KubeCon | CloudNativeCon

OPEN SOURCE SUMMIT

China 2019
SIG IBM Cloud

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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

- **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
  - 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
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
Kubefed (Multi Cluster)

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

https://www.stackalytics.com/unaffiliated?project_type=kubernetes-group&release=all&metric=commits&module=kubefed
IBM Cloud

- 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
IKS Workload Flexibility

- 6 IBM Cloud Regions, 25+ Datacenters

[Map with regions and datacenters listed]

Region04

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<tr>
<th>Region</th>
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https://console.bluemix.net/docs/containers/cs_regions.html#regions-and-locations
IKS Capabilities

- Simplified cluster management
- Design your own cluster
- Security & isolation
- Extend apps with IBM Cloud services
- Native open-source experience
- Integrated operational tools
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
IBM Multicloud Manager

- Visibility
- Application Management
- Compliance
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

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

https://razee.io/
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 !