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Serverless WG Update

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Cloud Events Update

Serverless Workflow Update



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CloudEvents Update

- Status & Deliverables

- CloudEvents specification v1.0.1 - Dec 2020
- Transport Bindings (HTTP, AMQP, MQTT, NATS, Kafka)
- Encoding Formats (JSON, AVRO)
- Primer
- SDKs (CSharp, Go, Java, Javascript, PHP, Python, Ruby, Rust)

- What's next?

- Customer feedback...
- Additional community pain points...



CloudEvents - New Lifecycle Specifications



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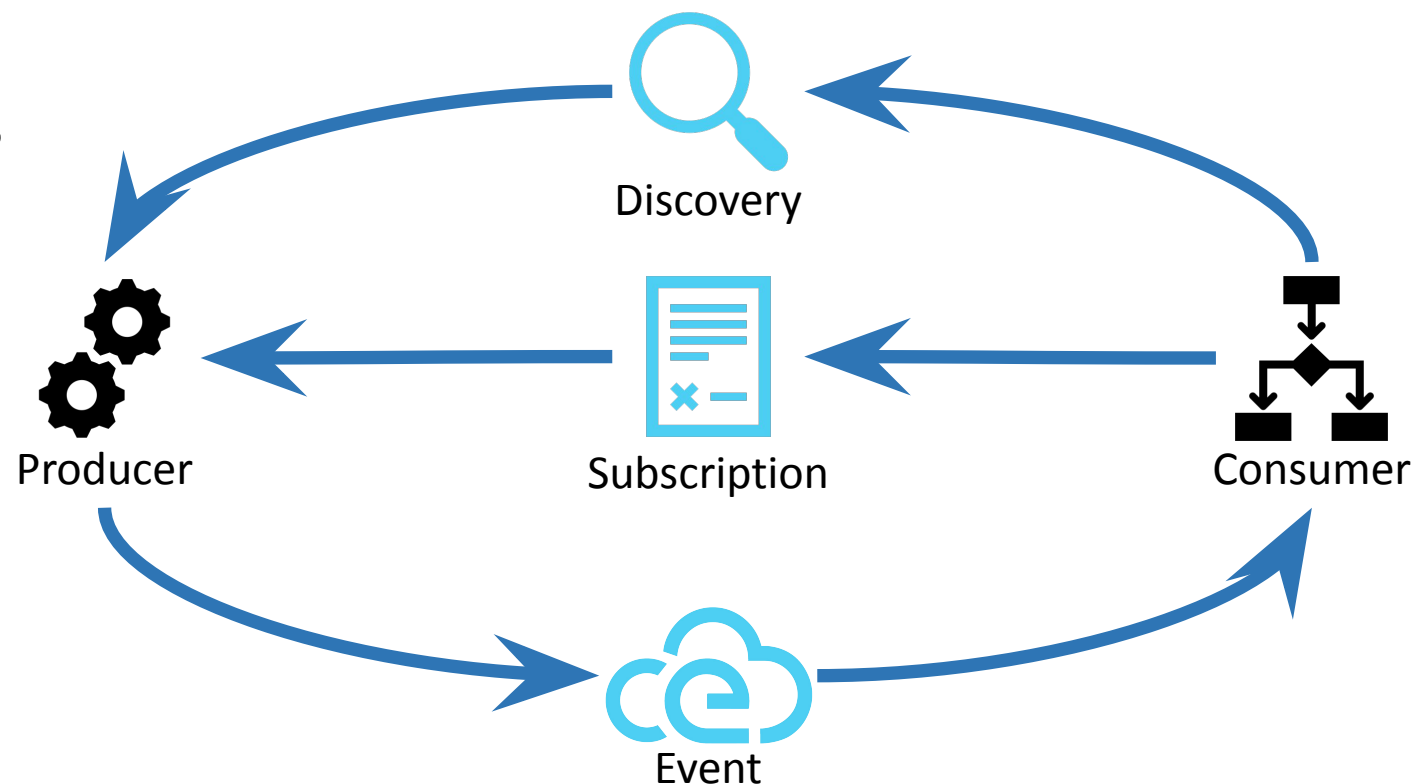


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- Discovery API Spec
 - Who produces the events of interest?
 - Which events are produced?
 - What subscription options are available?
 - How to subscribe?
- Subscription API Spec
 - Which events to deliver?
 - How/where to deliver the events?
 - Format of the messages?
 - How to manage the subscription?
- CloudEvents Spec
 - Push vs Pull
 - Transport
 - Format



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CloudEvents - Schema Registry Specification



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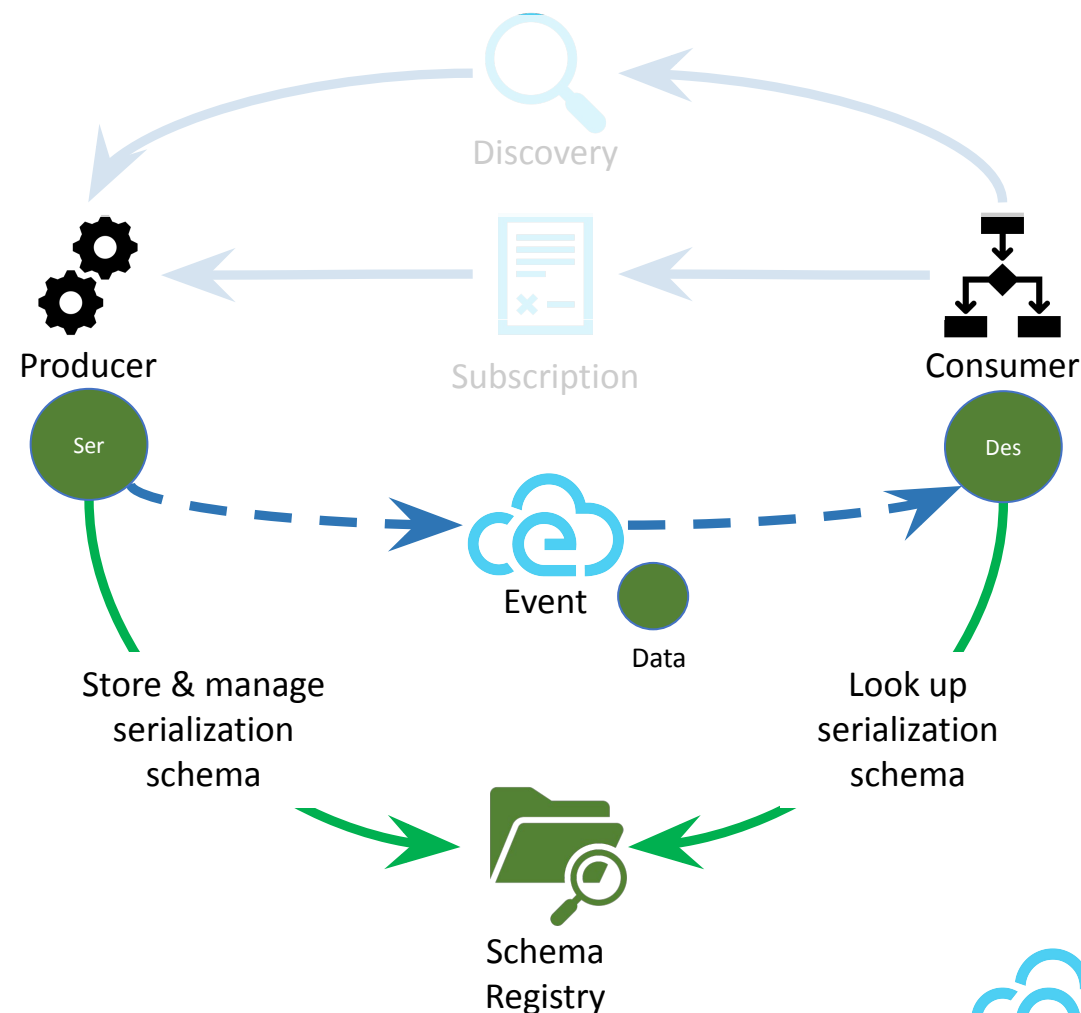


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- Standardize APIs of schema registry
- Producers:
 - Common APIs to manage serialization and validation schema groups and schemas in the registry
 - Use schema to serialize payload data
 - Reference the appropriate version of a registered schema in published events/messages
- Consumers:
 - Look up the validation or serialization schema based on a reference in the message/event metadata
 - Validate or deserialize the payload.



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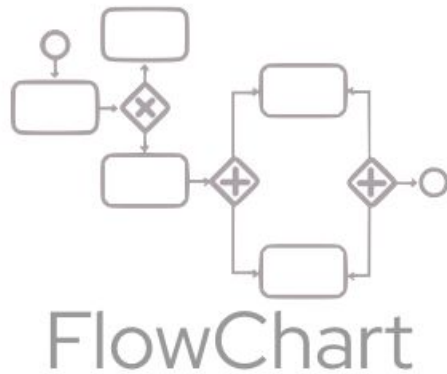
Serverless Workflow Update



Serverless Workflow

Workflow language for
microservice and event
orchestration.

Workflow language categories



Focus on "what"

JSON/YAML

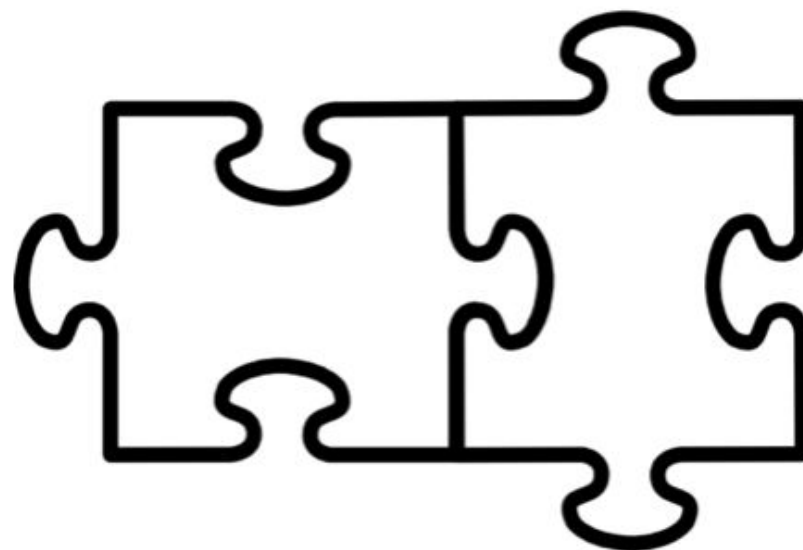
JSON Schema

Target Domains

Business

order
purchase
customer

...



Serverless

function
event
retry

...

Serverless Workflow - Agnostic



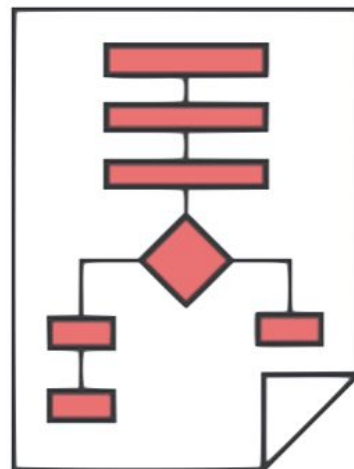
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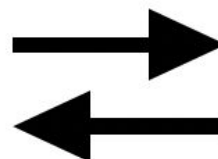
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Workflow Definition
(JSON/YAML)

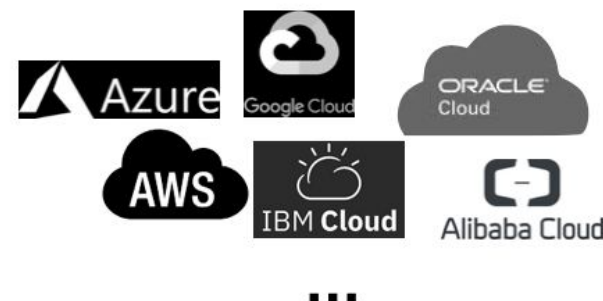


Workflow Data
(JSON)

Runtimes



Cloud Platforms



Serverless Workflow - Lang. Comparisons



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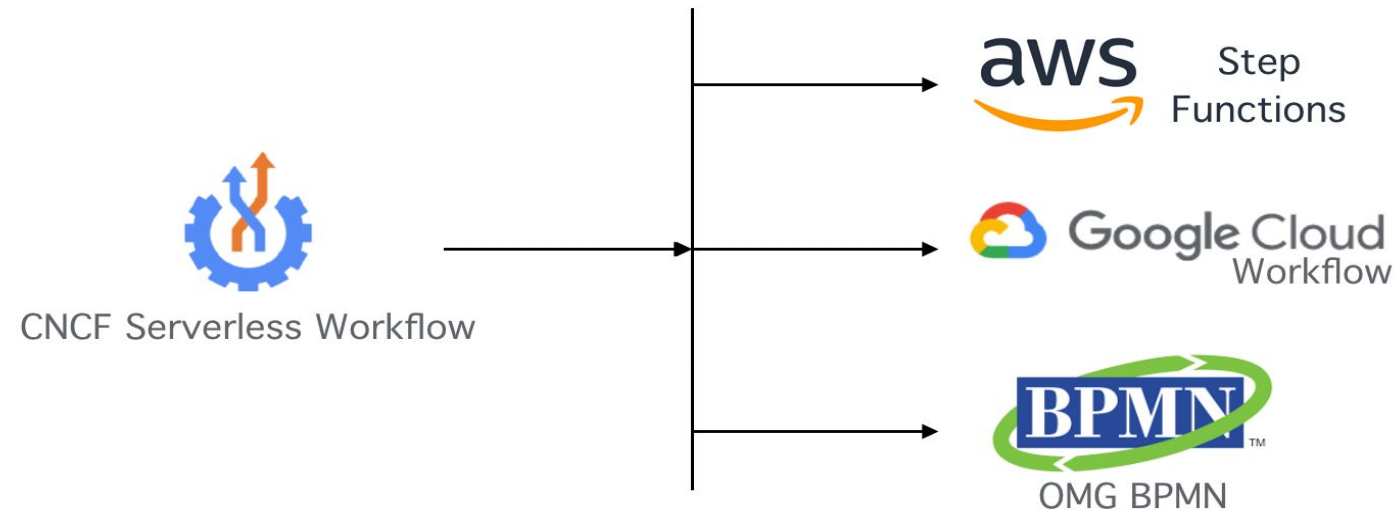


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Workflow Language Comparisons



	Events	REST	RPC	Error Handling	Retries	Compensation	Pipeline	Parallel exec	Data-based Decisions	Event-based Decisions
AWS	No	Yes, targets AWS services	No	Yes	Yes	No	Yes	Yes	Yes	No
GCW	No	Yes, but custom impl	No	Yes	Yes	No	Yes	Yes	Yes	No
BPMN	Yes, Messages	Yes, via custom workitem	Yes, via custom workitem	Yes	Yes, but must be modeled	Yes	Yes	Yes	Yes	Yes
SW	Yes, CloudEvents	Yes, OpenAPI	Yes, gRPC	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Serverless Workflow - Focus on standards



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Workflow Language based
on Standards



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OPENAPI
INITIATIVE



./jq



AsyncAPI

Serverless Workflow - Logical Structuring



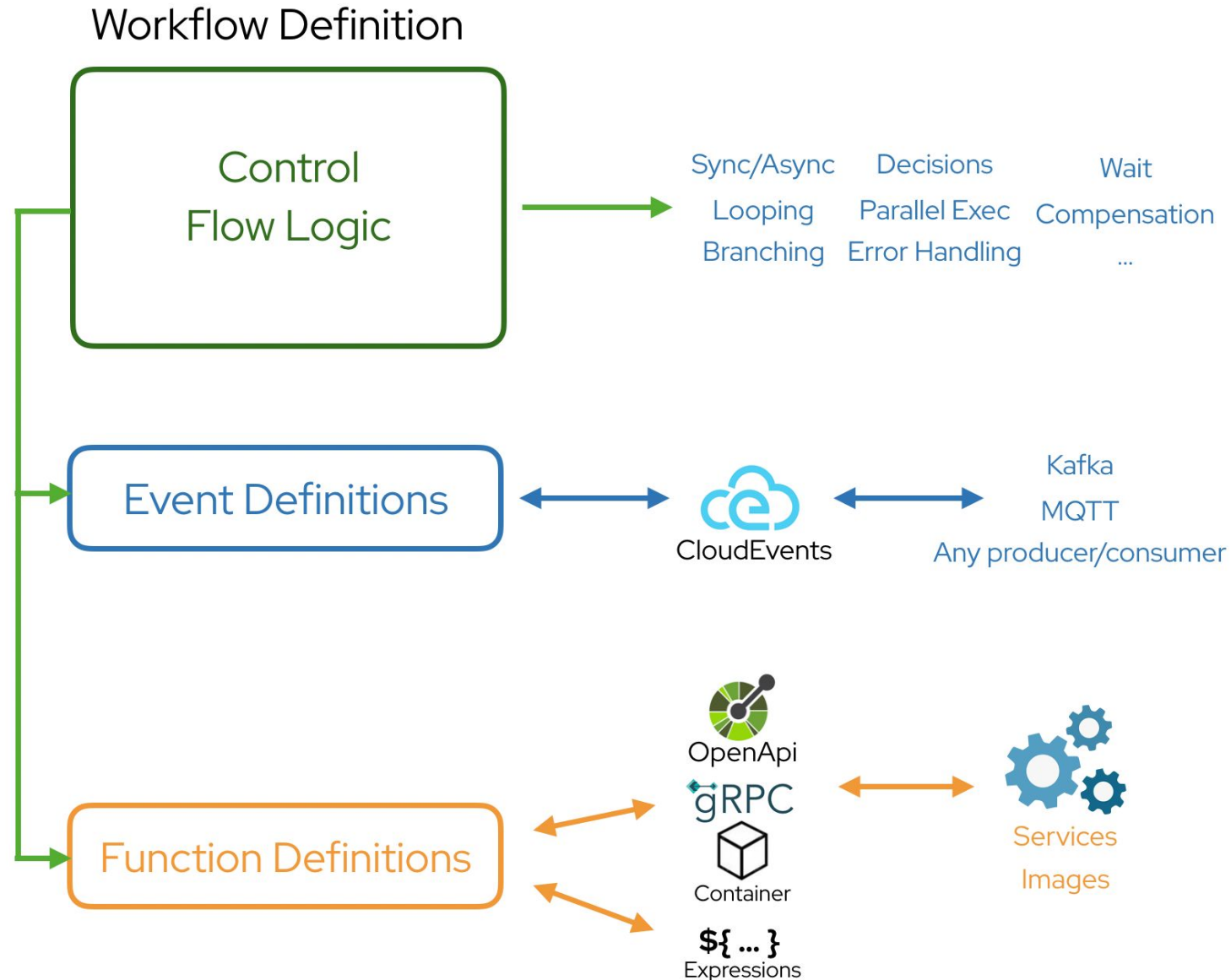
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Serverless Workflow - Ecosystem



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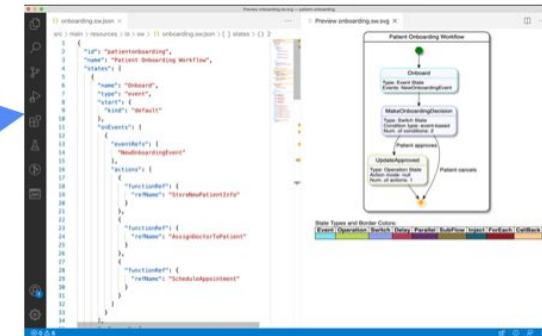
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Specification

DSL Definition
Documentation
Extensions
Examples
Comparisons
Use Cases

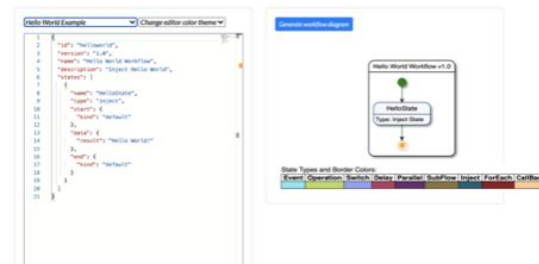
VSCode



Online Editor

Serverless Workflow Online Editor

Edit your workflow and select the "Generate workflow diagram" button to update the image.
You can also select one of the existing workflow examples from the dropdown.



SDKs

Go
Java
.Net
TypeScript

Serverless Workflow - Collaboration



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CNCF
Partner Projects



Open-Source
Collaboration



NOKIA



(and more...)

Open-Source
Implementations



(and more...)

Serverless Workflow - Release Roadmap



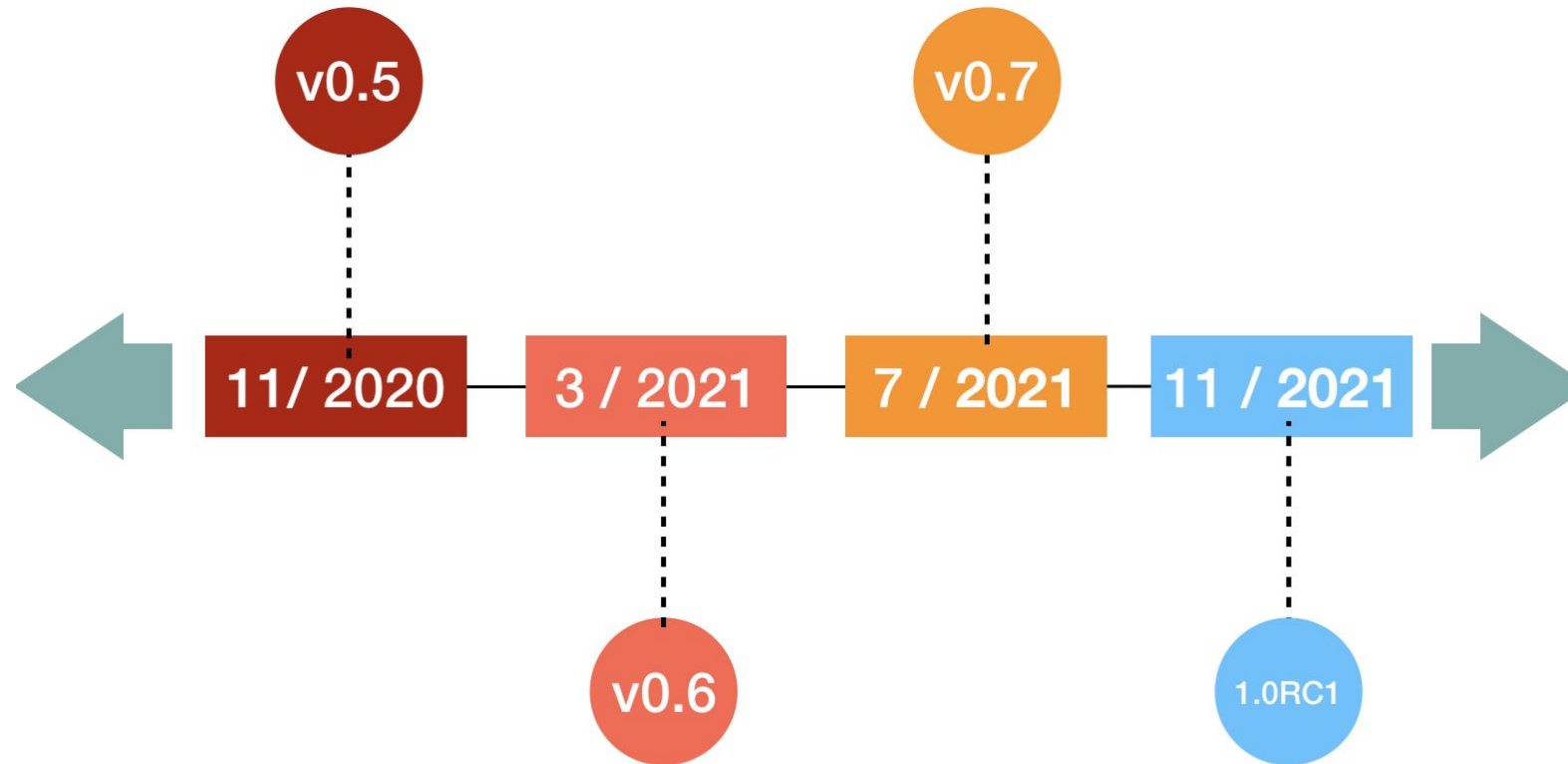
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Release Schedule

Current: v0.6

Next: v0.7

v1.0 RC1: 11 / 2021

Serverless Workflow - Demo



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Demo



- More information

- CloudEvents

- CloudEvents: <https://cloudevents.io>
 - Specifications repo: <https://github.com/cloudevents/spec>
 - Weekly calls - Thursdays@12pm ET (see git repo for dial-in info and slack coordinates)
 - Contact: Doug Davis @duginabox

- Serverless Workflow

- Website: <https://serverlessworkflow.io>
 - Specification repo: <https://github.com/serverlessworkflow/specification>
 - Weekly calls - Mondays@1pm ET (see git repo for dial-in info and slack coordinates)
 - Community Slack: <https://slack.cncf.io/> - #serverless-workflow
 - Contact: Tihomir Surdilovic @tsurdilo



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Forward Together »