

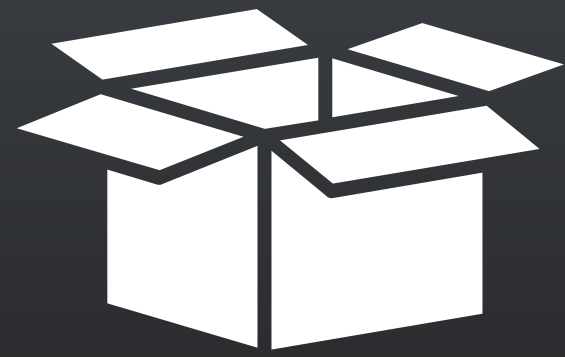
Committing to our Users

Product and Release Management in Apache Cassandra

Scott Andreas – NGCC 2019



NGCC | Outline



Product + Release
Management

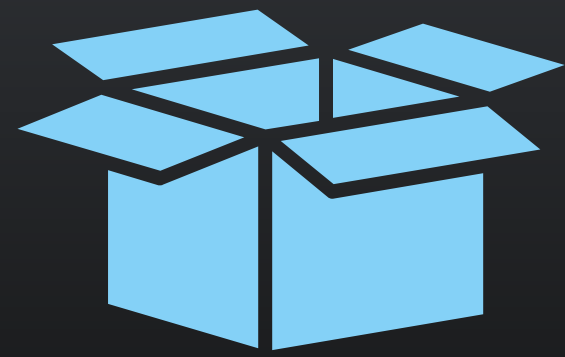


Evolving Cassandra:
Enhancement Process



User Community +
Communication

NGCC | Outline



Product + Release
Management

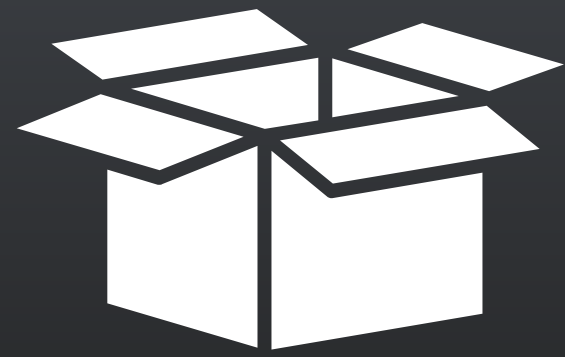


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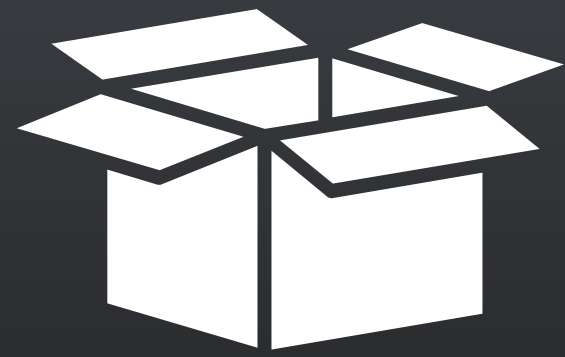


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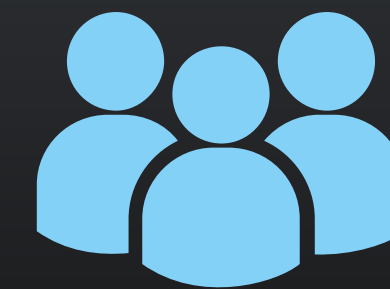
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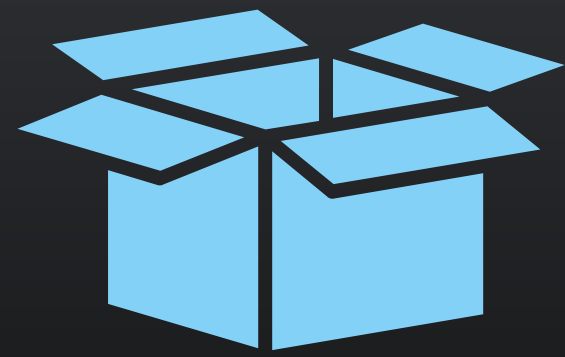


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NGCC | Product and Release Management

Why's this matter?

- Volunteers contributing to an open source project.
 - Most of us aren't working exclusively on Apache Cassandra.
- Users building some of the biggest systems in the world.
- Succeeding here is critical to growing the Cassandra ecosystem.
 - Ability for other projects to take dependencies on us (e.g., Zipkin).



NGCC | Product Management

- Release scope, timelines, and milestones
- (More) Predictable delivery
- Measurably high quality
- User communication



NGCC | Scope and Timeline

- Release Scope

- What's in and what's out for major and minor releases.
- Proposed by contributors, agreed to on dev list with exception process managed by PMC, and published on the website.



- Release Timeline and Milestones

- Timeline and forecast for these milestones.
- Done isn't a date – but working to hit “done” on published dates.
- **Definitions:** Alpha, Beta, Release Candidate, and GA.

NGCC | Quality and Communication

- Measurably high quality
 - Test and qualification plans
 - Release quality metrics
- User Communication
 - Announcements, release notes, blog posts, and public presentations.
 - Regular updates on release progress and milestones.
 - All indexed and available via the website (not just email).

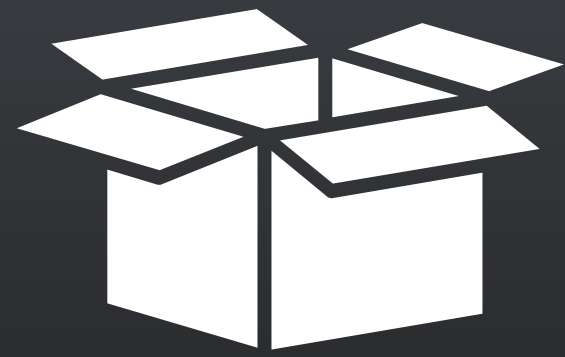


NGCC | Release Management

- Managing open items against scope and timeline.
- Ensuring convergence of open items against that target.
- Raising issues and flagging scope questions/concerns to the dev list and PMC.
- Communication of release status to our user community.



NGCC | Outline



Product + Release
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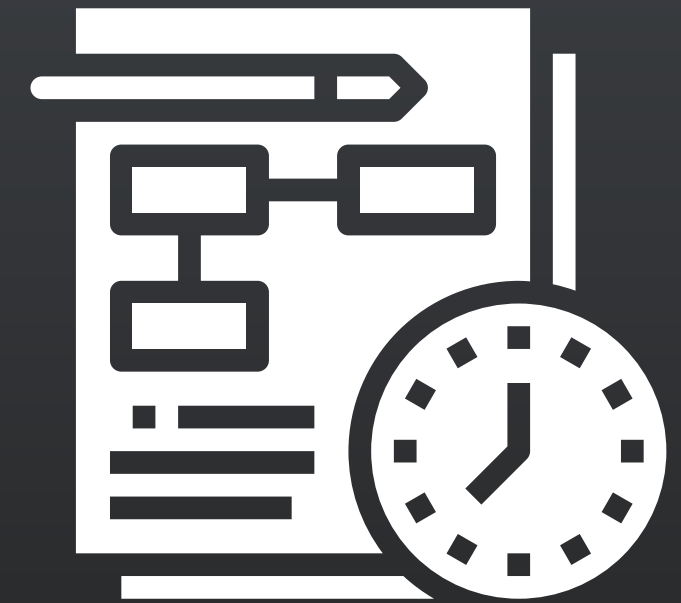
NGCC | Evolving Cassandra: Enhancement Process

- **Motivation:** Lightweight structure for our work, and making it clear to the community.
- **Precedent** in other projects: KIP / SIP / KEP, swift-evolution, etc.
- **Durable record** of project artifacts for major contributions: consensus, decisionmaking, architecture, and development.



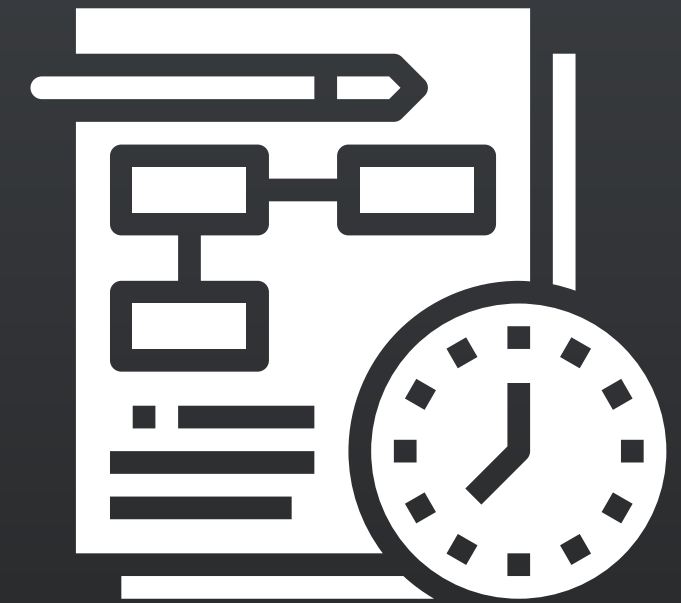
NGCC | Evolving Cassandra: Enhancement Process

- Goals:
 - Transparency in major changes planned, and a forum for discussion.
 - PMC-chartered working groups for major changes.
Regular status updates and public comment periods.
 - Empower working groups to design, lead, and execute projects.
 - Reduce asymmetry of effort on behalf of proposer and commenters through participation and stake.



NGCC | Evolving Cassandra: Enhancement Process

- Non-Goals:
 - Overly-broad application to every type of change.
 - Heavyweight design process that requires all aspects of a project be designed up front.
 - Mountains of paperwork before anything can get done.
 - Establishing fiefdoms (communication and opportunities to participate are open).



NGCC | Evolving Cassandra

- **Potential Approach:** Similar to JEP
 - Lightweight doc: scope, goals, approach, timeline, mailing list / Slack channels, umbrella JIRA ticket.
- **Example:** JEP-169 Value Objects (Valhalla)
- Once “accepted,” working group is established, chartered by PMC, and project + communication artifacts prepared (JIRA, list, channels, etc).
- **Participation is open**, with periods of public comment. But **contribution requires commitment**.

JEP 169: Value Objects

<i>Owner</i>	John Rose
<i>Type</i>	Feature
<i>Scope</i>	SE
<i>Status</i>	Draft
<i>Component</i>	hotspot / compiler
<i>Discussion</i>	mlvm dash dev at openjdk dot java dot net
<i>Effort</i>	L
<i>Duration</i>	L
<i>Created</i>	2012/10/22 20:00
<i>Updated</i>	2015/05/29 13:51
<i>Issue</i>	8046159

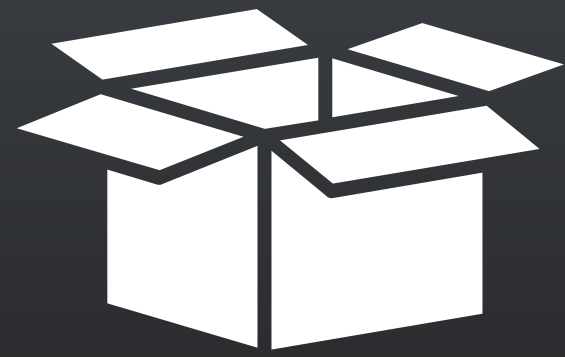
Summary

Provide JVM infrastructure for working with immutable and reference-free objects, in support of efficient by-value computation with non-primitive types.

Goals

- Support user-defined and library-defined abstract data types with performance profiles similar to Java primitive types.
- Bring the semantics of `int` and `java.lang.Integer` closer together.
- Allow representation of ubiquitous types currently not well supported on the JVM, including complex numbers, vector values, and tuples.
- Increase shareability of Java data structures.
- Provide clear and explicit semantics for shared read-only array data.
- Enable functional-style computation with pure data, for optimized parallel computations.
- Increase safety and security and decrease "defensive copying" in applications which must share structured data across trust boundaries.

NGCC | Outline



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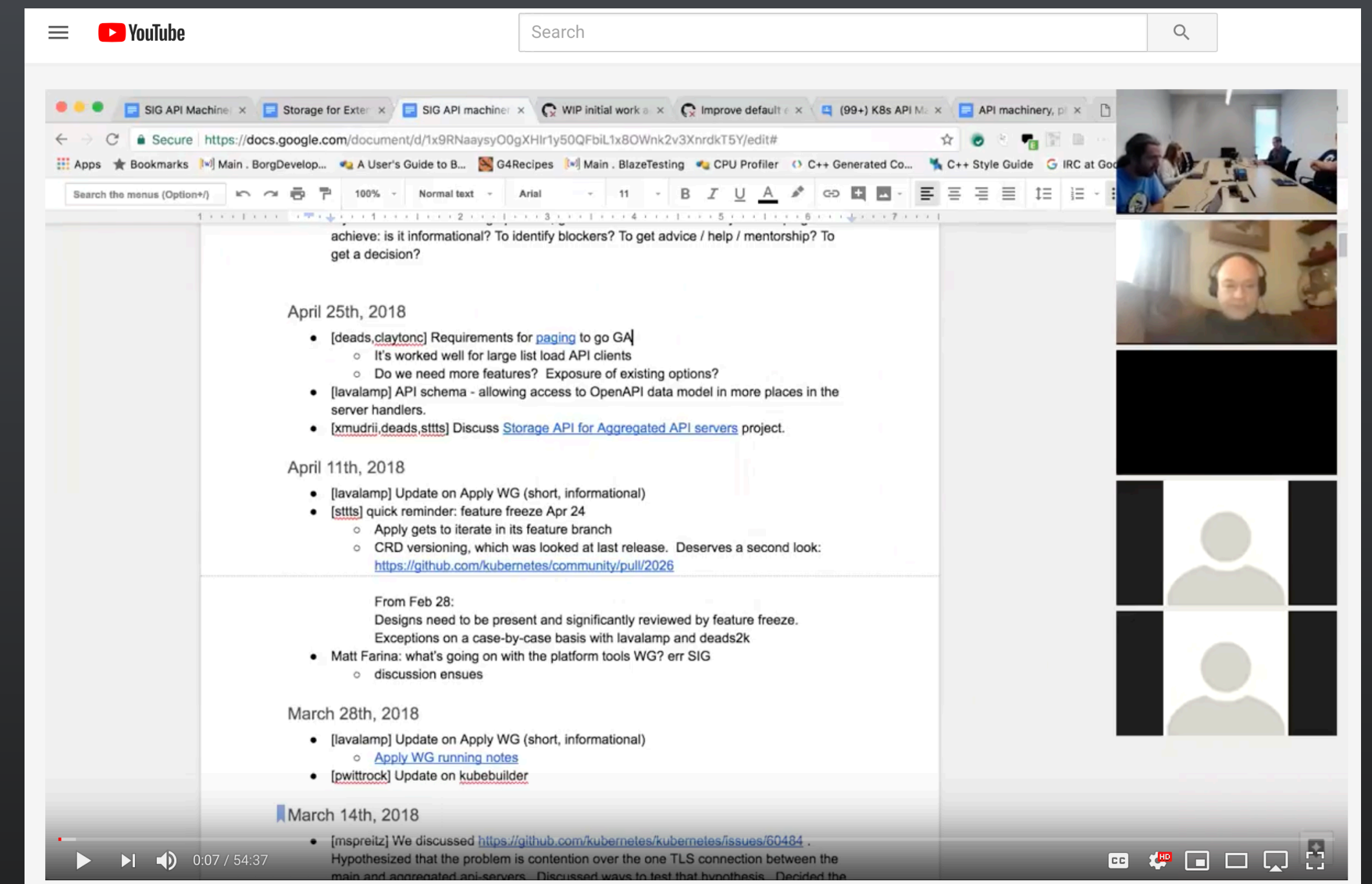
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User Community +
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NGCC | User Community + Communication

- Public video calls
 - Moderated, published agenda, recorded, and hosts rotated.
 - Emcee owns timekeeping and execution of meeting agenda.
 - Low-fi: light on prep and production value.
 - Could be applied either among contributors or Cassandra users.



NGCC | User Community + Communication

- **SIGs as “Working Groups”**
 - Scalability and empowerment through chartered roles: release management, subsystems, docs, testing, and community management.
 - “Release Management” and “Documentation” as potential groups.
 - Precedent: GSoD contributions
 - Clear path to contribution for new contributors interested in making non-code contributions.

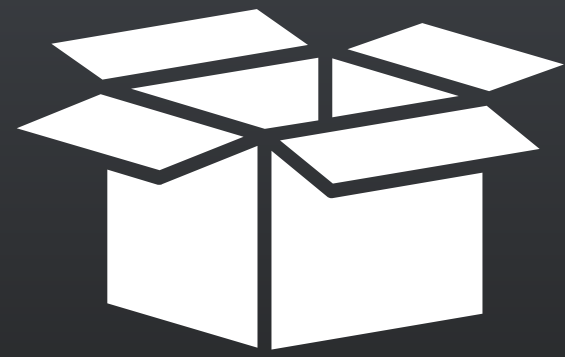


NGCC | User Community + Communication

- **Marketing**
 - Apache Cassandra blog
 - Areas: Release status, features, success stories, community highlights, others?
 - Twitter account: promotion of this content to our audience.
 - Public speaking engagements (and re-sharing of this content on our website).
 - Giving our website and docs some love.



NGCC | Outline



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NGCC | Recap

- **Big Idea:** Exercising underrepresented functions in the project.
- **Approach:** Expanding the role of the PMC to charter working groups to lead particular areas: large projects, release management, and user communication / marketing.
- **Creating Opportunities** for contributors whose primary role isn't writing code.
- **Examples:**
 - **Project Management:** Formalizing release management (scope, status, and quality)
 - **Development:** Lightweight JEP-like design docs and working groups.
 - **Communication:** Dev / User Video Calls, Documentation, and Marketing

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