Introduction to HELM

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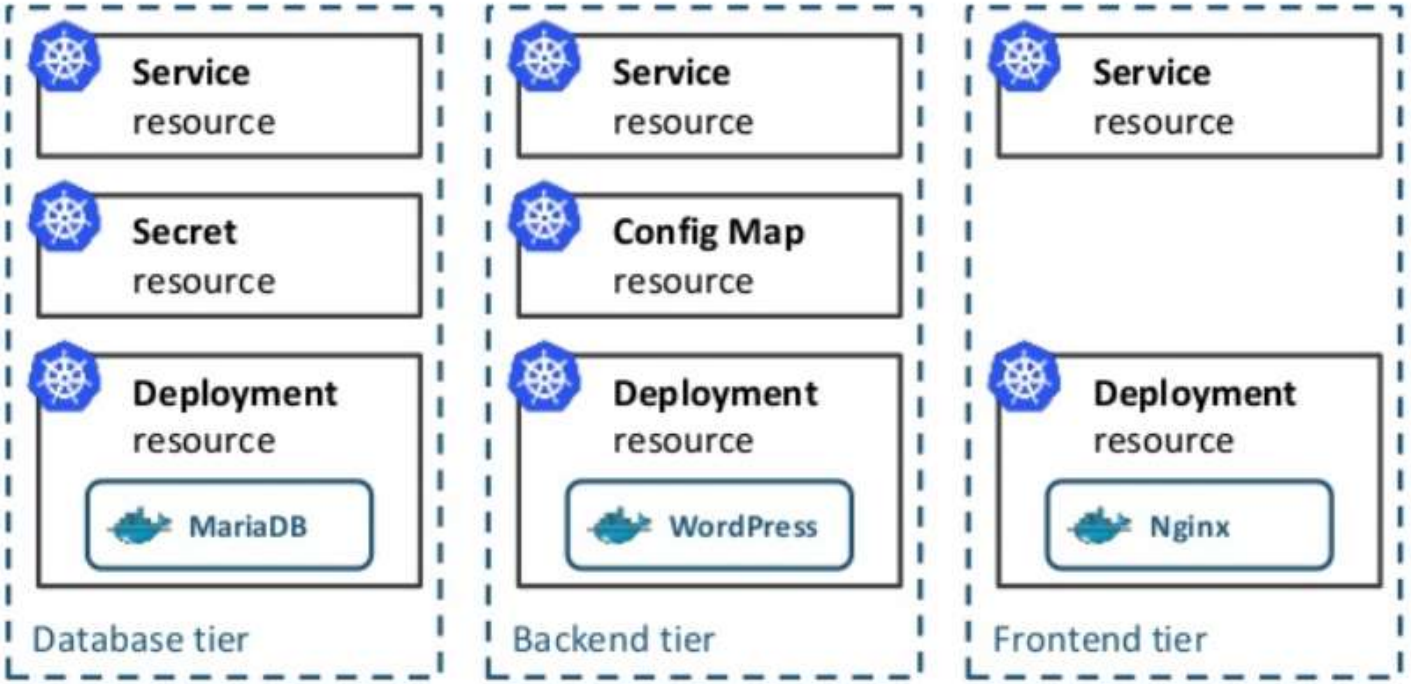
Kubernetes
The Pain Point

- 1 MicroService == 1 POD + 1 Deployment + 1 ReplicationSet + 1 Service (+ 1 Ingress)
- Lifecycle Management of Applications are very hard



What is HELM

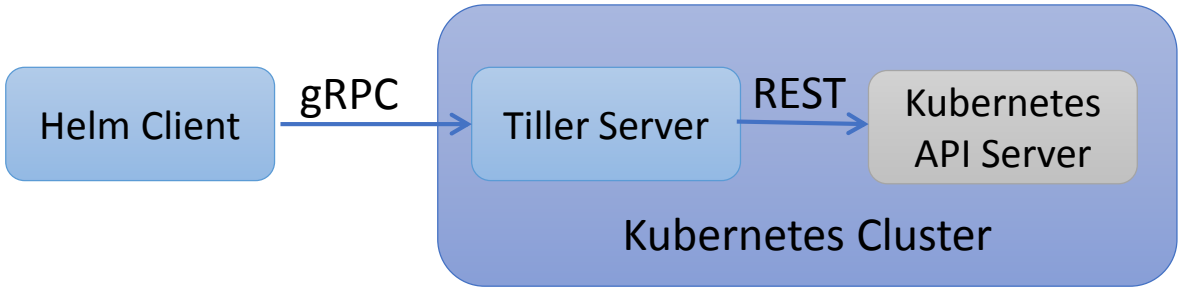
- Package manager
  - Like yum, apt but for Kubernetes
  - Search and reuse or start from scratch
  - Lifecycle Management
    - Create
    - Install
    - Upgrade/Rollback
    - Delete
    - Status
    - Versioning
- Benefits
  - Repeatability
  - Reliability
  - Multiple environment
  - Ease collaboration
  - Manage Complexity

History!!!!

- Originated from an internal hackathon @ Deis (MS)
- Jointly developed by Google and Deis
- Now part of CNCF

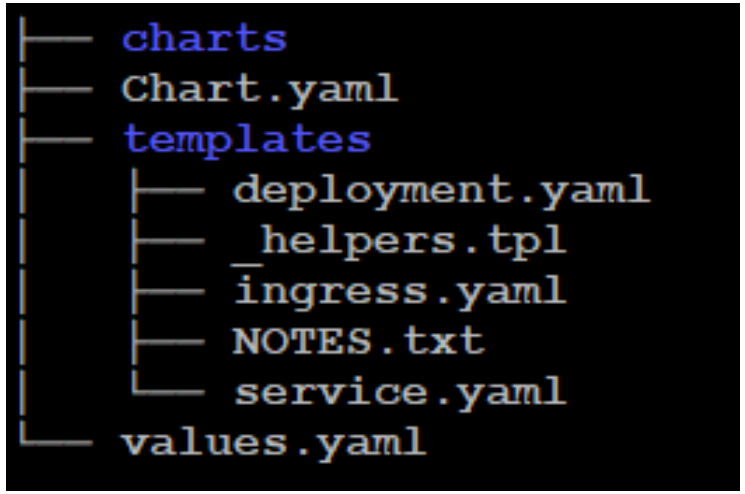
Helm Components

- Helm Client
  - Command-line client
  - Interacts with Tiller Server
  - Local chart development
- Tiller Server
  - In-cluster
  - Listens to the Helm client
  - Interacts with Kubernetes API Server
  - Manages the lifecycle



Helm Charts

- Application Deployment Blueprint
- Collection of K8S resource definition files inside a directory
- Can deploy simple and complex applications




```
$ cat Chart.yaml
apiVersion: v1
appVersion: "1.0"
description: A Helm chart for Kubernetes
name: helm-demo
version: 0.1.0
```

Install HELM

- curl <address> | sudo sh
  - https://raw.githubusercontent.com/kubernetes/helm/master/scripts/get
  - https://get.helm.sh
- https://github.com/kubernetes/helm/releases

Minikube

- Available on all major platforms
- https://github.com/kubernetes/minikube
- minikube start
- minikube status
- minikube dashboard

Thanks

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