Scaling Pipelines with Tekton

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Introduction

Photo by Mike Benna, CC0

What is Tekton

– A brief into to Tekton

A bit of history

– Knative, Tekton and the CDF

Authoring

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Steps, Tasks and Teams

- units of reuse
- Steps for small scripts of OTS images
- we don’t want large shell scripts embedded in YAML
- Tasks == pods, cheap I/O
- Tasks do one thing well, stable interface
- Tasks are re-usable, produced by ”experts”

Catalog and Hub

- Sharing Tasks and discovery
- Hub and API
- Tekton Bundles

The Pipeline

- Ever growing pipeline
- Multiple teams add to it

Running

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Pipelines & Triggers

- Intro to triggers
- Running pipelines through triggers

Events

- Receiving and sending events
- Further spread responsibility, break the pipeline
- Interop and event SIG

Bottlenecks

Photo by Dan-Cristian Pădureț, CC0

Growing pipelines

- Large pipelines
- Story about DAG issue

Under pressure

- Many pipelines in parallel / bursts
- Informers, LeaderElection
- Large execution history

Data

- Unit of re-use and data
- Tasks vs pipelines
- pod overhead
- data across nodes

Photo by Carl Jorgensen, CC0

References

References:

- Slides: github.com/afrittoli/scaling_pipelines_with_tekton
- Tekton: tekton.dev
- Tekton on GitHub: github.com/tektoncd