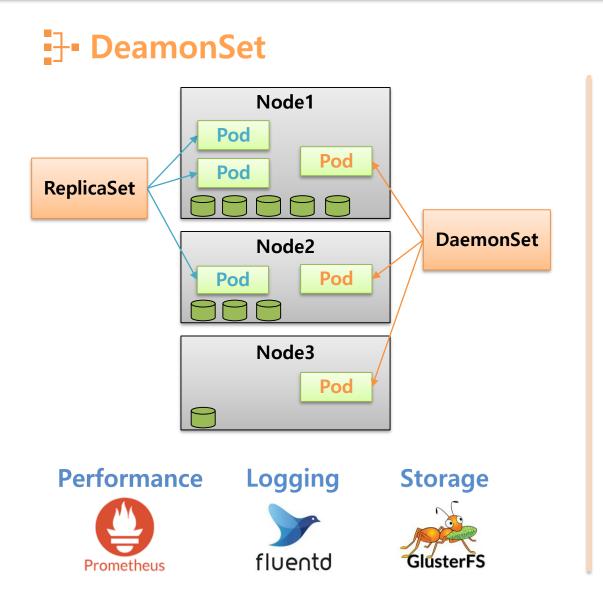# 6. Controller - DaemonSet, Job, CronJob

DeamonSet

Node1
- Pod
- Pod
- Pod

ReplicaSet

DaemonSet

Node2
- Pod
- Pod

Node3
- Pod

Performance — Prometheus
Logging — fluentd
Storage — GlusterFS

Job   CronJob

- Pod
- ReplicaSet
- Job
- Job
- Job

Service Down

Node1
- Pod
- Pod — Recreate
- Pod — Recreate

Node2
- Pod — Restart — Pod
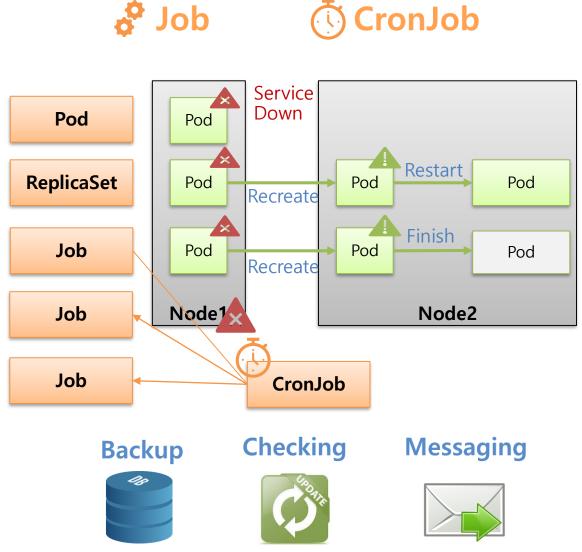- Pod — Finish — Pod

CronJob

Backup — DB
Checking — UPDATE
Messaging

6. Controller - DaemonSet, Job, CronJob

DaemonSet

DaemonSet
selector **template**
type:app Pod

nodeSelector
os:centos
hostPort

Node1 Node2 Node3
Pod Pod Pod
os:centos os:centos os:ubuntu
18080 18080

```
apiVersion: apps/v1
kind: DaemonSet
metadata:
 name: daemonset-1
spec:
 selector:
  matchLabels:
    type: app
 template:
  metadata:
   labels:
     type: app
```

externalTrafficPolicy: Local

Service

Pod Pod
Node1 Node2
30000 30000

External

```
       spec:
        nodeSelector:
         os: centos
        containers:
        - name: container
          image: tmkube/app
          ports:
          - containerPort: 8080
          hostPort: 18080
```

Job

Job
completions : 6 **template**
Pod
Pod Pod Pod **selector**
Pod Pod Pod

parallelism : 2 **activeDeadlineSeconds : 30**

Pod Pod Job → Job
30 sec

```
apiVersion: batch/v1
kind: Job
metadata:
 name: job-1
spec:
  completions: 6
  parallelism: 2
  activeDeadlineSeconds: 30
  template:
   spec:
    restartPolicy: Never
    containers:
    - name: container
      image: tmkube/init
```

CronJob

CronJob
schedule : **jobTemplate**
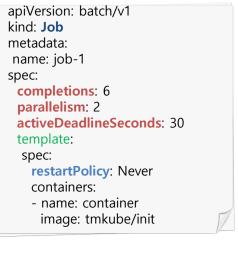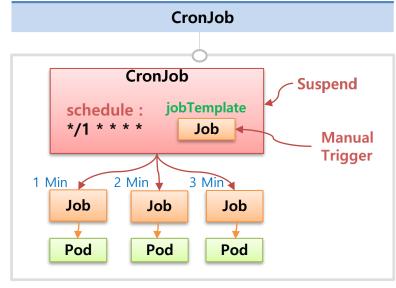**/1 * * * *** Job

Suspend
Manual Trigger

1 Min 2 Min 3 Min
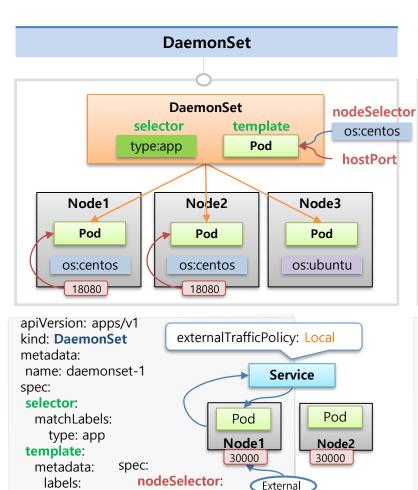Job Job Job
Pod Pod Pod

```
apiVersion: batch/v1
kind: CronJob
metadata:
  name: cron-job
spec:
  schedule: "*/1 * * * *"
  concurrencyPolicy: Allow
  jobTemplate:
   spec:
    template:
     spec:
      restartPolicy: Never
      containers:
      - name: container
        image: tmkube/app
```

6. Controller - DaemonSet, Job, CronJob

DaemonSet

DaemonSet
- **selector**: type:app
- **template**: Pod

nodeSelector: os:centos
hostPort

Node1 — Pod — os:centos — 18080
Node2 — Pod — os:centos — 18080
Node3 — Pod — os:ubuntu

```
apiVersion: apps/v1
kind: DaemonSet
metadata:
 name: daemonset-1
spec:
 selector:
   matchLabels:
     type: app
 template:
   metadata:
     labels:
       type: app
   spec:
     nodeSelector:
       os: centos
     containers:
     - name: container
       image: tmkube/app
       ports:
       - containerPort: 8080
         hostPort: 18080
```

externalTrafficPolicy: Local

Service
Node1 — Pod — 30000
Node2 — Pod — 30000
External

Job

Job
- **completions : 6**
  - Pod Pod Pod
  - Pod Pod Pod
- **template**: Pod
- **selector**

parallelism : 2
Pod Pod

activeDeadlineSeconds : 30
Job → Job
30 sec

```
apiVersion: batch/v1
kind: Job
metadata:
 name: job-1
spec:
 completions: 6
 parallelism: 2
 activeDeadlineSeconds: 30
 template:
  spec:
    restartPolicy: Never
    containers:
    - name: container
      image: tmkube/init
```

CronJob

CronJob
- **schedule :** */1 * * * *
- **jobTemplate**: Job

Suspend
Manual Trigger

1 Min — Job — Pod
2 Min — Job — Pod
3 Min — Job — Pod

concurrencyPolicy

Allow			Forbid			Replace		
1min	2min	3min	1min	2min	3min	1min	2min	3min
				skip				
Job	Job	Job	Job		Job	Job		Job
Pod	Pod	Pod	Pod	⚠ Pod	Pod	Pod	⚠ Pod	Pod