

Kubernetes Concepts Explained

Deployment

A Kubernetes Deployment is used to tell Kubernetes how to create or modify instances of the pods that hold a containerized application. Deployments can scale the number of replica pods, enable rollout of updated code in a controlled manner, or roll back to an earlier deployment version if necessary.

Workloads

A workload is an application running on Kubernetes. Whether your workload is a single component or several that work together, on Kubernetes you run it inside a set of pods.

Volume

Similar to a container volume in Docker, but a Kubernetes volume applies to a whole pod and is mounted on all containers in the pod. The volume will be removed only when the pod gets destroyed. Also, a pod can have multiple volumes associated.

ReplicaSet

A ReplicaSet's purpose is to maintain a stable set of replica Pods running at any given time. As such, it is often used to guarantee the availability of a specified number of identical Pods.

Ingress

An API object that provides routing rules to manage external users' access to the services in a Kubernetes cluster, typically via HTTPS/HTTP, Ingress may provide load balancing, SSL termination and name-based virtual hosting.

Orchestration

Container orchestration is the automation of much of the operational effort required to run containerized workloads and services. This includes a wide range of things software teams need to manage a container's lifecycle, including provisioning, deployment, scaling (up and down), networking, load balancing

