



Basic Concepts in Kubernetes II



Namespaces

- Also called "virtual clusters"
- No real isolation by default
- Just separation
- Good for keeping order
- Good for separating environments
- Can help with isolation



Node Selectors

- Select a (group of) specific node(s) for pods to be scheduled
- Selection based on Node labels
- Nodes can be labeled based on
 - features
 - environments
 - tiers
 - etc.



Config Maps

- Help keeping configuration out of your images and pods
- Hold configuration in form of
 - configuration files
 - environment variables
 - command line arguments
- Can inject said configuration into pods



Secrets

- Similar to Config Maps
- Hold sensitive information like
 - passwords
 - keys
 - tokens
- Special type: `imagePullSecrets`
- Are held in `tmpfs` and only on nodes that need them



Daemon Sets

- Ensures an instance of a pod is running on all nodes
- Is meant for running daemons like
 - cluster storage daemons (e.g. Quobyte, glusterd, ceph, etc.)
 - log collectors (e.g. fluentd or logstash)
 - monitoring daemons (e.g. Prometheus Node Exporter, collectd, New Relic agent, etc.)
- Can also use Node Selectors



Jobs

- There are three kinds of Jobs:
 - Non-parallel jobs
 - Parallel jobs with a fixed completion count
 - Parallel jobs with a work queue



Scheduled Jobs

- Like Jobs but scheduled
- Two types:
 - Once at a specified point in time
 - Repeatedly at a specified point in time
- Think Cron (format is identical)