



KubeCon



CloudNativeCon

Europe 2026





KubeCon



CloudNativeCon

Europe 2026

#KubeCon #CloudNativeCon

Explore TAG Workloads Foundation: Advancing Cloud Native Execution From Core Runtime To Applications

Stephen Rust, Principal Architect, Akamai Cloud

Yuan Tang, Senior Principal Software Engineer, Red Hat

Marlow Warnicke, Senior Engineer, Nvidia

Kante Yin, R&D Engineer, HivergeAI



Agenda

- What is a TAG?
- TAG Restructuring
- TAG Workloads Foundation
- Community Activities
- Project Shoutouts
- How to get involved!



KubeCon



CloudNativeCon

Europe 2026

What is a TAG?



What is a TAG?

Support Projects

Define and Advance Practices, Standards, Assessments

Scale contributions by the technical community

Retaining integrity increasing quality

In support of the CNCF's mission

“... within each technical domain of cloud native systems, applications, and architectures for the benefit of the community and our project adopters. This supports the CNCF's technical vision by addressing critical problems faced by adopters and contributing to a robust cloud native ecosystem.”

<https://github.com/cncf/toc/blob/main/governance/tag-governance.md#technical-advisory-groups-tags>

TAG Goals

Strengthen the project ecosystem

Bridge between projects

Identify gaps in the CNCF Project Portfolio

Scale / Offload the TOC

Provide Technical Expertise

Educate and inform users

Help foster project maturity

TAG Operational Resilience

- Observability
- Management
- Business Continuity
- Resource Optimization
- Cost Efficiency
- Energy
- Performance
- Troubleshooting
- Reliability
- Day 2 Ops

TAG Developer Experience

Microservices, Streaming, Messaging, API Management, Dev Frameworks

TAG Workloads Foundation

Containers, OS, Runtime, Virtual Machines, Serverless, Web Assembly, Databases, Batch, Serving, Scheduler, Orchestrator, Deployment, Dynamic Scaling, CI/CD

TAG Infrastructure

Data, Storage, Network, DNS, Compute, Service Mesh, Infrastructure-as-Code, Edge, Sovereignty, Load Balancing

TAG Security and Compliance

- Security hygiene
- Policy-as-code
- Compliance
- Auditing
- Threat Modeling
- Secure Software Supply Chain



KubeCon



CloudNativeCon

Europe 2026

TAG Responsibilities



Reach out to projects, engage with communities



Often the first point of contact for a project with the CNCF



Provide “Domain Technical Review”



Sponsor TAG initiatives such as whitepapers



Sponsor TAG-led Community Subprojects



Hold regular public meetings / everything in the open

Domain Technical Reviews

What is a DTR?

- ❑ Framework for engaging with projects to standardize across all TAGs when reviewing projects for sandbox, incubation, graduation, and providing feedback and recommendations to the TOC
- ❑ Set of General Technical Questions based on project level
- ❑ Domain specific criteria added on for TAG domain specific
- ❑ Templates for questions and feedback
- ❑ Due 2 weeks prior to TOC review to allow project to respond

General Technical Questions

- ❑ **Day 0 - Planning Phase. (Sandbox)** - design and architecture of the cloud native project.
- ❑ **Day 1 - Installation and Deployment Phase (Incubation)** - initial installation and deployment of the design
- ❑ **Day 2 - Day-to-Day Operations Phase (Graduated)** - post-deployment operations in production-ready environments to include monitoring, maintenance, auditing and troubleshooting.





KubeCon



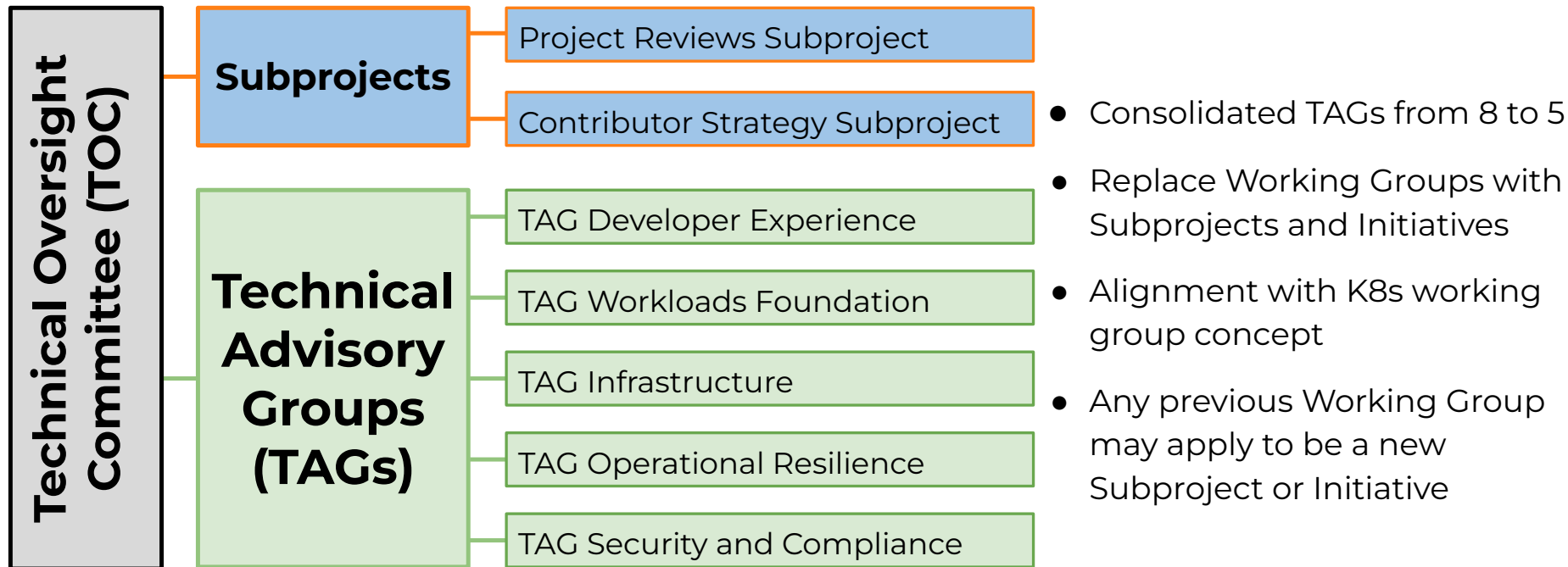
CloudNativeCon

Europe 2026

Restructuring of TAGs

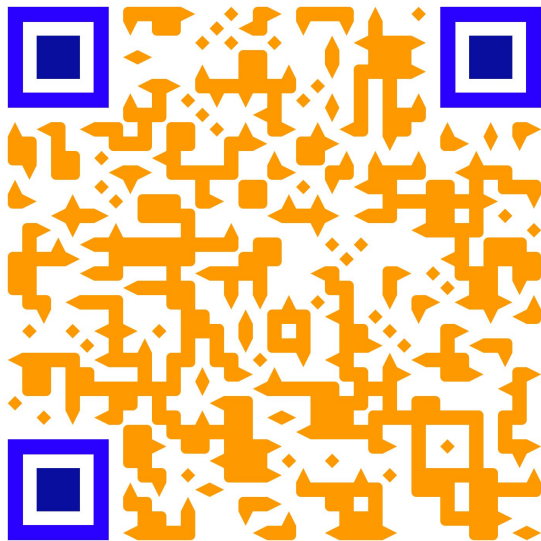


TAG Reboot



TAG Reboot References

TAG Reboot TOC GitHub Issue



TAG Reboot Presentation Slides





KubeCon



CloudNativeCon

Europe 2026

What is TAG Workloads Foundation?



Mission

To define and advance practices and standards for **fundamental cloud native workload execution environments** and their related **lifecycle management** within cloud native systems, applications, and architectures.

Scope

- Containers
- OS (Special Purpose Operating Systems)
- Runtime
- Virtual Machines
- Serverless
- Web Assembly
- Databases
- Batch
- Serving
- Scheduling
- Orchestrator
- Deployment
- Dynamic Scaling
- CI/CD

Out of Scope

- Anything not explicitly mentioned on the left is out of scope.
- Any end-user directed activities and initiatives.
- Technologies that are not cloud-native (defined in [CNCF Cloud Native definition](#))

Leadership

Chairs

- Danielle Tal ([@miao0miao](#))
- Paco Xu ([@pacoxu](#))
- Yuan Tang ([@terrytangyuan](#))

Tech Leads

- Alexander D. Kanevskiy ([@kad](#))
- Hongcai Ren ([@RainbowMango](#))
- Kante Yin ([@kerthcet](#))
- Rajas Kakodkar ([@rajaskakodkar](#))
- Stephen Rust ([@srust](#))

TOC Liaisons

- Alex Chircop ([@chira001](#))
- Kevin Wang ([@kevin-wangzefeng](#))



KubeCon



CloudNativeCon

Europe 2026

Community Activities





KubeCon



CloudNativeCon

Europe 2026

Subprojects



Propose a Subproject

- Open a new issue to propose an subproject! <https://github.com/cncf/toc/issues>

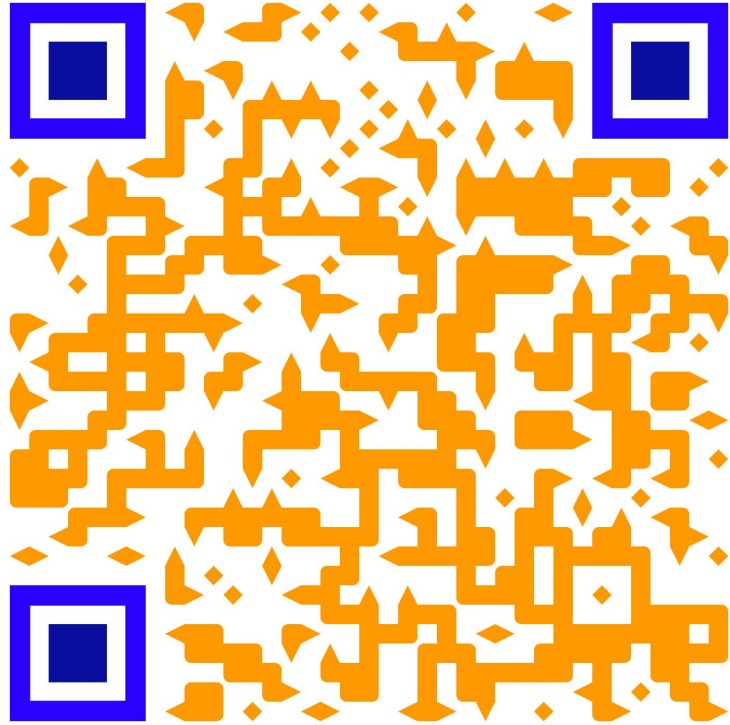
Create new issue

Subproject Application

Subproject application form



Batch Systems Subproject











Batch Systems Subproject

"To define and advance practices and standards for fundamental cloud native workload execution environments and their related lifecycle management within cloud native systems, applications, and architectures."

Landscape:

<https://tag-runtime.cncf.io/wgs/bsi/landscape/>

KUBERNETES-NATIVE (8)

 YUNI KORN Apache Yunikorn	 ARMADA Armada	 FUZZBALL Fuzzball	 KubeWharf Godel-Scheduler	 MCAD MCAD (Multi-Cluster A...)	 run:ai Run:ai
 slinky Slinky	 VOLCANO Volcano				

KUBERNETES-SPONSORED (1)

 Kueue Kueue
--

K8S-CONNECTORS (5)

 flux Fluxion Fluxion	 HTCondor HTCondor	 IBM Spectrum LSF IBM Spectrum LSF	 PBS Professional PBS Professional	 slurm Slurm
--	---	---	---	---

Batch Systems Subproject

Meetings biweekly Tuesdays at 8AM PST, next meeting December 2nd.

Meetings are usually informative and have a variety of topics. Examples include:

- Topology
- DRA discussions
- Demos of projects in this space (RunAI, slurm-operator, slurm-bridge)

Current Initiatives:

- [Scheduling for Cloud Native AI](#)
 - To enumerate and educate the various challenges and opportunities regarding optimizing resource allocation for Cloud Native Artificial Intelligence (CNAI) workloads
 - Almost complete-currently in review by TOC
- Benchmarking - TBD, contact Marlow Warnicke ([here](#)) for more info on slack



KubeCon



CloudNativeCon

Europe 2026

Initiatives



Initiative: Cloud Native AI Scheduling Challenges

Whitepaper

- TAG Workloads Foundation stewarding this initiative under the Batch Systems Subproject
- <https://github.com/cncf/toc/issues/1641>
- Currently in review by the TOC

“This paper aims to enumerate and educate the various challenges and opportunities regarding optimizing resource allocation (aka scheduling) for Cloud Native Artificial Intelligence (CNAI) workloads. Cloud Native allows easy scaling of resources, making it ideal for AI workloads of two types: training and inference.”



Initiative: Cloud-Native Foundations for Distributed Agentic Systems

- TAG Workloads Foundation stewarding this initiative
- <https://github.com/cncf/toc/issues/1746>
- Approved. Looking for contributors!

“Formalise principles, reference patterns and ecosystem strategy for running massively distributed systems of collaborating AI agents on Kubernetes and other cloud-native substrates.”



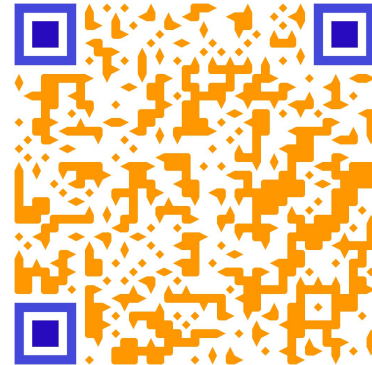
Other Initiatives

Roughly 30 other initiatives are currently underway

- Current Open Initiatives

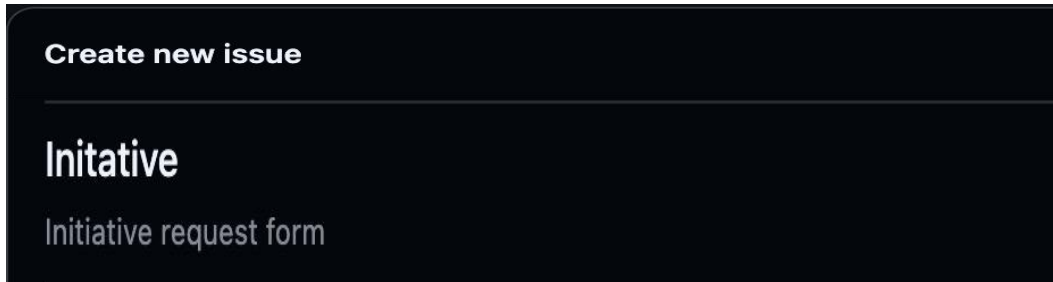
Example Initiatives:

- AI Security white papers
- AI Sustainability - Challenges & Opportunities
- Business Continuity: white paper and best practices
- Foundations for Distributed Agentic Systems
- Community Knowledge Graph
- Compliance Use Cases White Paper
- Data Storage in AI
- Improving Developer Experience for Secure Coding
- MCP Server Standards Whitepaper
- Observability Query Language Standardization
- Security Controls Catalog Refresh
- Storage Landscape V3
- Supply Chain Security Insights



Propose an Initiative

- Open a new issue to propose an initiative! <https://github.com/cncf/toc/issues>





KubeCon



CloudNativeCon

Europe 2026

Community Groups





KubeCon



CloudNativeCon

Europe 2026

Projects





KubeCon



CloudNativeCon

Europe 2026

Graduated Projects



Graduation

Maturity and Sustainability

Thriving Adoption

Healthy Governance Structure

Strong Diverse Community

High Standards for Security and Compliance

“This includes adopting the CNCF Code of Conduct, maintaining the Core Infrastructure Initiative (CII) Best Practices Badge, completing security reviews, and proving a stable committer process with multi-organization backing.”

https://github.com/cncf/toc/blob/main/.github/ISSUE_TEMPLATE/template-graduation-application.md

Continuous Integration and Delivery



2022-11-30



2022-12-06

Database




2019-11-05



2020-09-02


Scheduling and Orchestration



kubernetes

CNCF GRADUATED

2018-03-06



KEDA

CNCF GRADUATED

2023-08-22



Knative

CNCF GRADUATED

2025-09-11



Crossplane

CNCF GRADUATED

2025-10-28

Container Registry



2020-06-15



2025-10-28

Container Runtime



2019-02-28



2023-07-19



KubeCon



CloudNativeCon

Europe 2026

Incubating Projects



Incubation

Significant Production Adoption

Publicly documented list of adopters

Strong Vendor-Neutral Governance

Clear Maintainer Lifecycle

“Projects also need to demonstrate sustainability, a healthy contribution flow, and adopt the CNCF Code of Conduct.”

https://github.com/cncf/toc/blob/main/.github/ISSUE_TEMPLATE/template-incubation-application.md

Scheduling and Orchestration



KARMADA

CNCF INCUBATING

2023-12-12



Kubeflow

CNCF INCUBATING

2023-07-25



VOLCANO

CNCF INCUBATING

2022-03-21



OpenKruise

CNCF INCUBATING

2023-03-02

OS / Container Runtime / Virtual Machines



KubeVirt

CNCF INCUBATING

2022-04-19

Lima

CNCF INCUBATING

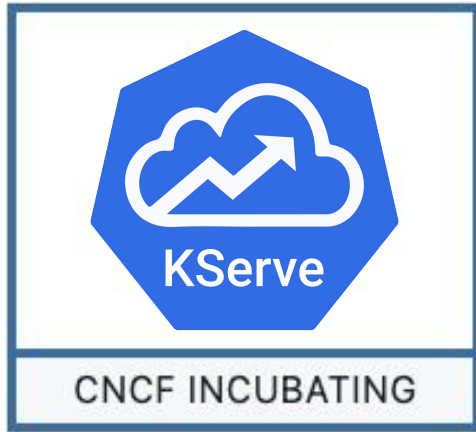
2025-10-14



CNCF INCUBATING

2024-08-02

Serving



2025-09-29

WebAssembly



2024-11-08



KubeCon



CloudNativeCon

Europe 2026

Sandbox Projects



Sandbox

Initial Project Stage

Innovative and Experimental Ideas

Continuous Stage of Evolution

Experimental

<https://github.com/cncf/sandbox>

Create new issue



Sandbox application



Apply for CNCF Sandbox

Orchestration, Serverless, CI/CD Examples



Ilm-d
2026-03-12



KAI Scheduler
2025-12-21



KubeElasti
2026-01-03



OpenChoreo
2026-01-06



KubeCon



CloudNativeCon

Europe 2026

Getting Involved



How to get involved?

- TAG biweekly community [meetings](#), [Slack channel](#), [mailing list](#)
- Contribute to [initiatives](#), [subprojects](#), whitepapers
- Help with project reviews
 - Join subproject review meetings
 - Contribute to Domain Technical Reviews (DTRs)
 - Work with project maintainers and CNCF TOCs
- KubeCon
 - TAG booth at the project pavillion
 - Contribute to maintainer sessions





KubeCon



CloudNativeCon

Europe 2026

