



**Cloud Native Days Austria
2025**

Schema driven Observability with OpenTelemetry Weaver

08.10.2025



PRESENTER

Dominik Süß

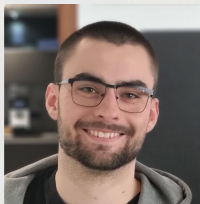
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Two hard things in software development

- Naming things
- Cache invalidation
- Off-by-one errors



Two hard things in software development

- *Naming things*
- Cache invalidation
- Off-by-one errors



Anatomy of a (prometheus) metric

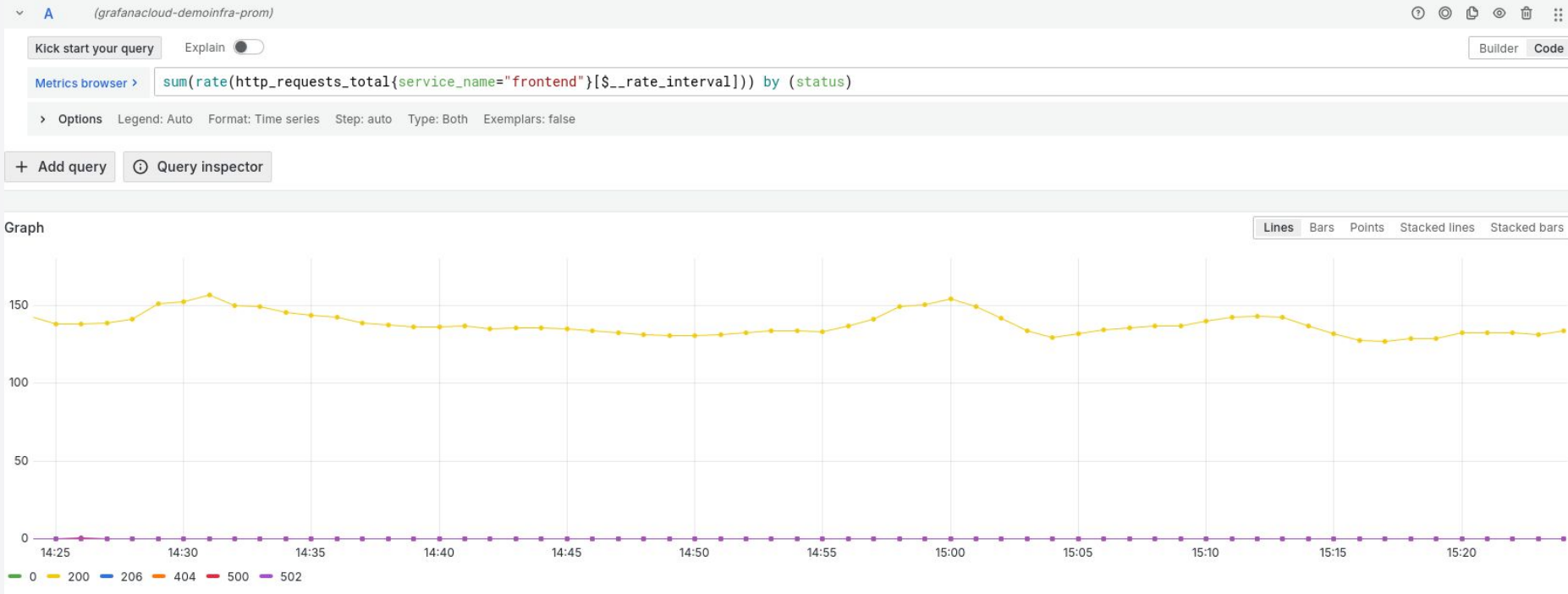
`http_requests_total{service_name="frontend"}`

Name

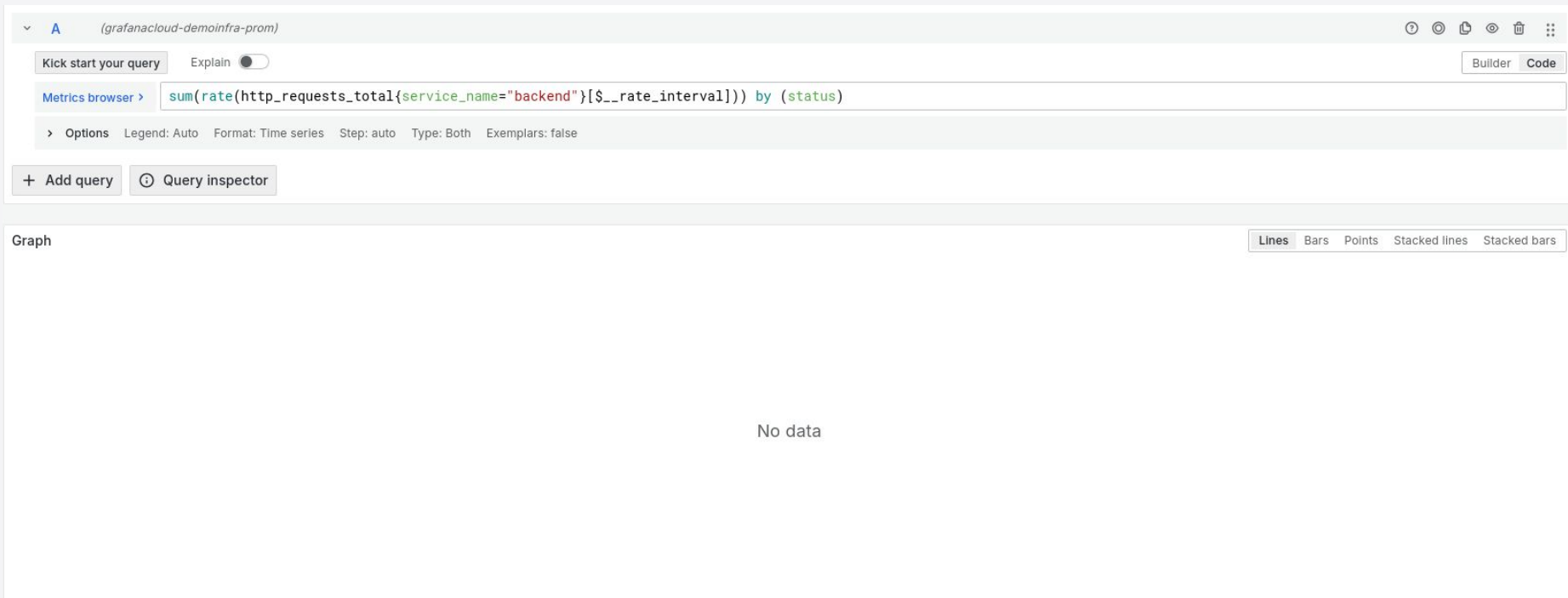
Attribute / Label



Telemetry sprawl



Uh oh...





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Semantic Conventions

- Agreed upon names for common signals
- Versioned
- Community Maintained
- Many namespaces already populated
 - Networking, HTTP, Hardware, CI/CD,...



Evaluation event

The table below indicates which attributes should be added to the [LogRecord](#) and their types.

Status:



The event name MUST be `feature_flag.`

Defines feature

Whenever a feature flag value is evaluated, which may be part of a feature flag's lifecycle. For example, a website A/B testing different button colors. A `feature_flag.evaluation` event is emitted on the button click. The result is the same.

Build your own!

Attribute	Type	Description	Examples	Requirement Level	Stability
feature_flag.key	string	The lookup key of the feature flag	logo-color	Required	



My first convention



Library Semantic Conventions

Metrics

Book count

<code>library.books.total</code>	Number of books known to the library instance	Stable ▾
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Attributes

<code>library.location</code>	Location of the library currently holding the book	Required	Stable ▾
<code>library.book.status</code>	Availability status of the book	Required	Stable ▾



Challenges

- Cross-referencing attributes
- Keeping the schema up to date
- Ownership process
- Ensuring teams adopt schema

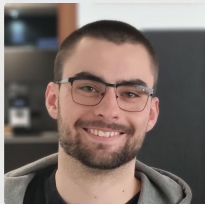




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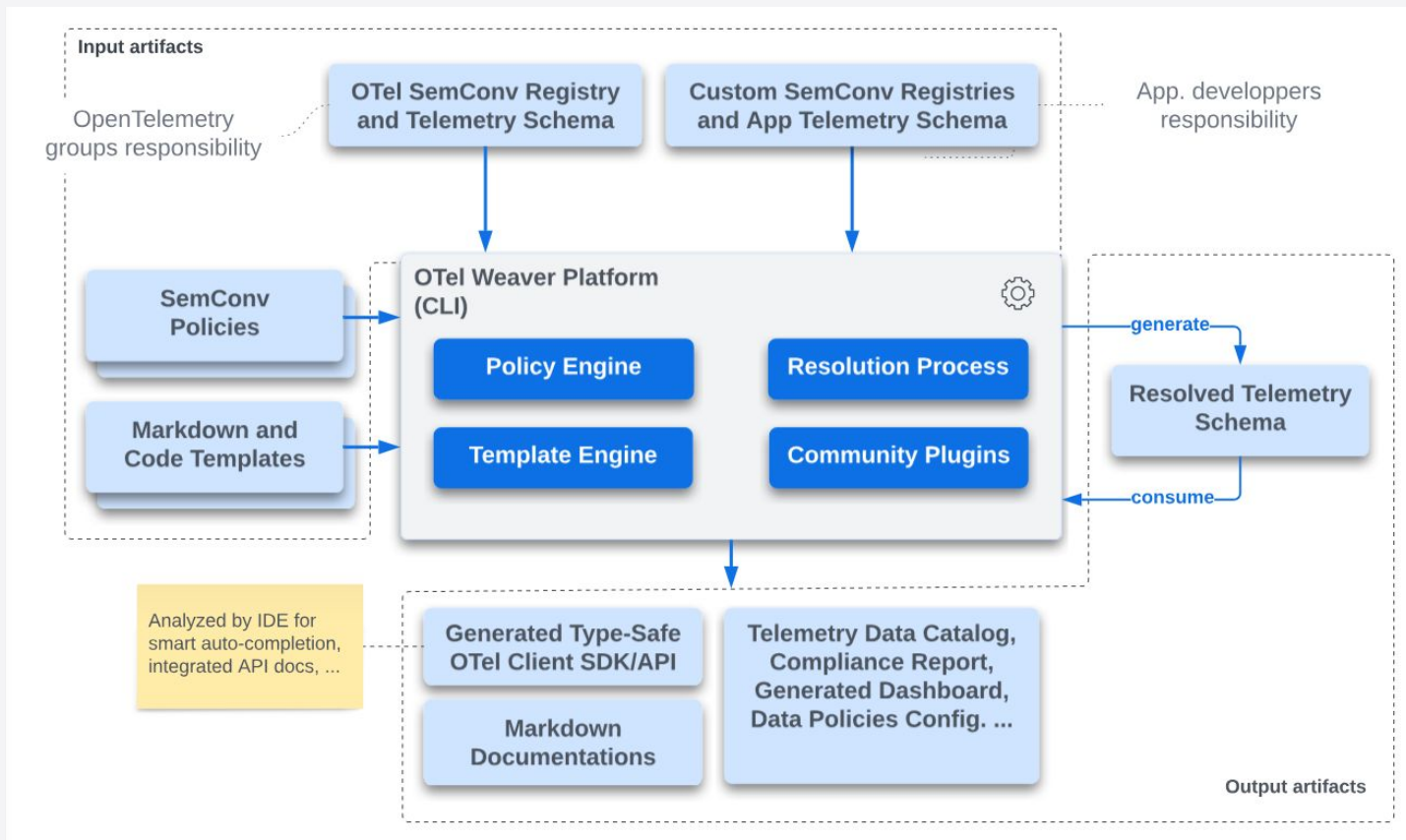
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Weaver

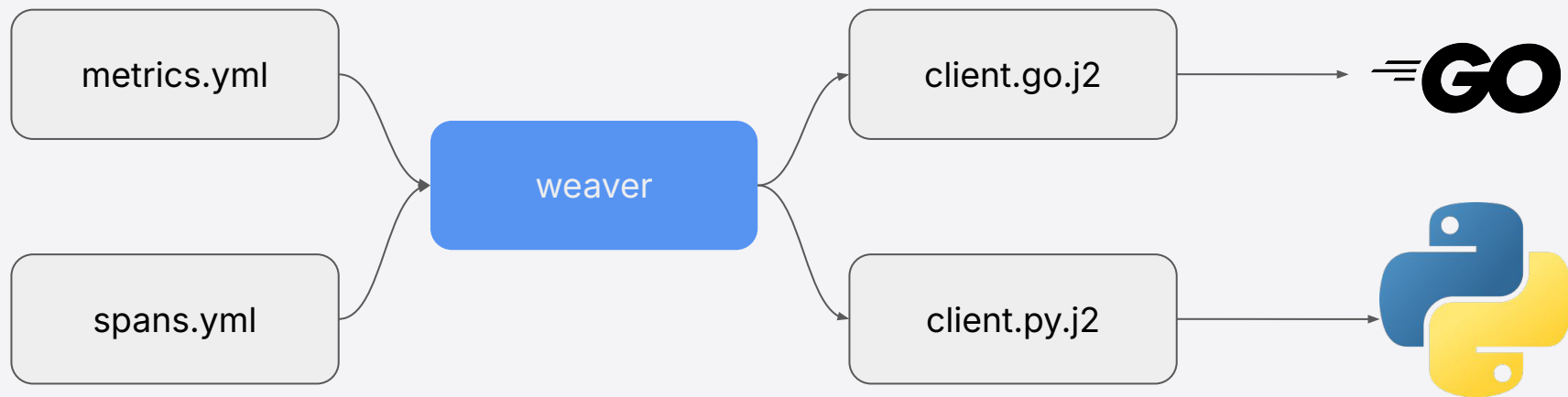
- Semantic convention tooling
- Code generation
- Policy validation
- Live checking
- Written in rust 🦀



Weaver Architecture



Weaver Architecture



Demo Time



Challenges

- Cross-referencing attributes
 - Seen in demo
- Keeping documentation up to date
 - Weaver can generate the docs for you!
- Ownership process
 - Schema lives in a shared git repository with well-defined code owners
- Ensuring teams adopt schema
 - Promote client usage & live checking



Recap

- Schemas help you combat sprawl
- Weaver can build clients for your teams
- OTel Semantic conventions are a good starting point
- Technical solutions can't solve social problems (on their own)



Thanks for participating!



Have more questions?

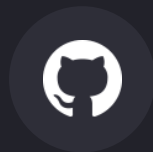
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