1. Pod - Lifecycle

Pending

- ReadinessProbe
- Policy

Running

- LivenessProbe
- Qos

Succeeded

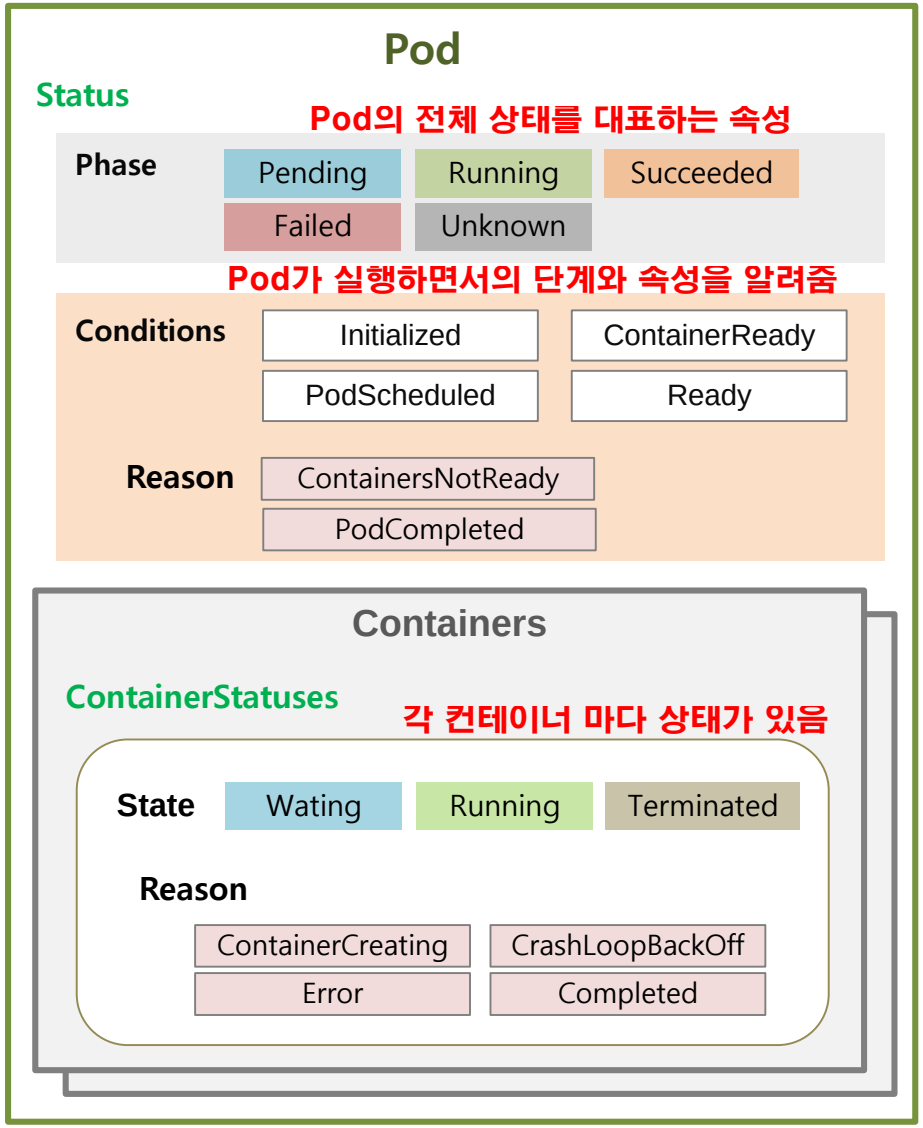
- Policy

Failed

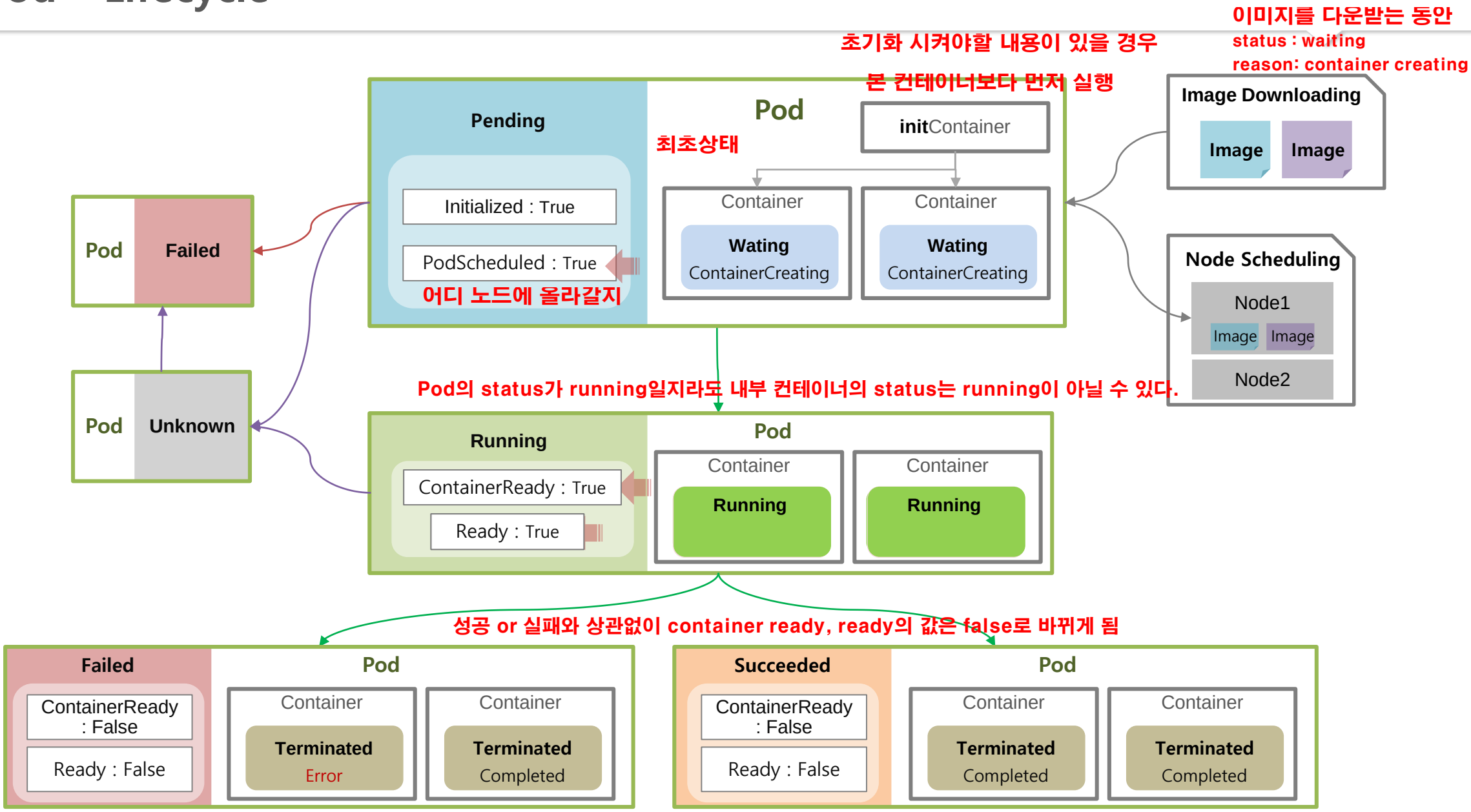
1. Pod - Lifecycle

```
status:
  phase: Pending
  conditions:
    - type: Initialized
      status: 'True'
      lastProbeTime: null
      lastTransitionTime: '2019-09-26T22:07:56Z'

    - type: PodScheduled
      status: 'True'
      lastProbeTime: null
      lastTransitionTime: '2019-09-26T22:07:56Z'

    - type: ContainersReady
      status: 'False'
      lastProbeTime: null
      lastTransitionTime: '2019-09-26T22:08:11Z'
      reason: ContainersNotReady
    - type: Ready
      status: 'False'
      lastProbeTime: null
      lastTransitionTime: '2019-09-26T22:08:11Z'
      reason: ContainersNotReady

  containerStatuses:
    - name: container
      state:
        waiting:
          reason: ContainerCreating
      lastState: {}
      ready: false
      restartCount: 0
      image: tmkube/init
      imageID: ''
      started: false
```

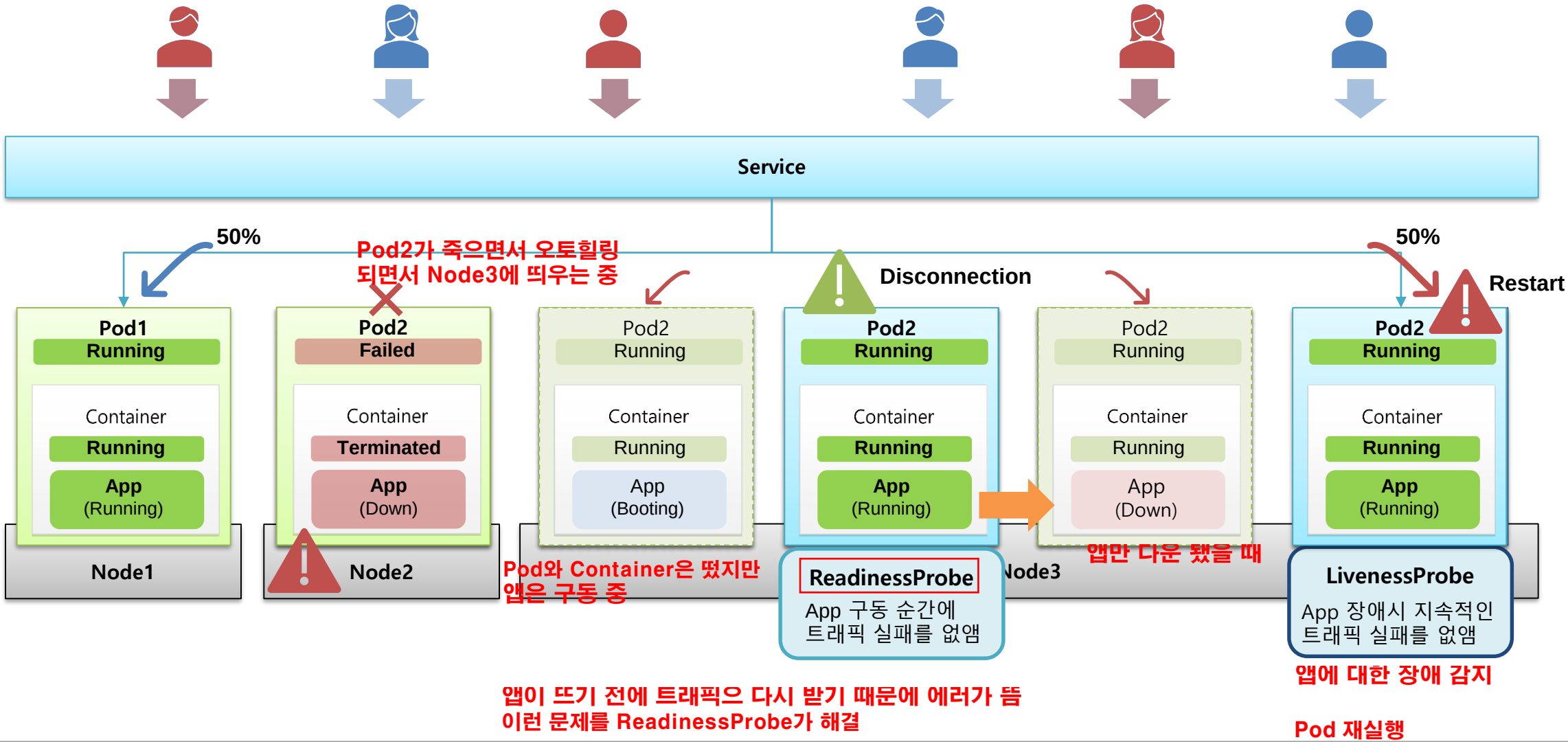
status가 false일 경우 reason이 추가됨



1. Pod - Lifecycle

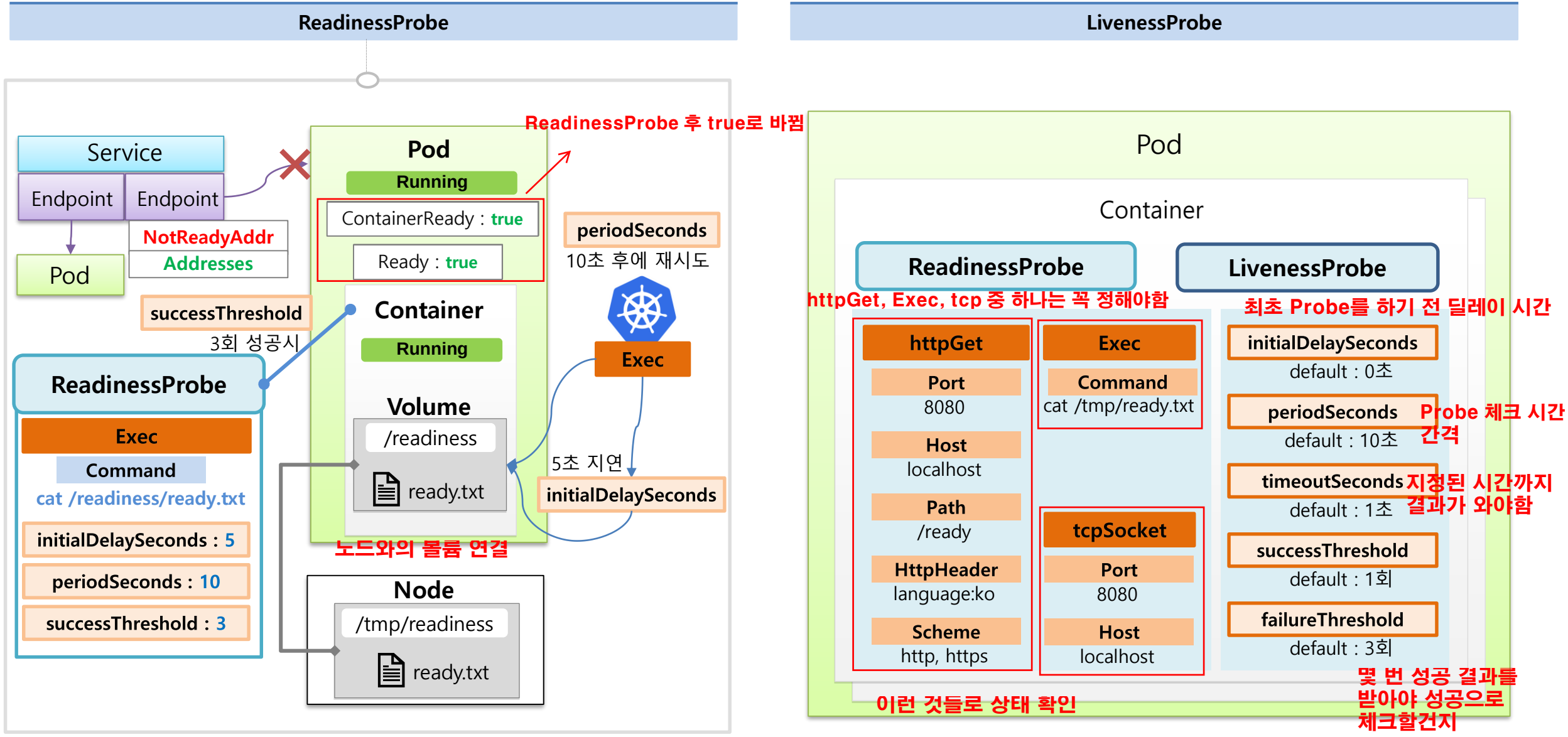


- Pod (ReadinessProbe, LivenessProbe)



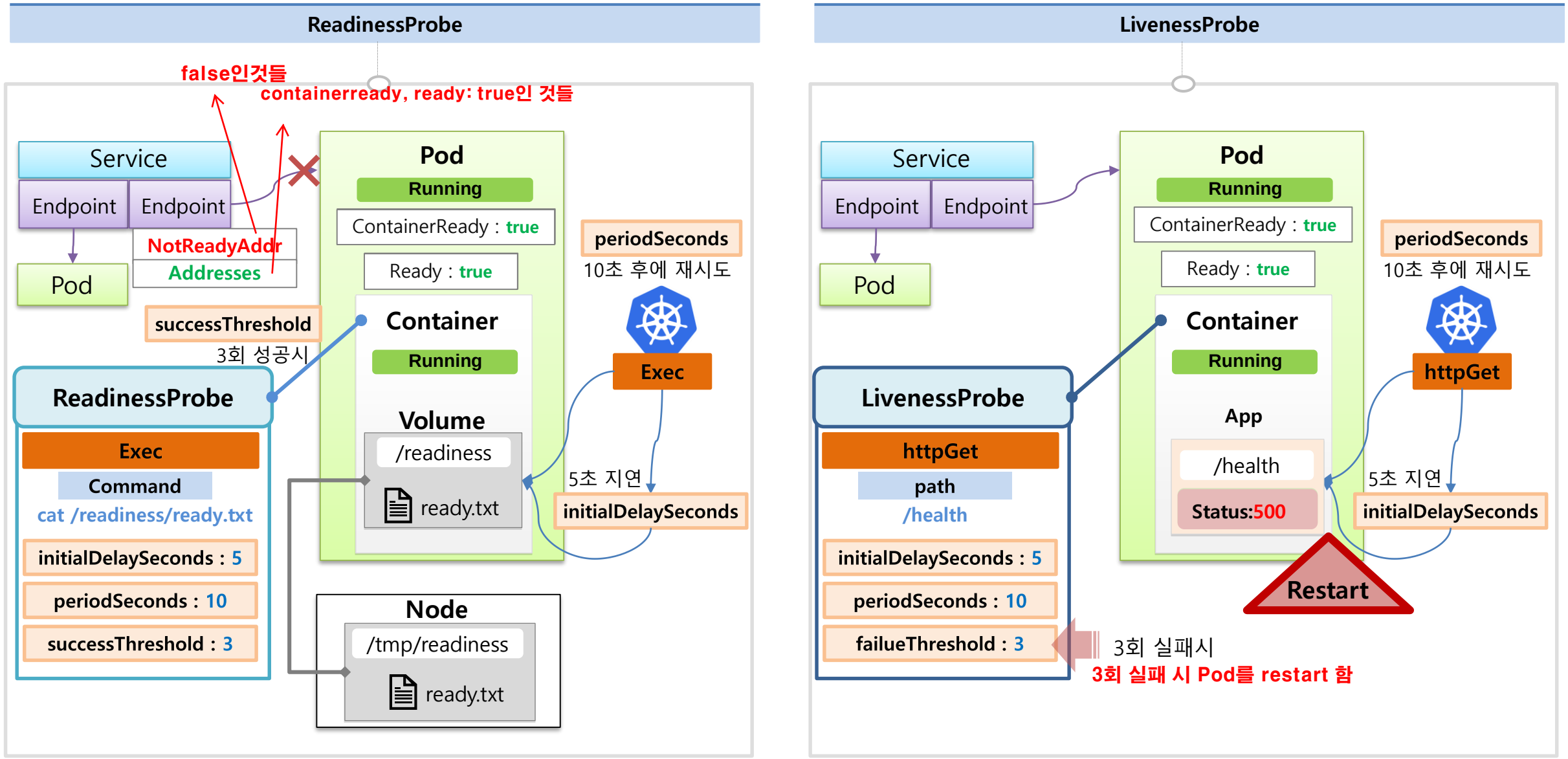
- Pod

ReadinessProbe를 알아보기 위한 그림



- Pod

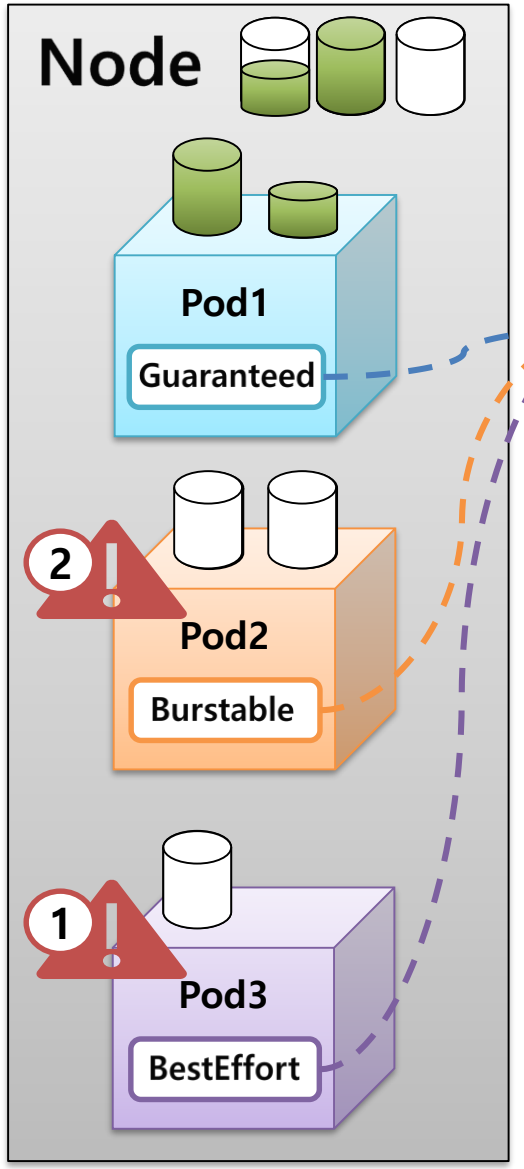
LivenessProbe 를 알아보기 위한 그림



- QoS classes (Guaranteed, Burstable, BestEffort)

컨테이너마다 req, lim을 어떻게 설정하느냐에 따라 결정됨

쿼리티 오브 서비스



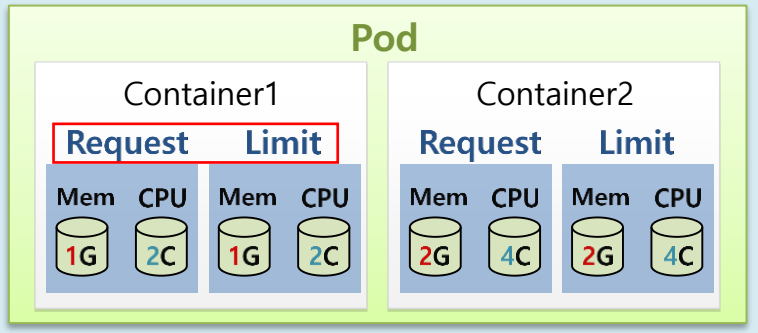
앱에 중요도에 따라 관리

QoS Classes

```
kind: Pod
spec:
 containers:
  - resources:
     requests:
       memory: 1G
       cpu: 2
     limits:
       memory: 2G
       cpu: 4
```

Guaranteed

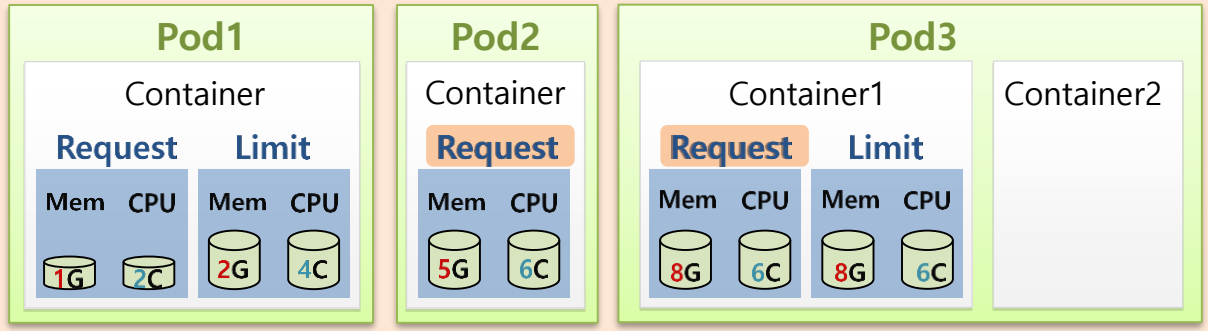
이 규칙이 다 맞으면 쿠버가 Guaranteed로 봄



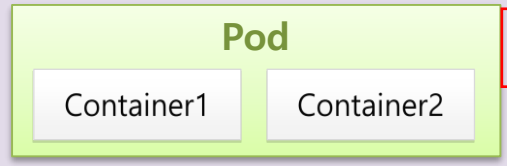
- 모든 **Container**에 **Request**와 **Limit**가 설정
- **Request**와 **Limit**에는 **Memory**와 **CPU**가 모두 설정
- 각 **Container** 내에 **Memory**와 **CPU**의 **Request**와 **Limit**의 값이 같음

Burstable

컨테이너마다 req, lim은 설정되어있지만,
req < lim인 경우, 등등

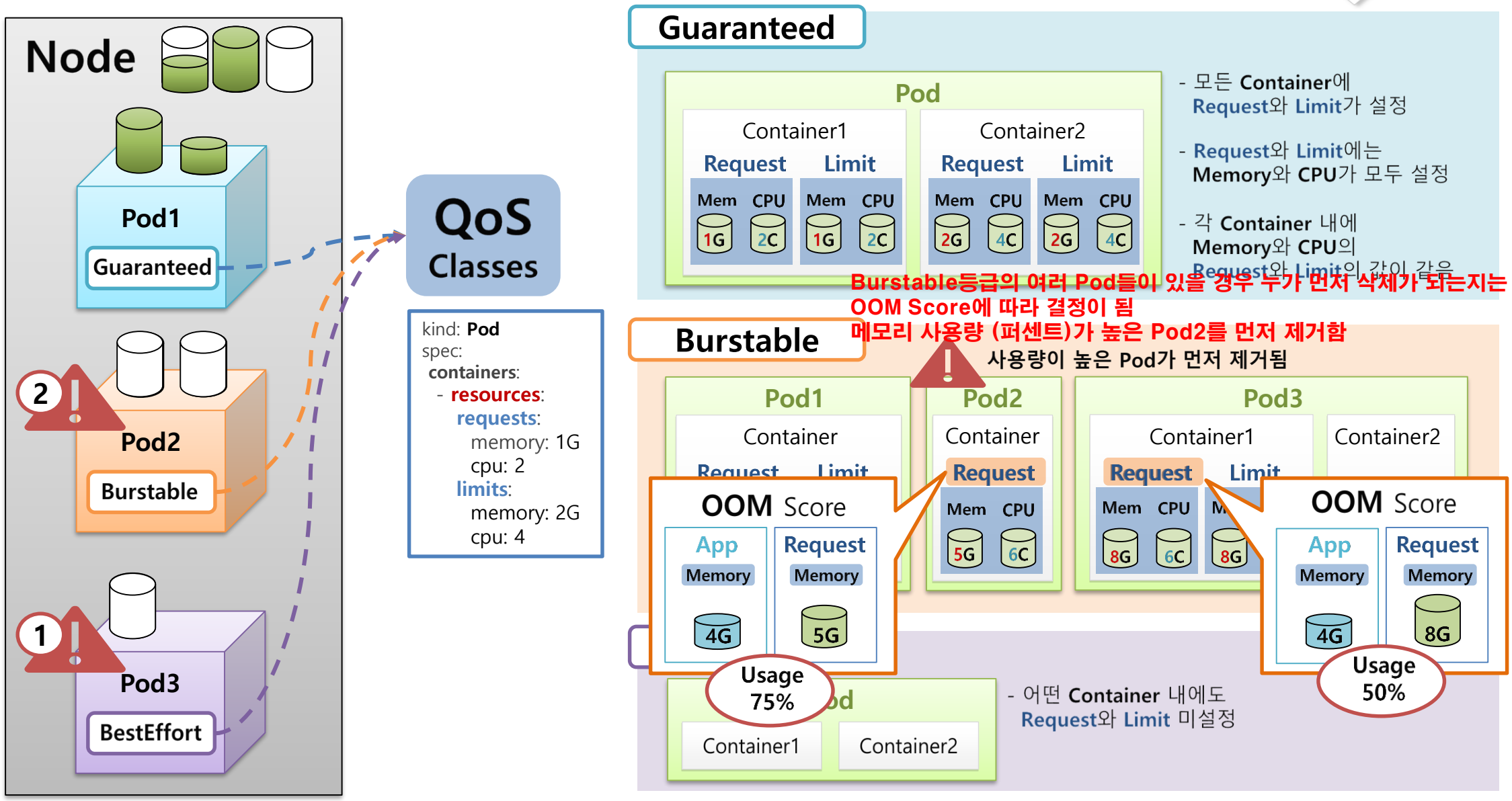


BestEffort

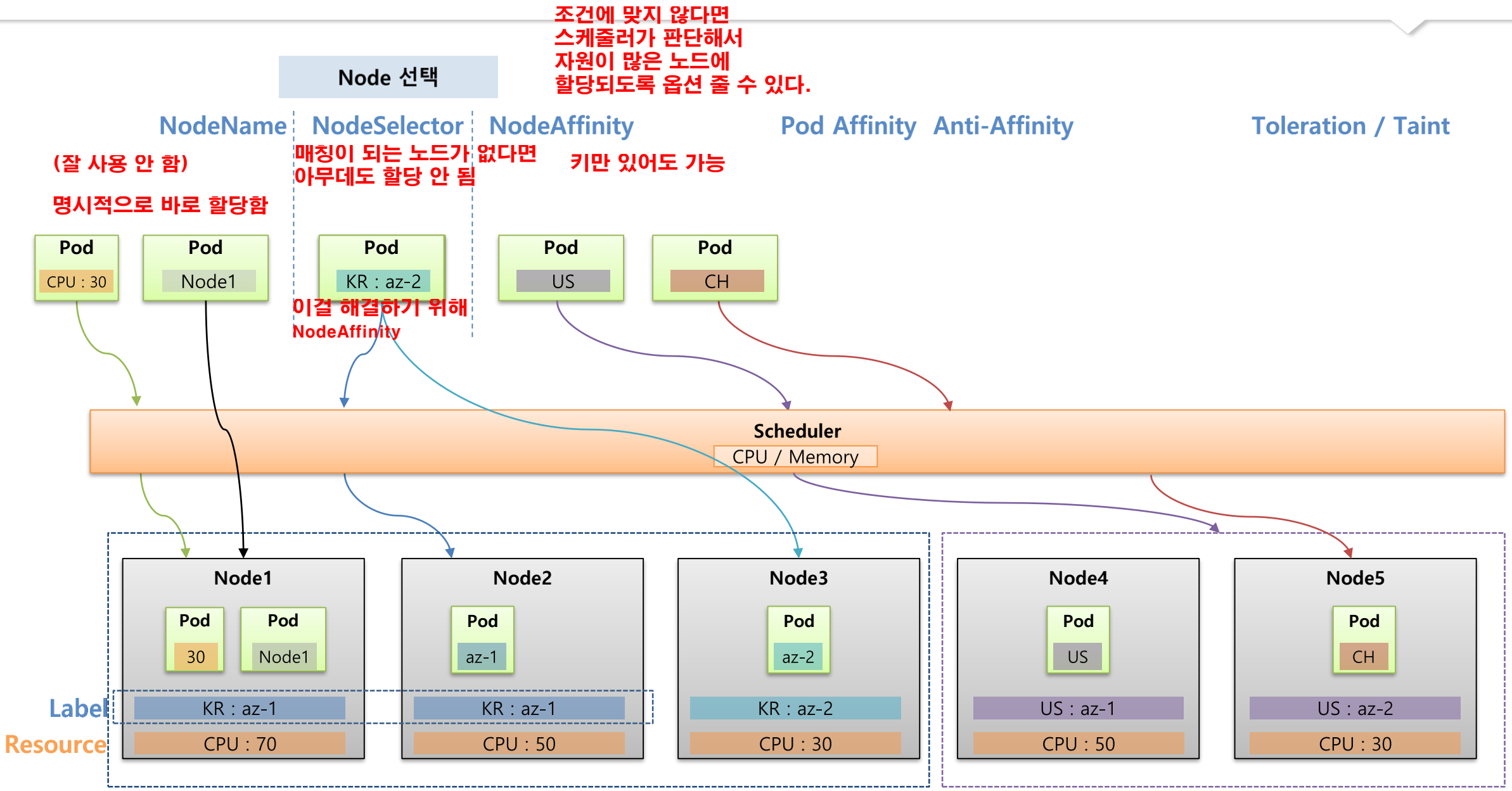


- 어떤 **Container** 내에도 **Request**와 **Limit** 미설정

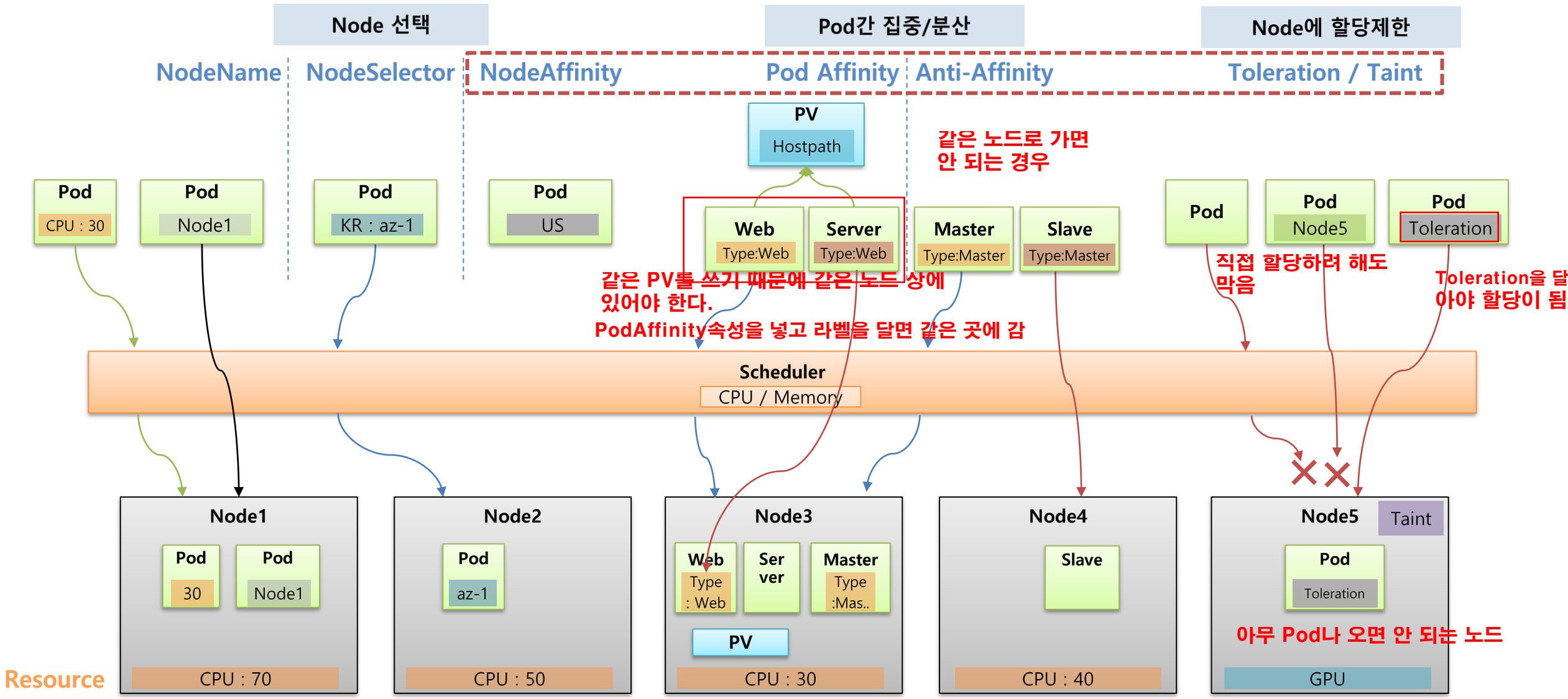
- QoS classes (Guaranteed, Burstable, BestEffort)



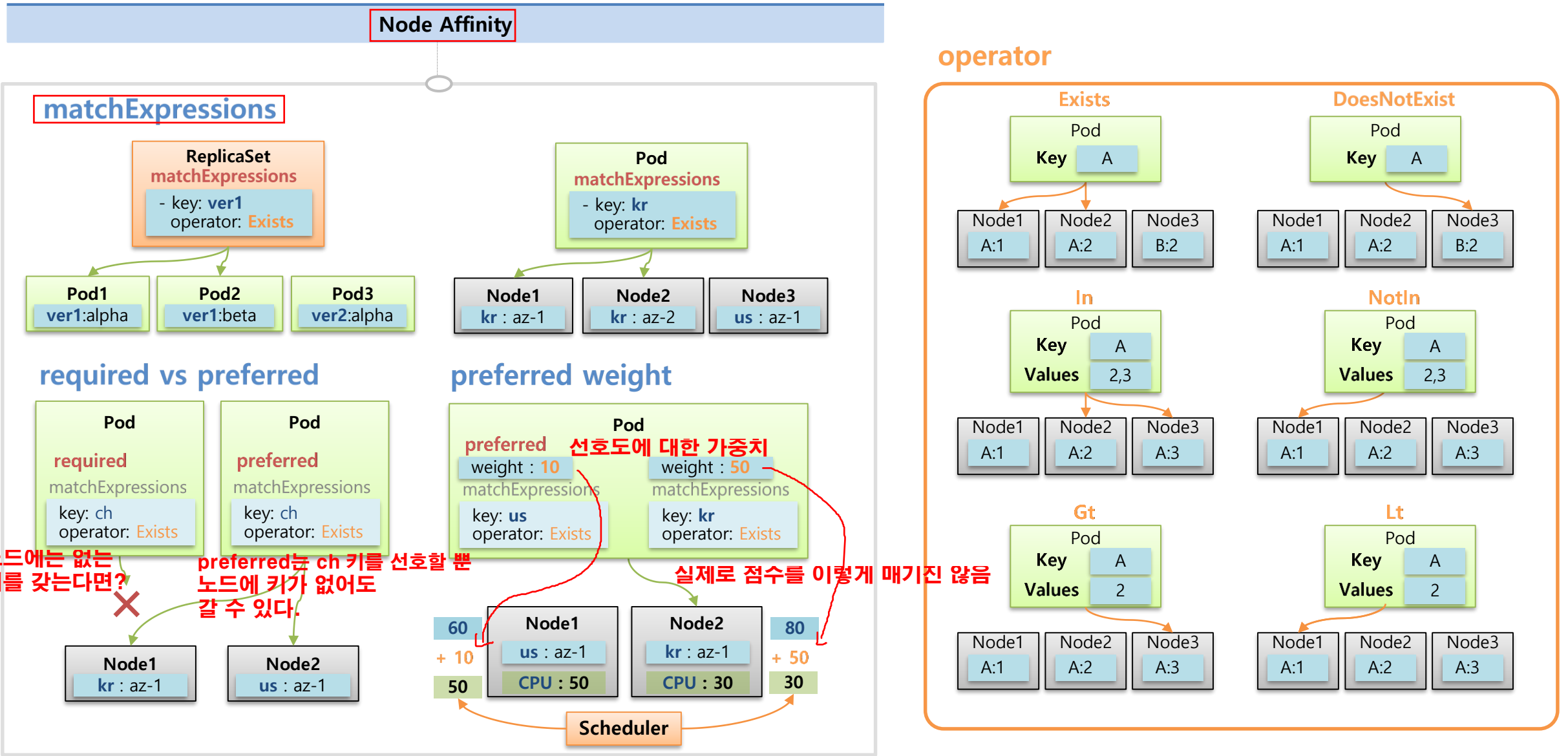
- Pod (Node Scheduling)



- Pod (Node Scheduling)



- Pod (Node Scheduling)

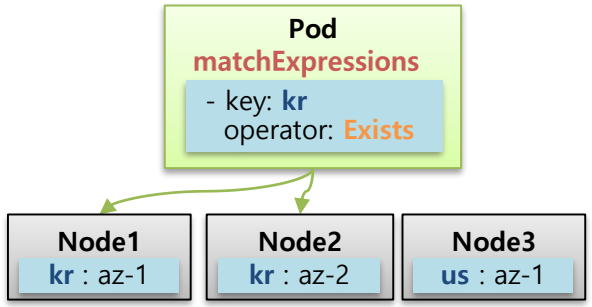


- Pod (Node Scheduling)

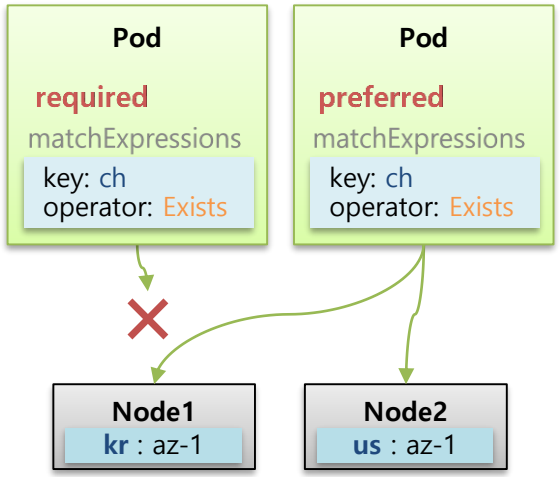
Toleration이 있다고 Node1에 가는게 아니라 Node1에 갔을 때 Toleration이 있어야 할당이 되는거임. 따라서 nodeSelector를 달아야 Node1에 ㅇ확정으로 갈 수 있음

Node Affinity

matchExpressions

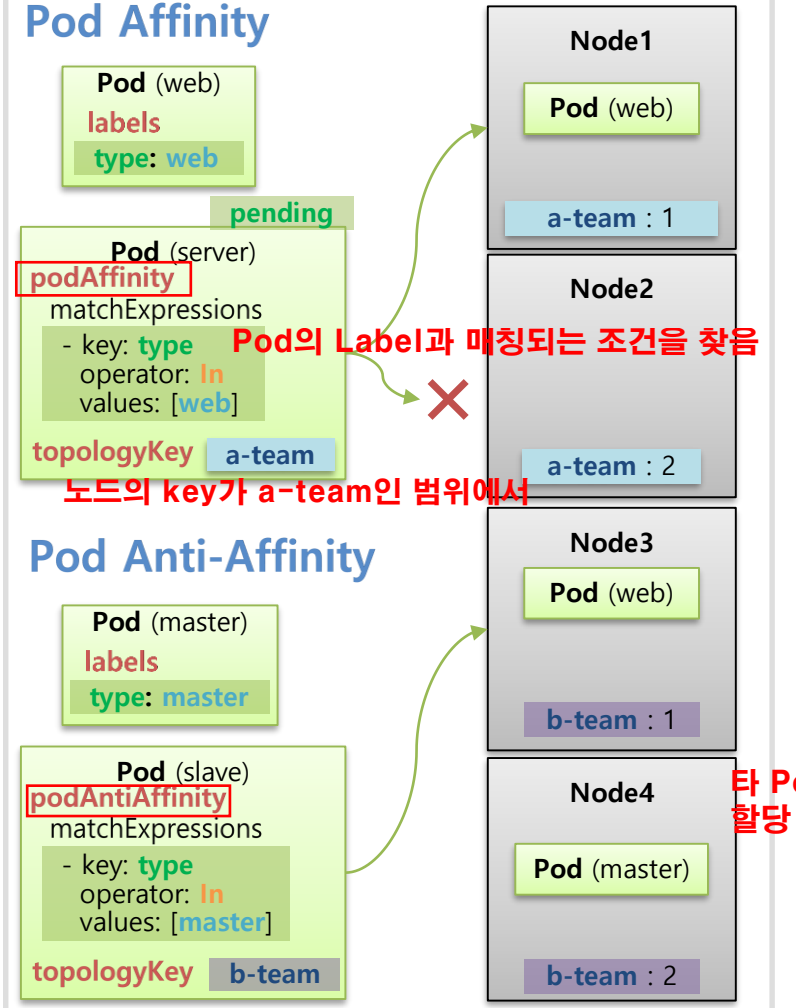


required vs preferred



Pod Affinity

Pod Affinity



Pod Anti-Affinity

Taint, Toleration