Pod (2)

1) Init Container

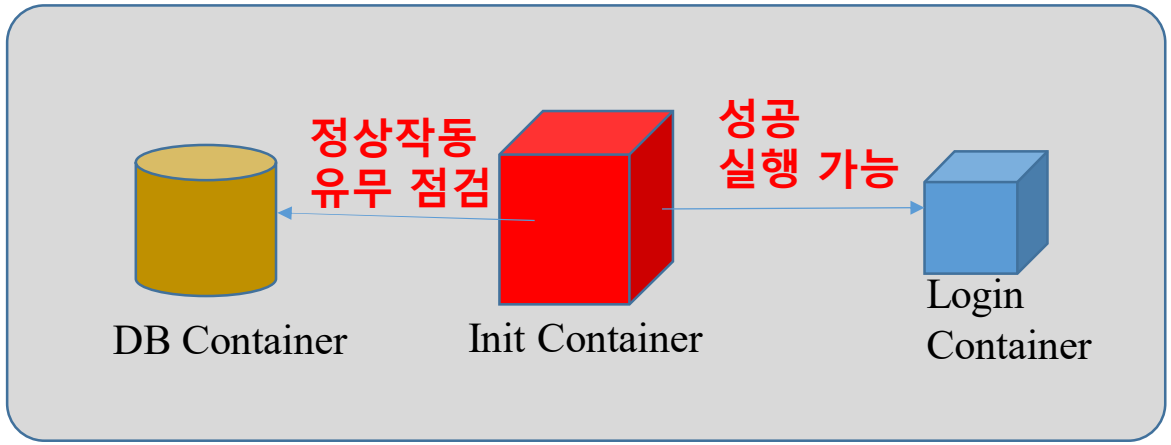
2) Static Pod

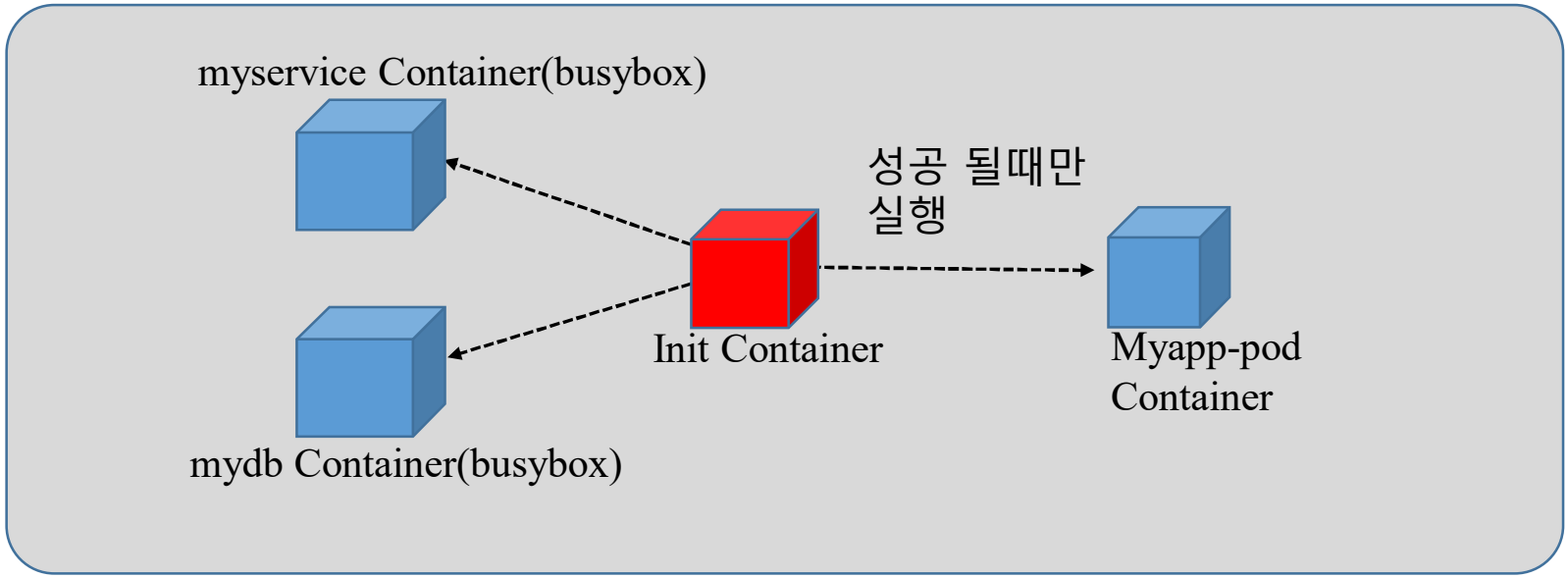
1) Init Container

초기화 컨테이너(init container)

- Main container(App container)가 실행되기 전 동작시킨 컨테이너
- Main Container가 실행되기 전에 사전 작업이 필요한 경우 사용
- 초기화 컨터이너가 모두 실행된 후에 App container를 실행
  - Init container는 여러 개 구성할 수 있음
  - Init container 실행이 실패하면 성공할 때까지 재시작함
  - Init container가 모두 실행 된 후 App Container 실행이 시작

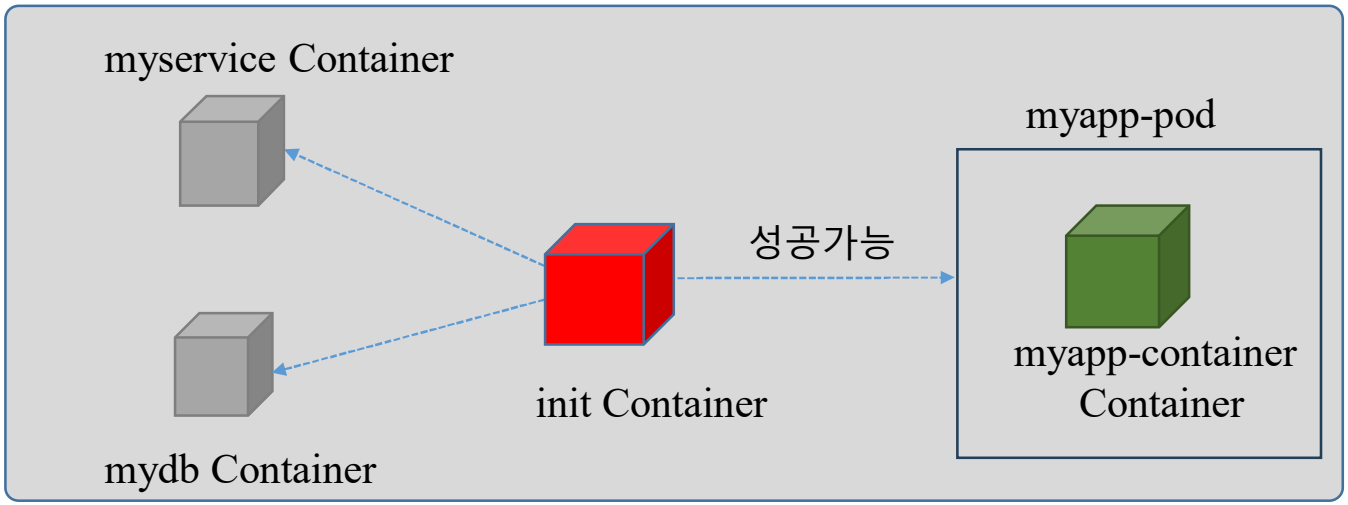
초기화 컨테이너(init container)





Alt+Enter

```
[node1 ~]$ kubectl get pods -o wide
NAME        READY   STATUS     RESTARTS   AGE   IP          NODE    NOMINATED NODE   READINESS GATES
myapp-pod   0/1     Init:0/2   0          48s   10.5.1.5    node2   <none>           <none>
[node1 ~]$
```




```
apiVersion: v1
kind: Service
metadata:
  name: myservice
spec:
  ports:
  - protocol: TCP
    port: 80
    targetPort: 9376
```

myservice.yaml

```
apiVersion: v1
kind: Service
metadata:
  name: mydb
spec:
  ports:
  - protocol: TCP
    port: 80
    targetPort: 9377
```

mydb.yaml

myapp-pod.yaml

```
apiVersion: v1
kind: Pod
metadata:
  name: myapp-pod
spec:
  containers:
  - name: myapp-container
    중간 생략~~~
  initContainers:
  - name: myservice
    중간 생략~~~
  - name: mydb
    중간 생략~~~
```

init Container

- kubectl delete pod --all
- watch kubectl get pods –o wide
- kubectl create –f init-container-exam.yaml
- kubectl create –f mydb.yaml
- kubectl create –f myservice.yaml
- kubectl get pods - o wide
- kubectl describe pods *pod 명*
- kubectl delete pod --all

kubectl create –f init-container-exam.yaml

```
Every 2.0s: kubectl get pods -o wide

NAME        READY   STATUS     RESTARTS   AGE   IP              NODE       NOMINATED NODE   READINESS GATES
myapp-pod   0/1     Init:0/2   0          93s   192.168.19.71   worker03   <none>           <none>
```

```
1 master × +
root@master:/k8s# kubectl create -f init-container-exam.yaml
pod/myapp-pod created
```

kubectl create –f mydb.yaml
kubectl create –f myservice.yaml

```
Every 2.0s: kubectl get pods -o wide

NAME        READY   STATUS    RESTARTS   AGE     IP              NODE       NOMINATED NODE   READINESS GATES
myapp-pod   1/1     Running   0          4m42s   192.168.19.71   worker03   <none>           <none>
```

```
1 master × +
root@master:/k8s# kubectl create -f mydb.yaml
service/mydb created
root@master:/k8s# kubectl create -f myservice.yaml
service/myservice created
```

kubectl describe pods myapp-pod

```
Events:
  Type    Reason     Age    From               Message
  ----    ------     ----   ----               -------
  Normal  Scheduled  7m32s  default-scheduler  Successfully assigned default/myapp-pod to worker03
  Normal  Pulling    7m30s  kubelet            Pulling image "busybox:1.28"
  Normal  Pulled     7m23s  kubelet            Successfully pulled image "busybox:1.28" in 6.245s (6.245s
  Normal  Created    7m23s  kubelet            Created container: myservice
  Normal  Started    7m23s  kubelet            Started container myservice
  Normal  Pulled     2m58s  kubelet            Container image "busybox:1.28" already present on machine
  Normal  Created    2m58s  kubelet            Created container: mydb
  Normal  Started    2m58s  kubelet            Started container mydb
  Normal  Pulled     2m57s  kubelet            Container image "busybox:1.28" already present on machine
  Normal  Created    2m57s  kubelet            Created container: myapp-container
  Normal  Started    2m57s  kubelet            Started container myapp-container
```

2) Static Pod

Static Pod

- Kube-apiserver를 통하지 않고 kubelet이 직접 실행하는 pod
  - API 서버 없이 특정 노드에 있는 kubelet 데몬에 의해 직접관리
  - kubelet daemon에 의해 관리되는 container
- Kubelet이 직접 관리하면서 이상이 생기면 재시작

실습. Static Pod

```
root@worker01:/# cd /var/lib/kubelet
root@worker01:/var/lib/kubelet# ls
checkpoints  cpu_manager_state  kubeadm-flags.env     pki      plugins_registry  pods
config.yaml  device-plugins     memory_manager_state  plugins  pod-resources
root@worker01:/var/lib/kubelet#
```

```
    json:
      infoBufferSize: "0"
    text:
      infoBufferSize: "0"
  verbosity: 0
memorySwap: {}
nodeStatusReportFrequency: 0s
nodeStatusUpdateFrequency: 0s
resolvConf: /run/systemd/resolve/resolv.conf
rotateCertificates: true
runtimeRequestTimeout: 0s
shutdownGracePeriod: 0s
shutdownGracePeriodCriticalPods: 0s
staticPodPath: /etc/kubernetes/manifests
streamingConnectionIdleTimeout: 0s
syncFrequency: 0s
volumeStatsAggPeriod: 0s
```

```
root@worker01:/etc/kubernetes# pwd
/etc/kubernetes
root@worker01:/etc/kubernetes# ls
kubelet.conf  pki
root@worker01:/etc/kubernetes# mkdir manifests
root@worker01:/etc/kubernetes# cd manifests
root@worker01:/etc/kubernetes/manifests# ls
root@worker01:/etc/kubernetes/manifests#
```

cd /etc/kubernetes

mkdir manifests

nano nginx-pod.yaml

```
Every 2.0s: kubectl get pods -o wide

NAME                READY   STATUS    RESTARTS   AGE   IP            NODE       NOMINATED NODE   READINESS GATES
nginx-pod-worker01   1/1     Running   0          46s   192.168.5.8   worker01   <none>           <none>
```

1 master × | 2 worker01 × | +

```
root@worker01:/etc/kubernetes/manifests# cat nginx-pod.yaml
apiVersion: v1
kind: Pod
metadata:
  name: nginx-pod
spec:
  containers:
  - name: nginx-container
    image: nginx:1.14
    ports:
    - containerPort: 80
      protocol: TCP
root@worker01:/etc/kubernetes/manifests#
```