

Features of Kubernetes

The following are some features of Kubernetes:

- **Horizontal auto-scaling:** Dynamically scales containers based on resource demands
- **Self-healing:** Re-provisions failed nodes in response to health checks
- **Load balancing:** Efficiently distributes requests between containers in a pod
- **Rollbacks and updates:** Easily update or revert to a previous container deployment without causing application downtime
- **DNS service discovery:** Uses Domain Name System (DNS) to manage container groups as a Kubernetes service

Components of Kubernetes

The main components of the Kubernetes engine are

- **Master node(s):** Manages the Kubernetes cluster. There may be more than one master node in high availability mode for fault-tolerance purposes. In this case, only one is the master, and the others follow.
- **Worker node(s):** Machine(s) that runs containerized applications that are scheduled as pod(s).

The illustration in Figure [45-6](#) provides an overview of the Kubernetes architecture.