Welcome

Welcome to the 2021 Knative annual report.

Comments and feedback are welcome at steering@knative.team.
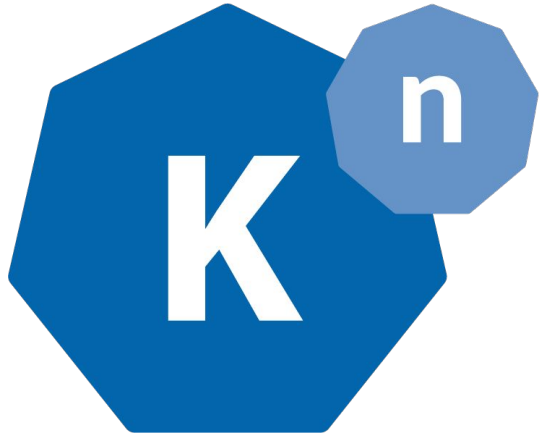
2021 Annual Report

Who We Are

- We have 4000 members in our Slack community 🎉

- 17 [Working Group Leads](#)

- 5 Steering, 5 TOC, and 3 Trademark members

- 29 reviewers who write 100 or more reviews per year

- 94 contributors eligible to vote in the last SC election (at least 50 GitHub interactions)

- Knative receives [between 500 and 1200 pull requests](#) per month, of which more than 80% get merged. We also receive between 150 to 400 issues per month. See [activity here](#).

Highlights

- Knative 1.0

- Knative is applying for incubation to CNCF

- Multi-arch images (ie arm64, ppc64, s390x)

- 247 releases across 25 repos (123 minor releases, 124 patch releases)

- Conformance process defined

Steering

Welcome new steering committee members:
- Carlos Santana
- Lance Ball

Thank you to departing steering committee members!
- Brenda Chan
- Michael Behrendt

End-user seat will be selected in 2022!

Collected a [set of companies who are using Knative](#)

Collected case studies from 3 companies: [deepc](#), [Outfit7](#), and [Puppet](#)

TOC

Welcome new TOC members!
- ○ Jules, Dave, Scott

Thank you, departing TOC members!
- ○ Grant, Nghia, Matt, Markus

Updated the Working Group [roadmap and TOC review process](#)

Chartered the Security WG and the 1.0 and Functions task forces

TMC

Defining the conformance process / eligibility and grant duration

Update (rewrite) of the Eventing spec for 1.0

Welcome new TMC members!
- Evan, Spencer

Thank you, departing TMC members!
- Brenda, Omer, Ron

Community Meetups

- ○ 10 Meetups
- ○ Content usefulness: 4.6/5
- ○ Meetup satisfaction: 4.6/5

Serving(s)

DomainMapping: released to Beta

AutoTLS: Moved wildcard provisioner into core

8 new features released behind flags

Documented all GA flags and annotations

Renamed `net-*` plugins and options consistently

`kubectl explain` now works on Serving resources

Eventing(s)

Cleaned up Eventing behavior and spec to be more consistent:
- Added `Prefer: reply` to allow event recipients to know if replies will be processed
- Added `HTTP OPTIONS` and CloudEvents Webhook support to Broker and Trigger
- `subscriber` is now required on Subscriptions
- Documented which response codes are retried

Improvements in event delivery control (retries, timeouts, dead-letter)

Introduced feature flags (6 current features)

New Kafka and RabbitMQ broker implementations

[Eventing now includes](#) 13 event sources in knative-sandbox and 47 out-of-tree event sources. There are 3 serverless (aka multi-tenant) event sources.

Client(s)

A new (additional) Working Group lead: David Simansky

13 releases, ~ 23k downloads from GitHub in 2021

6 plugins released in sync with the client
- quickstart, event, func, source-kafka, source-kamelet

Function Task Force established for Knative function support

Feature Highlights:
- Offline resource generation
- Homebrew repo for plugins
- Multi-container support
- Intuitive Traffic split UI for "kn service create/update"

UX/Docs

We have a new look website

Changed site generator from Hugo to MkDocs

In March, we began using Google analytics to measure user engagement.
From March 7 to December 31, 2021, the website had:

- 137k users
- 41k returning users
- November was the busiest month with 19k new users

Implemented a new website structure to help users find information more easily

Added a getting started tutorial to help new users

Kn CLI plugin quickstart to quickly install Knative for development purposes

Productivity

Began the process to move all the test infrastructure to be community owned

Supported both Prow and GitHub Actions
- 8 robot PR generators (knobots)
- 10 Actions replicated across repos (presubmit)
- Over 100 prow job definitions (mostly generated)

Defined a cross-project release process and release rotations

Operations

25 releases: 9 Minor release and 16 patch release

563k+ downloads from GitHub in 2021. Incredible increase!!!
- (Over 100 times, comparing to all years before 2021)

First usage survey of Knative Operator, to direct future development

Started `kn-plugin-operator` to facilitate the usage of Knative operator

Feature Highlights:
- System resources configuration of containers based on the pod name
- Affinity, Toleration, NodeSelector configuration support on the pod level
- High availability configuration to all deployment resources
- Implementation of the customized manifests as the additional manifests

Security

Created (chartered) the security working group

Defined vulnerability and early-disclosure process

Defined a threat model

Began first security-related feature track

Sandbox

48 repos in the sandbox

23 sandbox repos had at least one coordinated release

11 new projects joined the sandbox

Highlights:
- Func (donated from Project Boson)
- Plugin-quickstart (UX)
- Plugin-event (CLI + Eventing)
- Monitoring (user contributed)

Come Join Us!

Knative is an open source project that anyone in the community can use, improve, and enjoy. We'd love ❤️ you to join us!

Visit https://knative.dev/community/ for more information.