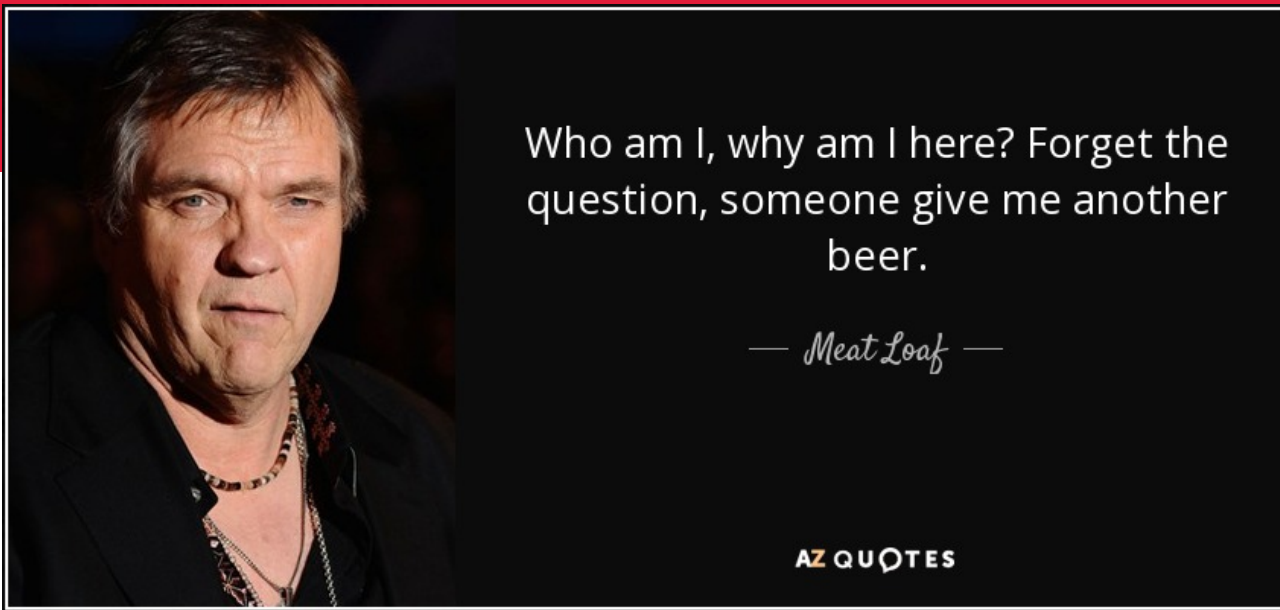




CNCF: Making Standards without Standards

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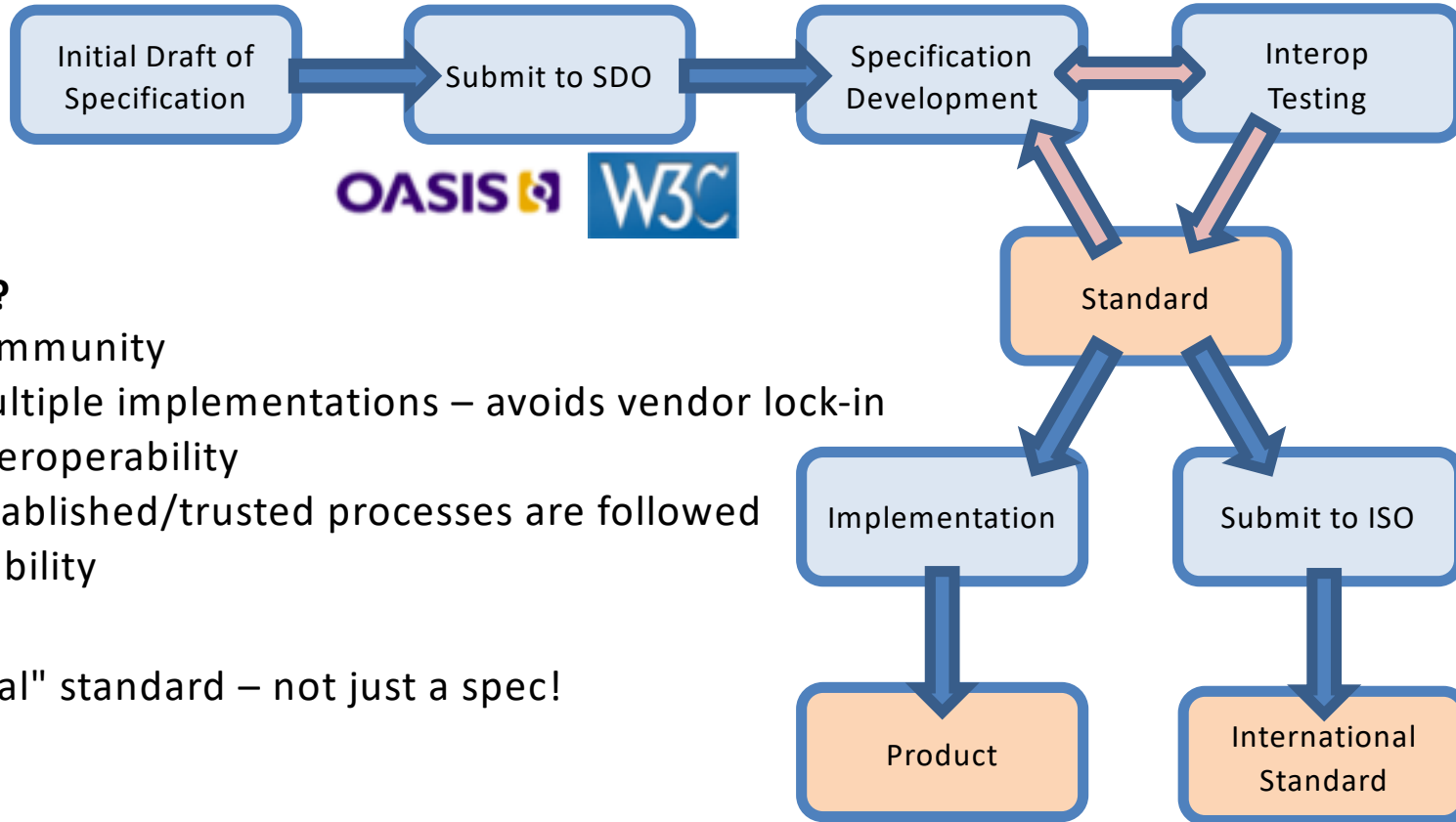


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Standards & Open Source for ~18 years
Docker, OCI, Kubernetes, Apache SOAP, Axis
OSB API, W3C, OASIS, DMTF, CNCF, ...

Standards Development Organizations (SDOs)



Why?

- Community
- Multiple implementations – avoids vendor lock-in
- Interoperability
- Established/trusted processes are followed
- Stability

A "real" standard – not just a spec!

Perceived issues with SDOs

- Bureaucratic, political, hard to join/start
- Feedback loop is too long
 - Waiting until after a spec is published for feedback is too late
 - SDO release cycles are not normally as short as OSS projects'
- Often done too soon
 - Technology & community need time to see what works
- SDOs slow innovation because APIs are frozen
 - This is no difference than creating a release of an OSS API spec
 - Both are (or should be) set in stone from that point on
 - All changes are for subsequent versions of the API

Open Source

- Speed!
- Freedom!
- Github is all you need!
- Easy for anyone to join and contribute!
- Code talks!
- **Spec** is developed along side the code!

Concerns with Open Source Specs

- The language-of-the-day influences the API
 - Language specific artifacts are exposed in the API
- At some point the language you're using today will become COBOL !
 - The "single" implementation becomes, almost, a single point of failure
 - When (if) a new version is created will they fork the spec?
 - What is the impetus to remain backwards compatible?
- Often lacks "enterprise" requirements and customer input
 - E.g. Internationalization, multi-arch support are often afterthoughts
- Differentiation is limited to extensions, when there's a single implementation
- Is the "spec" a "standard"?

Cloud Native Computing Foundation

- Promote all things Cloud Native
 - Distributed, scalable, resilient micro-service architecture
- Provide a neutral home & **community** for CN activities
 - Good governance home for OSS projects
 - Host, sponsor conferences
 - Produce educational material
 - **Guidance** for CN best practices and landscape
- NOT!
 - King maker
 - *Standards Development Organization*

How are they doing?

- 17 OSS Projects : for multiple Platforms (Kube, Docker, CF, ...)
 - 6 Sandbox projects
- > 150 Members : Providers, ISVs, Customers/End-Users, ...
- CNCF has helped **bring the community together**
- Community has embraced CNCF
- Being a CNCF project **does** mean something!

Working Groups

- At the will of the Technical Oversight Committee
- Often "investigational" in nature
 - Landscape & community of a technology
 - Potential CNCF projects

Networking and Storage Working Groups

- Container Networking Interface (CNI)
- Container Storage Interface (CSI)
- Plugin API specifications

Similar Stories

- Externally developed specs brought to CNCF
- New WGs formed to help complete the specs, but also...
 - Neutral home & broaden community
 - Examine landscape for guidance or gaps
 - Look for new related CNCF projects
- Development
 - Multiple implementations / platforms
 - Code and deployment experience is guiding spec work
 - Customer / end-user input

Serverless Working Group

- TOC wanted to learn more about this new space
- Formed to investigate community & landscape
 - Whitepaper & Landscape / Status
 - Set of CNCF "next step" recommendations

Serverless: Recommendations

- Education where needed
- Look for potential Serverless CNCF projects
- Look for areas of "harmonization"
 - "Events" was suggested

CloudEvents – New Specification

- Define the common metadata of an Event
- Serialization & Transport rules (e.g. JSON, HTTP)



```
{  "cloudEventsVersion" : "0.1",
  "eventType" : "com.example.someevent",
  "eventTypeVersion" : "1.0",
  "source" : "/mycontext",
  "eventID" : "A234-1234-1234",
  "eventTime" : "2018-04-05T17:31:00Z",
  "contentType" : "text/xml",
  "data" : "<much wow=\"xml\"/>"
}
```

CloudEvents - Status

- Released v0.1 in April 2018
- Multiple Implementations & support
 - Interop event @ KubeCon EU
 - IBM, Google, Microsoft, SAP, nuclio, VMWare, Oracle, Huawei, RedHat, Alibaba
- Approved as a CNCF Sandbox Project !
- Looking for next workstream... Function Workflow Definition?



Stacking it up...

	CNI	CSI	CloudEvents
Multiple implementations			
Community			
Interoperability			
Established / trusted process	✓	✓	✓
Stability	✓	✓	✓

CNCF "Community-based Standards": Speed of OSS, with a broader Community!

CNCF brings a wide community base to these projects in a way that a Github project alone probably won't

Open Questions

- Are they "standards"?
- Will countries and companies accept them as "standards"?
- **Net: Community & Users will decide**

Thank You!

Questions?

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