

Launching the CNCF Technology Radar

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June 12th, 2020

About me

My mission is to make end users successful and productive with cloud native technologies such as Kubernetes and Prometheus.

- Founder of Cloud Native London meetup
- Startup advisor
- Previously Google software engineer, developer advocate, DevOps manager, Cambridge CS

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The CNCF End User Community



Plus 13 non-public members

An initiative from the End User Community

Goals:

- Share the tools actively used by end users, which they would recommend, and their patterns of usage
- Highlight real world usage of cloud native, including proprietary and non-CNCF projects

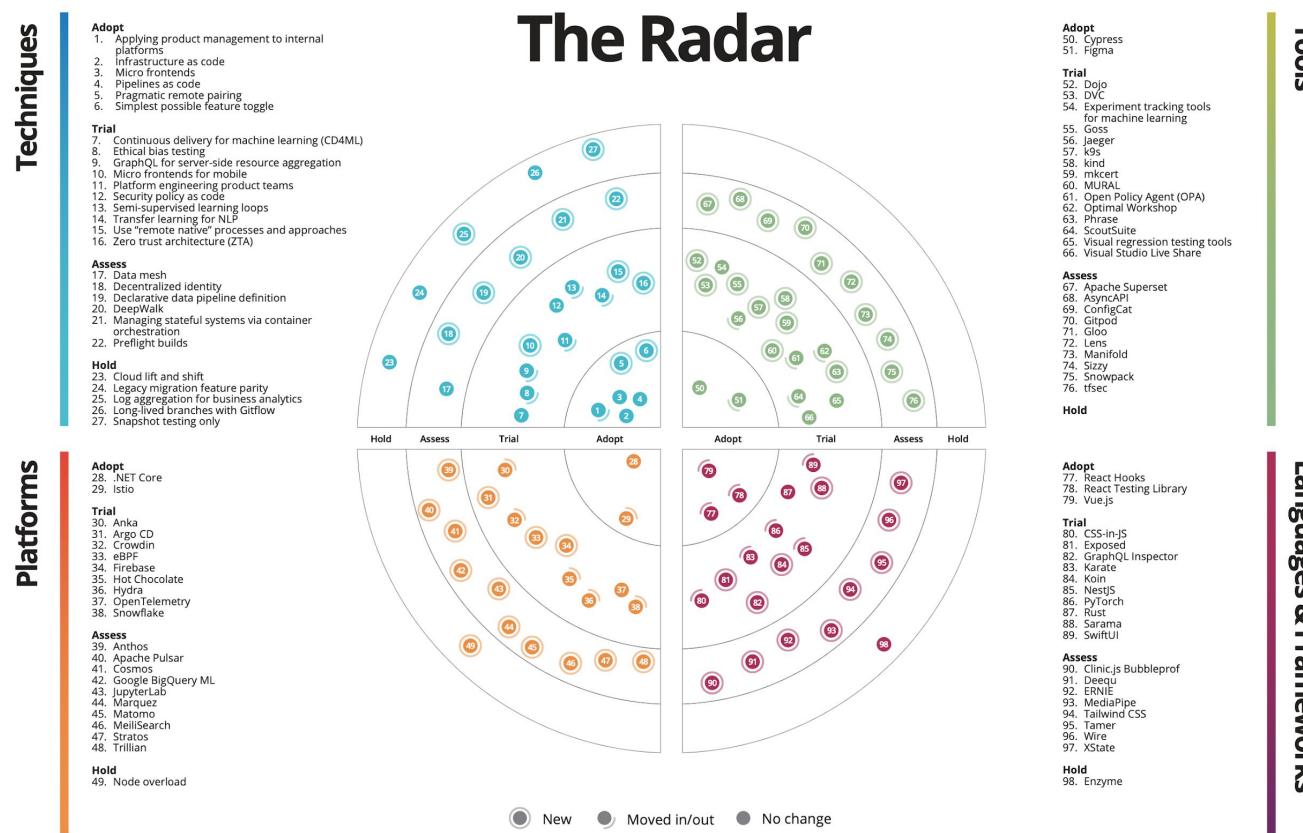
Agenda:

- What is a technology radar?
- How we designed and built the first CNCF Technology Radar
- The result: What do end users use for Continuous Delivery?

What is a technology radar?

What is a technology radar?

A technology radar is an opinionated guide to a set of emerging technologies. The popular format originated at [Thoughtworks](#) and has been adopted by dozens of companies including [Zalando](#), [AOE](#), [Porsche](#), Spotify, and Intuit.



What is a technology radar?

The key idea is to place solutions at one of four rings:

- **Adopt:** We can clearly recommend this technology. We have used it for long periods of time in many teams and it has proven to be stable and useful.
- **Trial:** We have used it with success and recommend to have a closer look at the technology in this ring.
- **Assess:** We have tried it out and we find it promising. We recommend having a look at these items when you face a specific need for the technology in your project.
- **Hold:** This category is a bit special. Unlike the other categories, we recommend you hold on using something. That does not mean that these technologies are bad, and it often might be OK to use them in existing projects. But technologies are moved to this category if we think we shouldn't use them because we see better options or alternatives now.

The CNCF Technology Radar

Inspired by the format with a few differences:

1. Community-driven; the data is contributed by the CNCF End User Community and curated by community representatives.
2. Focuses on future adoption, so there are only three rings: **Assess**, **Trial** and **Adopt**.
3. Instead of publishing annually, the target will be to publish quarterly.
4. Instead of covering 100 items, one radar will display 10-20 items on a specific use case. This removes the need to organise into quadrants.

Here's how we built the first technology radar, focusing on Continuous Delivery.

Step 1: Collect data

<u>Continuous Delivery</u> <i>(In house tool)</i>	Company	Company	Company	Company	Company
Argo CD	ADOPT	▼	▼	▼	▼
Gitlab	TRIAL	▼	▼	▼	▼
Jenkins	ASSESS	▼	▼	▼	▼
Jenkins X	HOLD	▼	▼	▼	▼
Jenkins Blue Ocean					
Flux	▼	▼	▼	▼	▼
Spinnaker	▼	▼	▼	▼	▼
Travis CI	▼	▼	▼	▼	▼
Go CD	▼	▼	▼	▼	▼
GitHub Actions	▼	▼	▼	▼	▼
Tekton CD	▼	▼	▼	▼	▼
jsonnet	▼	▼	▼	▼	▼
Helm	▼	▼	▼	▼	▼
CircleCI	▼	▼	▼	▼	▼
TeamCity	▼	▼	▼	▼	▼
Kustomize	▼	▼	▼	▼	▼
Wercker	▼	▼	▼	▼	▼
Drone	▼	▼	▼	▼	▼
Flagger	▼	▼	▼	▼	▼
Kapitan					

Step 1: Collect data

Step 2: Sort and determine final position

- Solutions with broad positive consensus went in **Adopt**:

Flux	ADOPT	TRIAL	ASSESS	ASSESS	ASSESS																		
Helm	ADOPT	ADOPT	ADOPT	ADOPT	ADOPT	ADOPT	TRIAL	TRIAL	TRIAL	TRIAL	TRIAL	HOLD	HOLD	HOLD									

- Those with mostly positive recommendations are in **Trial**:

CircleCI	ADOPT	ADOPT	ADOPT	ADOPT	ADOPT	ASSESS	HOLD	HOLD	HOLD														
Gitlab	ADOPT	ADOPT	ADOPT	ADOPT	ADOPT	TRIAL	TRIAL	TRIAL	ASSESS														
Kustomize	ADOPT	ADOPT	ADOPT	ADOPT	TRIAL	TRIAL	ASSESS	ASSESS	ASSESS														

- If there was no clear consensus, they were placed in **Assess**:

Argo CD	ADOPT	ADOPT	TRIAL	TRIAL	TRIAL	ASSESS																			
Drone	ADOPT	ADOPT																							
Flagger	ASSESS	ASSESS																							
GitHub Actions	ADOPT	ADOPT	TRIAL	TRIAL	TRIAL	TRIAL	TRIAL	TRIAL	ASSESS	ASSESS	HOLD	HOLD													
Jenkins	ADOPT	ASSESS	ASSESS	HOLD	HOLD																				
Jenkins X	TRIAL	ASSESS	ASSESS	ASSESS	HOLD	HOLD																			
jsonnet	ADOPT	TRIAL	ASSESS	ASSESS	HOLD	HOLD																			
Spinnaker	TRIAL	TRIAL	TRIAL	ASSESS	ASSESS	ASSESS	ASSESS	ASSESS	HOLD	HOLD															
TeamCity	ADOPT	HOLD																							
Tekton CD	ASSESS	ASSESS																							
Travis CI	ADOPT	TRIAL	ASSESS	HOLD	HOLD																				

3. Analyze themes

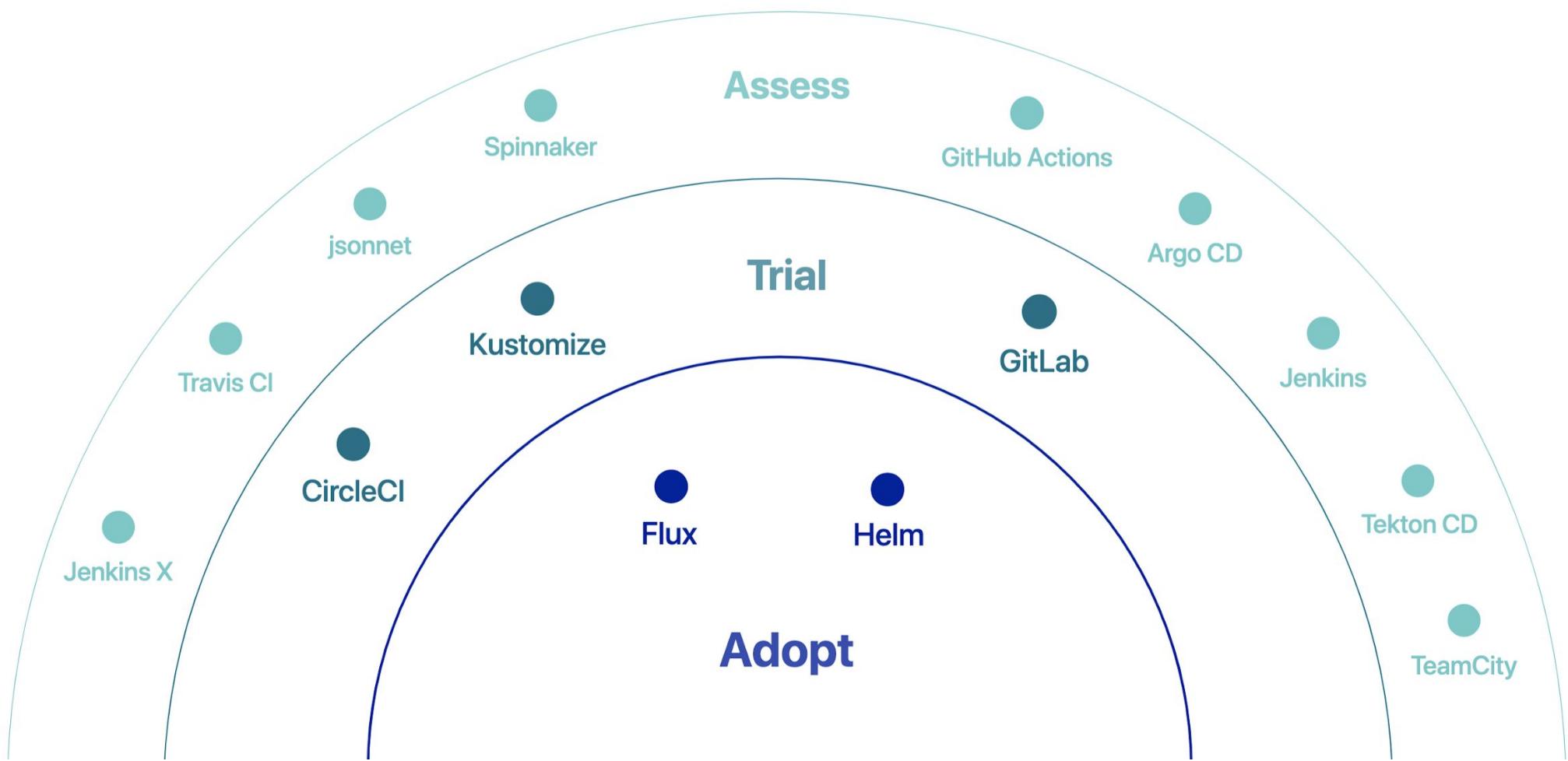
Each technology radar will be accompanied by three themes. Themes are patterns that an editor has deemed interesting, surprising or otherwise noteworthy.

A technology radar represents one set of people at one point in time, so it is opinionated by design.

CNCF Technology Radar: Continuous Delivery, June 2020

CNCF Technology Radar

Continuous Delivery June 2020



Themes in Continuous Delivery, June 2020

1. Publicly available solutions are combined with in-house tools

- Many end users had tried up to 10 options and settled on adopting 2-4. Several large enterprise companies have built their own continuous delivery tools and open sourced components, including LunarWay's [release-manager](#), Box's [kube-applier](#), and [stackset-controller](#) from Zalando. The public cloud managed solutions on the CNCF landscape were not suggested by any of the end users, which may reflect the options available a few years ago.

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2. Helm is more than packaging applications

- While Helm has not positioned itself as a Continuous Delivery tool (it's the Kubernetes package manager first), it's widely used and adopted as a component in different CD scenarios.

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3. Jenkins is still broadly deployed, while cloud native-first options emerge.

- Jenkins and its ecosystem tools (Jenkins X, Jenkins Blue Ocean) are widely evaluated and used. However, several consumers stated Jenkins is primarily used for existing deployments, with other solutions for new applications. Hence end users who are choosing a new CD solution should assess Jenkins alongside tools that support modern concepts such as GitOps (for example, Flux).

Read more

CNCF Projects



Case studies on CD



cncf.io/case-study/babylon/



cncf.io/case-study/intuit/

What's next?

Got feedback?

We are excited to provide this report to the community, and we'd love to hear what you think.

Email feedback to info@cncf.io.

Next radar in September 2020

Interested in learning what end users recommend for a cloud native use case?

Vote at <https://www.cncf.io/tech-radar> to help decide the topic for the next CNCF Technology Radar.

Examples could be categories from the CNCF Landscape:

- Security
- Storage
- Runtimes
- Serverless

Join the End User Community

<https://www.cncf.io/people/end-user-community/>

- Find out who exactly is using each project and read their comments
- Contribute to and edit future CNCF Technology Radars. Subsequent radars will be created by an editorial team selected from the End User Community.

Thank you

github.com/cncf/enduser-public/blob/master/CNCFTechnologyRadar.pdf

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