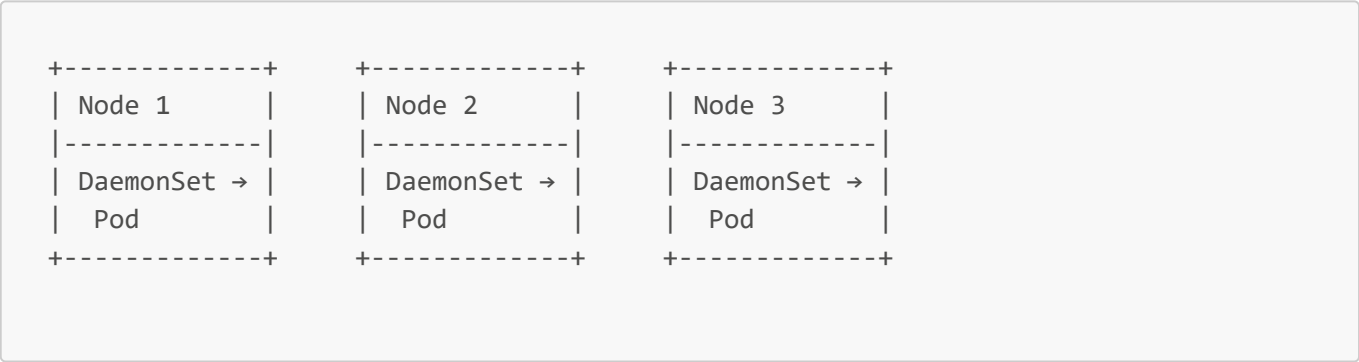# DaemonSet

A DaemonSet ensures that one copy of a specific pod runs on every node in your Kubernetes cluster.

If you have 5 worker nodes, a DaemonSet will run 1 pod on each node automatically.

Why is DaemonSet Important

Use Case	Why DaemonSet is Needed
Node-level logging	Run **Fluentd**, **Filebeat** to collect logs from all nodes
Node monitoring	Run **Prometheus Node Exporter**, **Datadog agent**
Security agents	Install **antivirus**, **Falco**, etc. on all nodes
Network setup	Run **CNI plugins** like Calico, WeaveNet
Storage management	Deploy **Ceph**, **GlusterFS**, etc.

Block diagram of DaemonSet

```
+-------------+      +-------------+      +-------------+
| Node 1      |      | Node 2      |      | Node 3      |
|-------------|      |-------------|      |-------------|
| DaemonSet → |      | DaemonSet → |      | DaemonSet → |
|  Pod        |      |  Pod        |      |  Pod        |
+-------------+      +-------------+      +-------------+
```

Commands

```
# List all DaemonSets
kubectl get daemonsets -A

# Describe a specific DaemonSet
kubectl describe ds <name> -n <namespace>

# Delete a DaemonSet
kubectl delete ds <name> -n <namespace>
```