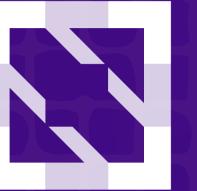




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# SIG IBM Cloud

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IBM China Systems Lab  
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# Agenda

## ❑ SIG Intro

- Overview
- Structure
- Activities

## ❑ Kubernetes-Sigs Projects

- Cluster API
- Kubefed

## ❑ Overview of the IBM Cloud

- Public, Private, Hybrid

## ❑ Summary

# Overview

- ❑ A SIG for building, deploying, maintaining, supporting, and using Kubernetes on IBM Public and Private Clouds
  - IKS and ICP
  - Both participate in the CNCF Certified Kubernetes Conformance Program and are certified
- ❑ Many developers and leaders from IBM Cloud work openly in this group to determine the future of IBM Cloud team's involvement in the Kubernetes community
- ❑ You can follow the evolution of the IKS and ICP platforms with respect to Kubernetes and related CNCF projects
- ❑ You interact directly with the team that builds and operates IBM Cloud



# Structure



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## ❑ Co-chairs

- Khalid Ahmed (ICP)
- Richard Theis (IKS)
- Sahdev Zala (OSS)

## ❑ Charter

- SIG Scope and Governance

<https://github.com/kubernetes/community/blob/master/sig-ibmcloud/charter.md>

## ❑ Mailing List

<https://groups.google.com/forum/#!forum/kubernetes-sig-ibmcloud>

## ❑ More about the SIG <https://github.com/kubernetes/community/tree/master/sig-ibmcloud>



# Activities

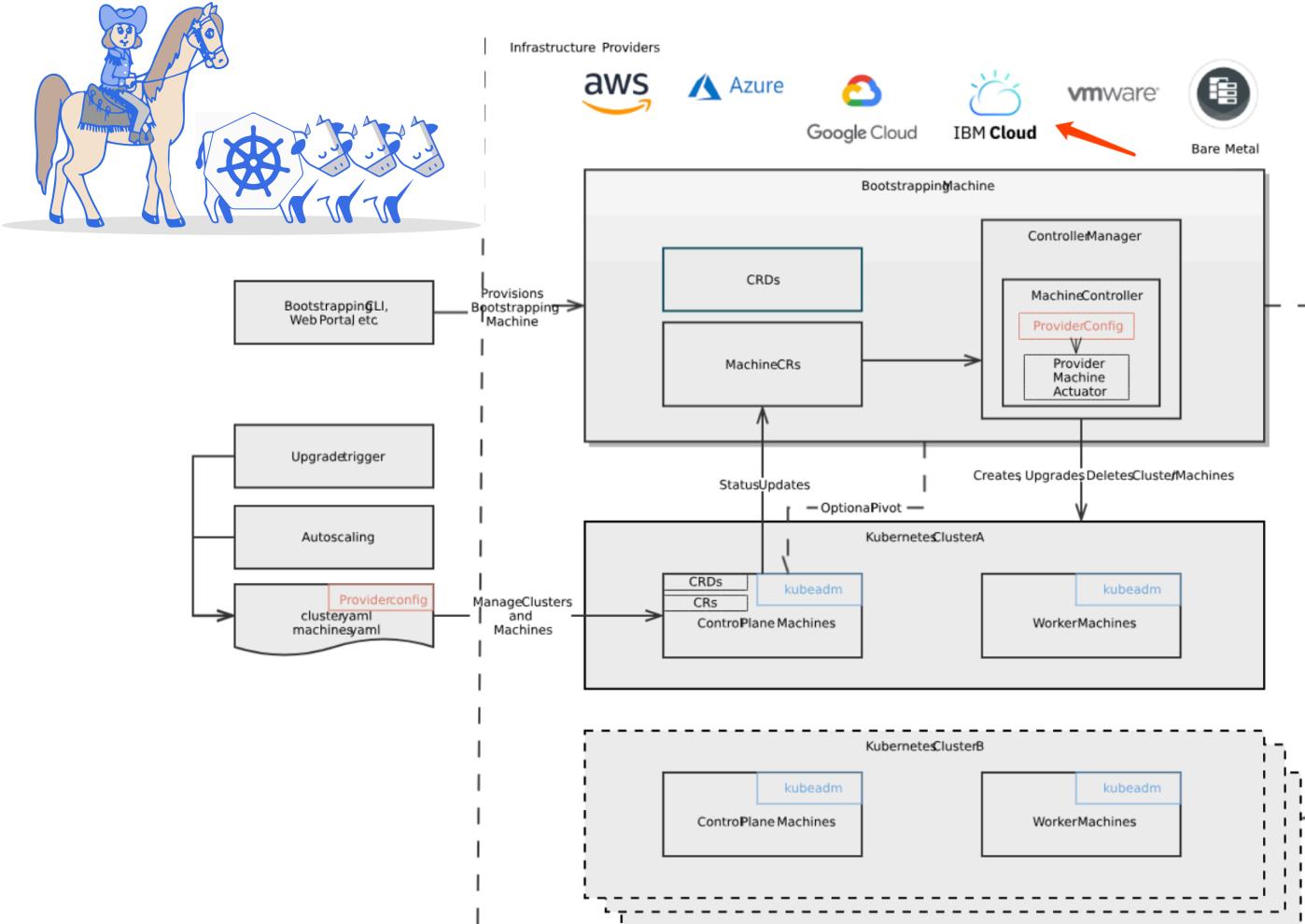
- ❑ Meet every other week
  - Wednesday at 14:00 EST
  - Meeting recordings <https://bit.ly/sig-ibmcloud-videos>
  - Presentations on various topics
  - Presentation from SIG members from IBM, Sysdig etc
- ❑ Slack discussions #sig-ibmcloud
- ❑ Quarterly updates to the Kubernetes community
- ❑ Subproject
  - Cluster-api-provider-ibmcloud
- ❑ Collaboration with SIG Cloud-Provider
  - Consolidation of individual cloud providers under one umbrella as sub-projects
  - Moving existing cloud provider code from K/K repo to separate cloud provider repos

# Kubernetes Sigs Projects

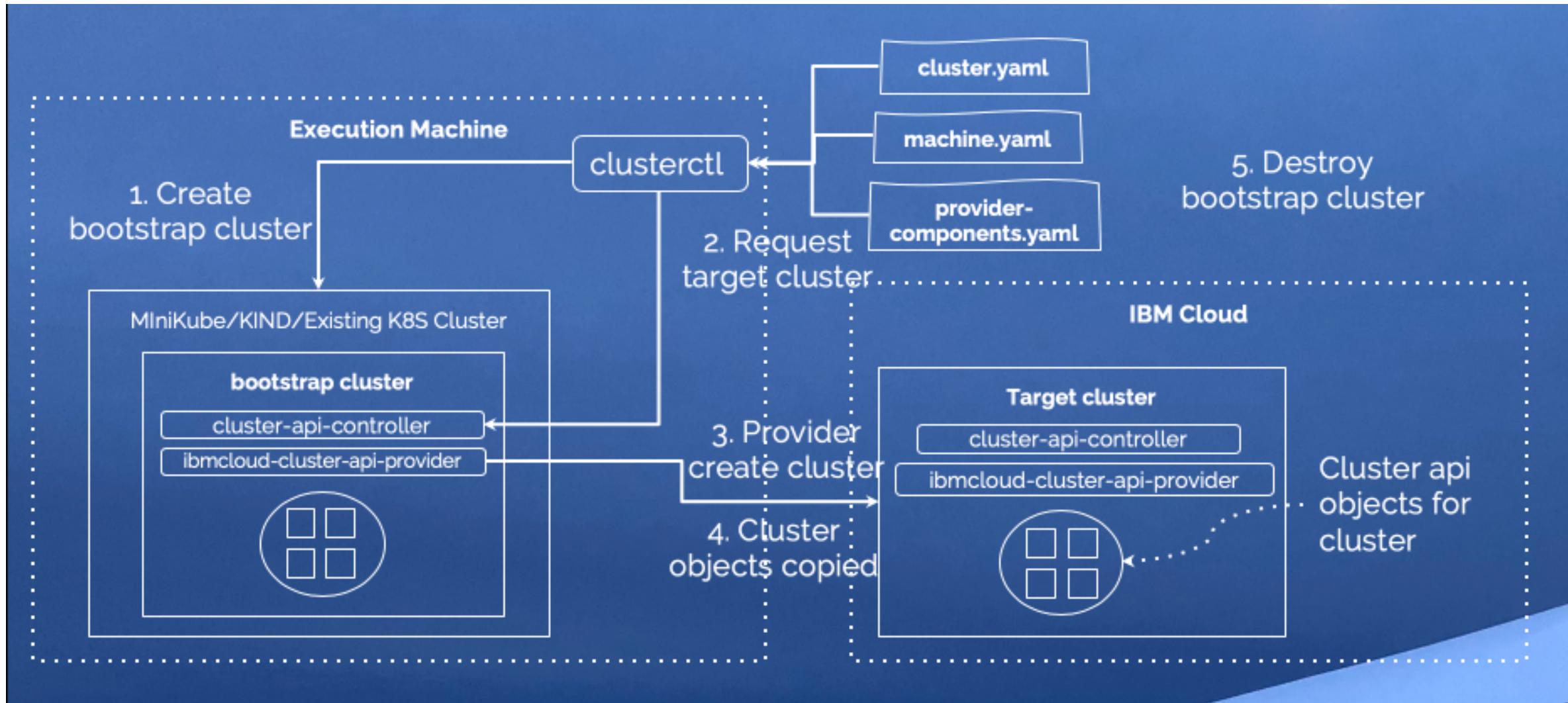
- Cluster API
- Kubefed

# Cluster API Overview

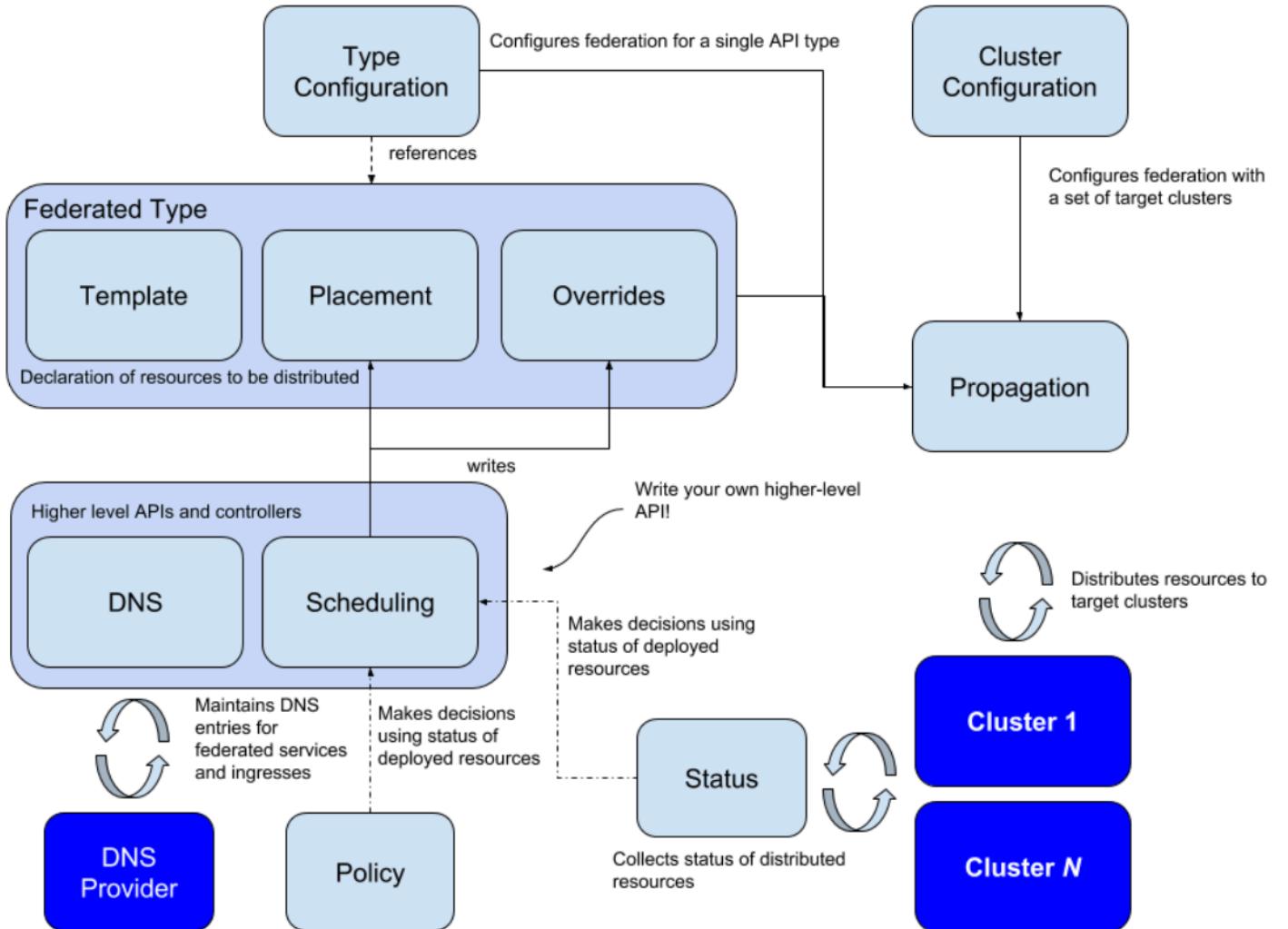
- ❑ Cluster as Cattle
- ❑ Target cluster
  - The declared cluster we intend to create and manage
- ❑ Bootstrap/Management cluster
  - The cluster that manages the target cluster
  - Possibly the same cluster
- ❑ clusterctl
  - Community CLI tool that favors a provider implementation for creating and managing a cluster
- ❑ Provider implementation
  - An implementation of the API specific to a cloud (IBM Cloud, Google, OpenStack, etc)
- ❑ IBM Cloud Provider
  - <https://github.com/kubernetes-sigs/cluster-api-provider-ibmcloud>



# Cluster API IBM Cloud Provider Detail



# Kubefed (Multi Cluster)



<https://github.com/kubernetes-sigs/kubefed>

## Commits by Company

Show 10 entries

Search

#	Company	Commits
1	Red Hat	788
2	Huawei	275
3	IBM	152
	*Independent	41
4	Cisco Systems	30
5	Midokura	17
6	NEC	13
7	Amadeus	10
8	CERN	6
9	BoCloud	3

Showing 1 to 10 of 13 entries

Previous

Next

[https://www.stackalytics.com/unaffiliated?project\\_type=kubernetes-group&release=all&metric=commits&module=kubefed](https://www.stackalytics.com/unaffiliated?project_type=kubernetes-group&release=all&metric=commits&module=kubefed)

## ❑ Public

- IBM Cloud Kubernetes Service (IKS)

## ❑ Private

- IBM Cloud Private (ICP)

## ❑ Hybrid/Multicloud

- IBM Multicloud Manager (MCM)

A **managed Kubernetes service** providing an intuitive user experience with simplified cluster lifecycle management. Built-in **security and isolation** to enable rapid delivery of apps, while leveraging IBM Cloud Services including Weather data, IoT, Analytics, or **AI capabilities with Watson**. Available in six IBM regions WW, including **25+ datacenters**.



<https://www.ibm.com/cloud/container-service>



Kubernetes Certified Service Provider  
Kubernetes Technology Partner  
Kubernetes Service Providers

1.14 +



# IKS Workload Flexibility

- 6 IBM Cloud Regions, 25+ Datacenters



[https://console.bluemix.net/docs/containers/cs\\_regions.html#region-and-locations](https://console.bluemix.net/docs/containers/cs_regions.html#region-and-locations)

Region04	Data Centers
AP North	<ul style="list-style-type: none"><li>• Hong Kong</li><li>• Seoul</li><li>• Singapore</li><li>• Tokyo</li></ul>
AP South	<ul style="list-style-type: none"><li>• Melbourne</li><li>• Sydney</li></ul>
EU Central	<ul style="list-style-type: none"><li>• Amsterdam</li><li>• Oslo</li><li>• Milan</li><li>• Paris</li><li>• Frankfurt</li></ul>
United Kingdom	<ul style="list-style-type: none"><li>• London</li></ul>
US East	<ul style="list-style-type: none"><li>• Montreal</li><li>• Toronto</li><li>• Washington, DC</li></ul>
US South	<ul style="list-style-type: none"><li>• Sao Paulo</li><li>• Houston</li><li>• San Jose</li><li>• Dallas</li></ul>

# IKS Capabilities



Simplified cluster management



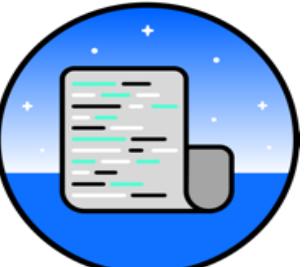
Design your own cluster



Security & isolation



Extend apps with IBM Cloud services



Native open-source experience



Integrated operational tools

# IBM Cloud Private

Application Development,  
Integration, Operations &  
Management



IBM DevOps



Microservices



Hybrid Cloud Management

Next Generation  
Middleware, Data,  
Integration & Analytics



WebSphere



IBM MQ



IBM DB2



IBM Data Science Experience



IBM Blockchain



Apache  
Open Whisk

## IBM Cloud private Platform

Kubernetes-based Platform

Multiple open compute models

IaaS Automation, Containers, PaaS & Functions

Software & Policy driven Network & Storage

Autoscaling & Automatic Application Recovery

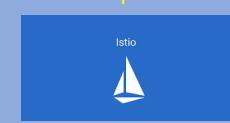
Multi-site HA/DR features



kubernetes



Core Services



Istio



Kn



Stateful & Stateless Application Support

Built-in Monitoring & Logging

Integrated Enterprise-grade Security

Vulnerability Advisor to prevent risk

## Enterprise Kubernetes:

- Built on open-source (Upstream K8S, Calico, Helm, Elasticsearch, Grafana, Prometheus,...)
- Broad hardware support
- Self-service catalog
- Agility, scalability, and elasticity
- Self-healing
- Enterprise security
- No vendor lock-in

<http://ibm.biz/Try-IBMCLOUDPrivate>

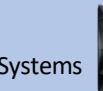
Enterprise  
Infrastructure



Storage



Power Systems



z Systems

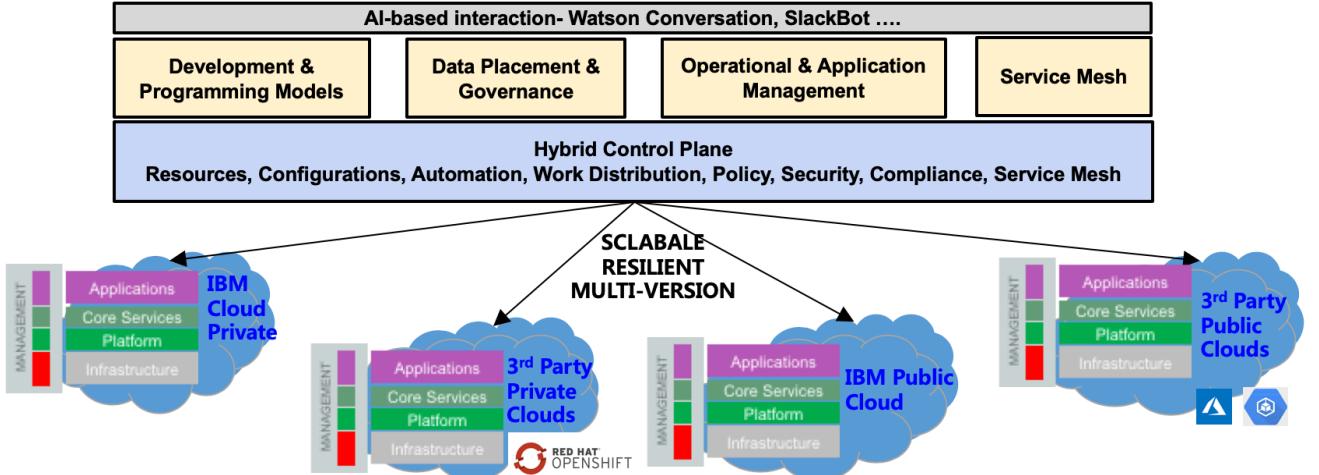


VMware



openstack

# IBM Multicloud Manager

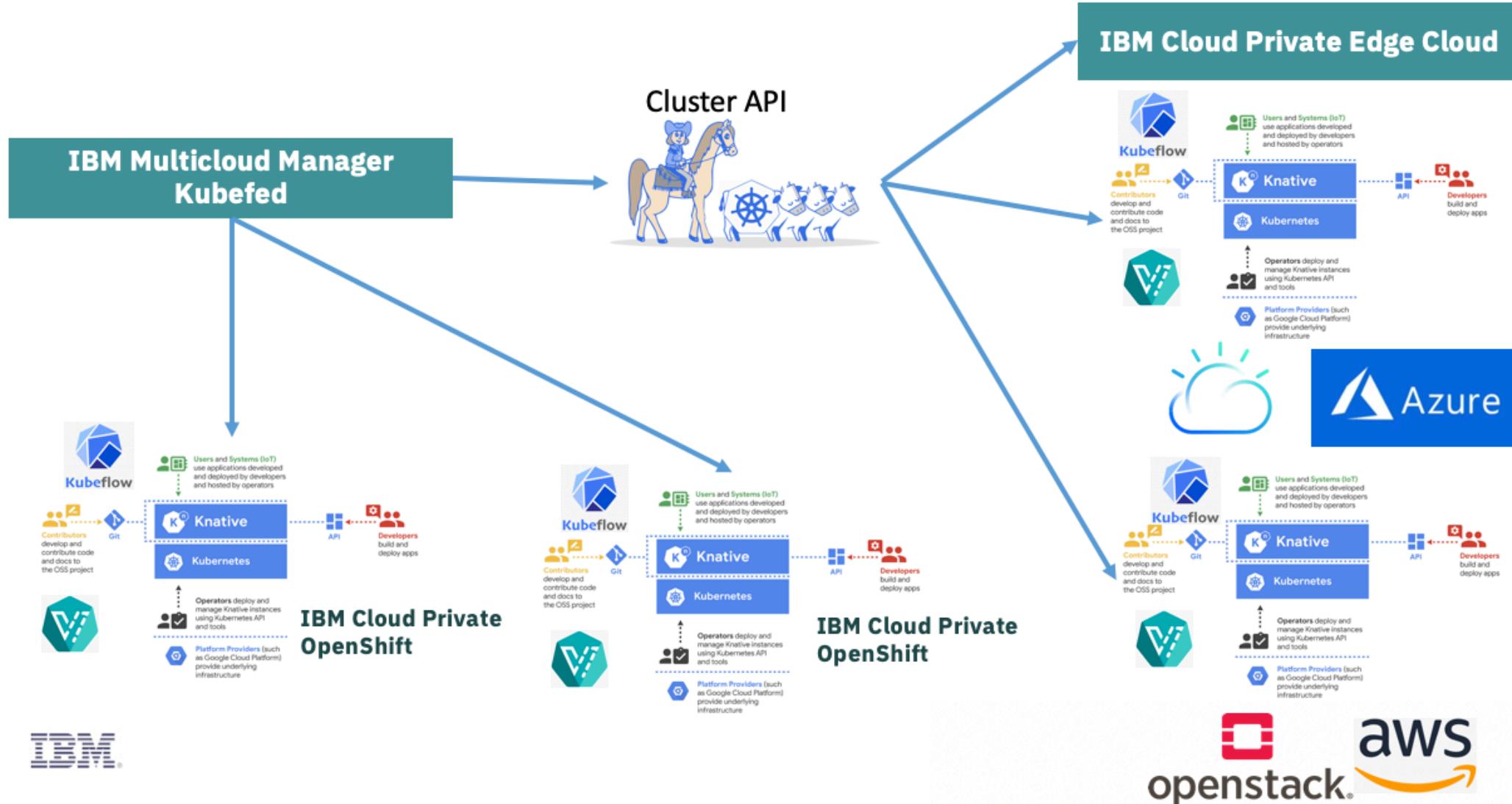


- Visibility
  - Application Management
  - Compliance

# Open Source and IBM Cloud Integration



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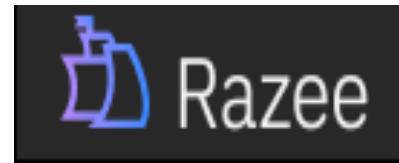
# Razee: Multi-cluster CD tool for Kubernetes



## ❑ A multi-cluster continuous delivery tool for Kubernetes

- Automate the rollout process of Kubernetes resources across multiple clusters, environments, and cloud providers
- Gain insight into what applications and versions run in your cluster

<https://razee.io/>



## Why Razee?

### ❑ Visibility

- Dynamically create an inventory of your Kubernetes resources

### ❑ Scale

- Designed for scale, Razee helps you to easily manage multi-cluster deployments by templatizing K8s resources
- Pull based deployment
- Self updating cluster

### ❑ Open Source

- Join us on our journey to make Razee a powerful continuous delivery tool for Kubernetes



# Summary

- ❑ A SIG for building, deploying, maintaining, supporting, and using Kubernetes on IBM Public and Private Clouds
- ❑ Follow the evolution of the IKS and ICP with respect to Kubernetes and related CNCF projects
- ❑ Contribute to the SIG
  - Join the SIG Discussions
  - Subproject
    - Cluster-api-provider-ibmcloud



# THANK YOU !



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# THANK YOU !