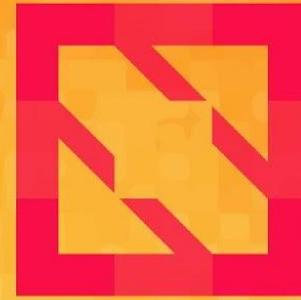




**KubeCon**



**CloudNativeCon**

**North America 2019**





KubeCon



CloudNativeCon

North America 2019

# Intro to Kubernetes SIG-Architecture Subprojects

*Jordan Liggitt and Davanum Srinivas*



# Who Are We?



KubeCon

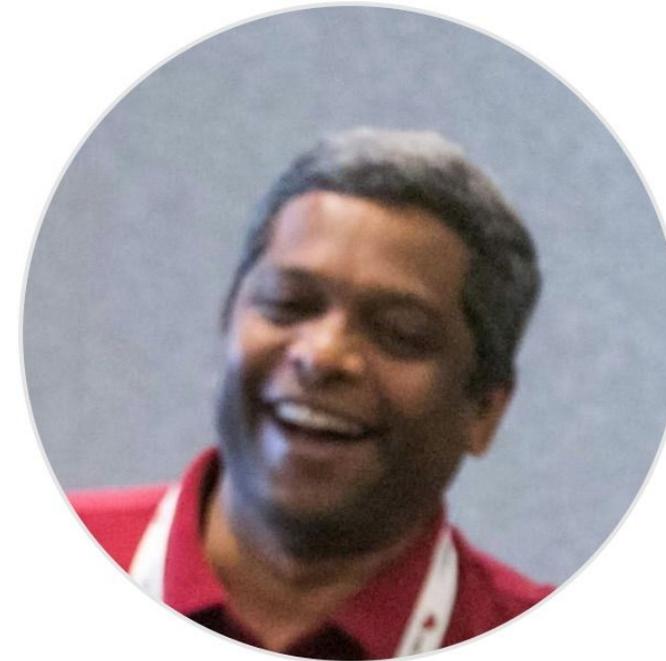


CloudNativeCon

North America 2019



**Jordan Liggitt**  
Staff Software Engineer, Google  
@liggitt



**Davanum Srinivas**  
Staff Engineer, VMware  
@dims

# Kubernetes Community Values



KubeCon



CloudNativeCon

North America 2019

- Distribution is better than centralization
- Community over product or company
- Automation over process
- Inclusive is better than exclusive
  - Your feedback is solicited
- Evolution is better than stagnation

# Kubernetes Project Overview

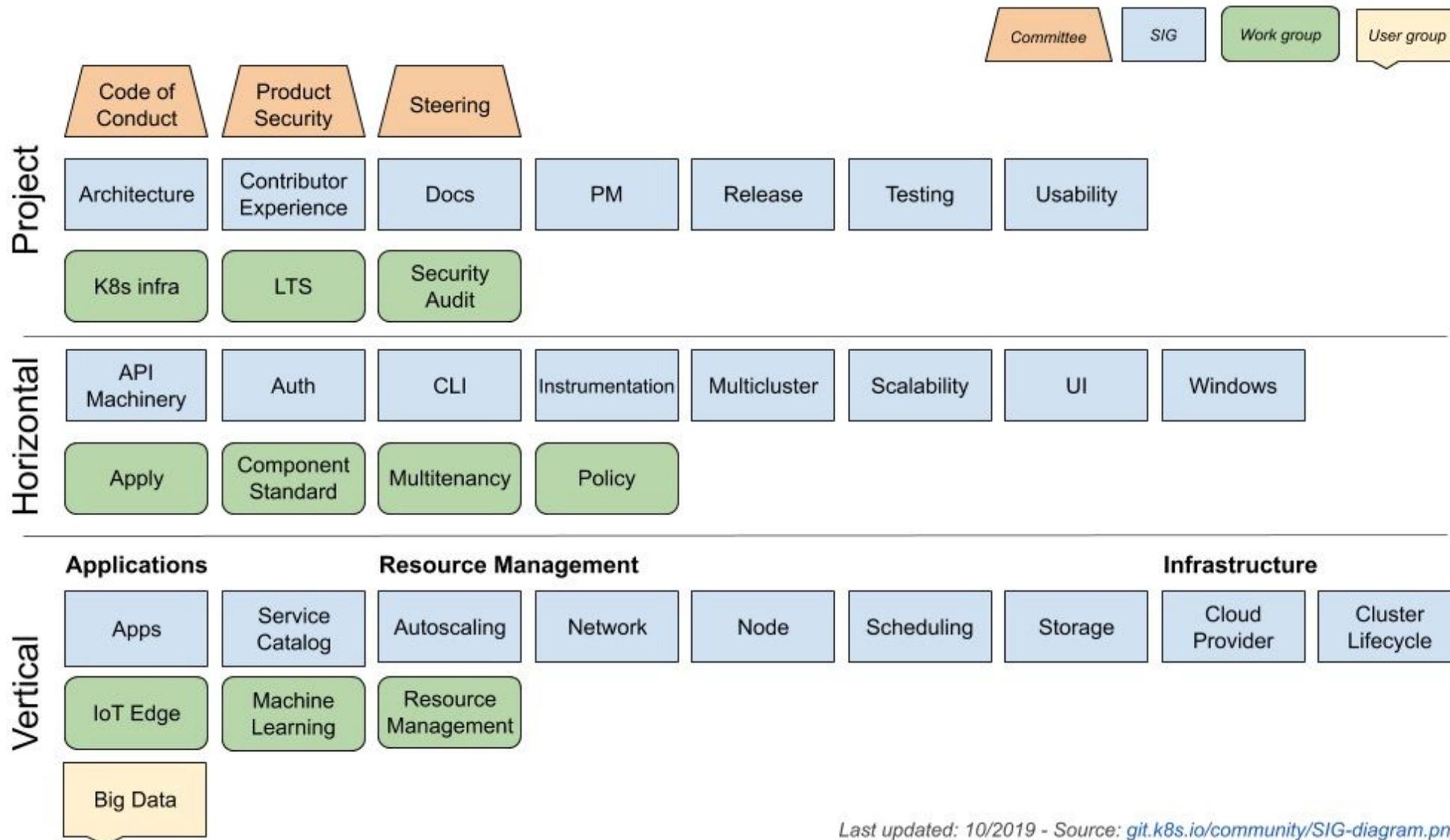


KubeCon



CloudNativeCon

North America 2019



# SIG Architecture Scope



KubeCon



CloudNativeCon

North America 2019

The Architecture SIG maintains and evolves the design principles of Kubernetes, and provides a consistent body of expertise necessary to ensure architectural consistency over time.

- *Conformance test definitions*
- *API conventions*
- *Architectural renderings*
- *Design principles*
- *Deprecation policy*

# Cross-cutting Processes



KubeCon



CloudNativeCon

North America 2019

- Conformance test review and management
- API review process
  - [go.k8s.io/api-review](https://go.k8s.io/api-review)
- Design documentation management
  - [git.k8s.io/enhancements/keps](https://git.k8s.io/enhancements/keps)
- Deprecation policy management
  - [k8s.io/docs/reference/using-api/deprecation-policy](https://k8s.io/docs/reference/using-api/deprecation-policy)
  - [k8s.io/docs/setup/release/version-skew-policy](https://k8s.io/docs/setup/release/version-skew-policy)

# What other kinds of issues?



KubeCon



CloudNativeCon

North America 2019

- Ambiguous behavioral questions
  - Inconsistencies in behavior across resources
- Unanswered questions
- Anything where TL/Chairs/Owners conflict
- Start a mailing list thread - come with KEPs and details!
  - [git.k8s.io/community/sig-architecture#contact](https://git.k8s.io/community/sig-architecture#contact)

# Sub Projects



KubeCon



CloudNativeCon

North America 2019

- **Architecture and API**
  - Document design principles
  - Document and evolve system architecture
  - Reviewing, Curating extension patterns
- **Code Organization**
  - Repository structure, branching, vendoring
- **Conformance Definition**
  - Review, approve changes to conformance test suite
- **Production Readiness Reviews**

# API Review



KubeCon



CloudNativeCon

North America 2019

- Review process
  - [go.k8s.io/api-review](https://go.k8s.io/api-review)
- Project board
  - [github.com/orgs/kubernetes/projects/13](https://github.com/orgs/kubernetes/projects/13)
- API Conventions, Guidelines
  - [git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md](https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md)
  - [git.k8s.io/community/contributors/devel/sig-architecture/api\\_changes.md](https://git.k8s.io/community/contributors/devel/sig-architecture/api_changes.md)
  - Very relevant for in-tree API design / additions / changes
  - Some guidelines also apply to CRD development

# Code Organization



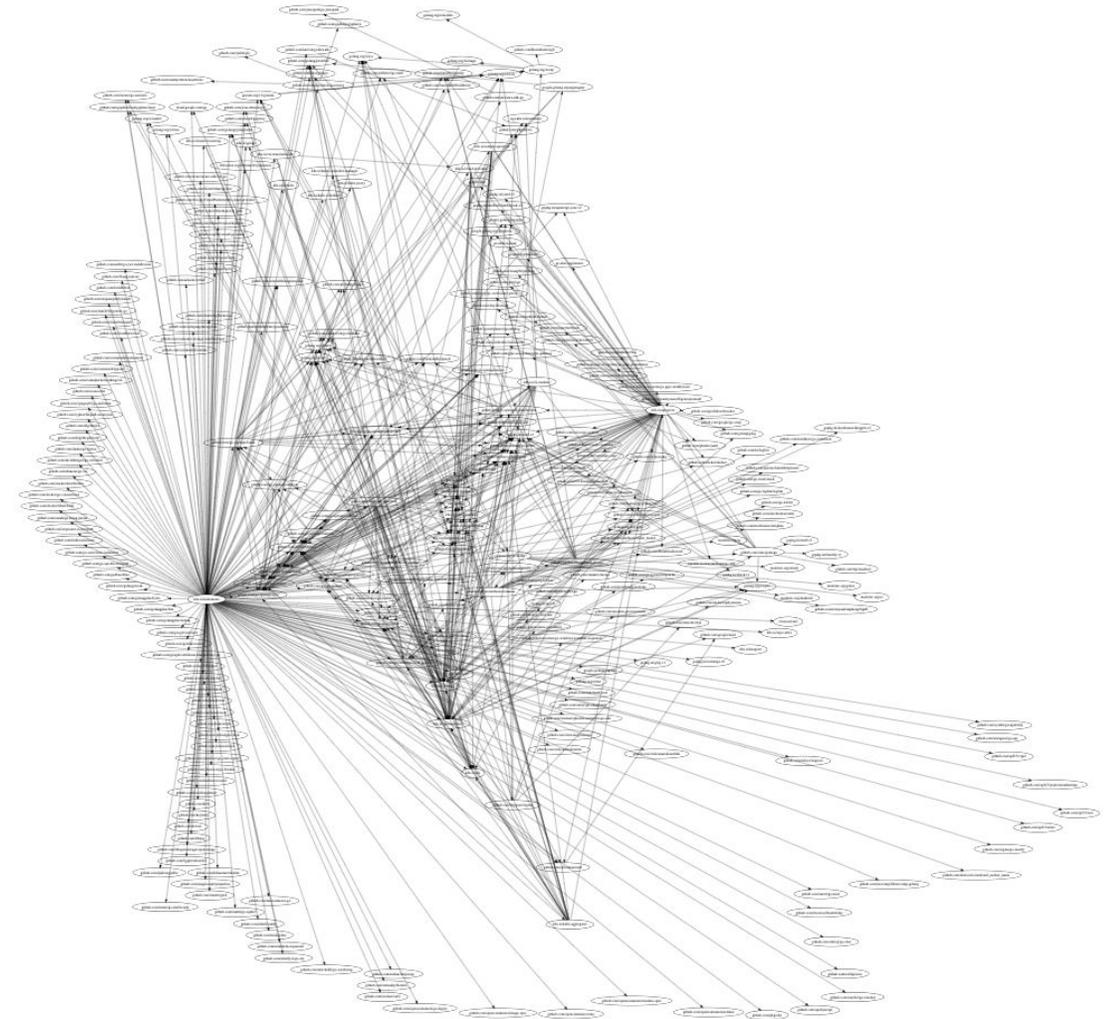
KubeCon



CloudNativeCon

North America 2019

- [bit.ly/sig-architecture-code-org](https://bit.ly/sig-architecture-code-org)
- [github.com/orgs/kubernetes/projects/27](https://github.com/orgs/kubernetes/projects/27)
- Dependency management
- Subrepo structure



Source: <http://issue.k8s.io/76395>

# Conformance Test & Promotion



KubeCon



CloudNativeCon

North America 2019

- Ensuring consistent support and behavior across distributions
  - [bit.ly/sig-architecture-conformance](https://bit.ly/sig-architecture-conformance)
  - [github.com/orgs/kubernetes/projects/9](https://github.com/orgs/kubernetes/projects/9)
  - [git.k8s.io/community/contributors/devel/sig-architecture/conformance-tests.md](https://git.k8s.io/community/contributors/devel/sig-architecture/conformance-tests.md)
- Improving test health and feedback
  - Adding presubmit conformance test coverage  
[github.com/kubernetes/enhancements/pull/1306](https://github.com/kubernetes/enhancements/pull/1306)
  - Conformance tests only use GA features/APIs  
[git.k8s.io/enhancements/keps/sig-architecture/20191023-conformance-without-beta.md](https://git.k8s.io/enhancements/keps/sig-architecture/20191023-conformance-without-beta.md)

# Conformance Test & Promotion



KubeCon



CloudNativeCon

North America 2019

- Visualizing current coverage
  - [apisnoop.cncf.io](https://apisnoop.cncf.io)
  - Filter by stable/beta/alpha status
  - Filter by API group
  - Filter by test

## v1.18.0-alpha.0.638

From ci-kubernetes-e2e-gci-gce

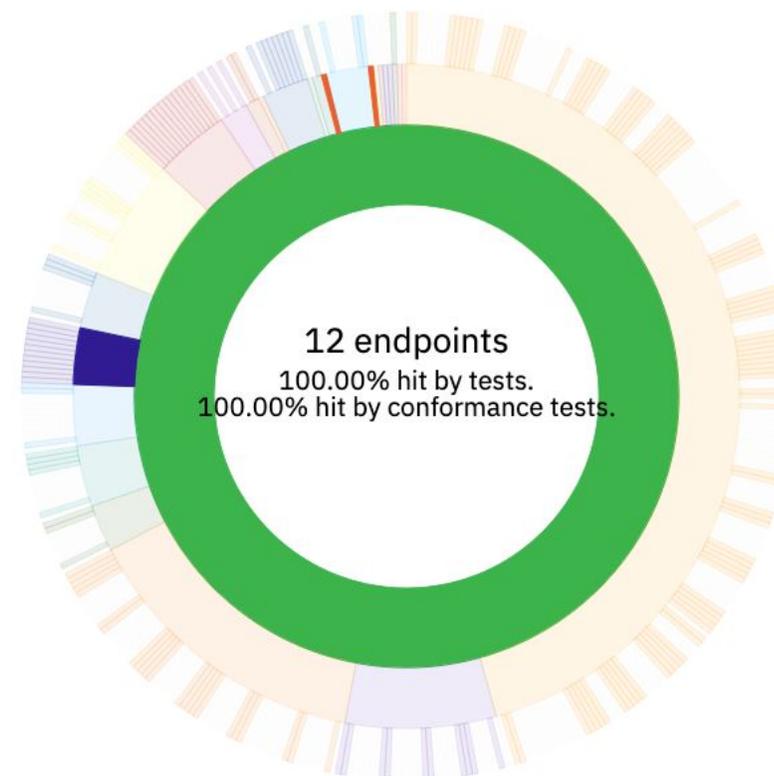
2019-11-11

[View this job on Spyglass](#)

stableapiextensions

12 ENDPOINTS

100.00% hit by tests.



# Production Readiness Reviews



KubeCon



CloudNativeCon

North America 2019

- [bit.ly/sig-architecture-prod-readiness](https://bit.ly/sig-architecture-prod-readiness)
- Asking the question "how will people run this in production?"
- Feedback loop from cluster operators, features that went well / didn't go well
- Developing questions/processes to improve production readiness
- Examples: monitoring, admin documentation, rollout, scale, security

# Where are we going?



KubeCon



CloudNativeCon

North America 2019

- Focus on extensions
  - Extension mechanisms GA in v1.16
  - Let the ecosystem grow and distill the best patterns
  - Fewer changes to core
  - Prove out new ideas as CRD APIs
- Build out conformance
- Cleanup + Reliability (.0 releases, production readiness)
- Organization Scaling
- KEPs KEPs KEPs

# How you can participate?



KubeCon



CloudNativeCon

North America 2019

- Attend the main and subproject meetings
- Follow along on project boards, mailing lists, and slack:  
[git.k8s.io/community/sig-architecture#contact](https://git.k8s.io/community/sig-architecture#contact)
- Find something of interest you can help with
- Speak up - offer your thoughts and ideas, ask questions for background/history, etc.
- Help with issue triage, PR reviews, docs



**KubeCon**



**CloudNativeCon**

North America 2019

# Thank You!

Q/A

