## DaemonSet是什么？

DaemonSet：守护进程集，缩写为ds，在所有节点或者是匹配的节点上都部署一个Pod。

使用DaemonSet的场景

* 运行集群存储的daemon，比如ceph或者glusterd
* 节点的CNI网络插件，calico
* 节点日志的收集：fluentd或者是filebeat
* 节点的监控：node exporter
* 服务暴露：部署一个ingress nginx

## 创建一个DaemonSet

[root@k8s-master01 ~]# cat nginx-ds.yaml

apiVersion: apps/v1

kind: DaemonSet

metadata:

labels:

app: nginx

name: nginx

spec:

revisionHistoryLimit: 10

selector:

matchLabels:

app: nginx

template:

metadata:

creationTimestamp: null

labels:

app: nginx

spec:

containers:

- image: nginx:1.15.2

imagePullPolicy: IfNotPresent

name: nginx

resources: {}

terminationMessagePath: /dev/termination-log

terminationMessagePolicy: File

dnsPolicy: ClusterFirst

restartPolicy: Always

schedulerName: default-scheduler

securityContext: {}

terminationGracePeriodSeconds: 30

[root@k8s-master01 ~]# # 创建一个ds

[root@k8s-master01 ~]# kubectl create -f nginx-ds.yaml

daemonset.apps/nginx created

[root@k8s-master01 ~]# kubectl get node -owide

NAME STATUS ROLES AGE VERSION INTERNAL-IP EXTERNAL-IP OS-IMAGE KERNEL-VERSION CONTAINER-RUNTIME

k8s-master01 Ready master 13d v1.19.0 192.168.0.201 <none> CentOS Linux 8 (Core) 5.8.5-1.el8.elrepo.x86\_64 docker://19.3.12

k8s-master02 Ready <none> 13d v1.19.0 192.168.0.202 <none> CentOS Linux 8 (Core) 5.8.3-1.el8.elrepo.x86\_64 docker://19.3.12

k8s-master03 Ready <none> 13d v1.19.0 192.168.0.203 <none> CentOS Linux 8 (Core) 5.8.3-1.el8.elrepo.x86\_64 docker://19.3.12

k8s-node01 Ready <none> 13d v1.19.0 192.168.0.204 <none> CentOS Linux 8 (Core) 5.8.3-1.el8.elrepo.x86\_64 docker://19.3.12

k8s-node02 Ready <none> 13d v1.19.0 192.168.0.205 <none> CentOS Linux 8 (Core) 5.8.3-1.el8.elrepo.x86\_64 docker://19.3.12

[root@k8s-master01 ~]# kubectl get po -owide

NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

busybox 1/1 Running 1 108m 10.244.32.153 k8s-master01 <none> <none>

nginx-8vrcz 1/1 Running 0 24s 10.244.195.20 k8s-master03 <none> <none>

nginx-dt2bx 1/1 Running 0 24s 10.244.32.165 k8s-master01 <none> <none>

nginx-gv8bd 1/1 Running 0 24s 10.244.122.145 k8s-master02 <none> <none>

nginx-k6dj6 1/1 Running 0 24s 10.244.85.219 k8s-node01 <none> <none>

nginx-mgrks 1/1 Running 0 24s 10.244.58.204 k8s-node02 <none> <none>

[root@k8s-master01 ~]# kubectl label node k8s-node01 k8s-node02 ds=true

node/k8s-node01 labeled

node/k8s-node02 labeled

[root@k8s-master01 ~]# kubectl get node --show-labels

NAME STATUS ROLES AGE VERSION LABELS

k8s-master01 Ready master 13d v1.19.0 beta.kubernetes.io/arch=amd64,beta.kubernetes.io/os=linux,kubernetes.io/arch=amd64,kubernetes.io/hostname=k8s-master01,kubernetes.io/os=linux,node-role.kubernetes.io/master=,node.kubernetes.io/master=,node.kubernetes.io/node=

k8s-master02 Ready <none> 13d v1.19.0 beta.kubernetes.io/arch=amd64,beta.kubernetes.io/os=linux,kubernetes.io/arch=amd64,kubernetes.io/hostname=k8s-master02,kubernetes.io/os=linux,node.kubernetes.io/node=

k8s-master03 Ready <none> 13d v1.19.0 beta.kubernetes.io/arch=amd64,beta.kubernetes.io/os=linux,kubernetes.io/arch=amd64,kubernetes.io/hostname=k8s-master03,kubernetes.io/os=linux,node.kubernetes.io/node=

k8s-node01 Ready <none> 13d v1.19.0 beta.kubernetes.io/arch=amd64,beta.kubernetes.io/os=linux,ds=true,kubernetes.io/arch=amd64,kubernetes.io/hostname=k8s-node01,kubernetes.io/os=linux,node.kubernetes.io/node=

k8s-node02 Ready <none> 13d v1.19.0 beta.kubernetes.io/arch=amd64,beta.kubernetes.io/os=linux,ds=true,kubernetes.io/arch=amd64,kubernetes.io/hostname=k8s-node02,kubernetes.io/os=linux,node.kubernetes.io/node=

[root@k8s-master01 ~]# vim nginx-ds.yaml

[root@k8s-master01 ~]# kubectl replace -f nginx-ds.yaml

daemonset.apps/nginx replaced

[root@k8s-master01 ~]# kubectl get po

NAME READY STATUS RESTARTS AGE

busybox 1/1 Running 1 110m

nginx-8vrcz 1/1 Terminating 0 2m17s

nginx-dt2bx 1/1 Terminating 0 2m17s

nginx-gv8bd 1/1 Terminating 0 2m17s

nginx-k6dj6 1/1 Running 0 2m17s

nginx-mgrks 1/1 Running 0 2m17s

[root@k8s-master01 ~]# kubectl get po

NAME READY STATUS RESTARTS AGE

busybox 1/1 Running 1 110m

nginx-8vrcz 0/1 Terminating 0 2m36s

nginx-k6dj6 0/1 Terminating 0 2m36s

nginx-mgrks 1/1 Running 0 2m36s

[root@k8s-master01 ~]# kubectl get po

NAME READY STATUS RESTARTS AGE

busybox 1/1 Running 1 110m

nginx-8vrcz 0/1 Terminating 0 2m38s

nginx-mgrks 1/1 Running 0 2m38s

nginx-n9q4d 0/1 ContainerCreating 0 12s

[root@k8s-master01 ~]# kubectl get po

NAME READY STATUS RESTARTS AGE

busybox 1/1 Running 1 110m

nginx-mgrks 1/1 Running 0 2m28s

nginx-n9q4d 0/1 ContainerCreating 0 2s

[root@k8s-master01 ~]# kubectl get po

NAME READY STATUS RESTARTS AGE

busybox 1/1 Running 1 110m

nginx-mgrks 1/1 Terminating 0 2m42s

nginx-n9q4d 1/1 Running 0 16s

[root@k8s-master01 ~]# kubectl get po -owide

NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

busybox 1/1 Running 1 110m 10.244.32.153 k8s-master01 <none> <none>

nginx-2khfj 0/1 ContainerCreating 0 13s <none> k8s-node02 <none> <none>

nginx-n9q4d 1/1 Running 0 21s 10.244.85.220 k8s-node01 <none> <none>

[root@k8s-master01 ~]# kubectl get po -owide

NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

busybox 1/1 Running 1 110m 10.244.32.153 k8s-master01 <none> <none>

nginx-2khfj 0/1 ContainerCreating 0 3s <none> k8s-node02 <none> <none>

nginx-n9q4d 1/1 Running 0 11s 10.244.85.220 k8s-node01 <none> <none>

[root@k8s-master01 ~]# kubectl get po -owide

kuNAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

busybox 1/1 Running 1 110m 10.244.32.153 k8s-master01 <none> <none>

nginx-2khfj 1/1 Running 0 27s 10.244.58.205 k8s-node02 <none> <none>

nginx-n9q4d 1/1 Running 0 35s 10.244.85.220 k8s-node01 <none> <none>

[root@k8s-master01 ~]# kubectl rollout history ds nginx

daemonset.apps/nginx

REVISION CHANGE-CAUSE

1 <none>

2 <none>

[root@k8s-master01 ~]# kubectl get po -owide

NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

busybox 1/1 Running 1 111m 10.244.32.153 k8s-master01 <none> <none>

nginx-2khfj 1/1 Running 0 45s 10.244.58.205 k8s-node02 <none> <none>

nginx-n9q4d 1/1 Running 0 53s 10.244.85.220 k8s-node01 <none> <none>

[root@k8s-master01 ~]# kubectl label node k8s-master03 ds=true

node/k8s-master03 labeled

[root@k8s-master01 ~]# kubectl get po

NAME READY STATUS RESTARTS AGE

busybox 1/1 Running 1 111m

nginx-2khfj 1/1 Running 0 53s

nginx-6s9cj 0/1 ContainerCreating 0 2s

nginx-n9q4d 1/1 Running 0 61s

[root@k8s-master01 ~]# kubectl get po -owide

NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES

busybox 1/1 Running 1 111m 10.244.32.153 k8s-master01 <none> <none>

nginx-2khfj 1/1 Running 0 67s 10.244.58.205 k8s-node02 <none> <none>

nginx-6s9cj 1/1 Running 0 16s 10.244.195.21 k8s-master03 <none> <none>

nginx-n9q4d 1/1 Running 0 75s 10.244.85.220 k8s-node01 <none> <none>

## DaemonSet的更新和回滚

Statefulset和DaemonSet更新回滚和Deployment一致