# 5. Object - Service

## ClusterIP

- 서비스 디버깅
- 내부 트래픽/대쉬보드
- 인증된 사용자 연결

Cluster내 접근가능

External ✕

```
9000
Service
171.96.10.17
```

```
8080          8080
Pod           Pod
10.16.1.2     10.16.1.3
```
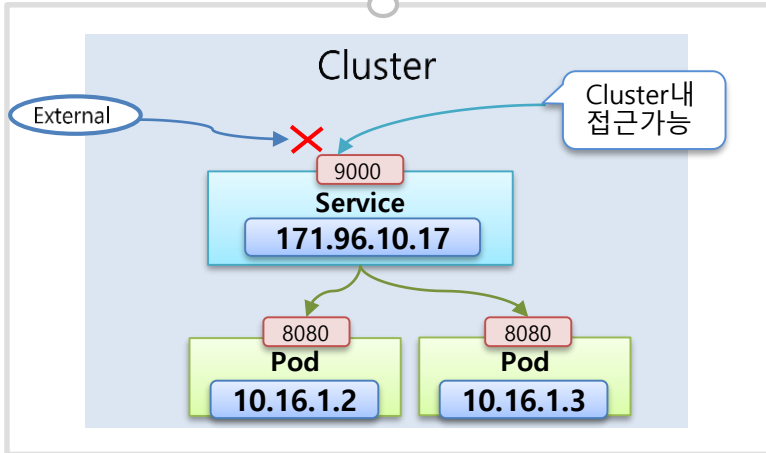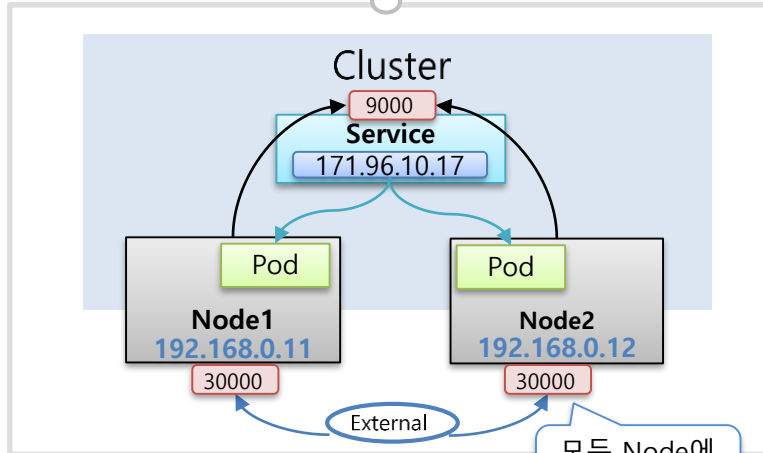
```
apiVersion: v1
kind: Service
metadata:
  name: svc-1
spec:
 selector:
   app: pod
 ports:
  - port: 9000
    targetPort: 8080
type: ClusterIP
```

```
apiVersion: v1
kind: Pod
metadata:
  name: pod-1
  labels:
    app: pod
spec:
  containers:
  - name: container
    image: tmkube/app
    ports:
    - containerPort: 8080
```

## NodePort

- 데모나 임시 연결용
- 프로덕션 환경(X)

```
Cluster
     9000
  Service
  171.96.10.17
```

```
Pod              Pod
Node1            Node2
192.168.0.11     192.168.0.12
30000            30000
```
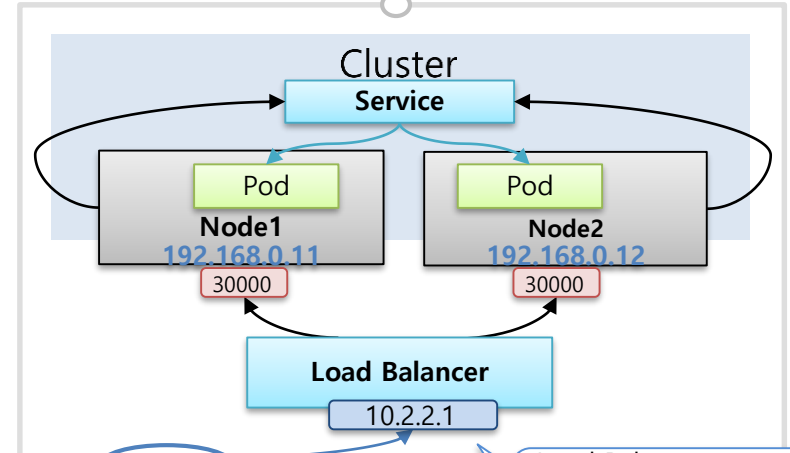
External

모든 Node에 Port할당

```
apiVersion: v1
kind: Service
metadata:
 name: svc-2
spec:
 selector:
   app: pod
 ports:
  - port: 9000
    targetPort: 8080
    nodePort: 30000
type: NodePort
```

30000~32767

externalTrafficPolicy: Local

## Load Balancer

- 외부 시스템 노출용

```
Cluster
     Service
```

```
Pod              Pod
Node1            Node2
192.168.0.11     192.168.0.12
30000            30000
```

```
Load Balancer
10.2.2.1
```

External

Load Balancer
External IP 지원 Plugin
- GCP, AWS, Azure, OpenStack

```
apiVersion: v1
kind: Service
metadata:
  name: svc-3
spec:
  selector:
    app: pod
  ports:
    - port: 9000
      targetPort: 8080
  type: LoadBalancer
```