



Collector Pipelines Visual Language

Harmonizing OpenTelemetry Configuration and Operation with a Shared Visual Vocabulary

3 min read · Apr 24, 2023



Devrim Demiroz



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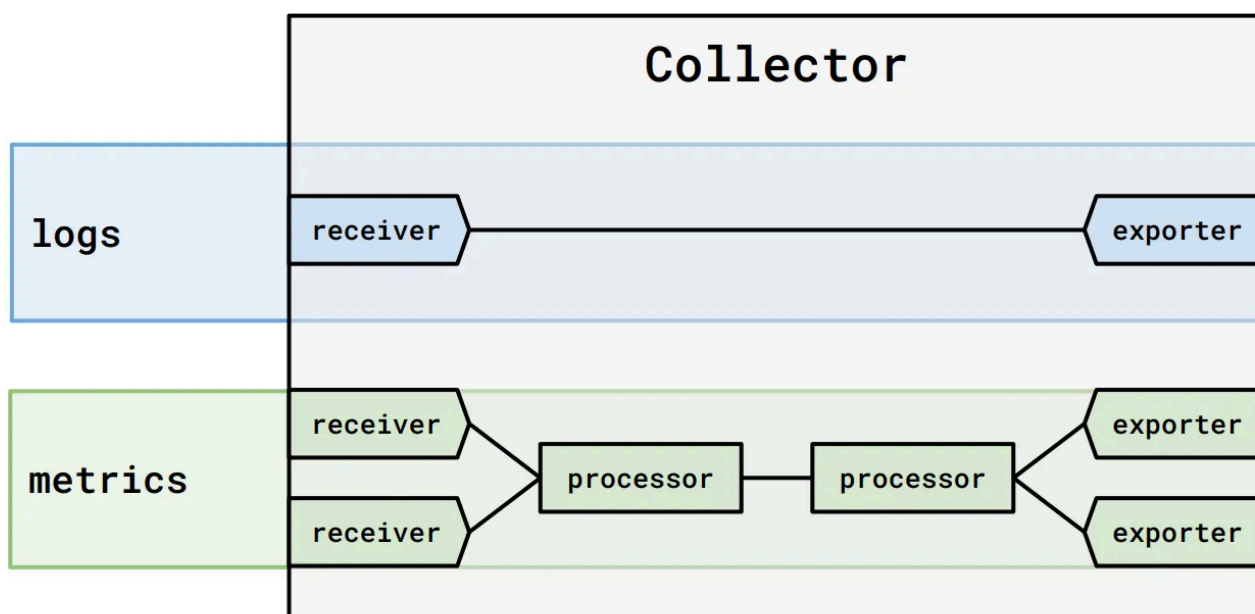


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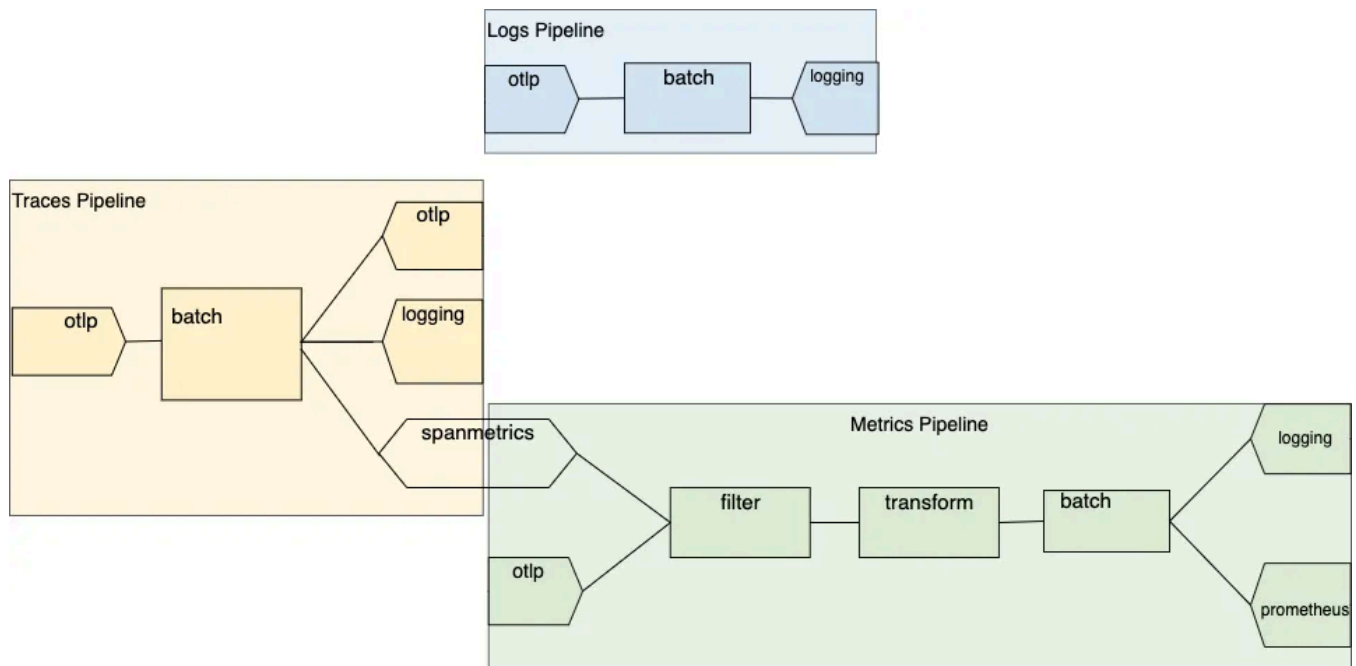
This is a quick experiment using the visual symbols used in KubeCON 23 EU session [Connected Observability Pipelines in the OpenTelemetry Collector — Dan Jaglowski, observIQ](#)

I highly recommend watching Dan Jaglowski's session as it is not just about symbols, but much more about how you can use Opentelemetry Collector in an intelligent way. 🔥 Be sure to watch it on [CNCF](#) channel.

Base Symbols from Kubecon Presentation



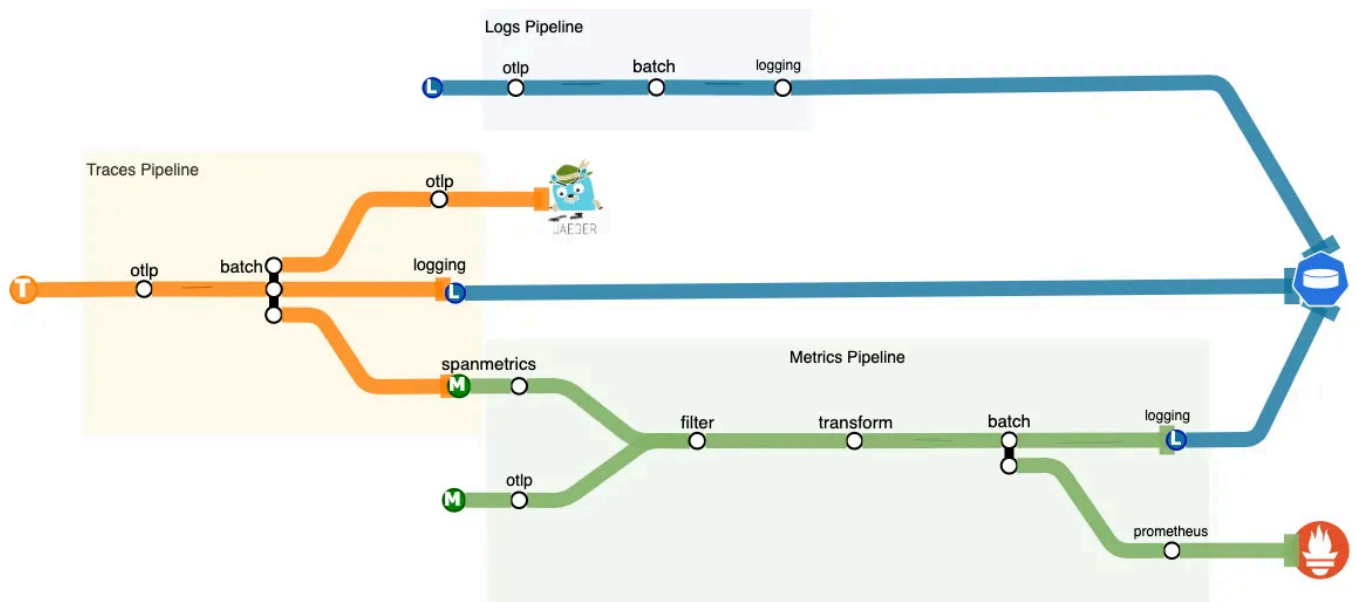
Opentelemetry Demo Application Collector with Symbols



Opentelemetry Demo Application otelcol with Symbols

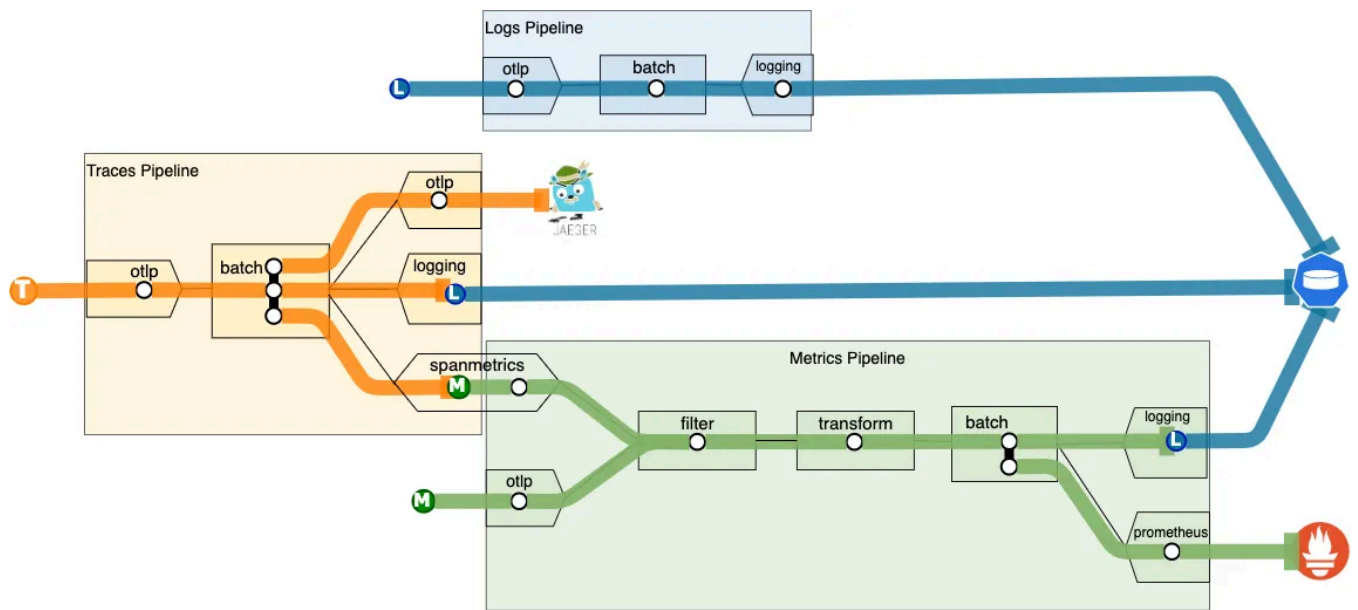
[opentelemetry-demo//otelcol-config.yml](https://opentelemetry-demo.github.io/otelcol-config.yml)

Opentelemetry Demo Application Collector with UCM Transit-map , no Symbols



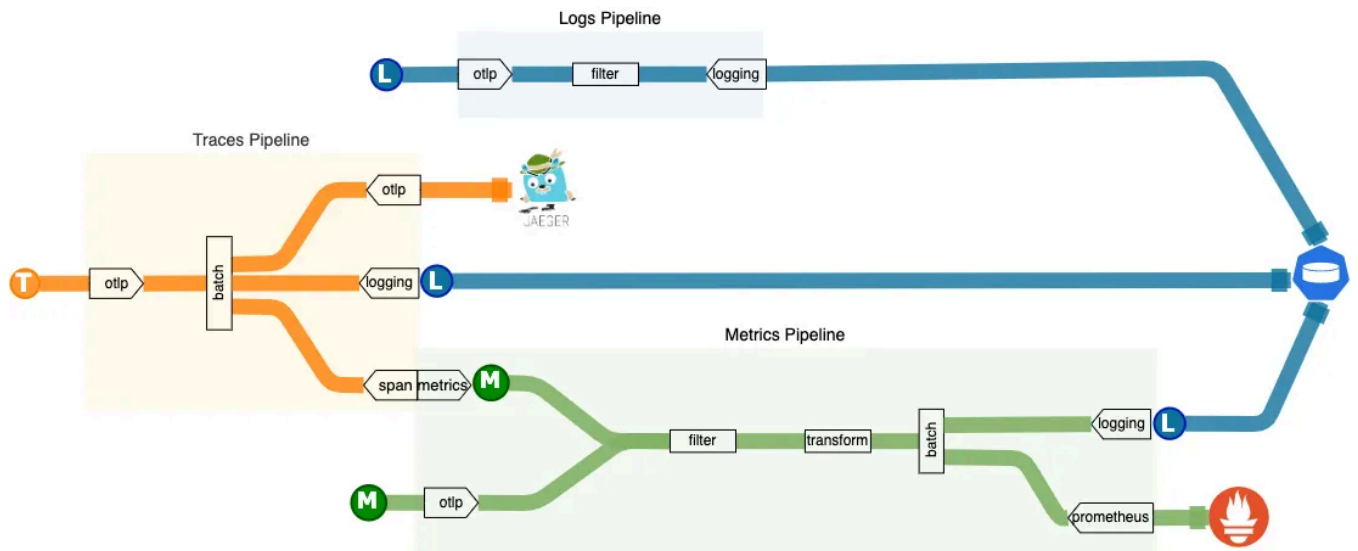
Opentelemetry Demo Application otelcol with UCM Transit-map style

Variation 1 — Path visiting Symbols as Component



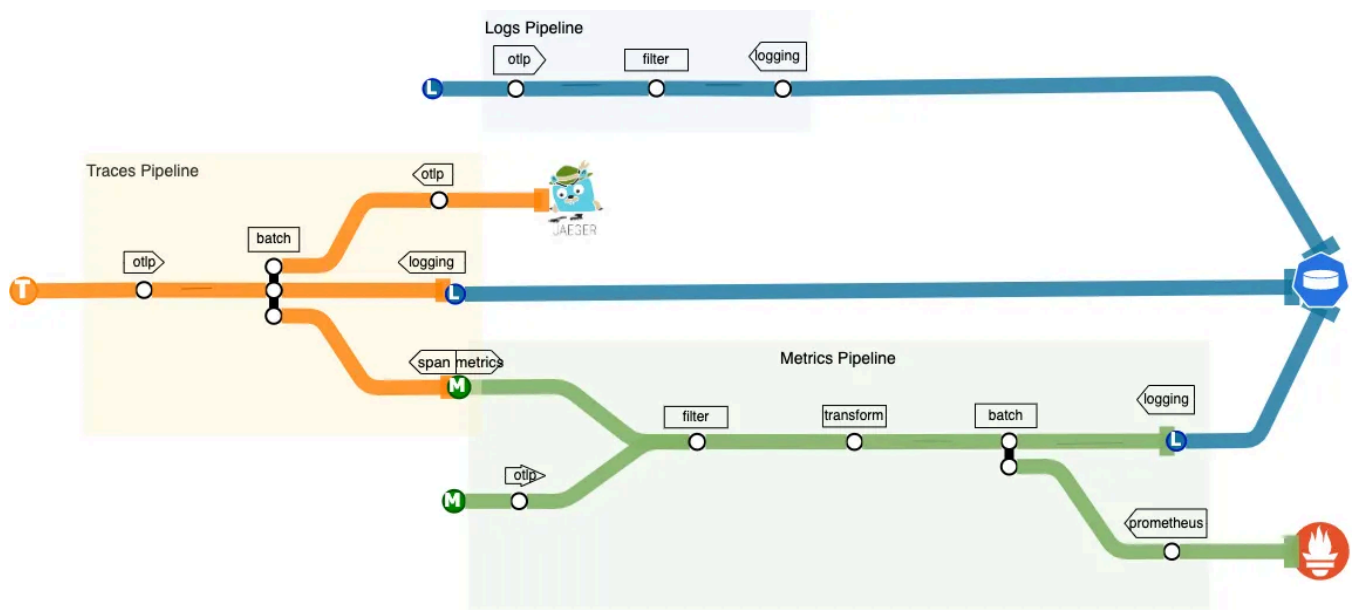
Variation 1 — Symbols with UCM Transit-map style

Variation 2 — Symbols embedded as Stations



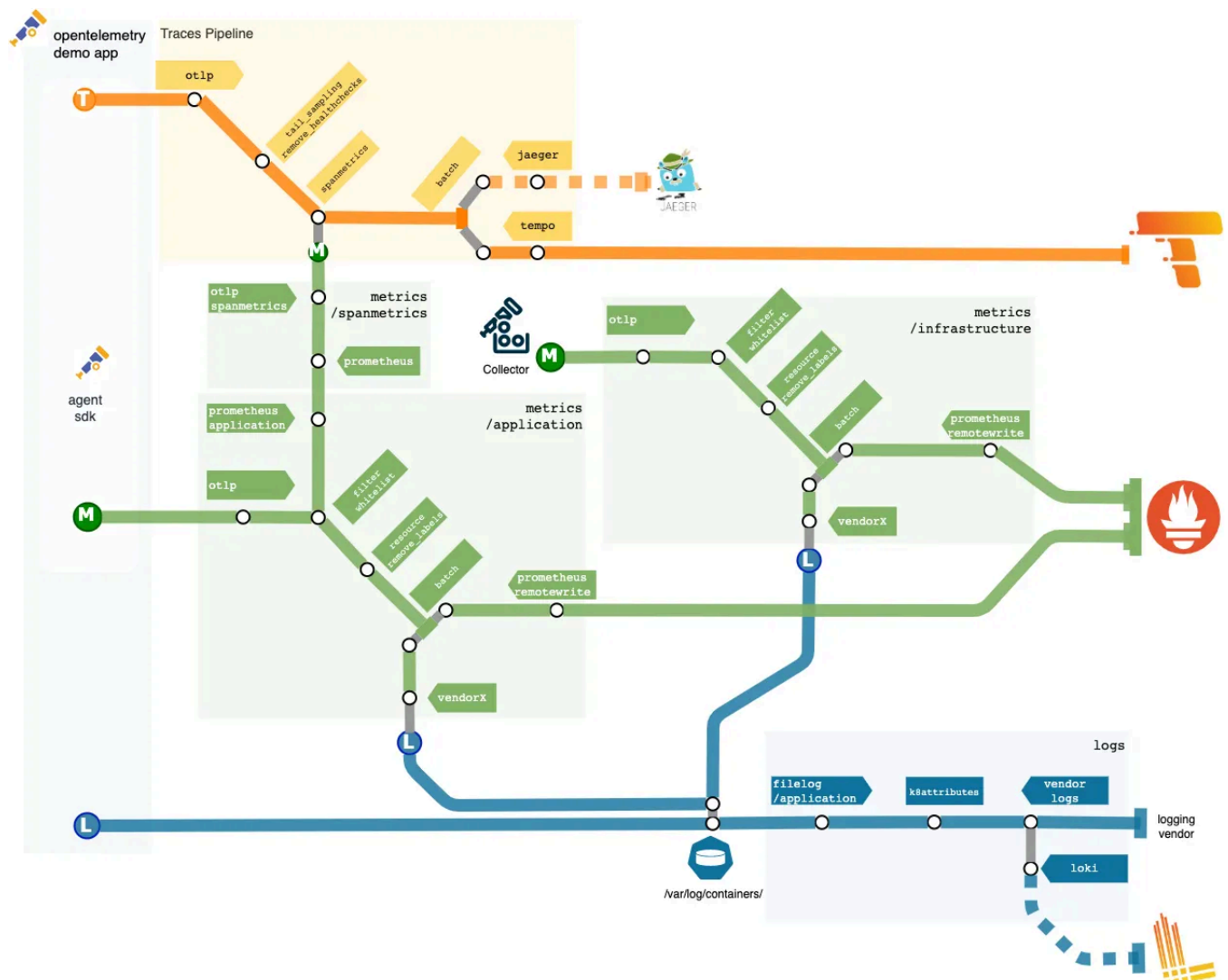
Symbols with UCM Transit-map style

Variation 3 — Symbols as Station Labels



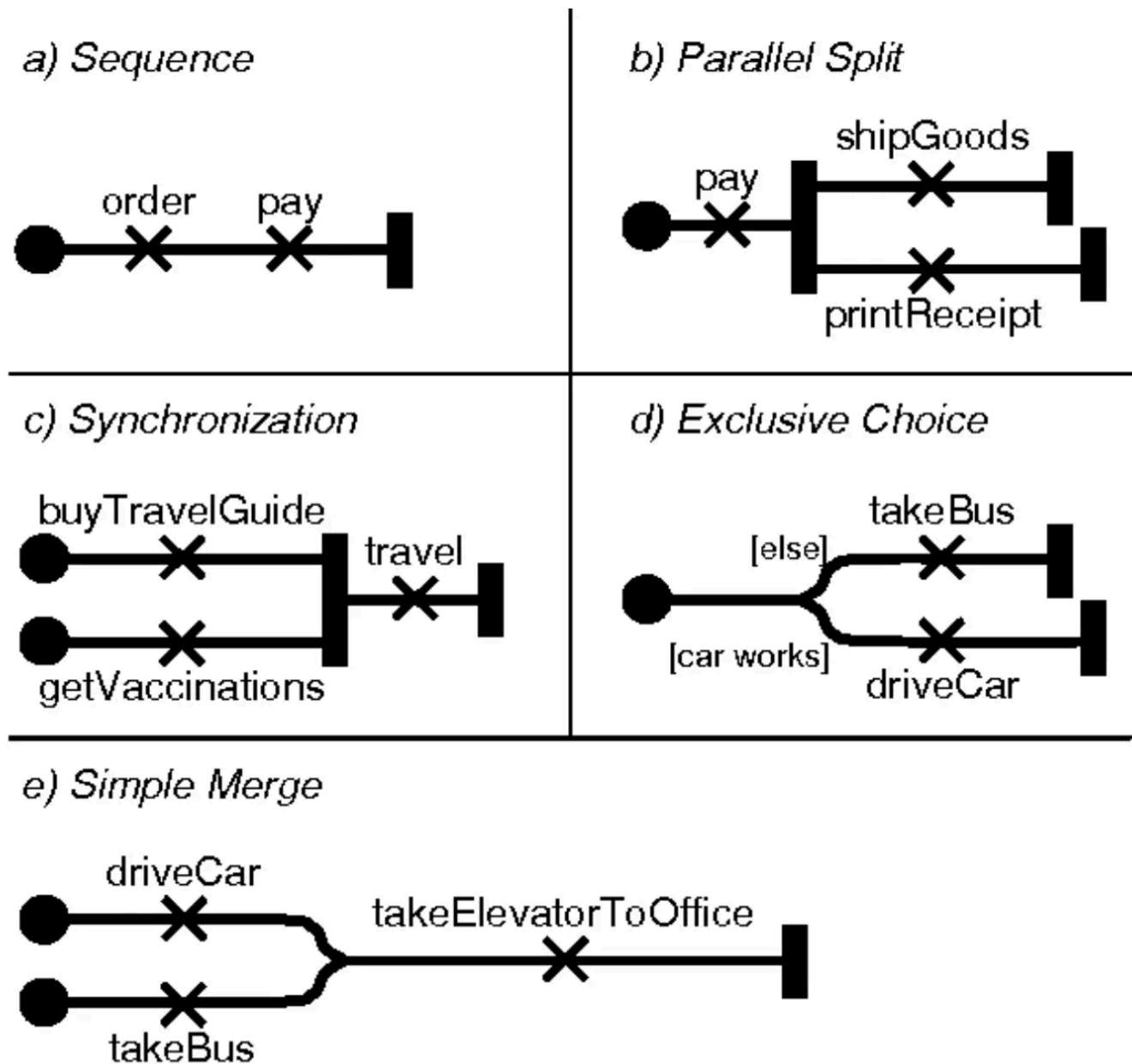
Variation 3 — Symbols used in Station Labels

Slightly complex scenario



Variation 3 applied to a Bring Your Own Backend scenario.



















Use Case Maps Base Notation



[Evolving Use Case Maps as a Scenario and Workflow Description Language](#)

UCM as a reference behind the scenes. Want to know more 🖱️ [Use Case Maps](#)

Signals Iconset

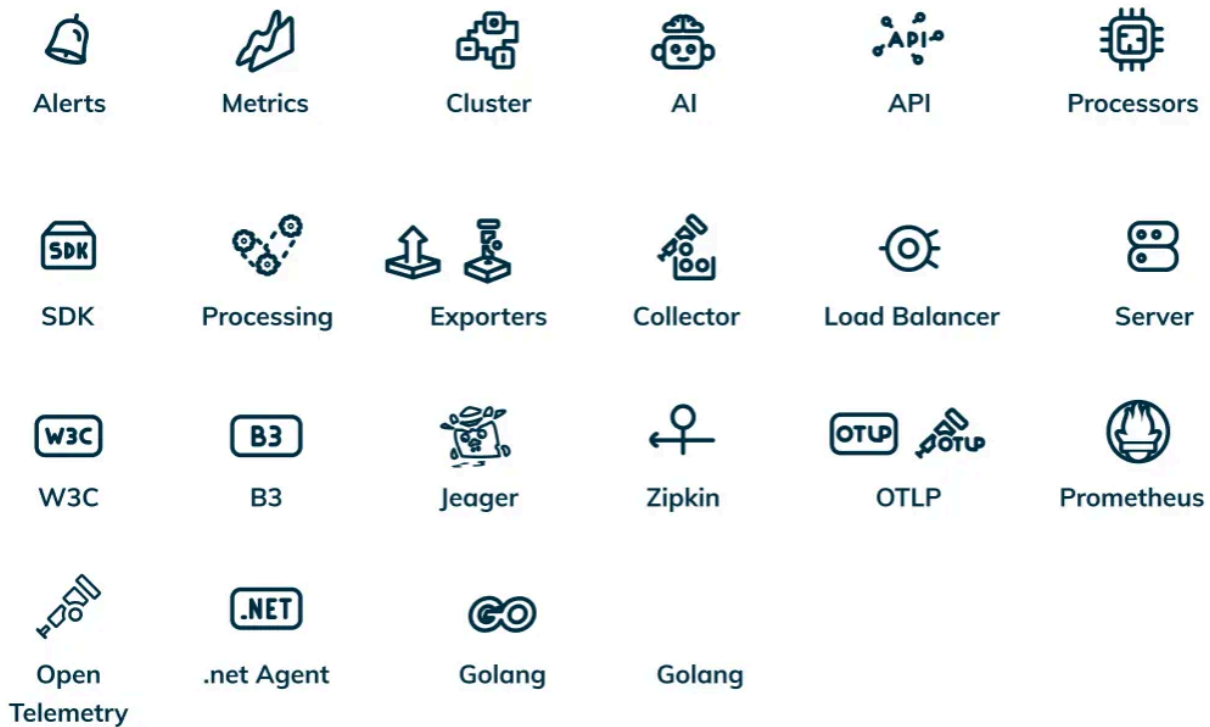
Implemented	Implementing	Prototype / Ideation
Traces 	 Traces	 Traces
Events 	 Events	 Events
Metrics 	 Metrics	 Metrics
Profiles 	 Profiles	 Profiles
Logs 	 Logs	 Logs
Exceptions 	 Exceptions	 Exceptions

Signal icons crafted by [Andrei Hawke](#)

Visit firecube-oss/observability-diagramming for artefacts reusable for the purpose mentioned and unmentioned in this post.

opentelemetry.io/iconography

ICONS



<https://github.com/open-telemetry/opentelemetry.io/tree/main/iconography>

Side Effects

- As connectors are not easily distinguishable in the pipeline configuration and are referenced within receiver or exporter components:
 - (a) It becomes difficult to determine whether a component is a receiver/exporter or connector. A prefix naming convention could be employed to enhance readability.
 - (b) Furthermore, it complicates the process of parsing and visually recreating the overall pipelines. This is because any item parsed in a receiver or exporter needs to be searched for under connectors to determine the component type.
- Unfortunately, unless the `otelconfig.yaml` file is parsed, this information is not available as a label on metrics. So, if two pipelines share the same exporter, it becomes impossible to delve deeper into the configuration. Shared components are not easy to get represented as shared on visuals.
- ⚠ Connector metrics not available!

Opentelemetry

Observability

Use Case Maps

Pipelines

Service Topology

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As Geek As it Gets

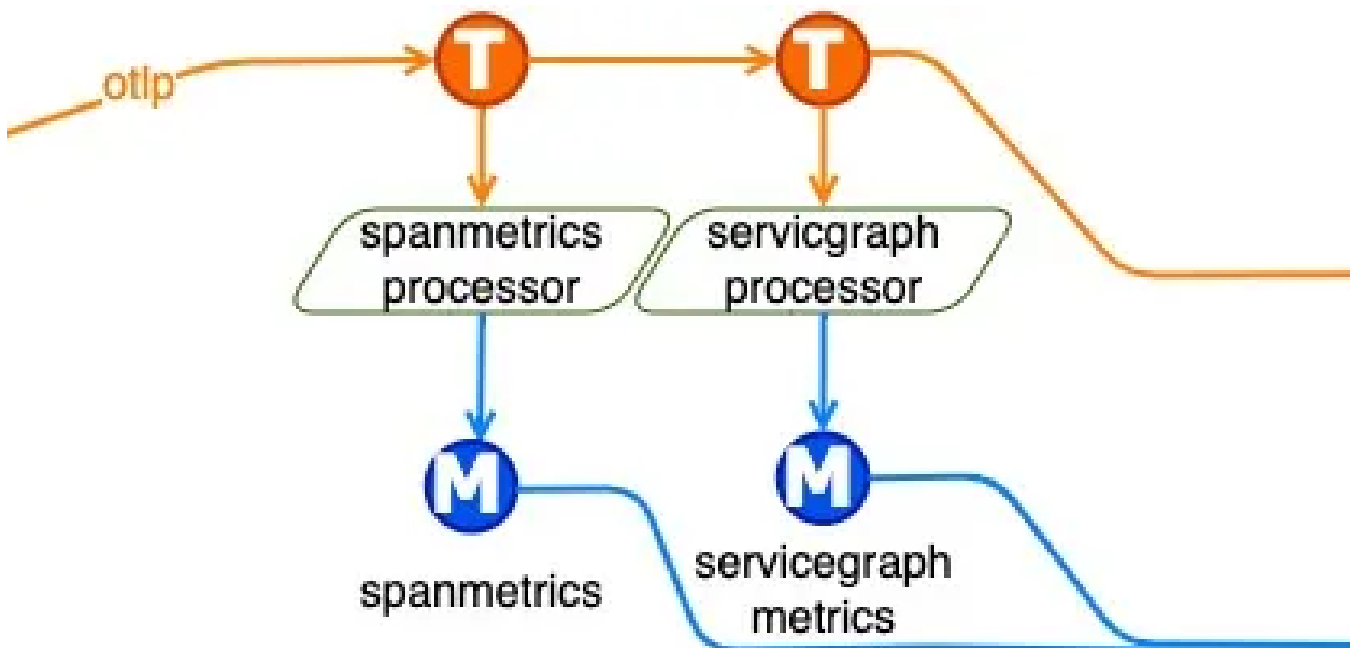
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What are your thoughts?

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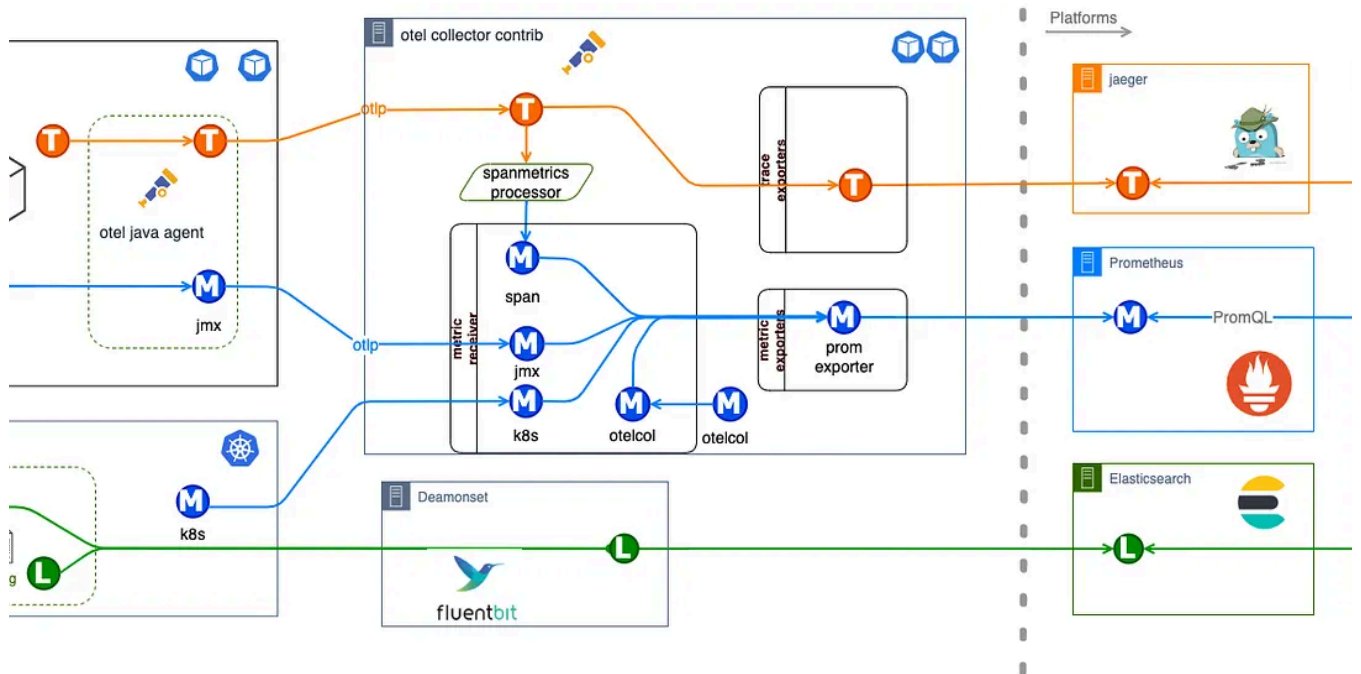



Collector Data Flow Dashboard

Ingress/Egress Metrics OpenTelemetry Collector

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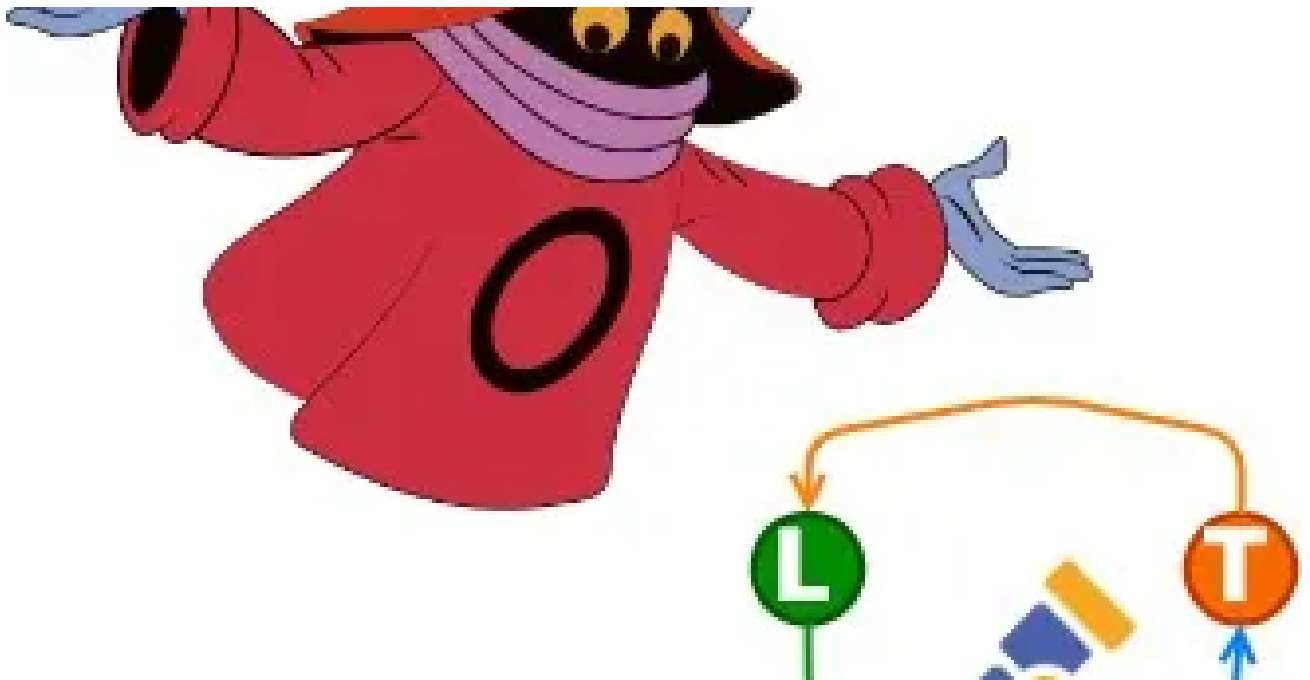
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