

Tekton 101

Andrea Frittoli

Open Source Developer Advocate

andrea.frittoli@uk.ibm.com

[@blackchip76](#)

KubeCon and CloudNativeCon

North America 2019

— A Bit of History

Knative Build

- Beginning of 2018...
- Knative:
 - Build
 - Eventing
 - Serving
- Sept 2018...
- Knative Pipelines
- OpenSource
- Contributors:
 - Google, RedHat, IBM
 - Cloudbees, Pivotal
 - ...and others



From Knative to Tekton

- Tekton pipelines (March 2019)
- Focus on CI/CD
- @CD Foundation (March 2019)
- Deploy “anywhere”
- Replaces Knative Build (June 2019)
- Bootstrap governance
- Build deprecated in Knative



— Tekton Pipelines

Tekton in a nutshell



Standard Kubernetes-style pipelines

Declarative pipelines with standard Kubernetes custom resources (CRDs) based on Tekton*



Run pipelines in containers

Scale pipeline executions on-demand with containers on Kubernetes



Build images with Kubernetes tools

Use tools of your choice (source-to-image, buildah, kaniko, jib, etc) for building container images



Deploy to multiple platforms

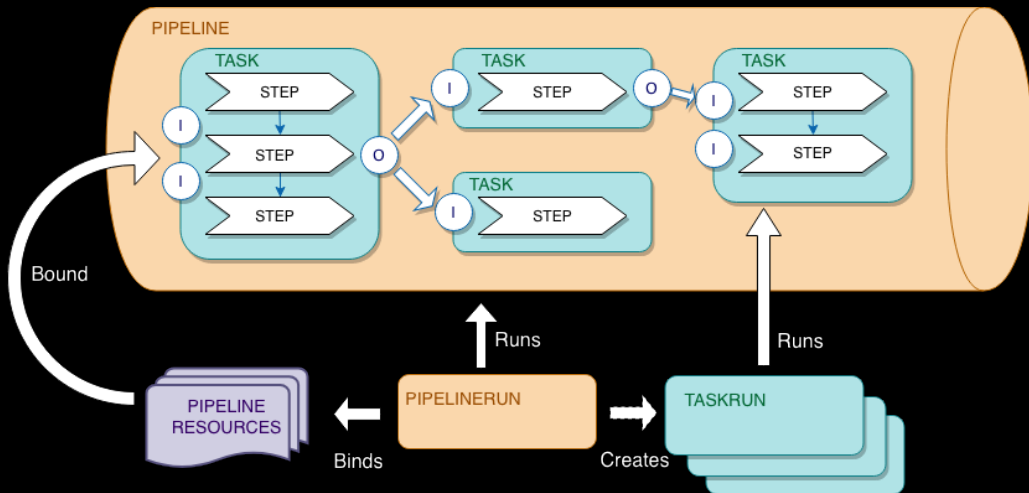
Deploy applications to multiple platforms like serverless, virtual machines and Kubernetes



Powerful command-line tool

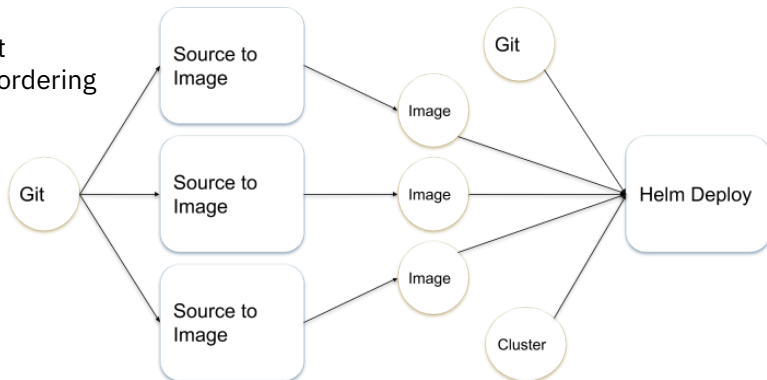
Run and manage pipelines with an interactive command-line tool

Cloud Native Pipelines



Sample pipeline

- Steps are sequential
- Tasks are a Directed Acyclic Graph
- Order defined by:
 - *from*: input / output
 - *runAfter*: enforced ordering



— Tekton Projects

Tekton projects

- tektoncd/pipeline — core
- tektoncd/catalog — shareable task definition
- tektoncd/cli — command-line to interact with pipeline
- tektoncd/triggers — create tekton resources in reaction of events
- tektoncd/operator — install/upgrade you tekton
- tektoncd/dashboard — web ui for tekton

- Plumbing, Community, Website (<https://tekton.dev/>), Friends



Thank You!

References

- This Talk:
<https://github.com/afrittoli//github.com/afrittoli/tekton101/tree/kubecon-na-2019>
- Tekton Links:
 - <https://tekton.dev/>, <https://cd.foundation/>
 - <https://github.com/tektoncd/pipeline>
 - <https://github.com/tektoncd/pipeline/blob/master/roadmap-2019.md>
- IBM Cloud: <https://cloud.ibm.com>

— Q&A