CLOUDFOUNDRY

Creating a portable Cloud Foundry on Kubernetes

Google Cloud

1. Goals
2. Cloud Foundry on K8s
3. CF Services on K8s

Goals

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Fill in the blanks, from Wikipedia

_____ is a tool chain for release engineering, deployment & life-cycle management of large scale distributed services made of a server and a CLI tool. _____ is typically used to package, deploy and manage cloud software. _____ is particularly well-suited for managing the whole life cycle of large distributed systems.

BOSH

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BOSH

BOSH

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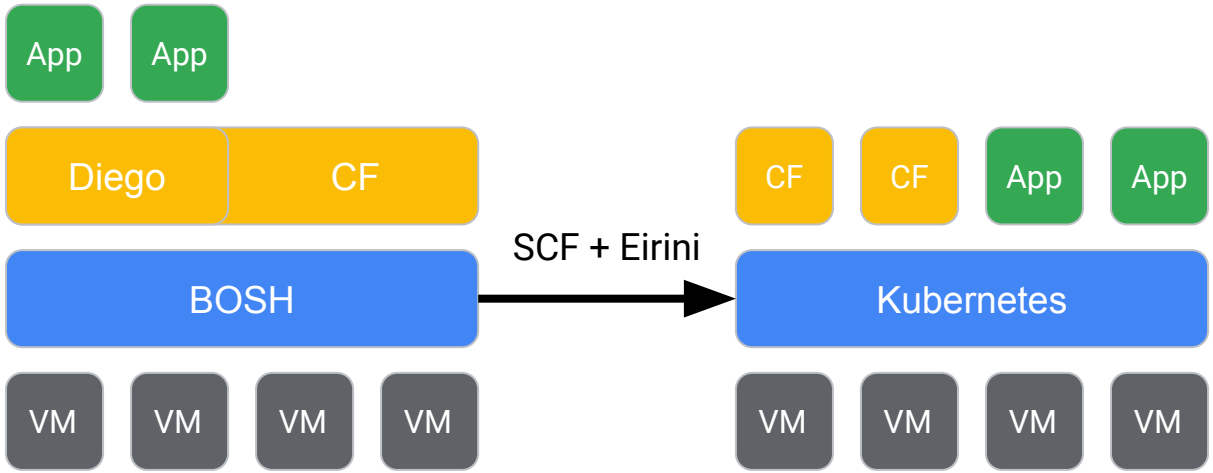
Kubernetes works just as well!

Kubernetes is a tool chain for release engineering, deployment & life-cycle management of large scale distributed services made of a server and a CLI tool. Kubernetes is typically used to package, deploy and manage cloud software. Kubernetes is particularly well-suited for managing the whole life cycle of large distributed systems.

Our Vision

Deploy Cloud Foundry, applications, and their dependencies into a self-contained, cloud-agnostic Kubernetes cluster.



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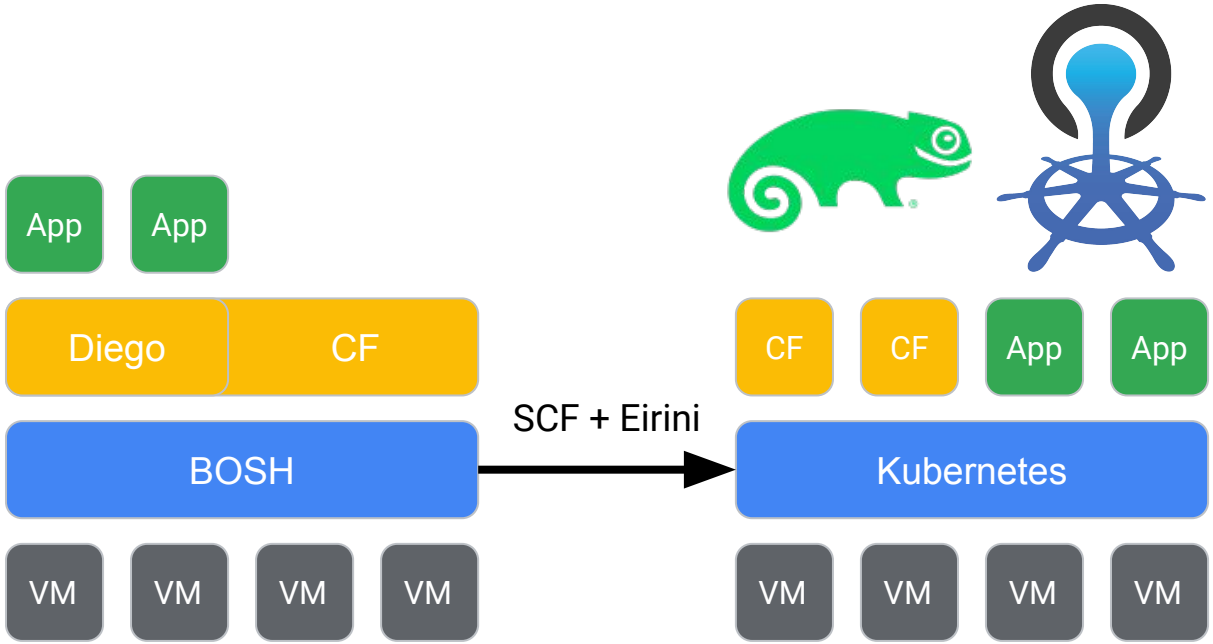
How Its Done



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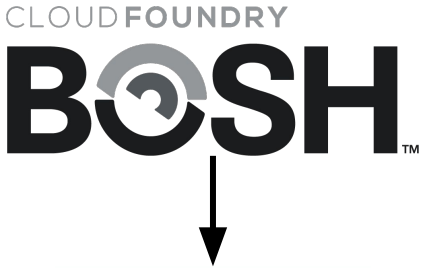
Benefits

- Manage CF like an app
- Pay for what you need
- Greater flexibility for data and legacy apps
- Single control plane for operators



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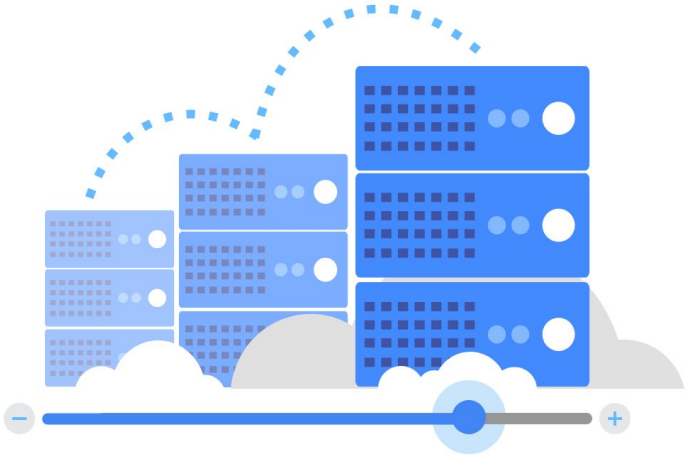

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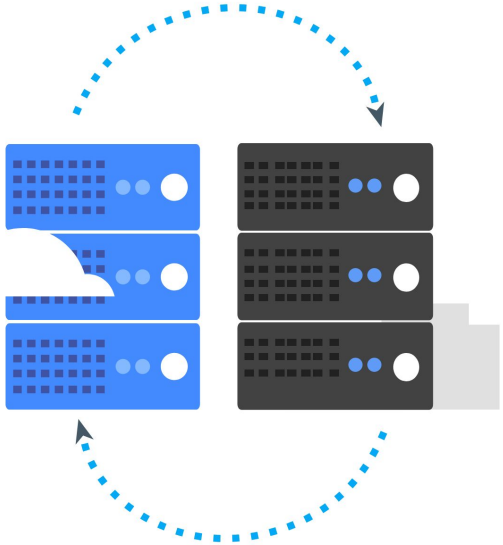

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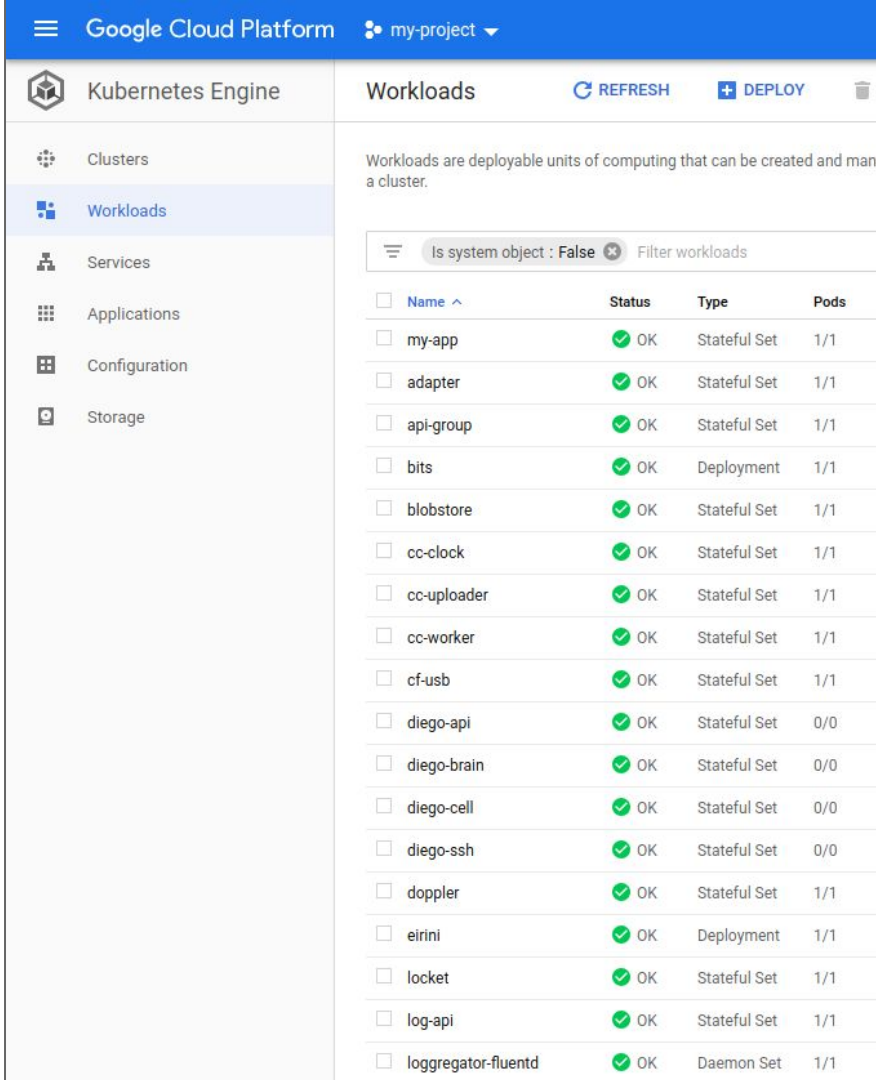
Google Cloud



Cloud Foundry on K8s

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Deployment

Deploy Cloud Foundry

1. Terraform infrastructure
2. Helm install Cloud Foundry
3. Deploy an application

Deploy GCP Service Broker

1. Helm install service broker
2. Install/enable in Cloud Foundry
3. Deploy CF applications w/ services

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CF Services on K8s

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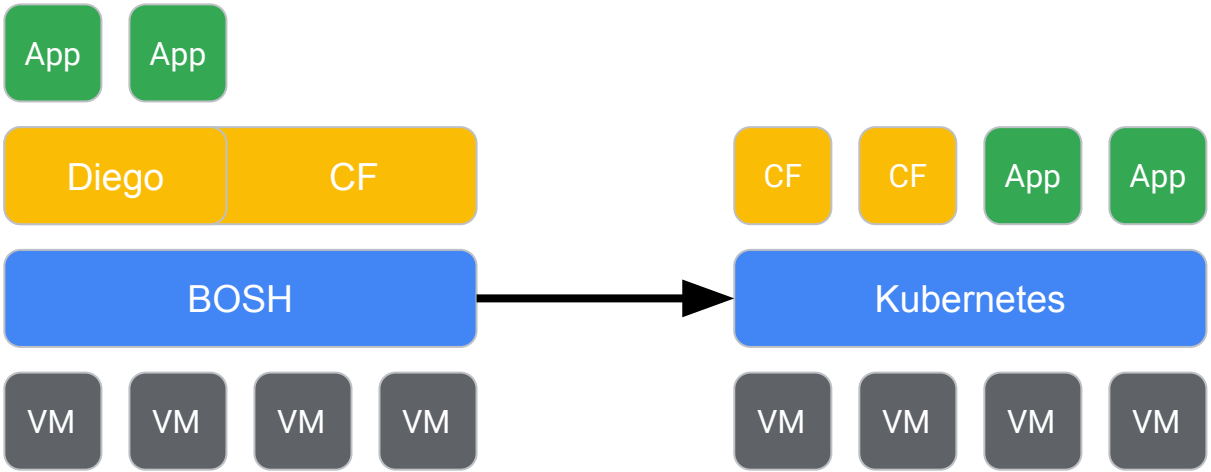
The expectation...



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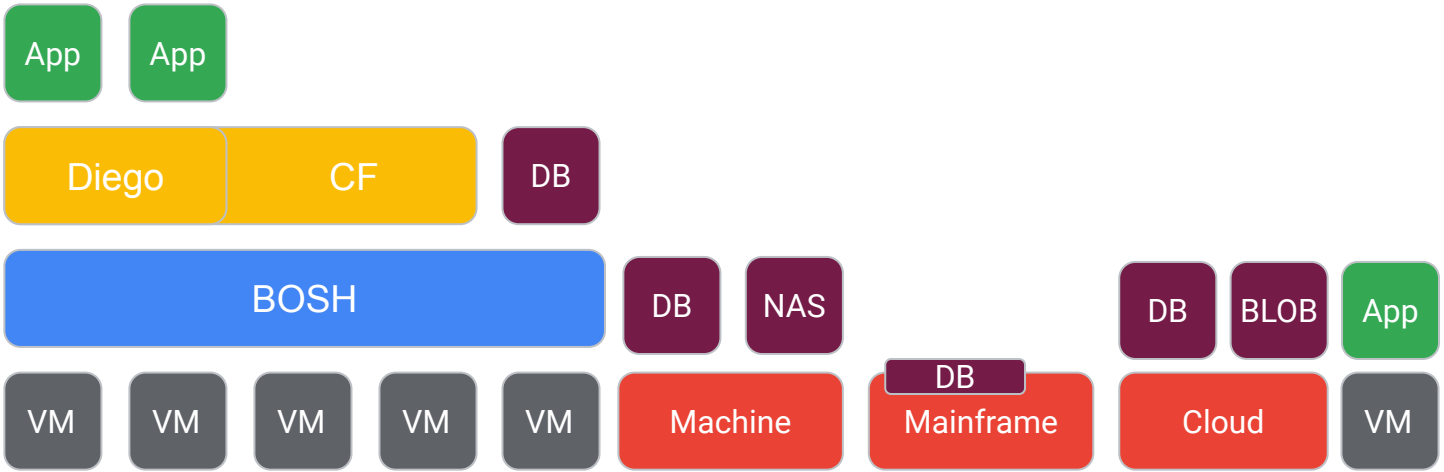
...the reality



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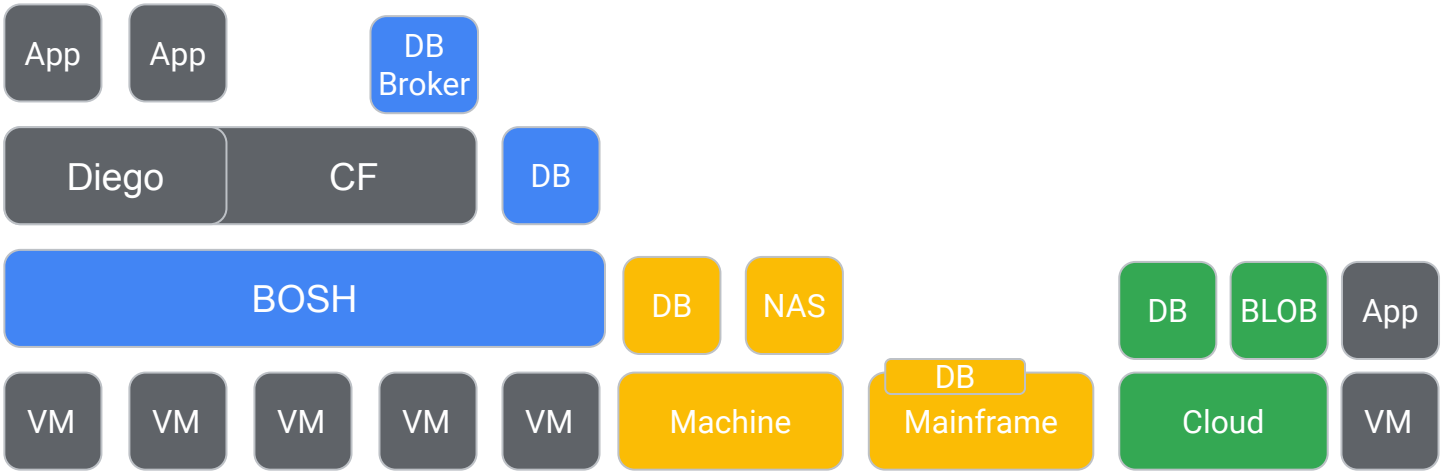
Categories of Services



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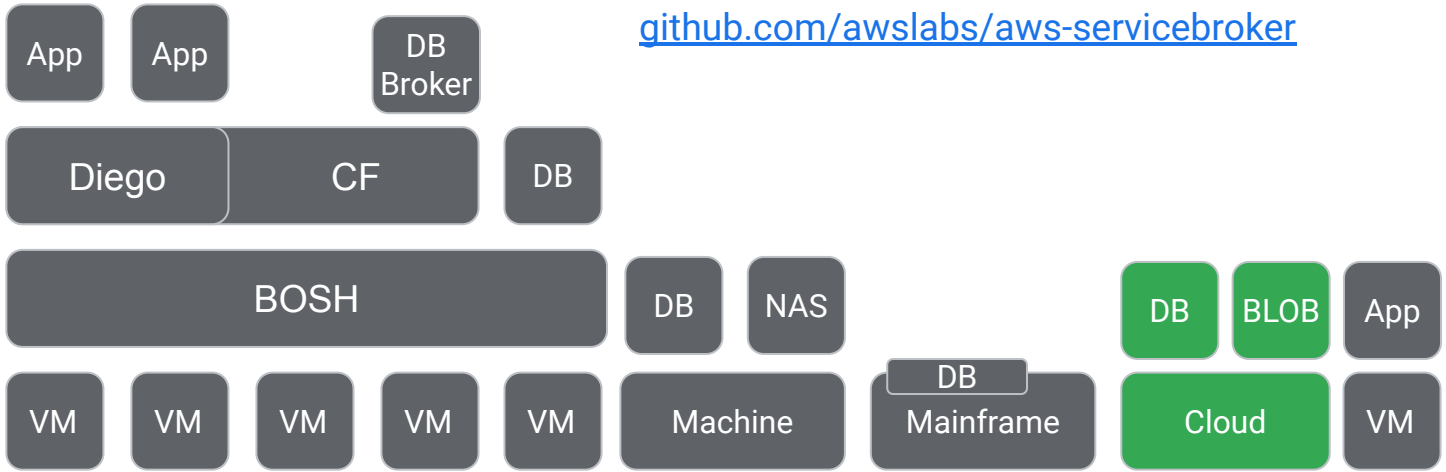
Solutions - Existing brokers in K8s

github.com/GoogleCloudPlatform/gcp-service-broker
github.com/Azure/open-service-broker-azure
github.com/awslabs/aws-servicebroker



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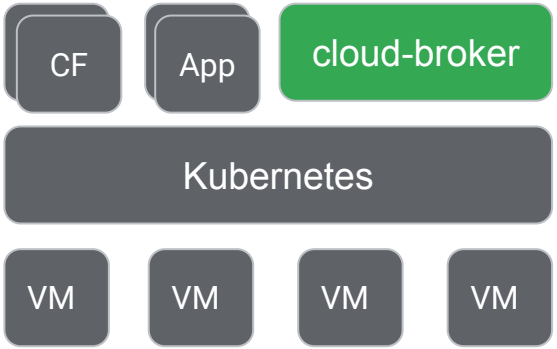
Cloud Service Brokers

AWS, Azure, and Google Cloud all have helm charts:

- https://github.com/GoogleCloudPlatform/gcp-service-broker
- https://github.com/Azure/open-service-broker-azure
- https://github.com/awslabs/aws-servicebroker

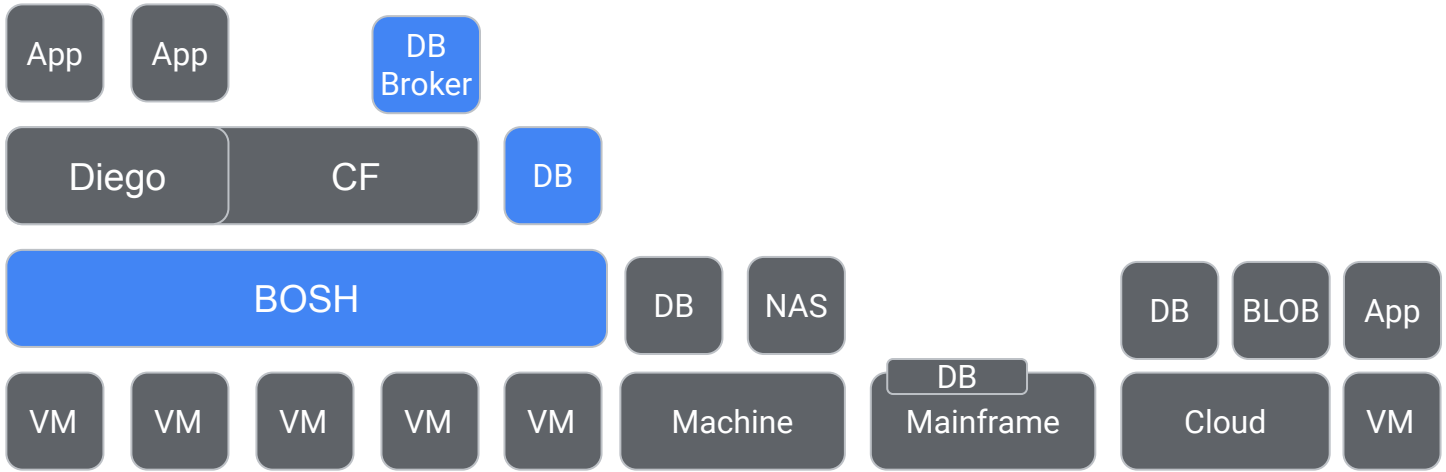
Or...if they have Terraform:

- https://github.com/GoogleCloudPlatform/gcp-service-broker



Solutions - Helm provider

github.com/google/helm-broker



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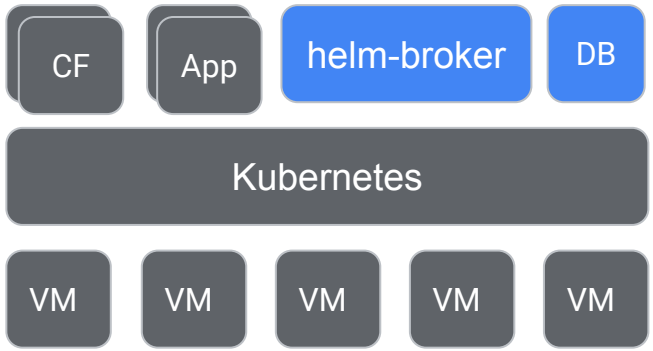
BOSH Services -> Helm Brokers

- + Inexpensive
- +/- Self-Managed
- **+ Availability**
- **+ Services**
  - Elastic
  - Redis
  - RabbitMQ
  - Kafka
  - 265 others...

https://github.com/google/helm-broker
https://github.com/cf-platform-eng/kibosh



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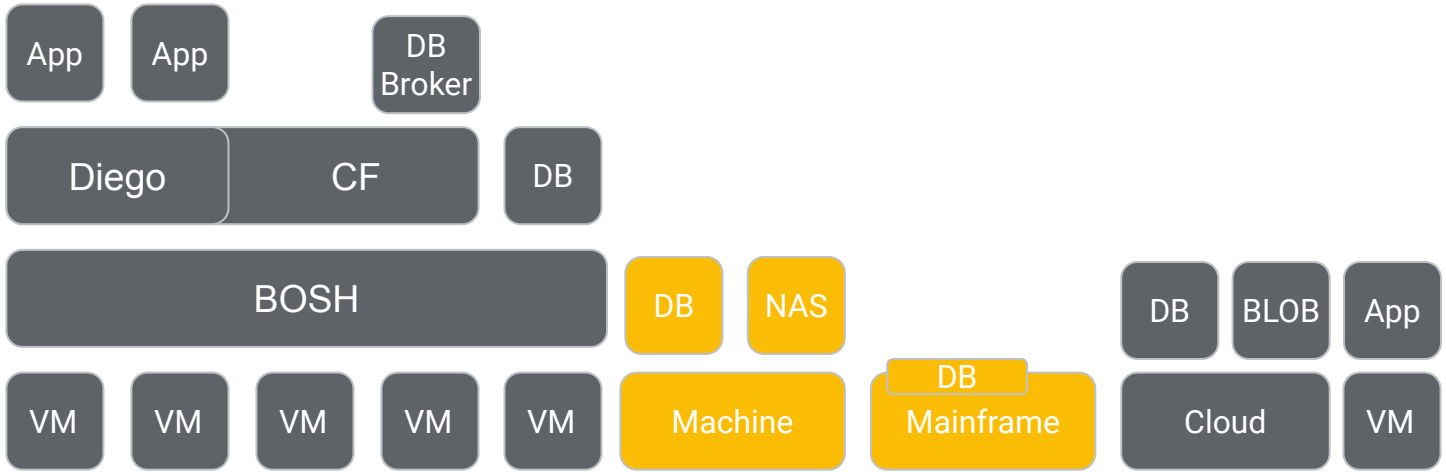
Solutions - Adapt to fit you

github.com/GoogleCloudPlatform/gcp-service-broker



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Thank You

https://graphite.page.link/cf-on-k8s

https://slack.cloudfoundry.org #gcp