



# Helm and Monocular on **OpenShift.**

OpenShift Commons Briefing

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# Who are Bitnami?

We have a long history of making apps easier to use on any platform: VMs, cloud and containers. Recently we've been developing solutions and tooling for making apps easier to run on Kubernetes.

## Who am I?



I'm a software engineer turned DevOps fanboy. I've been working with containers and Kubernetes for about 2 years. Also a core maintainer of Helm and Kubernetes Charts, and SIG-Apps co-lead.

*@prydonius on Twitter, GitHub, K8s Slack...*

# Kubernetes resources are hard to manage

We wanted:

- an easier way to manage and share manifests
- to be able to slightly tweak definitions for different environments
- to manage the lifecycle of our application

# Package Manager for Kubernetes



# Charts

{packages}

Are application definitions

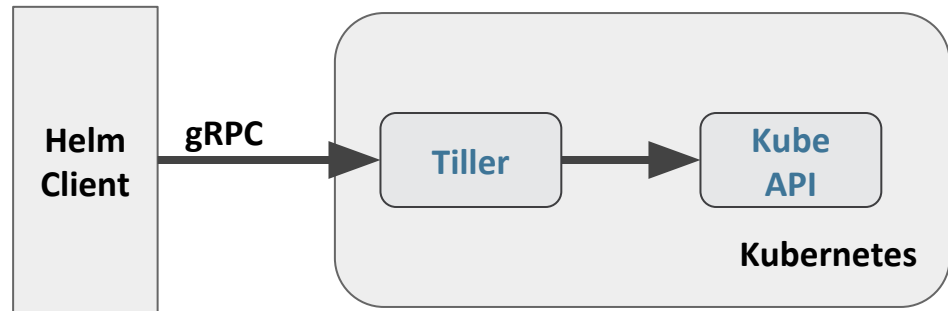
Consist of metadata, definitions, config and documentation

Live in chart repositories

```
todo
├── Chart.yaml
├── README.md
├── templates
│   ├── NOTES.txt
│   ├── _helpers.tpl
│   ├── deployment.yaml
│   └── service.yaml
└── values.yaml
```

# Tiller

- In-cluster component
- Renders Chart templates
- Creates/updates resources
- Tracks state of applications



# Tiller needs cluster admin privileges

yay RBAC!

# Grab Helm on GitHub or Homebrew

— — —

```
$ brew install kubernetes-helm
```

<https://github.com/kubernetes/helm/releases>



# Getting Started is Simple

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```
$ helm init --service-account=tiller
```

Helm makes managing and deploying  
Kubernetes apps easier...

...but it's difficult to *discover* what's available

KubeApps: Discover & launch | x

Secure https://kubernetes.com













Demos

KubeApps Charts · About

Discover & launch great Kubernetes-ready apps

Search charts...

105 charts ready to deploy

 acs-engine-autoscaler stable	 artifactory 5.4.1 stable	 aws-cluster-autoscaler stable	 cassandra incubator
 chaoskube stable	 chronograf stable	 cockroachdb 1.0.3 stable	 concourse stable
		 COSCALE	

# The npmjs.org, RubyGems.org or Docker Hub for Kubernetes

# Goals

Facilitate discovery of Kubernetes apps

Aggregate and browse chart repos from different sources

Easily grok changes across chart versions

Install apps with one-click

# Grab the chart

— — —

```
$ helm repo add monocular https://kubernetes-helm.github.io/monocular
```

```
$ helm install monocular/monocular
```

<https://github.com/kubernetes-helm/monocular>

# Architecture

- Backend (Golang)
  - Indexes Chart repositories
  - Saves and process repos metadata
  - Exposes it via JSON API (go-swagger)
  - Talks to Tiller for Chart deployment
- Frontend (Angular2)
  - Consumes JSON and assets API
  - Creates web interface



# What's next?

- Authentication / Authorization
- Catalog features
  - Social features, ranking
  - Categorization
- Helm Deployment management
  - Customize deployment / upgrades options
  - Improve releases information
- 3rd party integrations
  - CVE checks
  - Serverless (i.e Kubeless)

# Helm Community

- Over 170 contributors
- Almost 2 years old
- Slack channel: Kubernetes/#Helm
- Public dev meetings: Thursdays @ 9:30 PT
- Weekly updates & demos at SIG-Apps meetings: Mondays @ 9am PT

We need you!

<https://github.com/kubernetes-helm/monocular>



**Thank You**

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