

# From Zero to CD with Tekton

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# Agenda



Introduction

From 0 to CD

Roadmap

Q&A



# Introduction



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# Tekton is an open-source framework for creating CI/CD systems

Cloud Native  
Serverless,  
Scalable  
Pipelines



Standardization  
Built In Best  
Practices  
Maximum  
Flexibility

- Projects
- Pipeline
  - Triggers
  - Dashboard
  - CLI
  - Catalog, Hub
  - Results
  - Chains
  - Operator

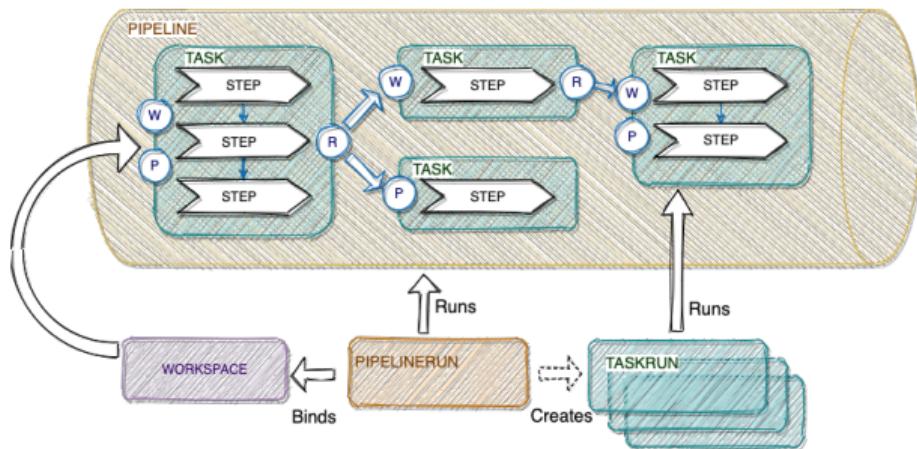
Community  
More than 150  
Companies  
Google, IBM,  
RedHat, VMWare



# At a Glance



- › Extend the k8s API with CRDs
- › Definitions: Task, Pipeline
- › Execution: TaskRun, PipelineRun
- › Bindings:  
Workspaces, Parameters, Results
  
- › Tekton v1 – Q1 2022
- › Standalone or building block



From 0 to CD  
...step by step





# Install

- One-liner (almost)
- Tekton Operator ([OperatorHub](#))
- Nightly Builds (Operator too)
- Helm (by CDF)
  
- Multi-architecture (amd64, s390x, ppc64le, arm64)
- Multi-OS (Workloads can run on Windows/amd64)
  
- OpenShift Pipelines
- Let's install it!



# Authoring

- › Catalog & Hub
- › Tasks & Pipelines
- › Parameters, Results & Workspaces
- › OCI Bundles
- › Signed Tasks and Pipelines (WIP)
  
- › Let's install some tasks and pipelines



Photo by [Thom Milkovic](#), CC0





# Watching

- › Running Tasks & Pipelines
- › Tekton Dashboard
- › tkn, kubectl
- › Pods, Volumes & Events
- › OpenShift Console

# Launching

- › Tekton Triggers
- › Setting up a Webhook
- › Filtering with Interceptors
- › Filtering with When Expressions



# Monitoring & Cleanup



- Unattended Execution
- Events, CloudEvents
- Notifications:  
GitHub, Slack and more
- Monitoring & Measuring
  
- Tekton Results
- Resource Cleanups (WIP)

# Experiments & Dogfooding

- |  |  |
|--|--|
| ➤ Custom Tasks:<br>Loops & Iterations<br>Pipeline in Pipelines Wait, CEL Run | ➤ Using Tekton to CD Tekton<br>➤ Release, GitOps, CI                                       |
| ➤ Custom Interceptors (GitHub)<br>➤ DSL, SDK, Notifiers                      | ➤ From Experiments to Feature<br>➤ Source of examples<br>➤ Bug discovery, feature requests |



# Roadmap



# Roadmap & Vision

## Mission:

- › Be the industry-standard, cloud-native CI/CD platform components and ecosystems

## Vision:

- › A rich catalog of high quality, reusable Tasks which work with Tekton conformant systems

## Vision:

- › Tekton API conformance across as many CI/CD platforms as possible

## Roadmap 2021:

- › Towards GA
- › LTS Policies
- › User stories, Documentation
- › Dogfooding



A photograph of a fast-moving stream flowing through a dense forest. The water is blurred, indicating motion, and the surrounding trees are bare, suggesting a winter or early spring setting. Mossy rocks are visible in the water.

# Thank You! Questions?

# References

- › Come and Join Us at Tekton!
- › Tekton community: [github.com/tektoncd/community](https://github.com/tektoncd/community)
- › Slides: [github.com/afrittoli/zero\\_to\\_tekton](https://github.com/afrittoli/zero_to_tekton)
- › Tekton: [tekton.dev](https://tekton.dev)
- › Tekton Docs: [tekton.dev/docs](https://tekton.dev/docs)
- › Tekton on GitHub: [github.com/tektoncd](https://github.com/tektoncd)
- › Tekton Hub: [hub.tekton.dev](https://hub.tekton.dev)
- › Tekton on Operator Hub:  
<https://operatorhub.io/operator/tektoncd-operator>
- › Tekton Results: [github.com/tektoncd/results](https://github.com/tektoncd/results)
- › Tekton Enhancement Proposals (TEPs):  
[github.com/tektoncd/community/tree/main/teps](https://github.com/tektoncd/community/tree/main/teps)

