SCALEOUT

Configuration Management Tools -
Kubernetes Helm

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- Helm
  - Prepare for failure.
  - How do our application run in the cloud?
  - Everything is ephemeral
  - Build trust in services

- Helm
  - The Cluster Packagemanager
  - Charts are Helm packages
  - Repository is where charts are collected and stored
  - A Release is an instance of a chart in a kubernetes cluster
  - Search/inspect/install
  -

- Helm
  - Lifecycle Management of your releases
  - Uses SemVer2 standard for versioning

- Helm
  - Hooks
    - pre/post install
    - pre/post delete
    - pre/post upgrade
    - pre/post rollback
    - crd install

- Helm
  - Templates
  - Value Files

- Helm Usage
  - Search / Inspect / Install
  - Inspect Values

- Install
  - RBAC
  - `kubectl create -f rbac-config.yaml`
  - `helm init --service-account tiller`

```
apiVersion: v1
kind: ServiceAccount
metadata:
  name: tiller
  namespace: kube-system
---
apiVersion: rbac.authorization.k8s.io
kind: ClusterRoleBinding
metadata:
  name: tiller
roleRef:
  apiGroup: rbac.authorization.k8s.io
  kind: ClusterRole
  name: cluster-admin
subjects:
  - kind: ServiceAccount
    name: tiller
    namespace: kube-system
```

- Best practices
  - Names
    - Lower case letter and numbers, start with a letter
    - Directory names must correspond with chartname
  - Version numbers: SemVer2
  - Yaml: 2 spaces per indention
  - helm/tiller
  - camelcase

HELM

https://pdos.csail.mit.edu/6.824/papers/borg.pdf