

Daemonset

A daemon set ensures that all nodes run a copy of a specific pod. As nodes are added to the cluster, pods are added to them as well. Example of a daemon set would be running your logging or monitoring agent on all of your nodes.

After running appropriate commands We notice that we have the example daemon set up and running and it's desired, current, ready, up to date, and available. If we look at our pods, you'll notice that we have a pod running – this indicates that its working as expected.

```
Administrator: Windows PowerShell
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl create -f daemonset-infra-development.yaml
daemonset.apps/example-daemonset2 created
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl get daemonset
NAME                DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR   AGE
example-daemonset    1         1         1       1             1           <none>          4m50s
example-daemonset2   0         0         0       0             0           infra=development 35s
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl create -f daemonset-infra-prod.yaml
daemonset.apps/prod-daemonset created
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl get daemonset
NAME                DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR   AGE
example-daemonset    1         1         1       1             1           <none>          5m47s
example-daemonset2   0         0         0       0             0           infra=development 92s
prod-daemonset       0         0         0       0             0           infra=production 7s
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl get nodes --show-labels
NAME        STATUS    ROLES                  AGE      VERSION   LABELS
minikube    Ready     control-plane,master   7m33s    v1.23.1    beta.kubernetes.io/arch=amd64,beta.kubernetes.io/os=linux,kubernetes.io/arch=amd64,kubernetes.io/hostname=minikube,kubernetes.io/os=linux,minikube.k8s.io/commit=3e64b11ed75e56e4898ea85f96b2e4af0301f43d,minikube.k8s.io/name=minikube,minikube.k8s.io/updated_at=2022_02_24T09_27_01_0700,minikube.k8s.io/version=v1.25.1,node-role.kubernetes.io/control-plane=,node-role.kubernetes.io/master=,node.kubernetes.io/exclude-from-external-load-balancers=
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets>
```

Statefulset

Stateful sets manage the deployment and scaling for a set of pods, and provide guarantees about the ordering and the uniqueness of these pods. But unlike a deployment, a stateful set manages the sticky identity for each of these pods

```
Administrator: Windows PowerShell
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl create -f statefulset.yaml
service/zk-hs created
service/zk-cs created
warning: policy/v1beta1 PodDisruptionBudget is deprecated in v1.21+, unavailable in v1.25+; use policy/v1 PodDisruptionBudget
poddisruptionbudget.policy/zk-pdb created
statefulset.apps/zk created
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl get statefulsets
NAME    READY   AGE
zk      0/3     20s
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl get pods
NAME                READY   STATUS    RESTARTS   AGE
example-daemonset-585fc 1/1     Running   0           10m
zk-0                 1/1     Running   0           53s
zk-1                 0/1     Pending   0           11s
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets> kubectl get pods
NAME                READY   STATUS    RESTARTS   AGE
example-daemonset-585fc 1/1     Running   0           10m
zk-0                 1/1     Running   0           86s
zk-1                 0/1     Pending   0           44s
PS C:\Users\msuban01\Desktop\kube\Exercise\05_06_daemonset_statefulsets>
```