VOLUMES AND DATA

Volumes and Data

Dynamic Provisioning

While handling volumes with a persistent volume definition and abstracting the storage provider using a claim is powerful, a cluster administrator still needs to create those volumes in the first place. Starting with Kubernetes v1.4, Dynamic Provisioning allowed for the cluster to request storage from an exterior, pre-configured source. API calls made by the appropriate plugin allow for a wide range of dynamic storage use.

The **`StorageClass`** API resource allows an administrator to define a persistent volume provisioner of a certain type, passing storage-specific parameters.

With a **`StorageClass`** created, a user can request a claim, which the API Server fills via auto-provisioning. The resource will also be reclaimed as configured by the provider. AWS and GCE are common choices for dynamic storage, but other options exist, such as a Ceph cluster or iSCSI. Single, default class is possible via annotation.

Here is an example of a **`StorageClass`** using GCE:

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: fast      # Could be any name
provisioner: kubernetes.io/gce-pd
parameters:
  type: pd-ssd
```