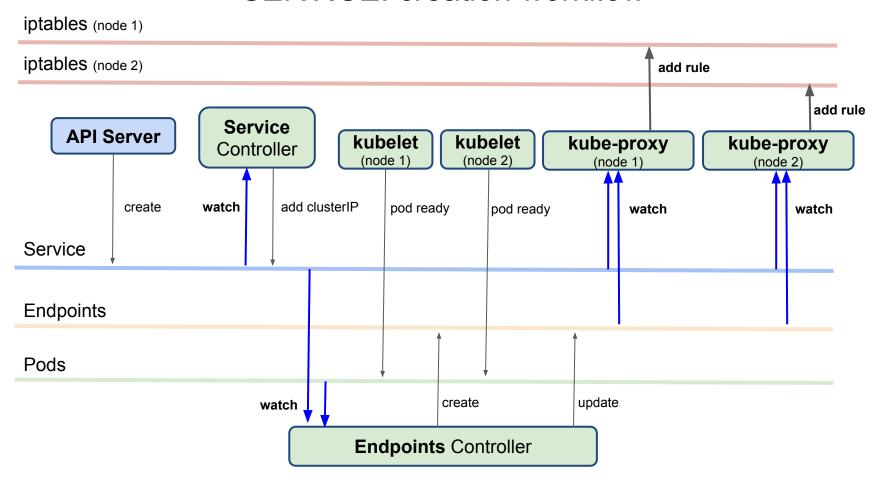












```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: votingapp
spec:
  strategy:
    type: RollingUpdate
  replicas: 3
  selector:
    matchLabels:
      app: votingapp
  template:
    metadata:
      labels:
        app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.1
          name: votingapp
```

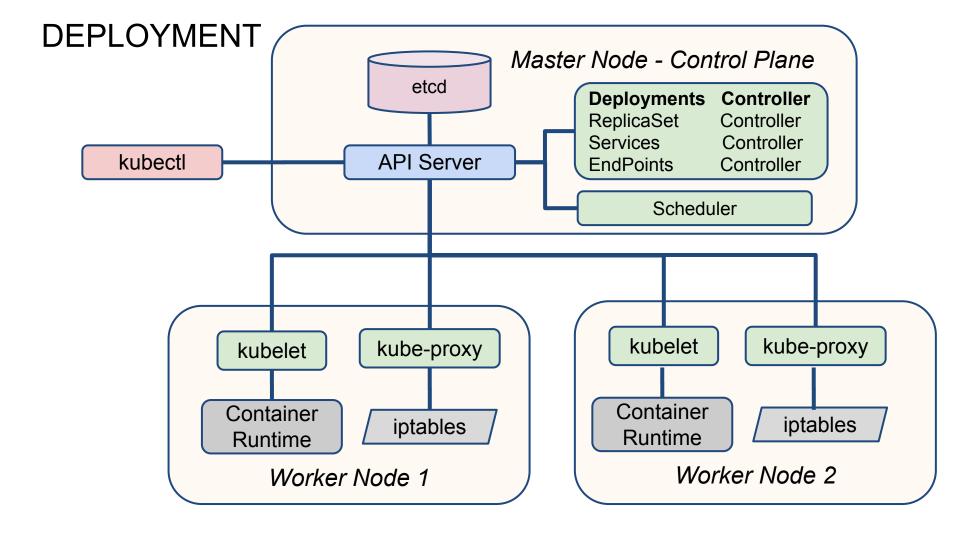
```
kind: Deployment
metadata:
  name: votingapp
spec:
  strategy:
    type: RollingUpdate
  replicas: 3
  selector:
                             ReplicaSet
    matchLabels:
      app: votingapp
  template:
    metadata:
      labels:
        app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.1
          name: votingapp
```

apiVersion: apps/v1

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: votingapp
spec:
  strategy:
    type: RollingUpdate
  replicas: 3
  selector:
                             ReplicaSet
    matchLabels:
     _app: votingapp
  template:
    metadata:
                                POD
      labels:
     → app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.1
          name: votingapp
```

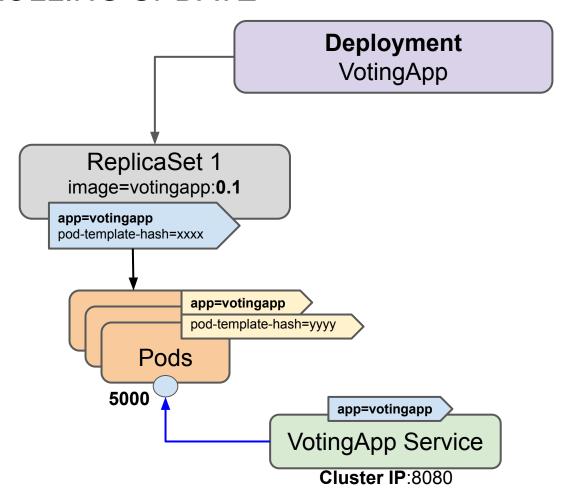
```
kind: Deployment
                                   metadata:
                                     name: votingapp
                                   spec:
apiVersion: v1
                                     strategy:
kind: Service
                                       type: RollingUpdate
metadata:
                                     replicas: 3
  name: votingapp
                                     selector:
                                                                ReplicaSet
                                       matchLabels:
spec:
  ports:
                                         app: votingapp
  - port: 8080
                                     template:
    targetPort: 5000
                                       metadata:
                                                                    POD
  selector:
                                         labels:
    app: votingapp
                                         app: votingapp
  type: ClusterIP
                                       spec:
                                         containers:
                                           - image: paulopez/votingapp:0.1
                                             name: votingapp
```

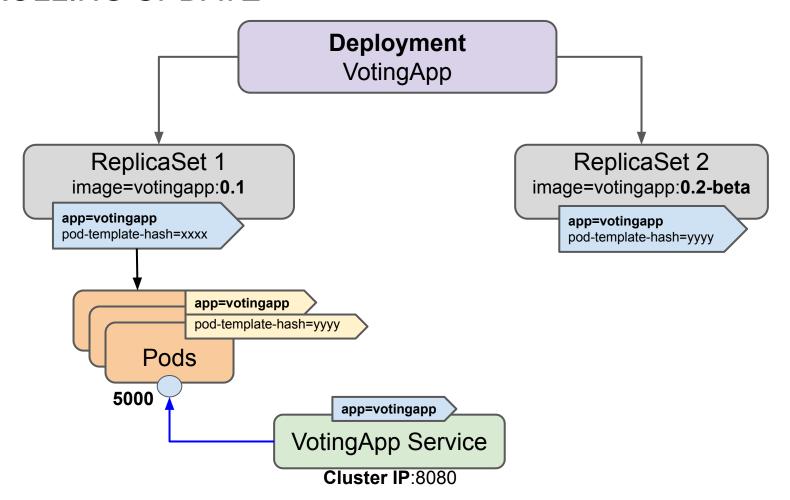
apiVersion: apps/v1

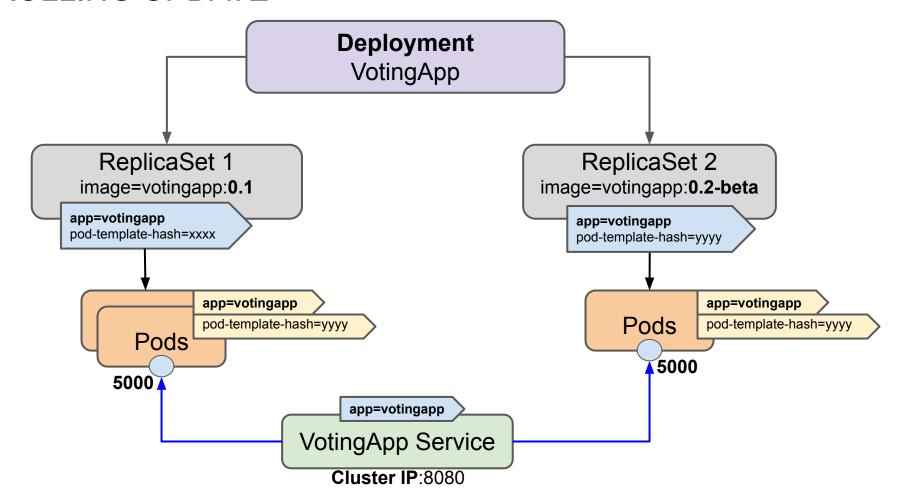


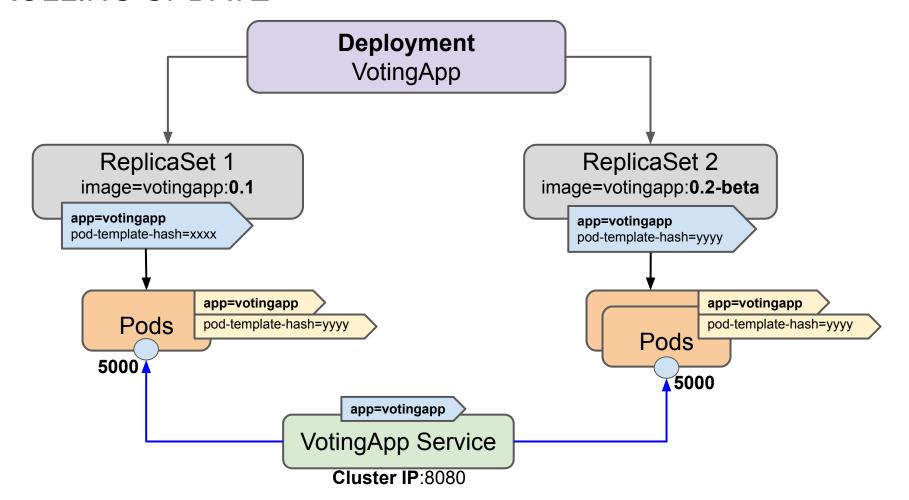
kubectl set image deployment/votingapp \
votingapp=votingapp:0.2-beta

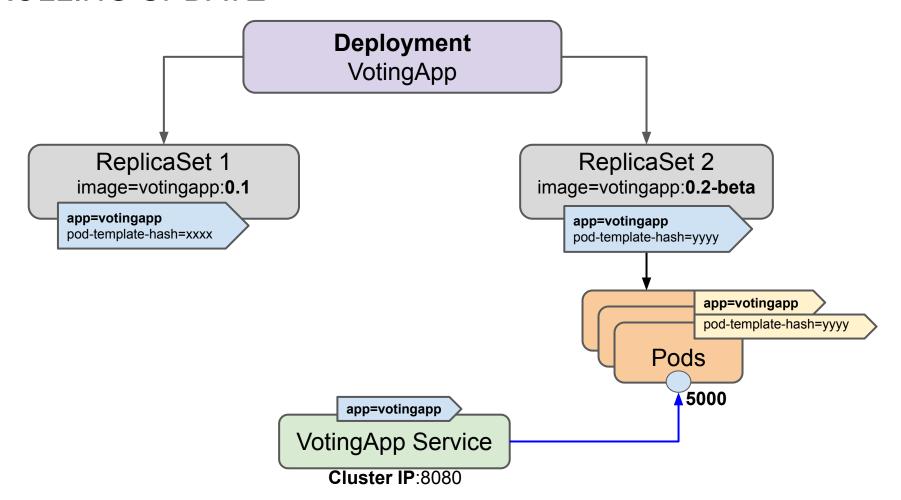
```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: votingapp
spec:
  strategy:
    type: RollingUpdate
  replicas: 3
  selector:
    matchLabels:
      app: votingapp
  template:
    metadata:
      labels:
        app: votingapp
    spec:
      containers:
        - image: paulopez/votingapp:0.2-beta
          name: votingapp
```











THANKS!





@memenetes