

TAG App Delivery

Metadata

This document includes agenda and notes for all TAG App Delivery meetings. It's open to the public to edit. Expand the "Document Outline" at the left to navigate to older discussions.

- GitHub repo: <https://github.com/cncf/tag-app-delivery>
- Community page: <https://community.cncf.io/tag-app-delivery>
- Web site: <https://tag-app-delivery.cncf.io/>
- Mailing list: <https://lists.cncf.io/g/cncf-sig-app-delivery/topics>
- Slack channel: <https://cloud-native.slack.com/archives/CL3SL0CP5>
- General meetings:
 - Every two weeks on Wednesday at 3pm UTC. [RSVP here](#)
 - Old Zoom:
<https://zoom.us/j/7276783015?pwd=R0RJMkRzQ1ZjcmE0WERGcTJTOEVyUT09>
 - New Zoom:
<https://zoom-lfx.platform.linuxfoundation.org/meeting/98590236563?password=b0335b64-4162-4499-bb61-ff2c7dec2724>
 - Passcode: 77777

Adding agenda items

- The group wants contributors to share their stories and ideas. To present something to the group, add an agenda item with your name next to it.
 - The maximum number of project presentations is two per meeting
 - DM TAG leaders in Slack to confirm time is available.
- Projects are encouraged to present to the TAG any time, particularly when initially proposed and when under annual review or review for promotion.
 - Guidance for projects presenting to the TAG is in development.
- TAG work in progress is discoverable in both [cncf/toc](#) and [cncf/tag-app-delivery](#) GitHub repos.

Projects

- Sandbox submissions ([\[query\]](#))
 - Atlantis ([#474](#))
 - Radius ([#481](#))
 - Connect ([#520](#))
 - Apicurio ([#517](#))
 - Threeport ([#512](#))
 - KubePlus



- Shipwright
 - KusionStack
 - OpenTofu
 - CozyStack
 - Iter8 - presentation May 15, 2024 to TAG
 - Score
 - Syngit
- Incubation
 - Tekton - presentation May 15, 2024
- Graduation
 - Buildpacks - presentation Jun 12, 2024
 - Dapr
 - Knative ([applied](#))

Active Working Groups

- [WG Platforms](#)
- [WG Artifacts](#)
- [WG App Development](#)
- [WG Infrastructure Lifecycle](#)

Meeting Template

Host:

Notetaker:

Attendees:

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
- Project presentations (max 2 per meeting!)
- Ideas and PTAL

Notes:

2025-03-05

Host: Lian Li

Notetaker:

Attendees:

- Lian Li (Co-Chair)

- Sarah Christoff
- Timur Tukaev
- Andrei Kvapil (kvaps)

Agenda:

- WG Updates i
- Lightning Talks at KubeCon booth: <https://forms.gle/7NKK4UNxNFnhHBgAA>
- Cozystack presentation. CNCF Sandbox candidate: <https://github.com/cncf/sandbox/issues/322>
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Notes:

2025-02-19

Host: Lian Li

Notetaker:

Attendees:

- Lian Li (Co-Chair)
- Yacine Kheddache (Microcks)
- Amine AIT AAZIZI

Agenda:

- WG Updates
- Lightning Talks CFP for TAG booth at KubeCon <https://forms.gle/nxiJrpFiRHe6iXFX8>
- [Microcks](#) project update (Incubation application)
 - ☐ 3rd presentation (2025-02-19) - TAG App Delivery - Microcks update

Notes:

- Infrastructure Lifecycle WG finishing up Whitepaper outline
 - https://docs.google.com/document/d/1gqxc8xG5zS_YWpQ55a928bsGI2AX2xI_NG0e7lUtZeJE/edit?tab=t.0#heading=h.bzxwakc4a3o
- App Dev WG is still in discussion for the content and scope of their whitepaper

2025-02-05

Host: Roberth Strand

Notetaker:

Attendees:

- Yacine Kheddache (Microcks)
- Roberth Strand (Co-Chair)
- Lian Li (Co-Chair)
- Mauricio Salatino (Co-chair)
- Colin Lacy
- Budhaditya Bhattacharya (Tyk)
- Amine AIT AAZIZI

Agenda:

- Update on the TAG reorganization proposal
 -  TOC Meeting 2025-02-04
 -  CNCF TOC - TAG Reboot, Feb 4 2025

Notes:

2025-01-22

Host: Roberth Strand

Notetaker: Valentina Rodriguez Sosa

Attendees:

- Roberth Strand (Co-Chair)
- Dylan Page (Tech Lead)
- Stevan Le Meur (Podman Desktop, Red Hat)
- Tim deBoer (Podman Desktop, Red Hat)
- Florent Benoit (Podman Desktop, Red Hat)
- Alessandro Vozza (Microsoft)
- Valentina Rodriguez Sosa (Red Hat - Platform WG)
- Colin Lacy (Cisco)
- Ram Iyengar (Linux Foundation)
- Daniel Oh (App Development Co-Chair)
- Siddhant Khisty (Devtron)

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
- Project presentations (max 2 per meeting!)
 - Podman Desktop [[GitHub](#), [Sandbox issue](#)]
- Ideas and PTAL

Notes:

- Working group status
 - Platform working group from @roberth Strand
 - Paap research interviews right now (in progress).
 - Open PR
 - Platform Engineering Maturity level - assessments (no news)
 - App Dev working group from Daniel Oh
 - CNCF projects to find the right projects to build apps
 - All projects should be related to platforms such as Backstage.
 - Infrastructure Lifecycle WP
 - Working on a WhitePaper on what the group is about to help the community understand the main goals.
 - From Artifacts - no status was provided.
- KubeCon
 - Kiosk at KubeCon
 - lighting talks
 - Agenda about sessions
- Podman presentation from @steven le meur (Red Hat)
 - Submitted to be a Sandbox project.
 - Presentation included slides and demo
 - Contributors are from Red Hat. However, 100 contributors outside Red Hat are contributing .
 - But the team has seen more contributors coming now that they recently started the Sandbox submission.
 - From Karena Angell on the chat "Reminder that Podman Desktop was just approved to CNCF Sandbox - it would be great to discuss how to onboard new contributors and for TAG App Delivery to help identify where in the ecosystem the PD team can engage. As well as extensions that would help the greater ecosystem".



<https://podman-desktop.io>



<https://github.com/podman-desktop>



<https://kubernetes.slack.com/podman-desktop>

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- Project resources
 - <https://podman-desktop>
 - <https://github.com/podman-desktop>
 - <https://kubernetes.slack.com/podman-desktop>
- Contributors can connect with the team on slack
- Interest on presenting at kubecon maybe a workshop/lab/presentation

- Slides:  Podman Desktop - TAG App Delivery Jan25

2025-01-08

Host: Lian Li

Notetaker: Valentina Rodriguez Sosa

Attendees:

- Lian Li (Co-Chair)
- Roberth Strand (Co-Chair)
- Dylan Page (Tech Lead)
- Allen Jones
- Jochen Zehnder (Infra LC WG Co-Chair)
- Nandita Valsan
- Siddhant Khisty
- Mona Borham
- Aman Singh
- Dhaval Shah

Agenda:

- Intros and new faces
 - Allen Jones - Drasi Project Engineering Manager, here to present Drasi
 - Nandita Valsan - Drasi Project PM
 - Jochen Zehnder
 - Daniel Gerlag
 - Aman Singh
 - Rukon Niu
 - Amine Ait Aazizi- Cloud Architect -looking to see how he can contribute
 - Dhaval Shah, DevOps Engineer - learn how to contribute
 - Ricardo Bemfica from Livelo (Brazil) - learn more about the group and how he can contribute
 - Valentina Rodriguez Sosa , from Red Hat, collab with the Platform Working Group right now on an issue about building a framework on platform
 - Mona Borham, Independent contractor, ex: Vmware. Catching up contributing to CNCF after a break
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
 - Infrastructure Lifecycle
 - GitHub Issue: [Technical Paper Proposal: Cloud Native Infrastructure-Lifecycle](#)
 - Meeting schedule: Bi-weekly on Thursday at 17:00 GMT+1
 - [Zoom](#)
- Project presentations (max 2 per meeting!)

- Drasi, <https://github.com/drasi-project>, [Sandbox issue](#), <https://drasi.io>
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- Ideas and PTAL

Notes:

- **From Lian Li, about this meeting:**
 - sometimes projects present here in this meeting and they give recommendations to the TOC.
 - Active Working Groups
 - [WG Platforms](#)
 - [WG Artifacts](#)
 - [WG App Development](#)
 - [WG Infrastructure Lifecycle](#)
 - TAG: we have general discussions, create deliverables such as state of the ecosystem, booth at kubecon, any ideas you can propose and discuss it in this meeting.
 - Lian invited us to participate on the slack as well.
 - Contribute to blogs - check with the team first before starting the blog to ensure the idea/topics is relevant, after that the contributor can create a PR and request feedback from the community or work with others to build the content.
- **From Robert status on Platform working group:**
 - Paap - research about Paap
 - Maturity model survey
- **From Jochen Zehnder, Infrastructure lifecycle working group**
 - Infrastructure paper defines the foundation for infrastructure as a code. What's cloud native infrastructure, different toolings, different stages. High Level and generic, First paper. If you want to contribute join the meeting tomorrow Thursday 11 EST
 -
- **App Development working group** - they have the meeting at the same time as this meeting. No status was provided.
- **Presentation of drasi-  Drasi-CNCF App Delivery TAG presentation**
<https://github.com/drasi-project>, docs are at <https://drasi.io>
- If interested to contribute or learn more about this project reach out to the team on Drasi's Discord, <https://discord.gg/AX7FneckB>
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A data change processing platform

CNCF Sandbox Presentation- App Delivery TAG, Jan 8th 2025

Presented by Allen Jones

<https://github.com/drasi-project>

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2024-12-25

Cancelled due to holidays

2024-12-11

Host: TBD

Notetaker: TBD

Attendees:

- Lian Li
- Roberth Strand
- Sam Koved
- Dylan Page

Agenda:

- Intros and new faces

- Sam from RedHat, is currently working on an OpenSource project
<https://github.com/kubearchive/kubearchive>
- Proposing Dylan Page for TL ([#780](#), <https://github.com/cncf/toc/issues/1498>)
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
- Project presentations (max 2 per meeting!)
- Ideas and PTAL
- KubeCon NA 2024, done! KubeCon EU up next
 - Maintainer summit, deadline today
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Notes:

- KubeCon lightning talk submissions deadline today
 - We'll submit a lightning talk for the maintainer track and a panel session for the maintainer summit

2024-10-16

Host: Sarah Christoff (TL)

Notetaker: Dylan Page (TL)

Attendees:

- Roberth Strand (co-chair)
- Ryan Nowak
- Justin Abrams
- Colin Lacy
- Jochen Zendher
- Sarah Christoff (TL)
- Dylan Page (TL)

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
- Project presentations (max 2 per meeting!)
- Ideas and PTAL

Notes:

- WG Updates:
 - Infra Lifecycle
 - Blog/Website content
 - Starting whitepaper proposal, call for contributors
 - Artifacts
 - No update



- AppDev
 - **Request for Feedback/Review** - Survey for KubeCon NA
 - **App Dev WG - CNCF Survey**
 - https://www.surveymonkey.com/r/Preview/?sm=RFzQALvxGy_2Bny6zKgZoEZlmAQbl83yA_2BREabXkOl16exqM9qrPQf8vyKH5_2FGAEt5
- Platforms
 - No update
- InfraLifecycle Whitepaper
 - <https://github.com/cncf/tag-app-delivery/issues/759>
 - General guidance for most end-users
 - Not super deep on technology, domain, workflow
 - "Practices everyone can learn from"
 - Questions
 - Interactions with vendors? Saas?
- TAG State of the Ecosystem
 - Due Nov 1st to the TOC
 - Need answers from each of the TAGs
 - <https://github.com/cncf/tag-app-delivery/issues/742>
 - **State of the Ecosystem**

2024-10-02

Host: Dylan Page (Tech Lead)

Notetaker:

Attendees:

- Dylan Page
- Raghu Shankar
- Sarah Christoff
- Mauricio Salatino
- Colin Lacy
- David Stenglein
- Damien Dassieu
- Nesrine Sfaxi
- Ryan Nowak

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
- Project presentations (max 2 per meeting!)
 - Syngit

- Ideas and PTAL

Notes:

- Wg Updates
 - Platforms
 - Organizing interviews for Platform-as-a-Product whitepaper
 - Survey/Assessment in the Platform Maturity Model
 - App Development
 - **Request for Feedback/Review** - Survey for KubeCon NA
 -  App Dev WG - CNCF Survey
 - https://www.surveymonkey.com/r/Preview/?sm=RFzQALvxGy_2Bny6zKg_ZoEZlmAQbl83yA_2BREabXkOl16exqM9qrPQf8vyKH5_2FGAEt5
 - Infra Lifecycle
 - Blog post:
 - Website content: <https://github.com/cncf/tag-app-delivery/pull/751>
- Syngit Project Presentation ([Sandbox Application](#))
 - <https://github.com/syngit-org/syngit>
 - a Kubernetes operator that allows you to push resources on a git repository and manage their lifecycle.
 - Why can syngit be beneficial to the end user?
 - Instead of pulling changes from gitops, it pushes and commits the changes
 - Acts as a proxy from the kubectl apply, interrupt it and commit to git, allowing CD tools to apply instead.
 - Technical Architecture
 - RemoteUserBinding
 - Binds the RemoteUser to a Kubernetes RBAC User/Group/SA
 - RemoteUser
 - Git server credentials
 - RemoteSyncer
 - Can scope to specific resources to block/intercept to commit instead
 - Questions
 - *How are you handling the authentication with Git? Who to record who makes the commit?*
 - This is why the RemoteUser object exists. You reference a secret with the Git credentials. The RemoteUserBinding maps K8s auth to RemoteUser
 - *How does it handle failure modes? Missing RemoteUser/Binding?*
 - It blocks the request by default. Syngit is namespaced-scoped.
 - *Where is the best way to join the community*
 - Wiki on the GitHub project with Governance page
 - No Slack/Discord for now, interact through GH Issues/Discussions
- PTAL

- KubeCon Planning - <https://github.com/cncf/tag-app-delivery/issues/658>

2024-09-18

Host: Lian Li (Co-Chair)

Notetaker: Dylan Page (Tech Lead)

Attendees:

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, Infrastructure Lifecycle
- Project presentations (max 2 per meeting!)
 - Dapr ([#748](#))
 - App Development working group - request for feedback (3 mins)
- Ideas and PTAL
 - Localisation PRs
 - Italian: <https://github.com/cncf/tag-app-delivery/pull/692>
 - French: <https://github.com/cncf/tag-app-delivery/pull/693>
 - Portuguese (Br): <https://github.com/cncf/tag-app-delivery/pull/737>
 - Korean: <https://github.com/cncf/tag-app-delivery/pull/750>
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Notes:

- WG Updates
 - Infra Lifecycle
 - Working on blog post
 - Working on adding relevant material to TAG website
 - Platforms
 - Continuing to progress on Platform-as-a-Product whitepaper
 - Official handoff meeting soon for Atul <- Roberth
 - App Development
 - **[Request for Feedback/Review](#)** - Survey for KubeCon NA
 - [App Dev WG - CNCF Survey](#)
- Dapr Project Presentation ([Graduation Proposal](#))
 - <https://github.com/dapr/dapr>
 - Set of APIs for building secure and reliable microservices and distributed services
 - Features
 - Supports any language/frameworks
 - platform agnostic
 - GCP, AWS, Hashicorp, on-prem etc.

- 120 community contributed components
 - Swappable backing components
- Dapr APIs:
 - Service-service invocation
 - `<dapr-url>/invoke/<service>/<method>/`
 - State management
 - `<daprurl>/state/<service>/<key>`
 - Other APIs:
 - configuration
 - publish
 - binding
- Security
 - mTLS/service-mesh
 - Access policies (per api, per action, per app)
- Tracing/Observability:
 - OTel support for traces/metrics
 - Full encapsulated distributed tracing support e2e
- Questions
 - *What are you going to focus on next? Roadmap? 6mons-1yr?*
 - More support for SQL statements
 - Workflows beta -> prod
 - More integration with DNS resolver components
 - *Do you have a governance model? For plugins/component types?*
 - Check for existing component first
 - Open an issue, once approved contributor is assigned
 - Contributor then contributes code/docs for component
 - Have a set of maintainers for each component
 - *Where is the best way to join the community*
 - Discord community
 - <https://github.com/dapr/community/?tab=readme-ov-file#communication-and-discord>

2024-09-04

Host: Roberth Strand (Co-Chair)

Notetaker:

Attendees:

- Ryan Nowak (Microsoft)
- Jochen Zehnder (56k.Cloud)

Agenda:

- Intros and new faces
- Status updates

- WGs - Platforms, Artifacts, AppDev
- Project presentations (max 2 per meeting!)
- Ideas and PTAL

Notes:

- Tag Update
 - Sarah Christoff is now official TechLead
 - Dylan is starting to get more involved in the TAG and is the liaison for the WG Infrastructure Lifecycle Management.
- WG Platform:
 - Atul took over as Chair from Roberth
 - There was an interview last week and more are being scheduled
- WG InfraLifecycle
 - Is now an official working group
 - Next steps are to work on an announcement blog post
- KubeCon Salt Lake City
 - There is now a full conference booth for the TAG, which comes with responsibilities to occupy the booth
 - Robert will share more information with the WG Chairs
 - The idea is that each WG has certain hours at the booth. Which allows to better market when a WG is available
 - There is the TAG App Delivery Logo on the booth, but no more marketing material is allowed. So we need to share the schedule via different channels
 - Set up a public project meeting during KubeCon
 - E.g. meet at the booth and then find some space to have the meeting

2024-08-21

Host: Lian Li (Co-Chair)

Notetaker:

- Colin

Attendees:

- Roberth Strand (Co-Chair)
- Andrei Kvapil (kvaps)
- Colin Lacy
- Dylan Page
- Ryan Nowak

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev

- [Platforms] Nominate Atulpriya Sharma as co-chair of WG Platforms ([#738](#))
 - Sarah Christoff nominated for Tech Lead ([#739](#))
 - Open issue for TL nominations ([#715](#))
- Project presentations (max 2 per meeting!)
- Ideas and PTAL

Notes:

- WG Platforms: Roberth
 - Nomination going for Atul taking over as chair of the WG Platforms
 - Colin Griffin is going to open an issue on the TOC to get their blessings
 - Let's clarify who needs to vote on this:
 - Working group chairs and tech lead
 - Tech lead isn't really active, so likely not applicable
 - GitHub issue template would be helpful
 - Can update the template when there's a change in leadership, not a lot of overhead
 - No reason for the other WG to vote on it
 - Ryan suggests adding three chairs as required, plus adding the other WG chairs to voice concerns if there are any
- WG AppDev: Colin
 - Working on the survey, getting feedback
 - Reaching out to developer-focused project maintainers for feedback on the write-ups for each project
- WG InfraLifecycle: Dylan
 - They've addressed feedback on the charter so that the deliverables aren't open-ended and that there's a clear purpose to the WG
 - More explicit with creating framework for how the WG would operate post initial info gathering
 - TOC doesn't usually dive into this
 - Lian suggests Dylan reach out to the TOC to vote on the proposal via Slack
- Sarah as Tech Lead
 - Roberth mentioned that Sarah has already been doing quite a bit of the work
 - New approach where the candidate gets to see what the work is like before being confirmed for the role
 - She's been very helpful
 - Roberth opened an issue to nominate her
 - Open to have more than one, she will be the only one if/when approved
 - Lian noted that there's no set requirements for becoming tech lead
 - Would like to see someone who has been involved and been active in previous meetings
 - May be worth considering the time commitment of being WG chair and tech lead

- Certainly possible, Roberth has been doing both
 - But it is a big commitment, be aware of risk of burn out
- What does a tech lead do?
 - Anything that a chair does, a TL can be asked to do
 - Chairs have two-year term limits
 - TL has no term limit
 - In this TAG, because there are not a lot of leaders, there currently isn't much of a distinction between chairs and TLs
 - Functional difference between chairs and TL
 - TOC owns the charter and sets the priority for chairs
 - Chairs then set priorities for TLs
 - There had been a conversation about making WG chairs automatic TLs
 - Wasn't well received
 - Admin stuff - e.g. Setting up meetings, making sure videos get uploaded to YouTube
 - When a project wants to present, help takes notes, help them prep for the meeting
 - Preparing for KubeCon
- Update on KubeCon: Roberth
 - Hasn't heard anything back about the project booth
 - Waiting on that before starting to plan events/things that we have in mind as they're blocked by this decision
 - We'll know on August 29
 - Worst case scenario we'll set up something somewhere on the social side
 - TAG maintainer track panel discussion was accepted - Roberth hosting
- Ryan mentioned that there's a project that they're considering presenting, and they were given guidance to present to TAG App Delivery since WG AppDev is a part of the TAG
 - Lian mentioned that there's a discussion to have presentations in the relevant WG meetings instead of the TAG general meeting
 - For any kind of lifecycle advancement, it has to be presented to the relevant TAG
 - So the more feedback a project has and the more positive voices, the better it will be for the project evaluation

2024-08-07

Host: Lian Li (Co-Chair)

Notetaker: Sarah Christoff

Attendees:

- Roberth Strand
- Sarah Christoff
- Andrey Kvapil
- Timur Tukaev
- Colin Lacy
- Dylan Page
- David Stenglein
- George Gaal
- Ryan Nowak

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, InfraLifecycle
 - Lifecycle: Vote pending w/ ToC for the charter to set success criteria
 - Platforms: Research effort around PaaS (Platform as a Product), there's a sign up to be interviewed!
- Project presentations (max 2 per meeting!)
 - Cozystack ([Sandbox submission #87](#))
 - [presentation, slides](#)
 - [technical presentation](#)
 - [github repository](#)
 - "Transform a bunch of servers into an intelligent system with a rest api spanning k8s cluster, DBaaS, etc"
 - leverages other open source products, ceph & prometheus
 - Uses helm & flux for building engine
 - *Who are your maintainers right now?*
 - 1 maintainer
 - Contributors from different companies
 - *Does it look like a k8s cluster to the tenant users?*
 - You can provide them access to the tenant cluster via kubeconfig
 - *How do you handle upgrades?*
 -
- Ideas and PTAL

Notes:

2024-07-23

Host: Lian Li (Co-Chair)

Notetaker: Dylan Page

Attendees:

- Lian Li
- Roberth Strand
- Dylan Page
- Siddhant Khisty

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, InfraLifecycle
 - InfraLifecycle - deciding chair nominations include with charter proposal to TOC
 - Platforms - still working on PaaS research interviews
 - They need interviewers!
 -  TAG App Delivery - WG Platforms Notes
- Project presentations (max 2 per meeting!)
 - Cozystack ([Sandbox submission #87](#))
 - [presentation, slides](#)
 - [technical presentation](#)
 - [github repository](#)
 - Did not present - ~~Will move to present during the Platform WG meeting~~
 - [Agreed](#) to present on August 7 at the next CNCF TAG App Delivery Meeting.
- Ideas and PTAL
 - New Tech Leads <https://github.com/cncf/tag-app-delivery/issues/715>
 - Two spots to fill - nominations open to public
 - KubeCon Planning <https://github.com/cncf/tag-app-delivery/issues/658>
 - There will be time for the TAG/WGs to present
 - New Project Review Template
 -  Project Review Template
 - Please start using for future Sandbox Project Reviews

Notes:

2024-07-10

Host: Roberth Strand (Tech lead, soon co-chair, or something)

Notetaker:

Attendees:

- Roberth Strand (TL)
- Dylan Page
- Dayuan Li

- Ryan Nowak
- Forest Chen

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, InfraLifecycle
- Project presentations (max 2 per meeting!)
 - KusionStack ([Sandbox submission #83](#))
 - [Slides](#)
 - Intent-driven Platform Orchestrator
 - Applying for Sandbox
 - Key Values
 - Tailored Golden Path
 - Everything as Code
 - Dynamic Configuration Management
 - Vendor Agnostic
 - Extendable Modules
 - Hybrid Resources
 - Golden Path
 - Platform Engineers define Workload Profiles
 - App Developers choose the Profile to match with their App
 - Kusion Module & Workspace
 - Standardized, building block fronted by KCL
 - KCL is another CNCF Sandbox project
 - Allows to set env and vendor specific configurations
 - Managed by Platform Engs
 - Hidden from Developers
 -
 - Ideas and PTAL

Notes:

2024-06-26

Host:

- Thomas Schuetz (Co-Chair)

Notetaker:

- Dylan Page

Attendees:

- Thomas Schuetz (Co-Chair)

- Dylan Page
- Paul Spinrad
- Ram Iyengar
- Siddhant Khisty

Agenda:

- Intros and new faces
- TAG Updates
 - Josh stepped back as a Co-Chair
 - Karena joined the TOC
 - Nomination process of Roberth is ongoing
 - We're looking for new tech leads!
- Status updates
 - WGs - Platforms, Artifacts, AppDev, InfraLifecycle
 - Infrastructure Lifecycle WG is working on their charter
 - <https://github.com/cncf/tag-app-delivery/pull/691>
- Project presentations (max 2 per meeting!)
 - ~~KusionStack?~~ Schedule for the next meeting on **7-10**
- Ideas and PTAL
 - [Ontology proposal](#) - Paul Spinrad (new face)

Notes:

2024-06-12

Host:

- Lian Li

Notetaker:

- Dylan Page

Attendees:

- Lian Li (Co-Chair)
- Sarah Christoff
- Sachi Desai
- Forest Chen
- Dylan Page

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev, InfraLifecycle
 - Infrastructure Lifecycle WG is working on their charter
 - [#wg-infrastructure-lifecycle](#)
 - Bi-Weekly on Fridays at Noon EDT

- Draft Charter:
 - Infrastructure Lifecycle Working Group Charter
- AppDev accepted by TOC!
 - [Request for Review: TAG App Delivery - WG App Development · Issue #1311 · cncf/toc · GitHub](#)
- Project presentations (max 2 per meeting!)
 - Buildpacks, KAITO
 - KAITO - <https://github.com/Azure/kaito>
 - Kubernetes AI toolchain operator
 - Applying for Sandbox
 - “Open-source LLMs on Kubernetes”
 - Sponsored Keynote at KubeConEU 2024
 - [Sponsored Keynote: Build an Open Source Platform for AI/ML - Jorge Palma, Principal PM Lead](#)
 - Roadmap
 - <https://github.com/orgs/Azure/projects/669>
 - 3 month release cadence
 - Intended to be donated to the CNCF long-term
 - Design
 - Workspace CRD -> provisions the workload/node
 - workload -> hooks into k8s base APIs
 - StatefulSet or Deployment
 - Node auto provisioning -> hooks into Karpenter APIs
 - Using Machine CRD moving to NodeClaim CRD
 - Primary Use Case?
 - RAG - Retrieval augmented generation
 - Fine Tuning
 - Upstream SIGs/WGs?
 - Device Management
 - Serving
 - BuildPacks
 - No members present
 - Ideas and PTAL
 - KubeCon NA 2024 Planning (Salt Lake City)
 - TAG has a booth Tues-Thurs
 - Lightning Talks
 - Open Booth (for WGs)
 - [KubeCon NA 2024 Planning · Issue #658 · cncf/tag-app-delivery · GitHub](#)
 - <https://github.com/cncf/tag-app-delivery/pull/671>

Notes:

2024-05-29

Host:

Notetaker:

Attendees:

Agenda:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, AppDev
- Project presentations (max 2 per meeting!)
 - Buildpacks, KAITO
 - Change project presentation format
- Ideas and PTAL
 - ~~[Ontology proposal](#) Paul Spinrad (new face) missed, sorry; hope to reschedule for 6-26~~

Notes:

2024-05-15

Host: Karena Angell

Notetaker: Sarah Christoff

Attendees:

- Karena Angell (TL)
- Roberth Strand
- Thomas Schuetz (Co-Chair)
- Andrea Frittoli
- Sarah Christoff
- Chitrang Patel
- David Bendory (Google, Tekton Engineering Manager)
- Matthew Barr
- Michael Kalantar
- Jochen Zehnder
- Dylan Page
- Jerop Kipruto
- Billy Lynch

Agenda:

- Intros and new faces
- Status updates

- WGs - Platforms, Artifacts, AppDev, Infra Lifecycle
- Project presentations (max 2 per meeting!)
 - Tekton
 - “Cloud Native CI/CD Platform”
 - Tekton Pipelines -> Defined as K8s CRDs
 - Tekton Chain (Security) -> Producing artifact signatures & in-toto attestations
 - Tekton Results (long term storage) -> takes results from etcd and puts into storage
 - Currently a graduated project in the CDF -> applying for Incubation
 - Governing board has 3+ different company representation, no company can have more than 2 members
 - Roadmap
 - Signed Actions, API Features to provide “concise syntax”, GA of multiple core features
 - Primary use cases?
 - CI/CD use cases
 - Often combined with other tools (ArgoCD, Flux)
 - Differences between ArgoCD & Tekton? How do you work with ArgoCD?
 - Argo & Tekton communities collaborate together
 - ML space
 - How do you manage CVEs?
 - Private distro list & disclosure policy
 - Built on top of [Ko](#)
 - How do you handle multi-tenancy
 - Event Listener - exposed by a k8s ingress
 - Controller can be configured to watch different namespaces
 - Are you exposing metrics, tracing, events?
 - OTel Metrics, Distributed Tracing Information (visualize pipeline and task run execution), Expose Events ([documentation](#))
 - Tekton controllers are built on Knative, so it exposes [Knative events as well.](#)
 - How is adoption?
 - Two services launched on Tekton (Cloudbees, Ozone)
 - Litmus
 - No members present
 - Iter8 Intro (2 mins) + [Recorded Iter8 presentation](#) (10 mins) + Q&A (8 mins)
 - Kubernetes Release Optimizer
 - Applying for Sandbox
 - Performance Testing - provides load generation, metrics store, etc
 - Integrated with and extends Grafana for visualization
 - Focus on A/B/n testing

- Uses progressive release (routing options given to test new releases)
- Related Projects
 - Flagger (Flux) & Argo Rollouts
- Supports rollout with k8s native services
- Community Engagement
 - Adopters: IBM, Seldon, Datagrate, kruize, LitmusChaos
 - Integrates with existing projects (Istio, Linkerd, Knative, Helm)
 - Not actively holding community meetings
- How many maintainers?
 - 3 maintainers from IBM
 - There are some contributors* outside of IBM
- Could another project adopt Iter8?
 -

- Ideas and PTAL

Notes:

-

2024-05-01

Canceled due to Labour Day

2024-04-17

Host: Karena Angell

Notetaker: Dylan Page

Attendees:

- Karena Angell (TL)
- Adrian Karasinski (CERN)
- Antonio Nappi (CERN)
- Alan Cha (iter8)
- Dylan Page (Lambda Labs)
- Ryan Nowak (Microsoft)

Agenda/Notes:

- Intros and new faces
- Status updates
 - Alois stepped back as a chair, chair voting in progress
 - <https://github.com/cncf/tag-app-delivery/issues/609>



- <https://github.com/cncf/tag-app-delivery/issues/610> & <https://lists.cncf.io/g/cncf-toc/topic/105466317#8576>
- WGs - Platforms, Artifacts, AppDev
 - AppDev has their second meeting on Thu 18, still discussing & finetuning the charter
- Project presentations
 - Litmus
- Ideas and PTAL
 - Language support for website
<https://github.com/cncf/tag-app-delivery/pull/612>
 - General Discussion
 - Guidance, best practices, tips
 - Infra lifecycle WG
 - State
 - Drift (whether human invoked, or invoked by system)
 - How to recover from failure modes
 - Dependencies classifications
 - Mechanism itself
 - Different classifications and dependencies
 - Whatever the developer thinks about for classification
 - Mysql database - abstraction at "stateful set"

2024-04-03

Host: Lian Li

Notes: Karena Angell

Attendees:

- Lian Li (Co-chair / TL)
- Karena Angell (TL)
- Alois Reitbauer (Co-Chair)
- Adam Kaplan (Shipwright)
- Alan Cha (iter8)
- Michael Kalantar (iter8)
- Abby Bangser
- Sarthak Jain
- David Stenglein
- Philip Miglinci (glasskube)
- Ryan Nowak (Microsoft)
- Adam Fitzgerald
- Mario De Armos (Capital One)
- Sri (IBM Research - iter8)

Agenda/Notes:

- Intros and new faces
- Status updates
 - WGs - Platforms, Artifacts, GitOps
 - New App Dev WG!
 - #wg-app-development
 - <https://cloud-native.slack.com/archives/C06SKDAQDEX>
 - Platforms:
 - New languages! French and Spanish
 - New blogs!
 - Platform as a Product chugging along with interviews
 - Question about Website PRs
- Project presentations
 - Shipwright Presentation - Adam Kaplan (He / Him / His)
 - Looking to move from CDF to CNCF
 - Runs on top of Tekton - like a swiss army knife
 - Direct dependency on Tekton
 - When create a build, creates a tekton task
 - Current dependency, in future could look to decouple and support Argo Workflows, for example
 - Need to clarify if Tekton is a hard dependency and roadmap
 - Vulnerability scanning - building an API experience and source scanning
 - Roadmap
 - Additional Signatures
 - Additional provenance
 - Shipwright could correct some gaps in Tekton
 - Multi-arch
 - Project called Triggers
 - Integrate with Tekton custom tasks feature
 - Expose shipwright API to build custom tasks
 - Appropriate chain of owner
 - Tekton: more of a workflow engine and general purpose
 - Other projects with dependencies
 -
 - Glasskube Presentation (<https://glasskube.dev>) - Philip Miglinci
 - Simplify package management in k8s
 - <https://github.com/glasskube/glasskube>
 - Backend engineers can deploy without needing to know other package managers
 - Informational - not looking to apply to CNCF yet, too soon
 - 5 core maintainers
 - 24 contributors
 - Possible to migrate from Helm

- 50% auxiliary workloads on k8s clusters
 - K8s in the wild, cert-managers, argo, non-app workloads where this would come in handy
 - E.g. non-application workloads running in a cluster
- Litmus

Ideas and PTAL

2024-03-20

<< CANCELLED >>

2024-03-06

Host: Karena Angell

Notes:

Attendees:

- Karena Angell
- David Stenglein
- Yusuke Tsutsumi (Cruise)
- Dan Garfield (Codefresh / Octopus Deploy)
- Sarah Christoff
- Chris Short
- Arvind Singharpuria
- Colin Griffin (Krumware)
- Marsh Gardner
- Victor Lu
- David Eads
- Sunil Ravipati
- Lian Li
- William Rizzo (SUSE)
- Liam Randall (Cosmonic)

Agenda/Notes:

- Intros and New Faces
 -
- API Design Review WG: <https://github.com/cncf/tag-app-delivery/issues/531>
 - API Extensions Proposals WG:
<https://github.com/cncf/tag-app-delivery/issues/448>
 - What will be the outcomes of the group?
 - Perhaps a goal could be an "API Maturity Model"
 - Which APIs?

- Not just K8s
 - Infrastructure APIs vs. App APIs
 - If/how to collaborate with OpenAPI initiative?
 - To what degree does this overlap with general architectural guidelines
 - Compare AWS' Well-Architected Framework
- Planned Output?
- Barn raising event Mar 14, 2024 9AM Pacific
<https://www.linkedin.com/feed/update/urn:li:activity:7170825685261885440/>
- Notes:
 - Marsh just joined (sorry—wasn't on my calendar!)
 - Yusuke Tsutsumi
 - Working at Cruise automation (prev google and involved in api governance team)
 - Focused on API useability
 - Project goal is to have a more open version of the Google AIP project (API Improvement Proposals)
 - Guidance on process of AIPs
 - Specific guidance on resource driven APIs
 - Current project is protobuf oriented and they are looking at reorienting around HTTP/REST and JSON
 - Many Xooglers missed having those API standards available after they leave
 - Generally google specific view
 - CNCF project goal to create a subset that is more applicable to a wider group of organizations
 - AIPs within google are not strictly enforced
 - The CNCF fork has a goal to have versioning and some ability to measure adherence
 - CNCF fork is AEP (API Enhancement Proposals)
 - Goal to support Protobuf and OpenAPI
 - Barn-raising community event on March 14th
 - Link needed
 - Companies like Roblox that have forked AIPs
 - Q: Have you looked at other projects within CNCF/cloud native projects
 - Are these used within kubernetes or other projects
 - A: Not used directly in CNCF projects today
 - Meant as a resource to improve design
 - Can improve integration of APIs into Kubernetes
 - Examples of issues with declarative tools integrating and intermingling of server and client defined values
 - There was an effort inside Google to resolve the issue of server changed values
 - Easing the integration of tools by having more consistent API behavior

- Q: is the goal for AEPs to work well with the kube API server? What is the scope
 - He's not yet seeing a complete enough set of guidance to be able to do API reviews for kubernetes API commits
- A: More boilerplate code if there is consistency with API behavior
 - Better integration with declarative systems
 - Easier automation downstream
- Q: Guidance for how AEPs would be localized
 - Related: custom rule ranges, see <https://aep.dev/2>
- A: localization of resource naming
 - Goal is to have the guidance be broadly applicable
 - Ease of consistent clients. Example of kubernetes using a consistent model allows kubectl to work seamlessly with new resources added
 - Goal to be inclusive to remote apis
- A: There was a concept in the AIPs that allowed custom rule ranges
 - Still open as to how private instances will reference these standards
 - Barn raising event next Thu
<https://www.linkedin.com/feed/update/urn:li:activity:7170825685261885440/>
- Q: Is there a linter
 - There are different linters for different projects like KCP or Crossplane
- A: There is a linter for AIPs <https://linter.aip.dev/>
 - Interested for AEPs but not yet
- Q: Could you have a maturity model similar to platform maturity model?
 - Grading would be helpful
- Q: Is there a wishlist from Kube API or what a project would like?
- A: A linter would need to be built to accommodate different design needs for different API domains (sync vs async response systems)
 - Linters may not scale within the CNCF due to diversity of projects
- A: These are tested design patterns. Even in manual reviews they are good to have to refer to to help with communication
- Q: Why wouldn't this be pulled into OpenAPI
- Qs:
 - What should be in AEPs
 - Should AEPs be in CNCF
- A: OpenAPI is sibling project
 - Has strict rules preventing it from getting into tools
 - Linters and code to go with opinions are important
- A: OpenAPI is designed as a way to describe any API and less opinionated by definition
 - AEPs want resources to be first-class
 - Clear definition of behaviors allowing more clients

- A: Seems like an odd fit for CNCF

- KubeCon EU 2024
 - <https://tag-app-delivery.cncf.io/blog/tag-app-delivery-at-kubecon-eu-2024/>
 -
-

2024-02-21

Host: Karena Angell

Notes: Josh Gavant

Attendees:

- Alois Reitbauer (Dynatrace)
- Josh Gavant (Red Hat)
- Roberth Strand (Sopra Steria)
- Karena Angell (Red Hat)
- Abby Bangser (Syntasso)
- Michael Kalantar (iter8)
- Sarah Christoff (Microsoft)
- Victor Lu

Agenda/Notes:

- Intros and new faces
 - Michael would like to present iter8 to group, need to schedule
- Items tagged for discussion:
 - <https://github.com/cncf/tag-app-delivery/issues?q=is%3Aissue+is%3Aopen+label%3Atag-discuss>
 - GitHub Workflows guidelines:
 - <https://github.com/cncf/tag-app-delivery/issues/543>
 - This came in with another tool suggestion (Prow)
 - Use GitHub Actions? Not open source, but already accepted by CNCF
 - Translations tool suggested - what tool to use?
 - Some are available for free to open source projects
 - Contrast: something that translates and then publishes directly, or something that hosts the translations?
 - Idea is a tool to generate an initial basic translation that native speakers can start from
 - Consider bringing this up in TAG Chairs for all web sites
 - KubeCon EU Planning: <https://github.com/cncf/tag-app-delivery/issues/498>



- Blog post:
<https://tag-app-delivery.cncf.io/blog/tag-app-delivery-at-kubecon-eu-2024/>
- Schedule:
https://docs.google.com/spreadsheets/d/1eIVqSb4PQF3FaDA6pwJ02LfM1ai0koWd0b6YWJ_abgU/edit#gid=0
- Book signing with Mauricio Salatino for his PE book
- TAG meeting at booth on Wednesday morning
- Invite projects to come discuss their issues
- Morning coffees: <https://github.com/cncf/tag-app-delivery/issues/557>
- API Extensions Proposals WG:
<https://github.com/cncf/tag-app-delivery/issues/448>
 - API Discussion on March 6 - which projects should be invited too?
 - Will invite folks for K8s SIG API Machinery
 - Marsh Gardiner - AEP, OpenAPI
 - Invite OpenAPI reps - Marsh
 - Also see <https://github.com/cncf/tag-app-delivery/issues/531>
 - What will be the outcomes of the group?
 - Perhaps a goal could be an "API Maturity Model"
 - Which APIs?
 - Not just K8s
 - Infrastructure APIs vs. App APIs
 - If/how to collaborate with OpenAPI initiative?
 - To what degree does this overlap with general architectural guidelines
 - Compare AWS' Well-Architected Framework
- TAG Code of Conduct: <https://github.com/cncf/tag-app-delivery/issues/414>
 - Start a doc and iterate - ask Colin
- Revise and update TAG charter:
<https://github.com/cncf/tag-app-delivery/issues/400>
 - How to handle it? Kick off a GitHub issue to discuss.
 - Discuss at Kubecon
 - Start by taking old one, move over to Gdoc for iteration
 - TAG App Delivery Charter Review
- Chaos WG closure - pending PR to actually archive the group
- Open project reviews:
<https://github.com/cncf/tag-app-delivery/issues?q=is%3Aissue+is%3Aopen+label%3Aprojects>
 - Threeport, Score - Josh Gavant will write up reviews soon
- App Delivery-related projects proposed for CNCF sandbox:
<https://github.com/cncf/sandbox/issues?q=is%3Aissue+is%3Aopen+label%3A%22App+Delivery%22>
 - Note: need to invite new submissions to present to TAG and create issues for them in our repo
 - What other projects should we invite to present?

- Status updates
 - Projects
 - WGs - Platforms, Artifacts, GitOps
 - Need some cleanup, like archive Chaos
 - Artifacts from the WGs - plan?
 - How to handle artifacts like the Operator white paper?
 - Make sure deliverables stay at TAG level
 - How to archive a working group?
 - Seek options in other groups
 - Would be nice to document WG lifecycle
 - include quarterly status updates
 - GitOps
 - Work has moved to OpenGitOps group
 - Consider a group related to all CI/CD?
 - GitOps as a sub-part of that group
 - Testing could also fit here
 - Application Lifecycle phases
 - [Roberth] Bringing this up in the GitOps WG meeting
- Project presentations
- Ideas and PTAL

Notes:

- Michael - project - Iterate

2024-02-07

Host:

- Lian

Notes:

- Thomas

Attendees:

- Lian Li (TAG TL)
- Karena Angell (TAG TL)
- Thomas Schuetz (TAG Chair)
- Chris Short
- Jared Watts
- Erick de Carty
- Michael Kalantar
- Victor Lu
- David Strenglein

- Lakmal
- Kelly Tenn
- Joe Bowbeer
- Viktor Nagy
- Dylan Page

Agenda:

- Intros and new faces
- Notes
 - Everyone's welcome to support the TAG with admin things and participate
 - TAG is always looking for contributors
- Status updates
 - Project reviews
 - Crossplane - Graduation proposal
 - proposal PR: <https://github.com/cncf/toc/pull/1254>
 - [slide deck](#)
 - [Graduation due diligence](#)
 - Crossplane opened proposal for graduation in the beginning of this week
 - Crossplane is a framework to build cloud native control planes
 - Sandbox in 2020, First stable release end of 2020, Incubation in September 2021
 - Jared describes how Crossplane works and the internal stack and compositions (and its limitations)
 - More flexibility implemented in the last time through functions and templates
 - Roadmap topics
 - Stabilizing APIs (Functions, Management, Policies)
 - Improving Developer Experience
 - Steep learning curve and can be challenging to get it work
 - Day 2 Operations (e.g. Database Backups)
 - Make it possible to define an entire platform
 - Community:
 - Governance has been in place before sandbox
 - Autonomous maintainer teams per repo
 - Steering committee is present and responsible for vision, health and success of the project
 - 1900 contributors, 120 companies with committers
 - Top 10% of all CNCF projects
 - In use by end-user orgs in production
 - E.g. Nike, Autodesk, NASA, Grafana, ...
 - Questions:
 - Relationship between Composition and Function

- In every composition, there's a static list of resources
 - With functions, crossplane is able to use pipelines where each steps could add resources.
 - This makes it possible to have multiple implementations for the same abstraction
 - Functions are only optional
 - Almost everything can be implemented as a function
- Who has been using Functions at this point?
 - Lots of engagement in the SIG for this
 - Users write functions for their specific organizational functionality
 - Users are also providing general functions
- WGs - Platforms, GitOps, Operators, Artifacts
- GitHub Actions
 - Giving advisories for release, CI and CD processes in GitHub
 - Generally the TAG works through working groups and they have their topics
 - What could be a working result for this (whitepaper)
 - Joe and Chris might talk about this in TAG Contrib Strategy
- KubeCon
 - <https://github.com/cncf/tag-app-delivery/issues/498>
 - Lightning Talk: Looking for Speaker
 - Part-Time Booth (AM shift)
 - Lightning Talks
 - Maybe Sandbox Project Office Hours at our booth
 - Schedule Online and Flyers
- Ideas and PTA
 - GH Actions <https://github.com/cncf/tag-app-delivery/issues/543>

2024-01-17

Host:

- Alois

Notetaker:

- Josh

Attendees:

- Alois Reitbauer (TAG Chair)
- Josh Gavant (TAG Chair)
- Thomas Schuetz (TAG Chair)
- Guilherme Cassolato (Kuadrant)
- David Martin (Kuadrant)

- Paul McCarthy (Kuadrant)
- Riaan Kleinhans (CNCF)
- Thomas Maas (Kuadrant)
- Alex Snaps
- Michael Palassis (Defense Unicorns)
- Hubbert Smith
- Akshay Shah (Buf, Connect)
- Matt Robenolt (PlanetScale, Connect)
- Tsahi Duek

Agenda:

- Intros
- [Riaan] Proposed change to charter and README for all TAG's - 2 minutes topic : -)
 - TAG charters are out of sync between TAG repos and TOC repo, also info in READMEs is out of sync
 - Recommendation: consolidate and put updated charter in either TAG or TOC repo
- Project presentations
 - Connect ([#520](#), [website](#), [cncf/sandbox#63](#)) (Akshay Shah)
 - consensus is this fits in CNCF
 - Kuadrant ([website](#), [slides](#), [cncf/sandbox#80](#))
-

Connect

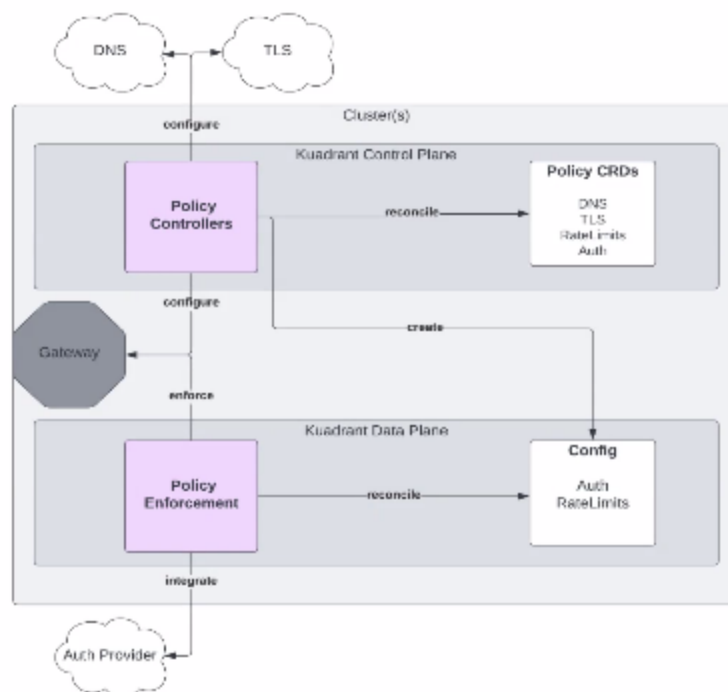
- Recording: <https://www.youtube.com/watch?v=TzE2sIZ3qeU>
- Connect RPC Framework: <https://connectrpc.com>
- cross-language framework for strongly-typed GRPC APIs
 - compare to Thrift
 - schema agnostic but generally used with protobufs
- Value statement
 - Most of today's APIs are hand-crafted HTTP+JSON
 - Use Swagger, Postman, Insomnia, etc.
 - But schema-first approaches are niche
 - "existing frameworks are complex, difficult to adopt and narrowly focused"
 - prioritize: simplicity, gRPC compat, support for HTTP 1,2,3
- Philosophy, background
 - less is more
 - build on handful of common options
 - use common HTTP/2 libs from every language
 - less custom code -> fewer bugs
 - grpc-go is much bigger, many more options than connect-go
 - protocol is boring
 - Connect's protocol - similar to GRPC but simpler on the wire - No HTTP trailers, no HTTP framing
 - works in HTTP 1,2,3

- Example
 - start with a protobuf schema
 - run a code generator on the protobuf, then implement the body of the methods in regular code
 - connect provides a framework for then binding the method to service listener - returns a route to be bound to a router (in Go)
 - also generate client-side methods
 - takes a transport type
 - communication between client and server
 - grpc, grpc-web, connect protocol
 - app doesn't need to care about protocol
 - switch protocol in use with a config option
 - heavy testing with GRPC
- project/roadmap
 - Go and TypeScript available
 - Swift and Kotlin in beta
 - work on Python, Rust, C++
 - Apache2 license
 - supported by company Buf, specializes in ProtoBuf
 - have a vulnerability tracking process on website
- Why CNCF? How cloud-native?
 - it's a component used to build apps
 - built on GRPC, uses OpenTelemetry
 - Envoy can parse Connect protocol
- Questions
 - Use cases are mostly for app dev, hence discussion in App Delivery
 - Is Connect separate from Buf's commercial software? Yes, fully separate.
 - Is Connect opinionated about Protobuf schemas, and does it overlap with AEP? No, Connect is happy with any syntactically-valid schema.
 - Is Connect opinionated about software packaging or delivery? No, Connect only generates code - distribution is orthogonal.
 - Does Connect have a security and vulnerability disclosure process? Yes, [documented on the website](#).
 - Does Connect have external committers? Yes, the Swift and Go implementations have committers from outside Buf. There's also a [documented governance policy and RFC process](#).

Kuadrant

- <https://kuadrant.io>, YouTube channel with weekly calls
- Value
 - gateway policies across single and multi-cluster envs
 - adhere to gateway API policy attachment pattern
- What is Kuadrant? Policies for Kubernetes Gateways

- "A set of kube-native controllers, services, APIs that provide gateway policies for existing Kubernetes Gateway API"
- mission: apply policies to Gateway API implementations
- Project
 - Red Hat sponsored, 18 engineers assigned
 - rate limiting, authn/z capabilities
 - support multi-cluster architects
- Why?
 - want to share for collab
 - related to k8s, envoy, istio, submariner
 - improve governance
- Architectural overview



-
- multi-cluster gateway controller lives in a hub cluster, which pushes configs out to spoke clusters
 - uses OCM, but considering other options
- DNSPolicy and TLSPolicy in hub cluster
- Kuadrant operator
 - installs components that implement policies - limitador and authorino
 - the components are HTTP for webhooks, and a GRPC service which integrates with Envoy
 - uses a WASI filter in Envoy to call limitador
 - generic WASM plugin to work with other gateway providers than Istio - e.g. Envoy Gateway project
- Existing policies

- RateLimit, Auth, DNS, TLS
 - Questions
 - How will you ask new contributors, e.g. from Istio?
 - Are there similar projects?
-

2024-01-10

Host: Josh

Notes: Karena

Attendees:

- Josh Gavant - Chair TAG
- Karena Angell - TL TAG
- Budha
- Florian Lipp
- David Stenglein
- Tsahi Duek
- John Gardner

Agenda:

- Intros
 - [Budha] advocate - working on API maturity model
 - Will look at **AEP / AIP group**
 - <https://cloud-native.slack.com/archives/C04TX46UCTV>
 -  AEP Weekly Meeting Notes
 - [Florian] product mktg at Humanitec - working on submitting [Score](#) to CNCF
 - Presenting to Platforms WG in a few weeks
- Working Group Updates
 - [Josh G] Interview templates and interviews in Platforms WG
- Project presentations
 - Apicurio Registry ([#517](#)) (Carles Arnal) - Postponed
- Discussions
 - WG APIs ([#448](#))
 - KubeCon
 - Idea: combined Survey+Interview
 - What is the role of the TAG?
 - Not declaring a winner or being kingmaker
 - Identifying patterns, working backwards to define principles
 - E.g. GitOps, define approaches, don't define the tools to achieve that

2023-12-20

Host: Karena

Notes: Josh

Recording:  2023-12-20 TAG Meeting with Threeport

Attendees:

- Vandit
- Josh Gavant - Chair TAG, Red Hat
- Lian Li - TL TAG
- Karena Angell - TL TAG, Red Hat
- Marsh Gardiner
- Alois Reitbauer - Chair TAG, Dynatrace
- Xing Yang - TAG Storage co-chair
- Richard Lander - CTO, Qleet
- Colin Griffin
- David Stenglein
- Bob Hong

Agenda:

- Intros: new faces and stories
- TAG updates
 - Proposed community blog post:
<https://github.com/cncf/tag-app-delivery/pull/515>
 - What's the standard disclaimer that gets attached to these?
 - Initial end user interview carried out by WG Platforms, see
[TAG App Delivery - Platform as Product Maturity - Interview Framework](#)
 - Join WG Platforms meetings to share feedback - see #wg-platforms
 - Website support for Chinese, Korean complete, Japanese in progress
 - FYI about contributions, including the disclaimer mentioned above and high level guidelines about the process:
 - <https://tag-app-delivery.cncf.io/contribute>
 - <https://github.com/cncf/tag-app-delivery/pull/523>
 - 1/3 meeting moved to 1/10
- Kubecon Paris plans - booth, lightning talk, maintainer talks
 - maintainer talk - Lian Li and Thomas developing session on behalf of TAG
 - "app delivery taking over the world" - why are so many projects here?
 - WGs can also submit talks - consider what you might want to share
 - WG Platforms will consider submitting a talk about the "platform as product" work
- Annual reviews - close out by end of year

- CDK8s - Karena - submitted some concerns about current state, Justin and Katie reviewing
- Sealer - Colin - will handle by end of week - chat with Karena if needed
- Project presentations
 - Threeport ([#512](#)) (Richard Lander) - starts at <https://youtu.be/XeDIdORTllk?t=1556>

Threeport

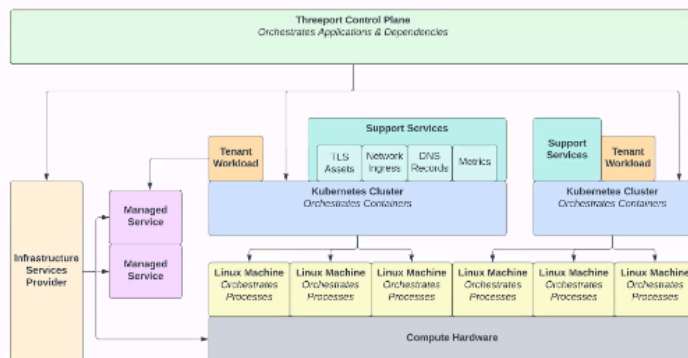
Recording starts at <https://youtu.be/XeDIdORTllk?t=1556>

- Threeport is based on the collective experience of founders in building application platforms using Kubernetes
- <https://threeport.io/>
- Values
 - Use SDK to extend Threeport to create a managed control plane for users
 - As easy to use as Cloud Run while retaining opportunity to expand in capabilities over time
 - For app developers:
 - Simplify Kubernetes for developers - provide developer-level abstractions
 - Allow developers to manage delivery
 - Benefits of K8s with complexity
 - For platform engineers: deliver first-class application platforms
 - "If we enable people to succeed without dedicated platform teams that's a win. But the unique problems that come with a product need someone to address"
- Architecture
 - Runs on Kubernetes - currently supports kind and EKS
 - Bring up a new ThreePort control plane with `tptctl up`
 - AWS credentials/accounts are saved as a secret for later use
 - Can install into the local "hub" cluster too
 - In each managed K8s cluster, Threeport installs:
 - `support-services-operator` is installed in each managed K8s cluster
 - Gloo Edge Gateway
 - cert-manager
 - ExternalDNS
 - threeport agent
 - Dependencies
 - infrastructure is treated as dependencies of the workload
 - e.g. RDS databases, gateways
 - supporting operators are deployed to runtime clusters *as needed*
 - e.g., cert-manager is installed only when a certificate is needed
 - e.g., ExternalDNS only when a domain is required
 -

- Users build extensions to control plane using threeport-sdk, based on kubebuilder
 - build a custom controller for your software
- Why not extend K8s directly, why create a modified framework?
 - Use Cockroach instead of etcd - because it requires multi-region control plane
 - use NATS to share submitted resources with controllers, enables parallel processing by many controllers
- Support managed providers
 - Custom controller for each cloud provider, currently offer AWS
- Managed by command line tool `tptctl`
- Roadmap - next 2-3 months
 - create a best practice manifest and workload for typical workloads, e.g. a web application
 - observability - metrics with Prometheus, log aggregation with fluent, visualization with Grafana
 - SDK
 - currently "threeport codegen"
 - currently generate scaffolding for controllers
 - use to generate controllers for other clouds
 - abstractions for common patterns
- Comparisons
 - Radius
 - same vision of abstracting for app developers
 - also want to support managed providers
 - Radius doesn't install Kubernetes, requires running separately
 - Radius doesn't install operators in Kubernetes
 - Crossplane
 - Both help to build an app platform
 - Tries to avoid writing code - use compositions
 - But Threeport prefers people writing actual code using threeport-sdk
 - ArgoCD
 - stores state in git and etcd rather than a database
 - Threeport uses software controllers rather than being limited to what Helm or Kustomize allows
- Questions
 - For resources that exist in K8s will you project the original resource?
 - No: different resource types in Threeport
 - Why recreate the cloud provider APIs? Why not use Crossplane?
 - Wanted to directly use the AWS SDK/APIs - more freedom and confidence
 - Could you use the Service Broker API?
 - Threeport creates a new abstraction/API layer
 - Threeport focuses on broader set of things
 - Can a different database be used, e.g., etcd instead of Cockroach?

- Not today, though could use PostgreSQL
- Would be challenging, Threeport uses relational and transactions

Technical Architecture



User interfaces with:

- Threeport API

Threeport interfaces with:

- Kubernetes API
- Cloud Provider API

2023-12-06

Attendees

- Viktor Nagy - GitLab
- Budha - Tyk
- Josh Gavant - Red Hat
- Kamal Gupta - Omnistrade
- Dylan Page - Autodeck, maintainer in Atlantis group
- Pepe Amengual - maintainer in Atlantis group
- Tyler Gillson - Spectro Cloud
- Alois Reitbauer - Dynatrace
- Colin Griffin - Krumware
- Karena Angell - Red Hat

Agenda

- Intros: New faces and stories
- WG updates
 - Platforms working on interview framework:
 - ☑ TAG App Delivery - Platform Engineering Maturity - Interview Framework
 - Artifacts working on a talk for Paris on work so far
- Project presentations

- Atlantis ([#474](#)) - notes below

Atlantis

- GitOps controller for Terraform
- "apply" of plan is via comments in PRs
- How is it installed?
 - It's a Go binary you run somewhere
 - configure webhook URL in git to send to Atlantis service
 - use Helm charts to host it in K8s
 - also there's a Docker image
 - some folks host it in VMs/EC2
- History, community
 - existed since 2018 and earlier
 - not even 1.0 but lots of people using it in production
 - Slack group with strong community
 - Originally the project was under the Hashicorp namespace.
- Governance, roadmap
 - lots of features added by community - 90% from community
 - earlier maintainers left project
- Originally the project was under the Hashicorp namespace.
- Architecture
 - prefer using VCS systems existing affordances, like GitHub PR discussions
 - desire to move toward API-driven platform rather than depending on VCS interfaces
 - just added API, not relying on VCS interface
 - ultimately runs Terraform commands locally
 - writes status back to PR
 - currently some statefulness to track PRs and commands - locks
 - making stateless will make more scaleable
- Goals, roadmap
 - integrate with other services like Argo, CI/CD
 - standard release process - post-merge hooks
 - don't want to depend on VCS (GitHub) interface
 - Viktor: it's more a PM questions than a TAG App delivery one. Did you run any validation on moving from a very slim solution to a "full product"? Or do you plan to maintain a "chromeless" version/layer?
- Challenges
 - lack of long-term maintainers
 - need better regression tests for new features - to better support one-off contributions without breaking other features
 - everything was a patch and folks were taking those too quickly - just added process for "minor" release branches
 - difficult to integrate and test different VCS providers
 - support BitBucket, GitLab, GitHub, Azure DevOps

- don't always have access to VCS systems
 - GitHub heavily favored
 - previously controlled by Hashicorp
- Vendor neutrality
 - all hard-coded for Terraform, need some adjustment for OpenTofu
 - policy checking also hardcoded to use conftest
- Similar projects: Scalar, Env0, TFC, Spacelift
 - don't use VCS interface
 - there is more than Terraform in the workflow - can apply policies like checking costs with InfraCost
 - can run post-merge actions once PR is merged

Questions:

- Why apply for Sandbox and Incubation if you have such wide adoption?
 - if want to focus on building contributor base and wait on due diligence sandbox is a good fit
 - incubation requires more work than sandbox, may not be needed
- How many contributors outside the core maintainers?
 - 3 core maintainers, 3 regular contributors
- What is the risk of you or Pepe leaving the project or spinning off onto a new project and not having time to contribute anymore?
 - They are committed, but it's a concern...
 - This is one of the reasons to join CNCF - attract more contributors
- Do you expect previous maintainers to return due to these changes or do you consider it unlikely?
 - Maybe but haven't contacted them
- Viktor: What support do you expect from joining CNCF? How can the TAG help you?
 - To increase number of long-term maintainers
 - To improve governance
 - To bring assurances to users
- Does this support OpenTofu too? Should this be in the OpenTofu organization?
 - want to be neutral to TF and OpenTofu
- Will there be licensing problems with Terraform?
 - Hashicorp agreed to donate the project to the CNCF if it gets accepted
 - Project created by one of their employees so best to get their agreement
 - All is Apache2, all domains and names are in control of current maintainers
- Is it okay that you ship the Terraform binary in the Docker image? Yes, as long as it's not resold commercially - that needs Hashicorp's agreement.
 - Would not be possible for others to commercialize

2023-11-15

Attendees

- Sai Malleni (Red Hat - kube-burner)
- Vishnu Challa (Red Hat - kube-burner)
- Raul Sevilla (Red Hat - kube-burner)
- Viktor Nagy (GitLab)
- Alex Block
- Boris Kurktchiev (Nirmata)
- Alois Reutbauer (Dynatrace)
- Karena Angeli (Red Hat)
- Josh Gavant (Red Hat)
- John Gardner (Krumware)

Agenda

- Intros: New faces and stories
- Kubecon retrospective
 - Invigorate the web site! Use for more (See [#495](#))
 - establish pattern for new activities
 - Include our governed projects more
 - list on web site, discuss at project booth, present at Kubecon keynotes
 - also need to help projects find us - TAG meet and greet is an opportunity
 - work with Tin Matienzo? Josh to start a thread with kangell@redhat.com
 - when projects come to present - ask them how we can support them
 - need to review charter
 - plan to review in an upcoming meeting
 - Project meeting - recording: [CNCf TAG App-Delivery @ KubeCon](#)
 - Booth
 - good to have
 - meetups at booth
 - better advertise position of booths
 - PM times okay? yes, especially at booth crawl
 - TAG-related sessions
 - Prep for Paris ([#498](#))
- WG Updates
 - **Platforms** - Maturity Model released, Platform as Product R&D started
 - **Artifacts** - steady progress in gathering implementations of OCI and other package managers
 - Intros between Carvel, Operator Framework, CNAB/Porter
- Project presentations

- Kube-burner ([tag#466](#), [sandbox#57](#))

kube-burner

- info
 - <https://cloud-bulldozer.github.io/kube-burner/latest/>
 - <https://github.com/cloud-bulldozer/kube-burner/>
 - <https://cloud.redhat.com/blog/running-2500-pods-per-node-on-ocp-4.13>
- values proposed to end users
 - cloud-native's goal is to run apps at scale
 - verifies perf and scale of K8s platform
 - verifies: "How's the app going to behave during cluster load conditions?"
- features
 - create/delete/patch any K8s resource
 - scrape Prometheus metrics
 - gather some custom measurements - pod latency, VMI latency, pprof
 - benchmark "canned workloads" - complex composite workloads and benchmarks - ships with a few typical ones
 - alerts
 - can gather point-in-time metrics or over a duration of time
- high-level technical architecture
 - start a job that creates/deletes/patches resources, wait for readiness, report results
 - scrape Prometheus and Thanos endpoints, generate reports and alerts
 - stashes scraped metrics in an Elasticsearch cluster
- demo of experiences and UIs - see <time in video>
- near-term roadmap
 - <https://github.com/cloud-bulldozer/kube-burner/blob/master/ROADMAP.md>
 - new job types - e.g. generate load on API services
 - more ad-hoc measurements (not in Prometheus)
 - more observability features
- community and governance
 - existed for 3+ years
 - Contributors: Red Hat, IBM, Upbound, EnterpriseDB
 - End users: Bosch, ANZ Bank, others private
- How can the TAG support you?
 - bring perf and scale to forefront of discussions
 - drive adoption, contributions
 - align roadmap
 - prepare for incubation
- Questions
 - who would use this framework - platform or app engineers?
 - it's a *symbiosis* - needs input from both
 - can test existing apps and workloads too
 - could it be integrated with a GitOps-oriented project like ArgoCD?

- looks like it's mostly imperative
- could be part of a CI workflow, e.g. a GitHub Action
- compare/contrast with krkn
 - krkn is focused on chaos engineering, kube-burner just creates a bunch of resources
 - krkn sets up their faults, then uses kube-burner to test with loads
- is this something that would run all the time? Or one-off?
 - Answer: it runs from CLI, just one-off, no long-term controller

2023-11-06 - Kubecon Chicago

- Recording:  CNCF TAG App-Delivery @ KubeCon

Agenda

- TAG and WG discussions
 - Overview
 - Sandbox project reviews
 - Working groups
 - platform as a product group
 - Invigorate the blog and website
 - Contributions page
 - Make projects visible
 - use blog to not require as much work
 - How to connect with our managed projects?
 - put them in our web site
 - write a blog post about them
 - what is our role?
 - general guidance to every project
 - enable connections between projects
 - help each individual project too
 - define example stacks
 - help categorize and tag projects, describe them
 - Not clear what is "bottom up" and what is "top down"
 - encourage new proposals to start as a blog post
 - enhancement proposal process
 - How to govern creation
 - platform as product paper?
 - surveys
 - Actions
 - create a template for creating a discussion - issue -> blog post -> more
 - create a blog post about this process - [#495](#)
 - assign a lead
 - Getting started guide for newbies?
- Project presentations and lightning talks

- Radius ([#481](#))
- CNOE
- CNAB
- workload specs: Score

2023-11-01

Attendees

- Josh Gavant
- Lian Li
- Karena Angell
- John Gardner
- Mayur Yambal (Iauro, IO Flow)
- Shashwat Tiwari (Iauro, IO Flow)
- Sudhir Raut (Iauro, IO Flow)
- Christian Lacsina
- Boris Kurktchiev

Agenda

- Introductions and stories
 - What is your interest? How can we help you contribute?
 - Optional: share an App Delivery story in <90s
- Status updates
 - Kubecon plans:
 - <https://tag-app-delivery.cncf.io/blog/tag-app-delivery-at-kubecon-chicago/>
 - WIP: <https://github.com/cncf/tag-app-delivery/issues/470>
 - Monday project meeting
 - Tues-Thurs booth
 - WG Platforms
 - Released Maturity Model v1!
 - WG Artifacts
 - Meeting with Carvel and Operator Framework
 - Meeting with CNAB/Porter
 - WG GitOps
 - proposal to open issue to discuss state
- Project presentations
 - IO Flow ([tag#447](#), [toc#55](#))

IO Flow

- What is it?
 - IO/Flow is a cloud-native, open source workflow engine
 - Runs in containers
 - Instances are independently scalable, e.g. in multiple pods

- Value propositions
 - Eliminate inefficient operations, save time, reduce costs via automation
 - Optimize resource utilization
 - Standardize business processes
 - Monitor business processes in real-time
 - Scale process execution smoothly
- Features
 - Intelligent task management
 - Smart dashboards
 - Easy integration
 - Realtime updates
 - Process monitoring
 - Workflow orchestration
- Architecture
 - Typical flow
 - create workflows in a designer using BPMN models
 - execute workflows via API calls
 - monitor workflows via API calls and dashboards
 - optimize workflows via AI/ML
 - Basic resource types
 - Gateways - conditional gates on logic flow, e.g. "if true then...." and parallel execution
 - Events - on Start, on End, on Timer
 - Tasks - system, user, compound
 - Connectors - integrate from tasks with REST, GRPC, Python, OpenAI, shell, JS
 - Doesn't have to be hosted in K8s, runs as a standalone container
 - Workflows are described in JSON and submitted via APIs
 - properties: `properties`, `stages`
 - APIs
 - CRUD "business process definitions"
 - CRUD instances
 - CRUD tasks
 - No GUI included today but is on the roadmap
- Community
 - [lauro](#) uses this with their customers already
 - Used by Telefonica, Airtel and some other companies, and they contribute too
 - Want to join CNCF sandbox to increase contributions and usage
- Comparisons
 - Argo Workflows, Keptn, Airflow - oriented to app delivery - IOFlow is oriented to business processes
- Questions
 - Are there CRDs for the APIs?
 - First use case is business processes, but next will do K8s CRDs
 - Does it emit OpenTelemetry events? Does it integrate [CDEvents](#)?

- Compare to keptn? Keptn orients on app deployment, IOFlow is for any workflow type
- Why is this "cloud-native" in particular?
 - Built per cloud-native principals
 - Can execute cloud app delivery workflows too
- Share copy of deck :  IO Flow Presentation - CNCF Sandbox.pdf

2023-10-18

Attendees

- Alois Reitbauer (Dynatrace) - first 15 mins
- Abby Bangser (Syntasso)
- Josh Gavant (Red Hat)
- Ravi Elluri
- Hubbert Smith
- John Gardner
- Victor Lu
- Pradeep Kumar Surisetty

Agenda

- Introductions and stories
 - What is your interest? How can we help you contribute?
 - Optional: share an App Delivery story in <90s
- Status updates
 - Project reviews
 - WGs - Platforms, GitOps, Operators, Artifacts
 - Maturity Model final review: <https://github.com/cncf/tag-app-delivery/pull/472>
 - Canoe chat at next Platforms WG: <https://cnoe.io/>
 - Kubecon - see blog
- Project presentations
 - krkn ([tag#465](#), [toc#44](#)) (@psuriset) - <https://github.com/redhat-chaos/krkn>
- Ideas and PTAL

krkn

TODO: get recording and presentation to share

- Background and use case - find unexpected problems by injecting unexpected scenarios. Needed by Red Hat perf&scale team to ensure max performance of clusters and apps.
- Want to learn from more users via CNCF
- Unique values:
 - emphasis on performance - SLAs and SLOs
- Architecture

- krkn, cerberus, chaos recommender, chaos AI, telemetry collector
- client-side tool, doesn't run inside the cluster, don't want it to be a victim of its own actions
- calls APIs to inject chaos
- for supported scenarios has built-in checks for successful handling of failure
- Cerberus: utility that monitors cluster health - scheduler, etcd, controller manager, etc.
 - aggregates health into a single go/no-go signal
- configure PromQL queries defining success
- scenario-oriented chaos
 - e.g., for a Kafka cluster in k8s
 - but not part of krkn yet - could be added
 - test cases for scenarios as community project
- Chaos AI and Recommender, Telemetry collector
 - Why? improve and increase coverage for chaos
 - Can watch telemetry from application or other components and create appropriate chaos test cases
 - Coming from IBM
 - Recommender - based on static rules
 - Chaos Recommender already part of project, Chaos AI still in development but will be part of project
 - Chaos AI will include a mechanism to continually train a model based on actual telemetry and observation
- Roadmap
 - run
 - more chaos testers, like DNS
 - visualizations and reports
- Community
 - Other contributors: IBM (AI)
 - Users: universities using and providing feedback, FSIs (banks, finance)
 - Seeking more feedback and use cases
- Questions
 - What do you mean by "focus on performance"?
 - use kube-burner
 - provide some recommended default SLOs to test against
 - Contrast with LitmusChaos and others
 - runs outside of cluster
 - cover more perf use cases
 - AI capability - automate creating test cases
 - How do you anticipate users using this? In a pipeline, ad-hoc?
 - Recommend using in a continuous chaos system
 - Use in a test environment first
 - Possibility: publish a guide to chaos engg via TAG
 - Share a copy of presentation

2023-10-04

Attendees

- Christian Lacsina (RX-M)
- Matt Menzenski (PayIt)
- Lian Li (TL, Loft Labs)
- John Gardner (Krumware)
- Abby Bangser (Syntasso)
- Tsahi Duek (AWS)
- Josh Gavant (Red Hat, TAG)

Agenda

- Introductions and stories
 - What is your interest? How can we help you contribute?
 - Optional: share an App Delivery story in <90s
- Status updates
 - Project reviews
 - WGs - Platforms, GitOps, Operators, Artifacts
- Project presentations
 - WG Platforms - Maturity Model ([#381](#), [#464](#))
- KubeCon Plans
 - Finalize everything by Wednesday 11/1
 - Project meeting on Monday 11/6 from 8-12 at the Marriott
 - broadcast and offer a remote session (Josh)
 - start with time for TAG discussion - mission, governance - from 8-9
 - specify agenda and times so people can join as they like
 - lean, unconference style for lightning talks
 - organize into themes
 - open informal CFP and suggest two formats - fixed or open discussion
 - try to emphasize concepts behind projects rather than projects themselves - leads to organize talks
 - seek ways to assign follow-up actions - ways for people to take ownership - create issues
 - Booth
 - Run an unconference session on Wednesday at 4pm at our booth
 - Bring a mic!
 - Sponsor a booth crawl for related projects (Abby Bangser)
 - On Tuesday evening parallel to main booth crawl
 - Print outs like from Amsterdam (Lian Li)
 - Amsterdam flyer for reference:
<https://www.canva.com/design/DAFF-YFqip8/jHcrWIYE2uzfpatXUGY4UQ/edit>

- Include Maturity Model table
 - Ask other WGs, TAG projects
 - Inform WG Artifacts (Josh)
 - Create a list of projects? (Josh)
 - Blog posts (Josh)
 - article on presence at Kubecon
 - article on maturity model
 - Website restructure PR <https://github.com/cncf/tag-app-delivery/pull/458>
-

2023-09-20

Attendees

- Josh Gavant (Chair, Red Hat)
- Karena Angell (TL, Red Hat)
- Sudhir Raut (IO Flow)
- Yusuke Tsutsumi (WG APIs)
- Shashwat Tiwari (IO Flow)
- Alexander Block (kluctl)
- Bryan LaBree
- John Gardner (krumware)
- Mayur Yambal (IO Flow)

Agenda

- Introductions and stories
 - What is your interest? How can we help you contribute?
 - Share an App Delivery story in <90s
- Status updates
 - Annual reviews
 - on pause as we await more automation to gather basics for each review
 - reconsider if "annual" reviews are needed for sandbox projects
 - instead do one "on demand" and prior to incubation
 - Kubecon plans ([#408](#))
- Project presentations
 - kluctl (Alex): <https://github.com/kluctl/kluctl>
 - [Notes](#)
 - API Extensions WG proposal ([#448](#), see also [below](#))
 - Projects that are dotted-line related (include a list).
 - Focus on infrastructure (resource-oriented) APIs.
 - Focus on the specification.
 - Invite Karena to the meeting.
- Ideas and PTAL
 - Maturity model from WG Platforms: `CNCF_PlatformsMaturityModel_v0.3.0`

API Extensions WG proposal

- Former API design team at Google, designed GCP APIs
- Terraform, Crossplane et al depend on the provider APIs
- <https://google.aip.dev/general>
 - designed for Google
 - designed around ProtoBuf - but should be applicable to HTTP/JSON RPC too
- Goal is to gather API patterns and apply across industry
 - Talked to Pulumi and Crossplane
 - No tangible projects, just docs/guidelines
 - Gather interested parties and determine what to provide
 - probably should provide some standard spec
 - that could be tested
- Questions
 - What projects would participate?
 - Kubernetes APIs and CRDs?
 - Many simply project existing provider APIs - see Crossplane, ACK, Terraform etc.
 - But projecting provider APIs isn't always ideal, pushes some problems to the clients
 - If/where would this fit at CNCF?
 - Intent is to provide some "official"ness
 - Enable orgs to confidently participate
 - Consider emphasizing "Infrastructure APIs" in proposal for closer alignment to CNCF's charter
- Next steps
 - Gather stakeholding projects
 - perhaps invite into Slack channel
 - kcp, Crossplane, Operator Framework
 - introduce individual projects
 - invite folks to weekly meeting
 - Get consensus that it's okay to start this in TAG App Delivery
 - Update charter accordingly
 - Proposal: [TAG App Delivery - WG API Enhancement Proposals \(AEP\) Charter](#)
- [#448](#), see also [below](#)

kluctl

- Meta
 - <https://kluctl.io/>
 - <https://github.com/kluctl/kluctl>
- What is it?
 - Define a "deployment project" for any kind of deployment
 - CLI to deploy these projects
 - Controller to enable gitops/pull driven deployment

- GUI
- What is a "deployment project"?
 - "deployment.yaml" points to other resources, e.g. a kustomize directory
 - Can render files from templates **even within** kustomize and helm directories
 - Can even recursively render vars in other vars files
 - "targets" in `.kluctl.yaml` map names to a set of args
 - vars can be sourced from external sources - files, secret stores
- How does deployment happen?
 - Deploy with ``kluctl deploy -t another`` - `-t` specifies the name of the args set
 - Ordering: deployments happen in parallel until a "barrier" is encountered, allowing ordering and dependency management
 - One deployment can refer to another one (via local include or git include)
 - Hooks: imperative actions
- GitOps Controller
 - Just another interface for deployment - offers same features/settings as CLI
 - ``KluctlDeployment`` CRD implemented by controller
 - Can use "push" model using CLI in tandem with GitOps (pull-driven) model
 - By default controller doesn't override out-of-sync changes, just reports
 - GitOps controller checks field owner of changed fields to determine if it should override them or not
 - Can also do diff/dry-run deployments to learn of changes
- UI
 - Will be integrated with OIDC and RBAC systems
 - Can run locally and connect to in-cluster controllers



- Contrast with Helm, ArgoCD?
 - Less upfront investment is required - can start with kluctl and then add the controller et al.
 - Better pattern for ordering dependencies - uses folder structure
 - Is there a path to using Argo or Flux? (Alex might have misunderstood the question...there is no native integration for Flux/ArgoCD, but complex deployments are easily possible via Kluctl alone)

2023-09-06

Attendees

- Omer Kahani (Snyk)
- Alois Reitbauer (Dynatrace)
- Karena Angell (Red Hat)
- Christian Lacsina
- Lian Li
- Abhinav Dubey (Devtron)
- Josh Gavant (Red Hat)
- Roberth Strand

Agenda

- Introductions and stories
 - What is your interest? How can we help you contribute?

- Optional: share an App Delivery story in <3 minutes
 - kluctl: <https://github.com/kluctl/kluctl/releases/tag/v2.21.0>
- Status updates
 - Project reviews ([link](#))
- Sandbox submissions
 - Silver Surfer ([#446](#))
- Website in general
 - Set up website as translations:
<https://github.com/cncf/tag-app-delivery/pull/450>
- Proposal: Kubernetes operator survey
 - [Kubernetes Operator Pattern for Application Deployment Survey](#)
 - ArtifactHub has opened up more usage of the pattern, need to learn from that
 - Gathering more folks with opinions
 - Suggestion: plan to develop a white paper
 - Next steps: share in Slack channel, post in web site
- PTAL
 - WG Platforms maturity model: [CNCf_PlatformModel_v0.2.0](#)
 - WG Platforms "platform as product" paper:
[CNCf_Platform-as-a-Product_v0.1.0](#)
 - WG Artifacts package manager research:
[Artifacts WG - Research - List of Package Managers](#)
 - WG Artifacts repo and issues: <https://github.com/cncf-tags/wg-artifacts/issues>
- Open an issue to change meeting cadence to every 2w

Silver Surfer

- From Devtron: <https://devtron.ai/>
- Work item: <https://github.com/cncf/tag-app-delivery/issues/446>
- Value props
 - Make cluster upgrades more reliable
 - Evaluate API version of all K8s resources and suggest path for upgrade
- Problems with upgrade
 - cluster version compatibility
 - downtime and service disruption
 - config management, custom resources
 - addons must also be considered/upgraded
 - disparate tools, no tool which solves all problems related to upgrade e.g.
 - kubeval - validates config files, not maintained
 - kube-no-trouble - checks for deprecated APIs
 - kubepug - doesn't provide migration path
 - kubeconfirm - inspired by kubeval, for config files
- Architecture
 - kubedd - client side tool which connects to API server using kubeconfig context
 - Uses kubectl.kubernetes.io/last-applied-configuration
- Community

- 7 contributors
- Roadmap
 - generate new manifests for next version
 - create support for pre-upgrade checks for Helm chart updates
 - check CRDs
 - publish as homebrew package for Mac and Linux
 - run as a server, install in cluster, via Helm chart
 - establish "migration policies" to alert on upgrades if cluster isn't ready
- Questions
 - Is scope right for CNCF?
 - May be appropriate as part of Kubernetes?
 - Compare <https://eraser-dev.github.io/eraser/docs/>
 - Maybe consider relationship to <https://kcl-lang.io/> for high-level schema validation
 - Present to the CLI SIG in K8s too

2023-08-16

Attendees

- Thomas Schuetz (WhizUs)
- Lian Li (Loft Labs)
- Josh Gavant (RedHat)
- Victor Lu
- Alexander Greene
- Iliyan Petkov
- Shoujian Zheng
- Pengfei Xu
- Christian Lacsina
- Colin Griffin
- Marcelo Grebois
- yusuke@tsutsumi.io from AEP (arrived late)

Agenda

- Introductions and stories
 - Welcome Lian Li as Tech Lead
 - What is your interest? How can we help you contribute?
 - Optional: share an App Delivery story in <99 seconds
- Status updates
 - State of reviews of annual project reviews ([list](#))
 - WGs - Platforms, GitOps, Operators, Artifacts
 - Verified that chair nominations don't require TOC approval
 - PTAL @ [#428](#) (elect WG Artifacts chairs)

- Platform Maturity Model (Sorry, abby@paintedwavelimited.com not available for this call, but here is a summary and please reach out with any questions!):
 - Evolved to v0.2.0 after a table refresh:
 - CNCF_PlatformModel_v0.2.0
 - Looking for help and review of the intro + detailed sections
 - Owners of the detail sections here:
<https://cloud-native.slack.com/archives/C020RHD43BP/p1691611833923109>
 - Meeting about investment (■ Details - Investment) on Aug 17 @ 12pm CDT:
<https://community.cncf.io/events/details/cncf-tag-app-delivery-presents-platform-maturity-model-investment-deep-dive/>
 - Meeting about measurement (■ Details - Measurement) on aug 21 @ 2pm EST
 - Review of all detailed sections on Aug 29 @ 4pm GMT:
<https://community.cncf.io/events/details/cncf-tag-app-delivery-presents-platform-maturity-model-deep-dive-take-4/>
 - Kubecon Chicago ([#408](#)) - requested project meeting and project booth
- Project presentations
 - KCL ([#430](#), [below](#))
- Ideas and PTAL
 - Presenting idea, entry-level documentation with enterprise-grade examples Marcelo Grebois
 - Compare
<https://github.com/cncf/tag-app-delivery/issues/293#issuecomment-1651339756>
 - CNCF Operator white paper v2 ([#439](#)) (Victor Lu)
 - Artifact Hub was published in June 2021, Operators paper was published in July 2021
 - Need to refresh paper with Artifact Hub in mind
 - Databases on K8s require an operator
 - Need best practices for security issues related to (database) operators
 - Big debate about operators - when are they necessary, what are the best use cases?
 - Crossplane, kcp
 - Need a survey to understand why folks are using operators
 - Scalability of operators - when you have a lot!
 - uses storage in etcd
 - Need to figure out how to leverage operators with ChatGPT and AI
 - Feedback: survey wasn't effective after last paper, best to develop some opinions first

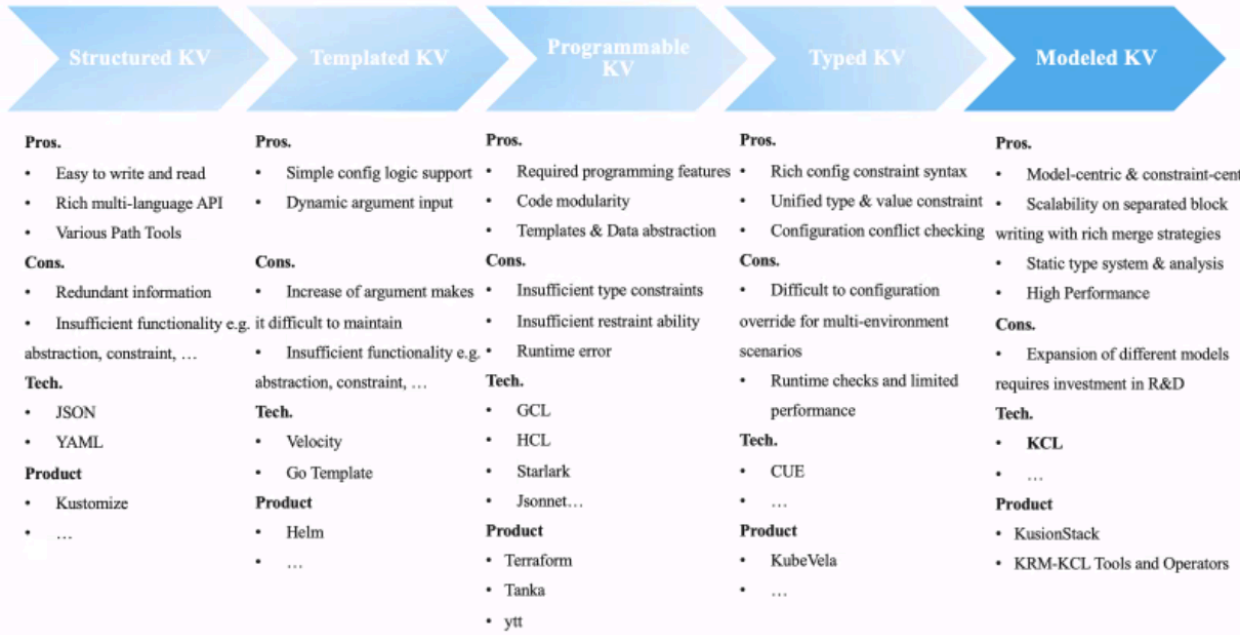
- Share previous survey (thomas.schuetz@t-sc.eu)
 - Iterate <https://github.com/cncf/tag-app-delivery/issues/439>
 - Schedule a meeting for interested parties for v2
- API Extensions WG proposal ([#448](#), see also [below](#))

KCL

- Why?
 - Reduce burden on developers through dynamic config.
 - Developers must learn a lot and write lots of YAML.
 - Developers require third-party software - DBs and networks.
 - Require dynamic configuration.
 - Challenges for stability and efficiency of Config Mgmt.
- What?
 - Can extend other tools like kustomize, helm, kpt
 - Transform standard schemas into many config formats
 - Meets KRM specs
 - KCL files can be bundled into an OCI package using kpm (<https://github.com/kcl-lang/kpm>)
 - SDKs in many languages let devs integrate KCL into their applications
 - Deploy using plugins like kubectrl
 - KCL operator can generate rendered manifests at runtime
 - replaces need for admission webhooks to mutate files
 - some things require dynamic lookups - need operator for that
 - Result is config files - or a binary which when executed yields the rendered config files
 - Can use for linting and formatting at coding time
- Compare
 - Score from Humanitec (workload spec)
 - Integrates with OpenKruise, kpt, kustomize, helm
 - CUE?
 - CUE Performance isn't good enough
 - CUE can't manipulate YAML because its unification feature
 - KCL has strong schema support with custom error messages for constraints, rule and lambda support.
 - KCL has better performance with the compilation support based on LLVM
- Community
 - <https://github.com/kcl-lang>
 - <https://github.com/kcl-lang/community>
 - Used by Ant, Huawei, Youzan, etc
 - Huawei uses this to emit Terraform HCL

Recording...

Related Projects



2023-08-02

Attendees

- Alois Reitbauer
- Christian Lacsina (RX-M)
- Karena Angell
- Pengfei Xu (KCL)
- Josh Gavant (Red Hat)

Agenda

- Introduce newcomers
 - What is your interest? How can we help you contribute?
 - Optional: share an App Delivery story in <3 minutes
- Voting for new co-chairs
 - [Link to Issue](#)
- Kubecon Chicago plans ([#408](#))
 - pre-day project meeting
 - booth in project area
- WG Artifacts chair nominations ([Alex Flom](#), [Ramkumar Chinchani](#))
 - Verify if we need TOC approval (alois.reitbauer@dynatrace.com)
- Seeking contributors for sandbox annual reviews

- List of pending reviews:
<https://github.com/cncf/toc/issues?q=is%3Aopen+label%3A%22annual+review%22+label%3A%22tag-app-delivery%22>
 - ORAS ([toc#943](#))
 - Sealer ([toc#1041](#))
 - Porter ([toc#951](#)) (`alois.reitbauer@dynatrace.com`)
 - CDK8s ([toc#1024](#))
 - Follow guidance here:
<https://github.com/cncf/toc/issues/1123#issuecomment-1661135902>
 - Contributors should create an issue in [TAG GitHub issue board](#) and link to TOC issue
 - Upcoming meetings: <https://community.cncf.io/tag-app-delivery>
-

2023-07-19

Attendees

- Josh Gavant
- Lian Li
- Karena Angell
- Abby Bangser

Agenda

- Intros, solicit agenda items
- Sandbox project annual reviews
 - Ask from TOC: lead annual reviews for sandbox projects related to App Delivery
 - **We are seeking volunteers!**
 - [First projects](#): Sealer, CDK8s, Porter, ORAS
 - Full list at <https://github.com/orgs/cncf/projects/27/views/4>
 - Note: *Not* the same as sandbox *submission* reviews for new projects, listed at <https://github.com/orgs/cncf/projects/14>
 - What should the process be like?
 - What official guidelines and standards?
 - Official doc on process:
<https://github.com/cncf/toc/blob/main/process/sandbox-annual-review.md#how-to-file-your-annual-review>
 - Detailed guidelines in development:
<https://github.com/cncf/toc/issues/1123#issuecomment-1640514688>
 - Templatize as a GitHub issue template eventually
 - Who can lead a review? Require a TAG lead as a partner? No - don't want to slow things down.

- Why include a lead? To share patterns and practices across many reviews. Can achieve that by doing it asynchronously in a doc and/or GitHub issue, allows leaders and other folks to review and learn too
- Has another TAG designed a process? **Ask TAG Security.**
- Is this just a one-off review? Should we seek any other engagement from the projects being reviewed?
 - Would be nice to encourage more participation, but it's not a goal right now.
- Proposed process:
 - Anyone can volunteer
 - Create an issue in <https://github.com/cncf/tag-app-delivery/issues> for each project
 - Provide status updates as comments for significant developments and discoveries
 - Research project to understand the following:
 - technical architecture
 - governance structure
 - breadth of community
 - Connect with current project maintainers and learn their perspectives
 - Follow guidelines from TOC in development [here](#)
 - Finish by end September
 - Next TOC sandbox review meeting is 9/18
- Kubecon: project meeting and booth are TBD, session proposal submitted for WG Platforms
- WG Artifacts chair nominations ([Alex Flom](#), Ramkumar Chinchani)
- TAG chair nominations ([#407](#))
- Last call for Chaos Engineering WG:
<https://github.com/cncf/tag-app-delivery/issues/415>
 - **We will close the Chaos Engineering WG.**
- Website
 - PTAL at <https://github.com/cncf/tag-app-delivery/pull/416>
 - Consider including projects under review - e.g. annual review, sandbox submissions
 - Consider a monthly "status update" post?
 - Start by summarizing meeting notes - tagged
 - Ask WG Artifacts to contribute
- Platform WG
 - Maturity Model deep dive (take 1) was successful!
 - Deep dive take 2 is scheduled:
<https://community.cncf.io/events/details/cncf-tag-app-delivery-presents-platform-maturity-model-deep-dive-take-2/>
 - Offering people to submit a model that can be added to a "gallery walk through" for identifying ongoing differences in understanding for the model

2023-07-05

Attendees

- Alex Jones (Canonical)
- Thomas Schuetz (WhizUs)
- Roberth Strand (Amesto Fortytwo)
- Karena Angell (Red Hat)
- Lian Li (Loft Labs)
- Josh Gavant (Red Hat)
- Colin Griffin
- Tsahi Duek (Amazon Web Services)

Agenda

- Recording: <https://www.youtube.com/watch?v=PtiYSBzTORY>
- Website restructuring ([#410](#)) (lian@loft.sh)
 - Doc: [TAG App Delivery Website Plan](#)
 - What is the role of any/this TAG?
 - Enable success of **projects** - help them work together
 - Enable **community** of and education of **end users** - provide guides, help them find projects to contribute to
 - Provide semi-official "CNCF opinions"
 - Consider iterating on TAG charter ([#400](#)) as part of this
 - Observation: hard to figure out what the TAG does from website
 - Most people don't know what a TAG is - what we do, what value we provide
 - Advice could be applied to other projects, CNCF advisory and working groups
 - Goal: help people quickly find entry points to contribute
 - Section for each WG
 - Some materials are *copied* into website structure, would need to keep those synchronized
 - Can we get metrics/analysis of traffic?
 - **Next steps:**
 - Work with Lian and others in issue
 - Find out about telemetry (Josh Gavant)
- Project reviews: <https://github.com/cncf/sandbox/issues>
 - How is TAG handling projects? How can we improve?
 - What projects are related, how might they work together?
 - Seek opportunities for projects to merge with other projects
 - Help projects understand what the state of their project is vis-a-vis TOC requirements - save lots of time

- Suggestion: create showcases integrating several projects
 - suggestion: work with [#293](#)
- Kubecon plans ([#408](#)) - meetings, sessions, booth
 - See [Kubecon EU Notes](#) below
 - What is the goal of the booth?
 - Demonstrate complete platforms integrating many capabilities from projects
 - Demonstrate and discuss business use cases and implementations to realize them
 - Discuss recent TAG work and releases - Platforms Maturity Model, web site, Artifacts WG
 - Lightning talk: bring people together - provide a platform and space for people to exchange ideas
 - Project meetings
 - What is the goal of a project meeting? Should we coordinate meetings across many projects?
 - Consensus: a project meeting has no formal goals. Rather, it's up to project members to decide if they desire a meeting and what its goals are; then CNCF simply enables that.
 - What are the goals of TAG App Delivery's project meetings?
 - Enable partnership and collaboration amongst related projects and ideas
 - Enable working groups to work together
 - Inform and enable end users about cloud-native app development and delivery
 - Lightning Talks for fast idea and relationship building
 - Logistics
 - We need a much larger room
 - Hold on Friday Nov 10? Folks are burned out by Friday
 - Replace or supplement with meetups at booth?
 - Find out what other projects and TAGs are doing
 - TAG Security
 - Start a discussion with TOC and TAGs
 - **Next steps:**
 - Submit request for TAG **booth**, begin planning content
 - Find out what other groups are planning for **project meetings**
 - But go ahead with scheduling a 4-hour meeting for the TAG
- Process refinements
 - Guidance for project reviews and recommendations ([#401](#))
 - Guidance for WG formation - write up the TAG's internal process
 - GitHub org for TAG repos ([toc#1098](#))
 - Code of conduct for contributing content ([#414](#))
- WG Updates
 - Platforms maturity model
 - issue: <https://github.com/cncf/tag-app-delivery/issues/381>

- doc: [CNCF_PlatformMaturityModel_v0.1.0](#)
- wg-artifacts progress ([#368](#), [#409](#)) (Josh Gavant)
- wg-chaos state ([#415](#))

2023-06-21

Attendees

- Alois Reitbauer (Dynatrace)
- Josh Gavant (Red Hat)
- Richard Frankel (AIPs; Roblox)
- Mak Ahmad (AIPs; Meta)
- Colin Griffin (Krumware)
- Michael Palassis (Defense Unicorns)
- Abby Bangser (Syntasso)
- Christian Lacsina (RX-M)
- Omer Kahani (Snyk)
- Yacine Kheddache (Microcks)
- Marsh Gardiner (Google)
- Yusuke Tsutsumi (Google)
- Paulo Simões (Oracle)
- Karena Angell (Red Hat)
- Alfred Fuller (AIPs; Buf.build)

Agenda

- WG updates
 - Platforms:
 - maturity model: <https://github.com/cncf/tag-app-delivery/issues/381>
 - jump into the Google Doc and share your opinions in comments
 - Doc: [CNCF_PlatformMaturityModel_v0.1.0](#)
 - join Abby as a moderator on the doc/paper
 - Ping Abby Bangser on CNCF slack
 - Provide visibility into the work via the website:
<https://github.com/cncf/tag-app-delivery/issues/410#issuecomment-1590005794>
 -
 - wg-artifacts progress ([#368](#), [#409](#)) (Josh Gavant)
- Kubecon plans ([#408](#))
 - Project meeting?
 - seek a bigger room
 - projects, TAGs and other meetings on the same day
 - can we have some meetings on Tues-Thurs?
 - what about on Friday?

- SDLC vs platform engineering
- talk to TOC (alois.reitbauer@dynatrace.com)
- Booth
 - get a half-day booth
 - lightning talks at booth
- Sessions?
 - Suggestion: state of app delivery and app development, relationship to platforms
 - topics include SDLC and Platform Engineering
 - could be the difference is the target audience
- Project reviews
 - AIP ([sandbox#30](#))
 - <https://github.com/cncf/sandbox/issues>

AIP

- Mak (Meta), Marsh (Google), Richard (Roblox), Yusuke Tsutsumi (Google)
- See <https://google.aip.dev/1>
- See <https://aip-dev.github.io/aip.dev/>
- AIP == "API Improvement Proposals"
- What are they?
 - Design guidelines developed and used at Google starting in 2019
 - Drive standardization in how APIs are created
 - Before AIP guidance was scattered, hard to verify conformance at scale
 - Externalized as <https://aip.dev/>
 - Cross-company group: Google, Meta, Roblox, Netflix, Salesforce, IBM - to define desired policies
- AIP is very Google branded, desire to become a community project, be more inclusive, ideal to be part of CNCF.
- Feedback: CNCF wants projects that will move from sandbox -> incubation -> graduation. What would graduation be like for AIP?
 - Is this similar to OpenGitOps? That started as a WG.
 - Also comparable to podtato-head? That project is managed by the TAG, not an independent project.
- Should we consider a working group on APIs and microservices, with AIP leaders as primary members?
 - A proposed charter from earlier this year:
<https://github.com/pasimoes/microservices-wg/blob/main/microservices-wg-charter.md>
 - Tools could be put into sandbox from it
- AIP is initially a style guide. But looking toward defining conventions and standards.
 - Define semantics - compare to OpenTelemetry?
 - Define common schemas for typical types like datetimes and durations
 - Provide base libraries to be used for typed client libs that follow the patterns
 - Client generation tooling - UIs, docs, CLIs, SDKs

- Roblox has adopted the AIP standard
 - linting, tooling, client gen
 - generate protobufs, could also generate OpenAPI specs
- What API services are targeted?
 - Application and product/service APIs.
 - Could also be applied to other types of APIs, like infrastructure APIs.
- Could we apply the AIP practices to existing CNCF projects?
 - There's an audit for Google APIs.
 - Could it do an audit for Kubernetes and CNCF APIs?
 - Evaluate CRDs? They are OpenAPI v3.
- Started as mostly "Architectural Decision Records" (ADRs)
- Will the related tools be contributed to CNCF as well?
 - Chicken and egg problem - need to convince tools maintainers that open source is worthwhile
 - In CNCF it's easier to contribute
- Compare AIP to AsyncAPI or OpenAPI?
 - AIP is about semantics and behaviors, beyond the syntax
- Have you considered the OpenAPI group?
 - Yes, but seems to be only for that spec. For example, AsyncAPI isn't there.

2023-06-07

Attendees

- Josh Gavant
- Hongchao Deng
- Lian Li
- Christian Lacsina
- Colin Griffin
- Ajesh Baby (LitmusChaos, Engineering Manager at Harness)
- Justin Cormack
- Uma Mukkara (LitmusChaos Maintainer, Head of Chaos Engineering at Harness)
- Prithvi Raj
- Roberth Strand
- Saranya Jena (LitmusChaos, Senior Software Engineer at Harness)

Recordings

- <https://www.youtube.com/watch?v=KTQCJ9Koeto>

Agenda

- Project presentation: LitmusChaos (Uma Mukkara, Prithvi Raj)
 - [Notes](#)
- TAG elections ([#407](#))

- wg-artifacts progress ([#368](#), [#409](#)) (Josh Gavant)
 - folks don't know the patterns to use in OCI, no examples for complex things
 - develop patterns and practices
- Community outreach (lian@loft.sh)
 - How to enable contributors to contribute small things - not the size of working group
 - Possibilities: website, podtato-head

LitmusChaos

- Presentation:  TAG Update 7th Feb
- CNCF info: <https://www.cncf.io/projects/litmus/>
- Started as ChaosNative 6y ago, many now work for Harness
- Functional features
 - New HTTP chaos experiments - latency, status, fuzzed headers and bodies, etc.
 - New AWS and GCP experiments
 - Spring Boot experiments (from a contributing company)
 - Support for CRI-O and containerd, cgroupsV2
 - for execution environment
 - Reduced resource requirements
 - Helm chart
- Management
 - support for private chaos "hubs"
 - refactored APIs for better automation
 - improved user experience for custom settings
 - improvements to `litmusctl` CLI
- Community
 - Kubecon project meetings and sessions
 - Chaos Carnival
 - Customer success stories
 - Participated in LFX/CNCF mentorship program
- Roadmap
 - Litmus 3.0: <https://github.com/litmuschaos/litmus/discussions/3801>
 - Continue reducing resource requirements of control components
 - More developer-centric - chaos as integrated part of typical delivery pipelines
 - Chaos Studio UI
 - <https://litmuschaos.cloud/> - hosted version of Litmus
 - absorbed from ChaosNative (purchased by Harness):
<https://www.chaosnative.com/>
- Chaos Testing WG
 - Chartered to produce white paper on best practices for chaos engineering
 - Gathered more enterprise user stories
 - Site: <https://github.com/cncf/chaosengineering-wg>
 - Meeting notes:  CNCF Chaos Engineering WG - Meeting Notes
- Questions

- What other chaos frameworks are there? Are they participating in CNCF and conferences?
 - ChaosMesh - working with TAG Network
 - ChaosBlade - working with TAG Network
 - Others: Testkube, AWS FIS, Gremlin, ChaosMonkey
- What value are you deriving from project meetings at Kubecon?
 - Meeting users
 - Would be helpful to have all together
- Can you share progress on the white paper in a GitHub issue? Are there public meetings?

Project Stats - Docker Pulls



2023-05-17

Agenda

- Project presentation: PipeCD (Khanh Tran) - <https://github.com/cncf/sandbox/issues/12>
 - [Notes](#)
- Project presentation: Microcks (Yacine Kheddache & Laurent Broudoux) - <https://github.com/cncf/sandbox/issues/37>
 - [Notes](#)
- Viktor Nagy (GitLab): Discussion on GitLab's application delivery entities: <https://about.gitlab.com/direction/delivery/glossary.html> We created the linked

glossary of delivery terms to better discuss the domain internally. I find it very generic and usable outside of GitLab. Wanted to ask your opinion about it and see if it would fit somewhere with the TAG. Let me know what you think!

- Justin Abrahms shared on Slack: You may also be interested in the work the CDF did around this:
 - <https://github.com/cdfoundation/sig-interoperability/blob/main/docs/pipelines-terminology.md>
 - <https://github.com/cdfoundation/sig-interoperability/blob/main/docs/tools-terminology.md>
- Viktor: I think the biggest difference between these and the proposed glossary is that these are all pipeline focused, while the proposal is user focused. At the same time, the pipelines terminology is a bit more detailed.
- Josh: Open a GitHub issue to discuss asynchronously
- Alois: We need the extra workload to collect existing terminology. Try to socialize it with related projects. Argo rollouts, Flagger, Kubevela, etc
 - Would be helpful to compare/contrast how these terms are used in different projects
 - See also [Why the Kubernetes needs an application object](#)

PipeCD (Khanh Tran)

- Resources
 - <https://github.com/cncf/sandbox/issues/12>
 - <https://pipecd.dev/>
 - <https://pipecd.dev/docs/>
 - <https://github.com/pipe-cd>
 - Slide:  Introduction to PipeCD_at TAG.pdf
- Why? "One GitOps Delivery Infrastructure for all"
 - A consistent process for all
 - Must be easy enough for everyone
 - Provide fast and useful feedback loop
 - Safety
- What? Merge PR with manifests, PipeCD deploys per manifests.
- App types
 - KubernetesApp
 - CloudRunApp
 - TerraformApp
 - LambdaApp
 - ECSApp
- App attributes
 - "pipeline" attribute that includes an array of "stages"
 - There are 2 kinds of stages: kind strict stage & common stage
 - Common stages can be used cross kind: wait / wait_approval / analysis / custom_bin

- "postSync" attribute sets an array of actions to be applied after sync/reconcile the current app
 - "postSync.chain" triggers others applications on current app sync done
- Other configurable for application deployment:
<https://pipecd.dev/docs/user-guide/configuration-reference/>
- UI for visibility into pipeline execution and current state of app
- Feedback on all stages
 - Provides a plan preview prior to deployment
 - Progressive delivery
 - Verification based on metrics, logs from Datadog, Prometheus
 - Insights based on DORA metrics
- Interact with CI: React to events via "EventWatcher" resource
 - e.g., adjust value of a YAML field
- Future work
 - Make more extensible and programmable
 - Drift detection, reconciliation
 - More feedback in plan preview

Microcks

Presented by Yacine Kheddache & Laurent Broudoux

Recording:

<https://youtu.be/UnNozJiNcz8?list=PLjNzvzqUSpxJ0JfD6vrdF5bsuBaJQ2BRT&t=1600>

- Resources
 - <https://github.com/cncf/sandbox/issues/37>
 - <https://github.com/microcks>
 - Slide deck ([PDF](#) / [Google slide](#)) of this 2nd presentation
- Why?
 - Accelerate development of APIs
 - Secure APIs (from a QA perspective to avoid breaking changes and commit on your consumers promise)
 - Enable collaboration between developers and product owners
 - Gather all types of APIs and protocols
 - Quote: "Releasing v1.0 is no problem. It's later versions where you might have conflicts, this 'secures' and verifies behavior is as expected."
- What?
 - Generate all kinds of APIs via a UI
 - Mock/simulate APIs for integration tests
 - Send requests per schema to test endpoints
 - Generate Kafka messages to send to consumer
 - Listen to Kafka messages to verify conformance to schema
 - Use as part of CI/CD pipelines for verification
 - Integrates with other projects
 - Checks for

- Support/import: SOAP, OpenAPI, gRPC, GraphQL, AsyncAPI, CloudEvents, Postman collection
- AsyncAPI for:
 - Kafka
 - MQTT
 - WebSocket
 - RabbitMQ
 - NATS
 - Google Pub/Sub
 - AWS SQS and SNS
- Includes [Hub](#) to share API descriptions (API Mocks & Test suites -> [How to contribute an API package](#))
- Future
 - Develop client library (SDK) for Microcks to publish and retrieve definitions

2023-05-03

Recording: <https://youtu.be/NpV1LsY-jt0>

Agenda:

- Introduce new attendees and discuss how to contribute
 - see <https://github.com/cncf/tag-app-delivery/blob/main/CONTRIBUTING.md>
 - Justin Cormack is the TOC liaison for TAG App Delivery
 - How to contribute translations to website?
- KubeCon Recap
 - Better describe opportunities to contribute
 - Present one-off ideas and examples, don't block on long-term maintenance
 - Announce Platforms Maturity Model effort - first meeting May 10 ([details](#))
 - Continue pursuing synergy with TOC and other TAGs on project support and curation (see <https://github.com/cncf/sandbox/issues>)
 - Use GitHub issues to track discussions in progress
 - Feedback on Kubecon activities? Suggestions for next time?
 - Project meetings, lightning talks, booth, session
 - Note: lots going on on the pre-day, conflicts, scheduling challenge
 - dedicated sections/booths for TAGs? TAG Security had a "village" too
 - focus on booths over project meetings?
 - TAG Security has its own conference - should TAG App Delivery Partner with CDCon and GitOpsCon?

CD Events

- Discuss cooperation with CDF on [CDEvents](#) (<https://github.com/cncf/tag-app-delivery/issues/397>)

- Why CD Events?
 - Enable interoperability between services and tools.
 - Make delivery components independently scaleable
- Recently added events for ongoing operations (runtime, post-delivery)
- Working on correlation/shared context across a related set of events (e.g., one pipeline run)
- One of the use cases is observability of delivery tasks/pipelines
 - Events enable calculation of DORA (and other) metrics
- Collection of all events can attest to intended activity throughout pipeline
 - Need to trust events (e.g., need to be signed)
- Interaction with OpenTelemetry? See <https://github.com/open-telemetry/opentelemetry-specification/pull/3169>
- Working with tools providers to emit compliant events
- What event bus is used to store and forward events to subscribers?
 - The event bus implementation doesn't have to matter to CD Events
 - Knative Eventing is used in prototypes
- What protocol for transporting events?
 - The standard includes a schema and binding to Cloud Events.
 - SDKs support JSON over HTTP, but other transports for JSON could be used.
- SDKs are able to both send and receive compliant events
 - Go SDK is complete, others in development
- Projects implementing today, using SDKs:
 - Jenkins: <https://plugins.jenkins.io/cdevents/>
 - Spinnaker: <https://github.com/spinnaker/governance/pull/299>
 - Tekton: <https://github.com/tektoncd/experimental/tree/main/cloudevents>
 - Testkube: <https://github.com/kubeshop/testkube/issues/3682>
- What can TAG App Delivery do?
 - Develop prototypes
 - Use CD Events-driven flows in podtato-head (<https://github.com/podtato-head/podtato-head-delivery>)
 - Demonstrate in a prototype platform
 - What would be the role in a platform outside of app delivery? Ongoing reporting on state of infrastructure. But CDEvents is focused mostly on delivery domain.
 - A general reference platform architecture is in development at CDF. How can we partner? Consider leveraging podtato-head?
 - Add event emitters to other services and tools, could use SDKs
 - Participate in CD Events meetings to further the spec and standard
 - [CDF Public Calendar](#) where CDEvents and SIG Events Meetings are listed
 - Join the community: <https://cdevents.dev/community/>
 - Idea: conventions for how to react and respond to events
 - Check in again in June for opportunities

- WG Artifacts progress update (Josh)
(<https://github.com/cncf/tag-app-delivery/issues/368>)
- TAG charter review: <https://github.com/cncf/tag-app-delivery/issues/400>
- TAG leader election soon (Alois)
- Pending discussions: <https://github.com/cncf/tag-app-delivery/labels/tag-discuss>

2023-04-18 - Kubecon EU

- TAG mission and objectives (~30m)
 - Highlights from [charter](#) (see also [TAGs](#)):
 - collaborate on areas related to developing, distributing, deploying, managing and operating secure cloud-native applications
 - develop informational resources including guides, tutorials and white papers describing best practices, trade-offs, and value-adds
 - identify suitable projects and gaps in the landscape
 - developing best practices, fostering collaboration between related projects, working on improving tool interoperability as well as proposing new initiatives and projects when blank spots in the current landscape are identified
 - Why are people here and what do they expect
 - Ensure projects work together
 - One is fine, two is ok, three is a
 - Focus on top adopted projects
 - Document use case
 - Maintenance work of artifacts
 - Should we maintain the “prototypes”
 - Feel the “pain” of keeping them working
 - Curate them vs. maintain
 - Which issue are we defining for projects
 - Monthly demo?
 - “Last mile” of the journey
 - GitHub discussion - short meetings
 - Objectives
 - Enable **cloud end users**
 - Enable **project maintainers**
 - Rationalize technical domains and projects
 - Governance
 - Working Groups
 - Chairs and Leads
 - Collaboration
 - How do you want to get access to content/meeting topics
 - How would you like to contribute

- TAG Objectives
- App delivery lightning talks (~60m)
 - <https://tag-app-delivery.cncf.io/blog/tag-app-delivery-at-kubecon-eu-2023/>
 - Lightning Talk: Capabilities of Portals
- TAG work in progress (~45m)
 - Platforms - Josh Gavant
 - Papers and processes, website - vNext
 - User experience reports, interviews, survey
 - Attributes and maturity model, product mindset (Abby Bangser)
 - Second level in "Capability" domains - artifacts 🧩, secrets/connections, multitenancy (seeking leads)
 - Operators - Jen Strejevitch
 - GitOps - Scott Rigby
 - Artifacts - Andy Block
 - Others?
- Lightning talks, etc. (~60m)
 - <https://tag-app-delivery.cncf.io/blog/tag-app-delivery-at-kubecon-eu-2023/>

2023-04-05

Recording: <https://youtu.be/PWr252H9TKk>

Attendees:

- Alois Reitbauer
- Josh Gavant
- Scott Rigby
- Lian Li
- Karena Angell
- Christian Lacsina
- Amye

Agenda:

- Kubecon prep
 - Schedule speakers and volunteers at booth and meetups
 - see KubeCon EU 2023 - TAG Activities
 - Ask sandbox projects to present
 - <https://github.com/cncf/tag-app-delivery/issues?q=label%3Aprojects>
 - <https://github.com/cncf/sandbox/issues>
 - Booth meetups
 - choose a theme for the booth meetups - GitOps?
 - Add to blog post/schedule @ <https://appdelivery.cncf.io/blog/tag-app-delivery-at-kubecon-eu-2023/>



- wg-gitops: OpenGitOps sandbox [project meeting at KubeCon at 08:00 - 12:00 on Tues Apr 18](#) (please [Retweet](#) :))
- Lightning talks deadline - Friday 4/15
- other TAG/TAG member activities
- Make a spreadsheet with booth time slots so people can sign up (Josh)
 - Here: [KubeCon EU 2023 - TAG Activities](#)
- Check in or meet Tuesday 1700 UTC, Friday to finalize plans
- We'll have stickers on the sticker wall (thanks amy@linuxfoundation.org !)
 - <https://stickerapp.com/> are super fast within europe
- CFP: <https://forms.gle/MpgyCcGpygr8zQC66>
- Info: <https://appdelivery.cncf.io/blog/tag-app-delivery-at-kubecon-eu-2023/>
- WG Artifacts
 - [TAG App Delivery - WG Artifacts Charter](#)
 - [Artifacts Search and Discovery \(from Artifacts WG\)](#)
 - GH issue: [cncf/tag-app-delivery#368](https://github.com/cncf/tag-app-delivery/issues/368)
 - TAG App Delivery mailing list [post](#)
 - TOC mailing list [post](#)
 - Idea: gradually bring synergy and conventions to:
 - <https://artifacthub.io/docs/topics/repositories/>
 - <https://packaging-con.org/>
 - Should inform OCI too
 - opportunity for cross-pollination
 - OCI events at Kubecon too

2023-03-15

Attendees:

- Josh Gavant (TL, Red Hat)
- Michael Palassis (Defense Unicorns)
- Omer Kahani (Snyk)
- Hongchao Deng
- Alex Jones (Canonical)
- Christian Lacsina (RX-M)

Agenda:

- TAG website (Josh)
 - Will be like <https://contribute.cncf.io/>, based on [Hugo](#)
 - Top-level nav: "Posts" and "Whitepapers"
 - Issue: <https://github.com/cncf/tag-app-delivery/issues/329>
 - Current contributing guide: <https://contribute.cncf.io/about/contributing/>
- Capability domain standards and synergies:
 - [CNCF WG Platforms - Capability Domains](#) (Josh)
 - Seeking vendors and individuals to bring in stakeholders and drive discussions

- App Definition (Thomas, Alois): [Why the Kubernetes needs an application object](#)
 - Different from this sig? <https://github.com/kubernetes-sigs/application>
 - Example from sig:
<https://github.com/kubernetes-sigs/application/blob/master/docs/examples/wordpress/application.yaml>
 - May not be necessary for simple scenarios. More relevant to big enterprises. But in big enterprises each enterprise is different.
 - Kubernetes may not want such a high level primitive, likely to reject it.
- Operator whitepaper
 - How to add a section - submit a PR to the markdown source
 - For v2, opportunity to reflect on evolution of operators
- Kubecon: [KubeCon EU 2023 - TAG Activities](#)
 - Meetup on Tuesday 4/18 @ 1pm
 - Booth Wednesday-Friday
 - designate times at booth for cross-cutting discussions on topics, e.g. Platforms, Operators, Chaos, GitOps
 - plan schedule
 - seek facilitators
- podtato-head
 - consider synergies with <https://github.com/cncf/tag-app-delivery/issues/293>

2023-03-01

Attendees:

- Alois Reitbauer (Dynatrace)
- Thomas Schuetz (Dynatrace)
- Omer Kahani (Snyk)
- Christian Lacsina (RX-M)
- Lian Li (Loft Labs)
- Josh Gavant (Red Hat)
- Alexander Block (@codablock)
- Jennifer Strejevitch (Kainos)
- Michael Palassis (Defense Unicorns)
- Roberth Strand (Amesto Fortytwo)
- Praveen Rewar (VMware)
- Paulo Alberto Simões (Oracle)

Agenda:

- Discuss Application Definitions: [Why the Kubernetes needs an application object](#) (Alois?)
- Review [Kluctl Delivery Scenario PR](#) (@codablock)
 - **review podtato-head contribution:**
<https://github.com/podtato-head/podtato-head/pull/178>

- sandbox request: <https://github.com/cncf/sandbox/issues/8>
- seeking more contributors for kluctl: <https://github.com/kluctl>
- previous presentation to TAG: [TAG General Meeting - 2022-11-16](#)
- another presentation: [Hands-on Introduction to kluctl | Rawkode Live](#)
- Discuss KubeCon EU activities: [KubeCon EU 2023 - TAG Activities](#) (Thomas?)
 - **Project Meeting on Tues 4/18 @ 1pm**
 - Suggestions
 - Review TAG objectives and charter
 - Review TAG WIP - platforms, gitops, operators
 - Lightning talks on emerging ideas
 - Partner with GitOps WG?
 - TBD, Roberth will let us know
 - Multiple tracks? Build on same logistics?
 - AV and recording of talks
 - Location, space, food, audio/video
 - Publish a schedule
 - Market: blog post, social posts, get on Kubecon schedule
 - **Booth in maintainers area**
 - Purpose
 - Project discussions
 - Cross-project domains
 - Run slideshows and videos?
 - Project slides only if maintainers are nearby
 - Challenge: how to know when people will show up with Qs?
 - Consider setting a scheduled time for several projects to share ideas
 - Previous:
 - [Kubecon unmeetup: Components of a cloud-native platform](#)
 - Define which talks/projects will be present

2023-02-15

Attendees:

- Thomas Schuetz (Dynatrace)
- Josh Gavant (RedHat)
- Devdatta Kulkarni (CloudArk)
- Omer Kahani (Snyk)
- Paulo Simoes (Oracle)

Agenda:

- Present KubePlus (<https://github.com/cloud-ark/kubeplus>) - Devdatta Kulkarni

KubePlus

- Major value proposition is "multi-instance multi-tenancy": each tenant is assigned a separate instance of the same application, one instance is assigned to each tenant. Separate data, config, customizations per instance/tenant.
 - Also called "Multi-customer tenancy"
 - Apps that are otherwise single-tenant can be managed in a multi-tenant way - that's what "multi-instance" is.
- Use cases:
 - B2B SaaS
 - Enterprise internal SaaS
 - and possibly internal platform capabilities
 - Public SaaS
- Story
 - A service described by a Helm chart is to be deployed many times for many tenants in one cluster.
 - Naive approach would be to run `helm install` against each tenant namespace. But this leaves gaps in isolation, security, monitoring, upgrades, and customizations for tenants.
 - KubePlus manages the installation of a Helm chart to a namespace and adds features to ensure and enable isolation, security, monitoring, upgrades, and customizations for each tenant and instance.
- Implementation
 - Components info:
 - <https://cloud-ark.github.io/kubeplus/docs/html/html/kubeplus-components.html>
 - Includes a kubectl plugin
 - ResourceComposition resource includes a link to a Helm chart
 - KubePlus generates a CRD based on the ResourceComposition resource. For example, it generates a `WordPressService` CRD from a WordPress ResourceComposition resource.
 - An OpenAPI schema is also generated from values.yaml - not easy, but required in recent Kube versions.
 - KubePlus handles instances (CRs) of the generated CRD and does stuff that adds common required features - isolation, security, monitoring, upgrades, customization
 - Helm's `values.yaml` schema becomes the schema for the new CRD's spec
 - A MutatingWebhook picks up newly-submitted instances of the CRD and calls the `Helmer` service to render and apply the chart
 - Has been tested alongside other MutatingWebhooks (e.g. from Kyverno) without problems
 - KubePlus tracks all the resources created by the chart and by KubePlus itself, and makes them accessible via `kubectl appresources` (a plugin)
 - NetworkPolicies and ResourceQuotas CRs are generated and injected by KubePlus
 - `kubectl metrics` plugin aggregates metrics across all the resources in the CRD

- CloudArk offering includes a GUI that gathers metrics periodically and tracks them over time
 - GUI is available publicly and can be deployed by individual researchers but is intentionally not documented or supported
- Tested with all Bitnami Helm charts and addressed bugs
 - Please open issues for Helm charts with problems!
- Questions
 - If someone just wants to deploy capabilities, not complete applications, should they consider KubePlus? E.g., if tenants want a database in their namespace alongside other components.
 - Yes, but namespace needs to be dedicated to the KubePlus-deployed service.
 - Could bundle the complete application in one chart - including database and app components.
 - Is it okay to use the namespace for other components? Not really, KubePlus expects to own the namespace.
 - Compare/contrast with Operator Lifecycle Manager - it also publishes new resource types and allows many instances of them?
 - More complexity with OLM - KubePlus only requires one controller and charts are added directly to it; OLM has notion of channels and packages
 - KubePlus focuses on one pattern: apps bundled as Helm charts; OLM supports Go and other types of operators
 - Compare/contrast with Operator Framework's [Helm-chart-based operator](#) - it also bundles a Helm chart and exposes a CRD based on the schema in values.yaml?
 - Operators created by Operator SDK yield a lot of boilerplate Go code which must be built and deployed
 - Operator SDK requires a controller per operator type, KubePlus requires just one operator (the KubePlus operator)
 - How does KubePlus interact with GitOps tools like ArgoCD?
 - Work in progress - must update ResourceCompositions, then roll out updates to instances based on those compositions

2023-01-18

Attendees:

- Alois Reitbauer
- Josh Gavant
- Andrew Oetzel
- Paulo Simoes
- Michael Palassis (Defense Unicorns)
- Lian Li
- Jennifer Strejevitch

Agenda:

- Present Score (Andrew Oetzel, Humanitec)
 - Product page: <https://score.dev>
 - Repo: <https://github.com/score-spec/spec>
 - Value proposition:
 - "eliminates configuration inconsistencies between local and remote environments"
 - reduce requirements for app devs to consider infrastructure details
 - reduce risk of deep coupling with specific infrastructure
 - E.g. dev says "I need a database", ops team determines how to fulfill appropriately in dev and prod
 - API: <https://docs.score.dev/docs/reference/score-spec-reference/>
 - intended to be generic and able to target any environment - K8s, Hashicorp Nomad, AWS ECS, docker-compose, localhost
 - Implementation: <https://docs.score.dev/docs/reference/score-cli/>
 - multiple command-line tools (one per target platform) which implement **rendering** of manifests for each target platform (e.g. docker-compose, k8s, helm)
 - use the CLI implementation for the target platform, e.g. `score-compose run` or `score-humanitec run` - generates manifests to be applied for that platform
 - Questions
 - Why not use Helm to render manifests? Want to target more than K8s.
 - Why not KubeVela? In KubeVela a *developer* must specify resource types for each environment. In Score, platform team determines implementation (by writing a command-line tool)
 - How does a platform team implement a "platform"? Must implement a platform-specific Score CLI
 - How to detect drift and do reconciliation? Rely on backend system like K8s
- Microservices WG Proposal (Paulo Simoes, @pasimoes, Oracle)
 - Proposal: WG focused on _microservice_ development and delivery
 - <https://github.com/pasimoes/microservices-wg/blob/main/microservices-wg-charter.md>
 - Feedback
 - Success depends on clear focus. What would be first goal? Produce a whitepaper describing best practices for microservice architecture
 - Start by gathering potential contributors, perhaps at Kubecon EU
 - Is there enough to differentiate microservices from any other cloud-native architecture?
 - Not many runtime-level projects at CNCF now
 - Could work with Jakarta and MicroProfile communities (Eclipse)
 - Dapr?
 - Compare <https://www.konveyor.io/>

2019-2022

- Previous notes: [CNCF TAG App Delivery Meeting Notes - 2019-2022](#)