



OPEN-SOURCE OBSERVABILITY  
WITH OPENTELEMETRY

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what is observability?

Don't call it a buzzword



## Time to Understanding

- Usually the first half of time to resolution
- It's possible to have a fix without understanding!
- But without understanding our stress is pretty high!

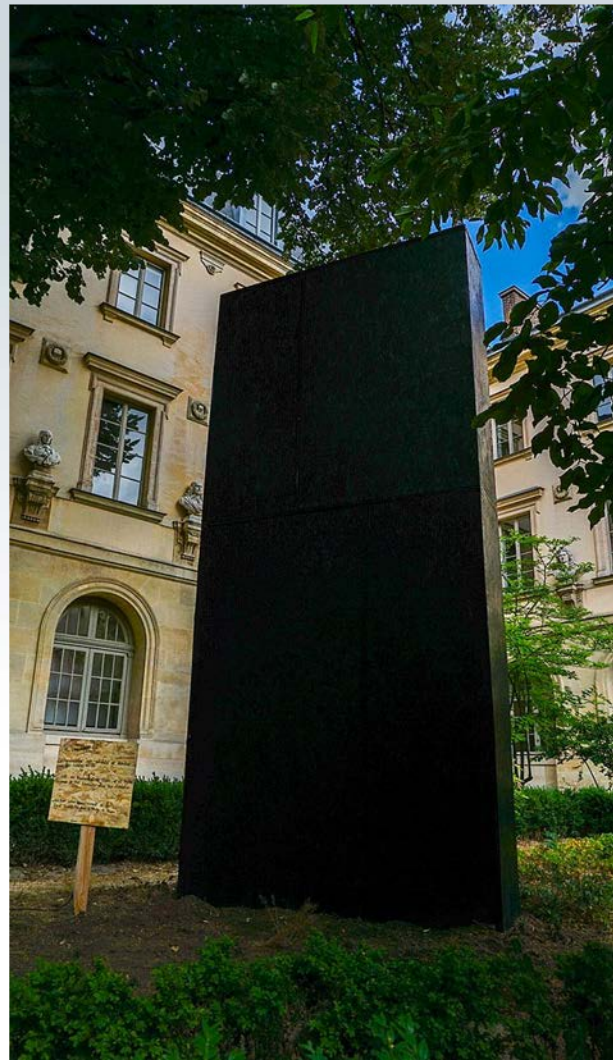


# WHY ARE MICROSERVICES HARDER?

Every tool has its drawbacks

# And for a time it was good

- In the era of the monolith, only a few people understood the whole system
- But once things ‘clicked’ we usually had a full explanation





## Microservices

- Someone understands each of these dots *\*fully\**
- No one understands the map



Chaos reigns

- Three pillars of observability







## Metrics

- “When you don’t know what’s happening, count something”
- The best way to get a high-level view
- Very easy to store even in high volume



## Logs!

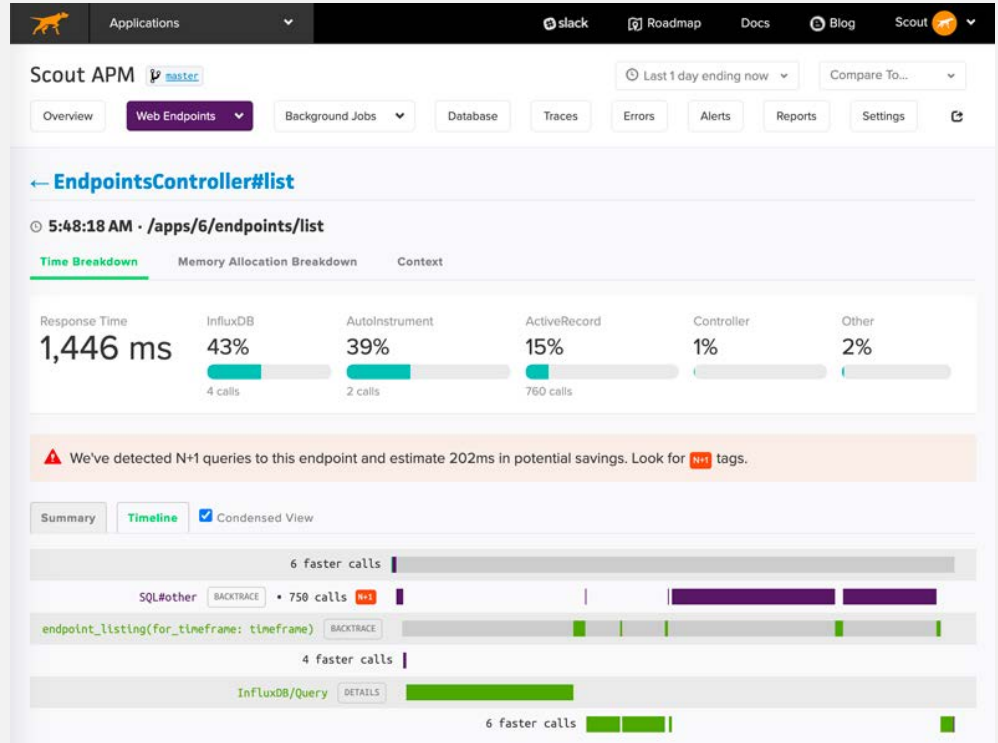
- They always have a complete and thorough explanation of the problem
- ... somewhere
- Storage and management are their own challenge

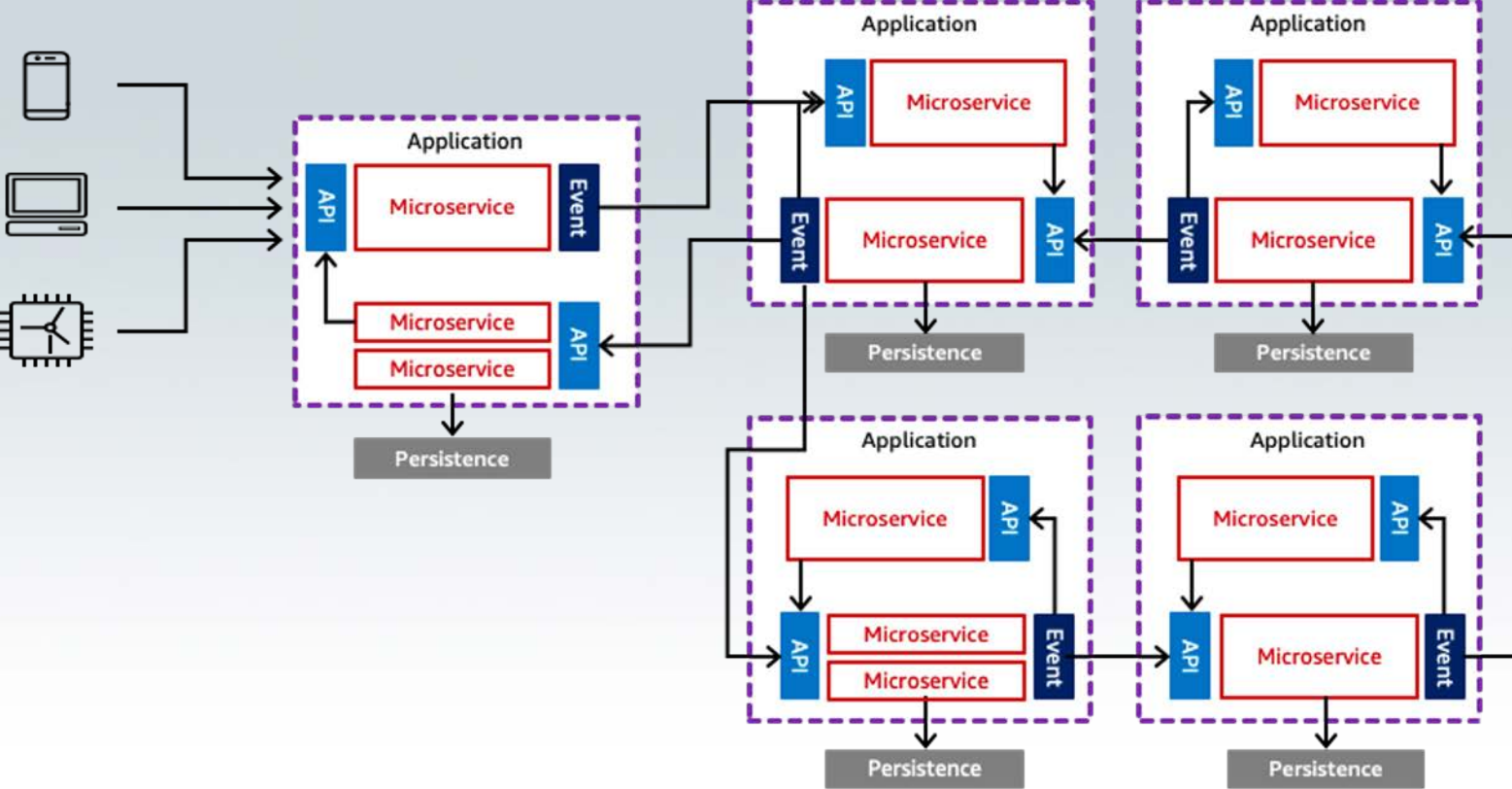


## Tracing

- Informatically, a hybrid between metric and logging
- Tries to generalize observed time spans

- The dirty secret:
- Most trace data is never viewed
- By “most” we mean 99.999%



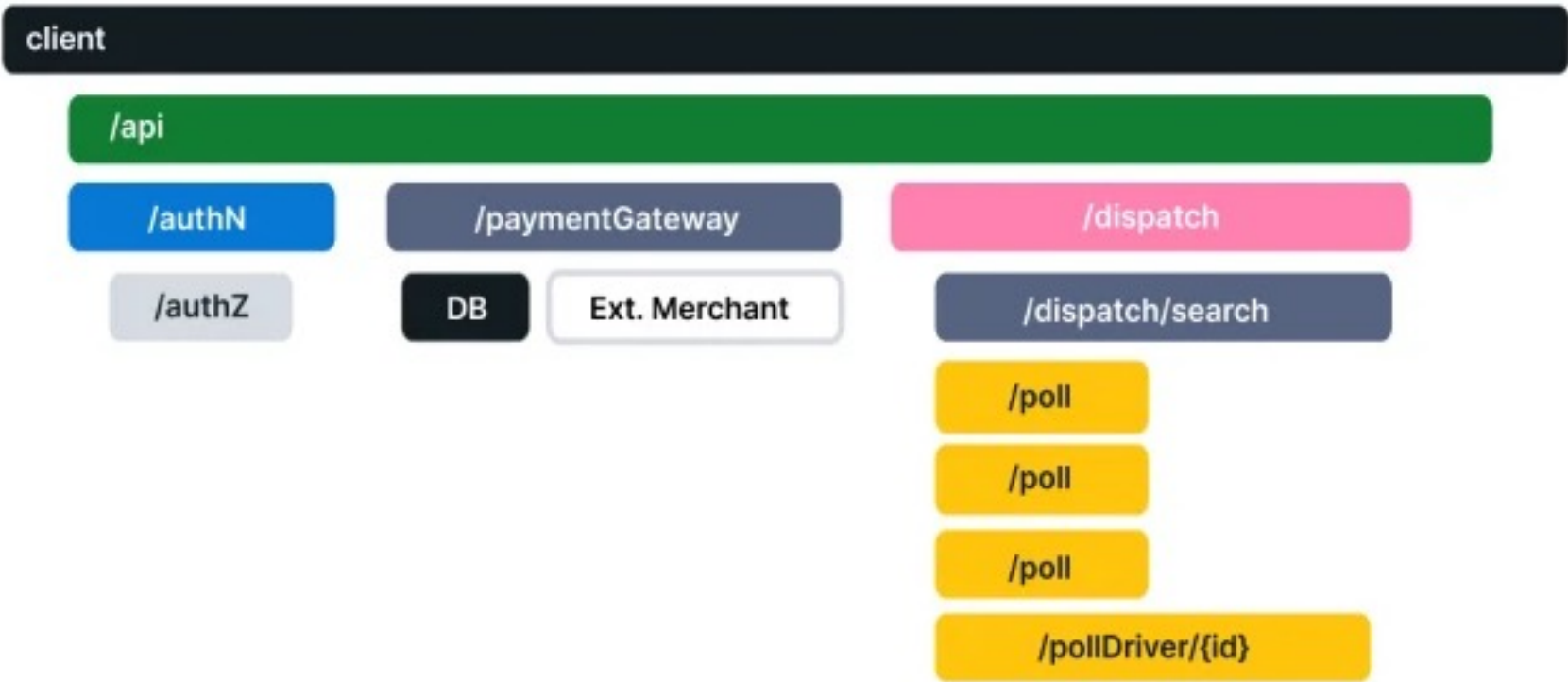


Tracing -> distributed tracing

## HOW DISTRIBUTED TRACING HAPPENS

- Add a trace header somewhere close to the 'start'
- Pass that around with the request
- Have collector-side logic to tie those traces together





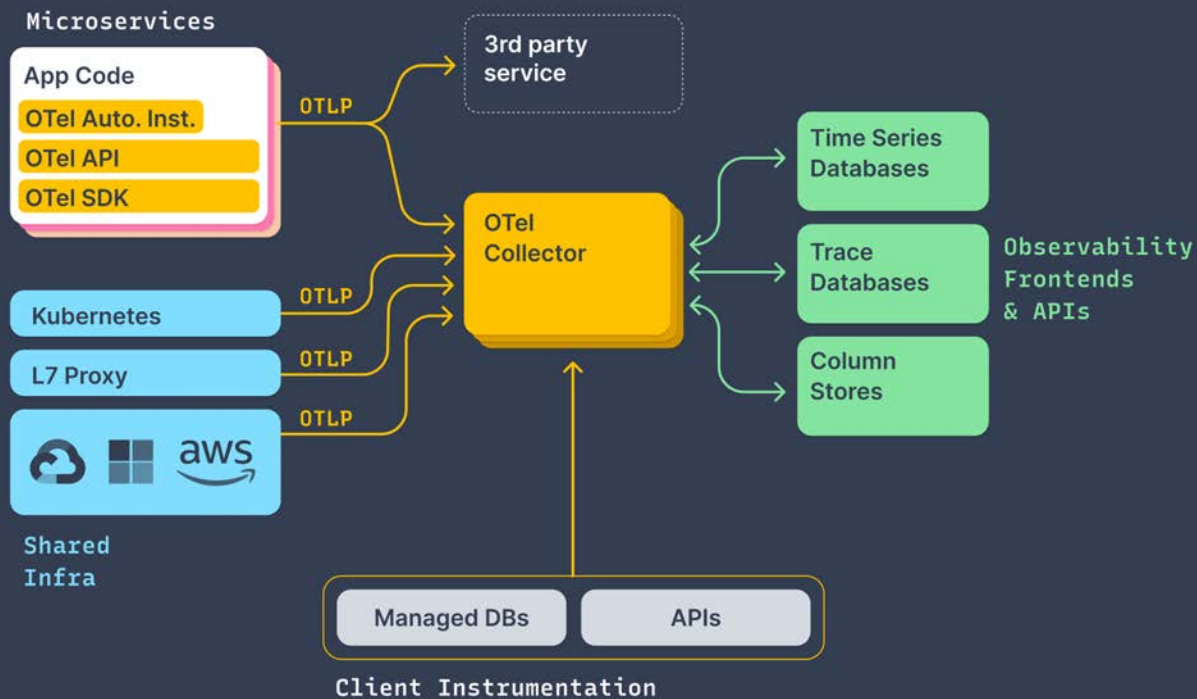
Goal of tracing is a waterfall chart

# Enter OpenTelemetry

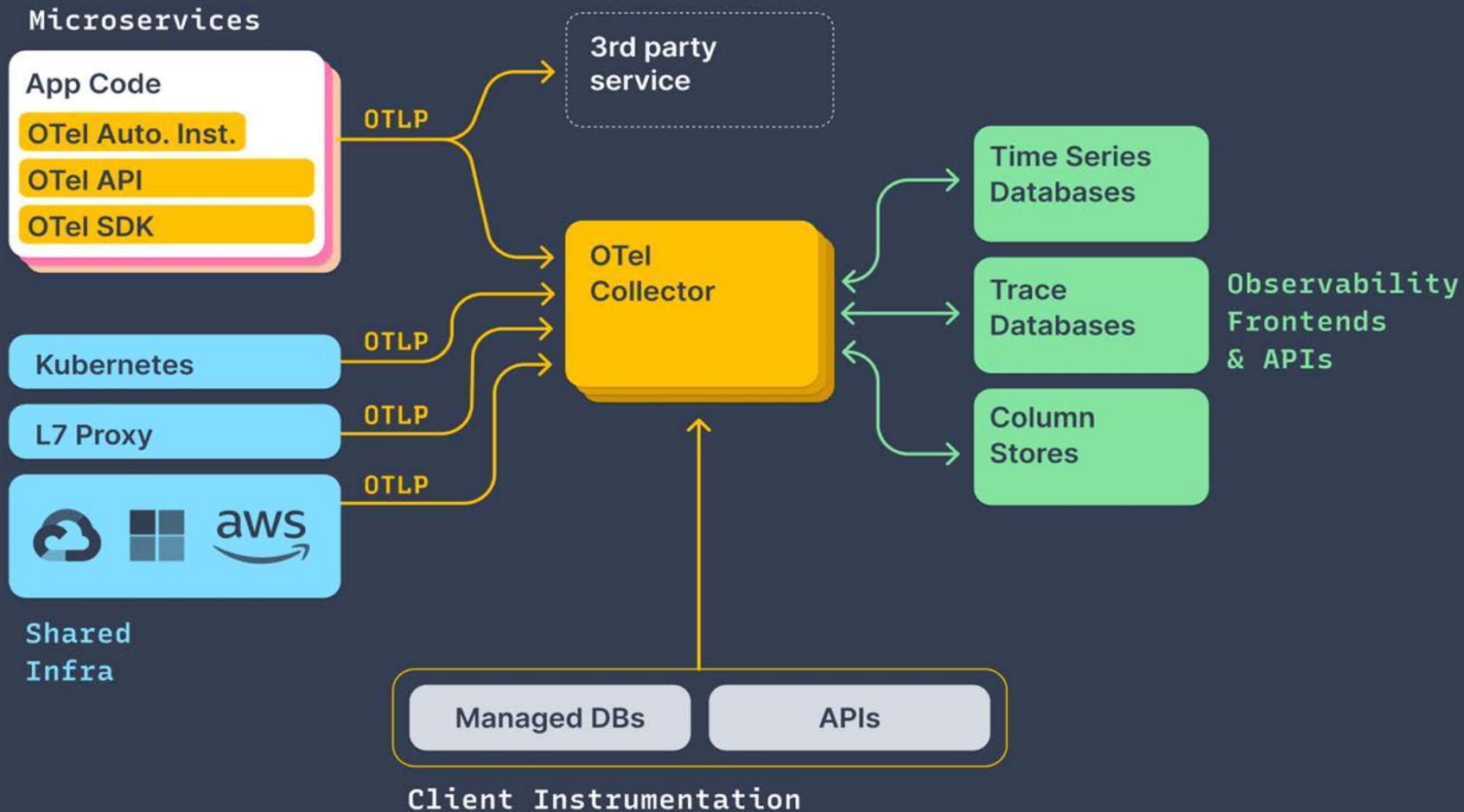
- The end of the tower of babel

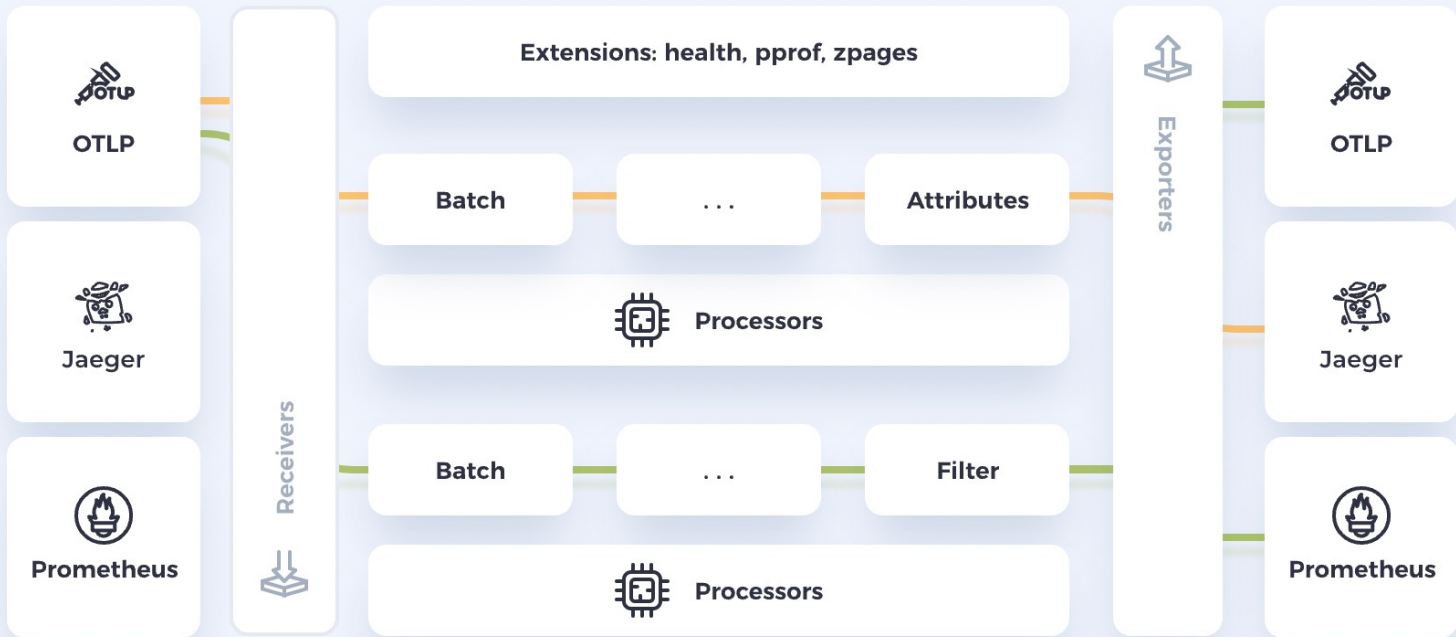






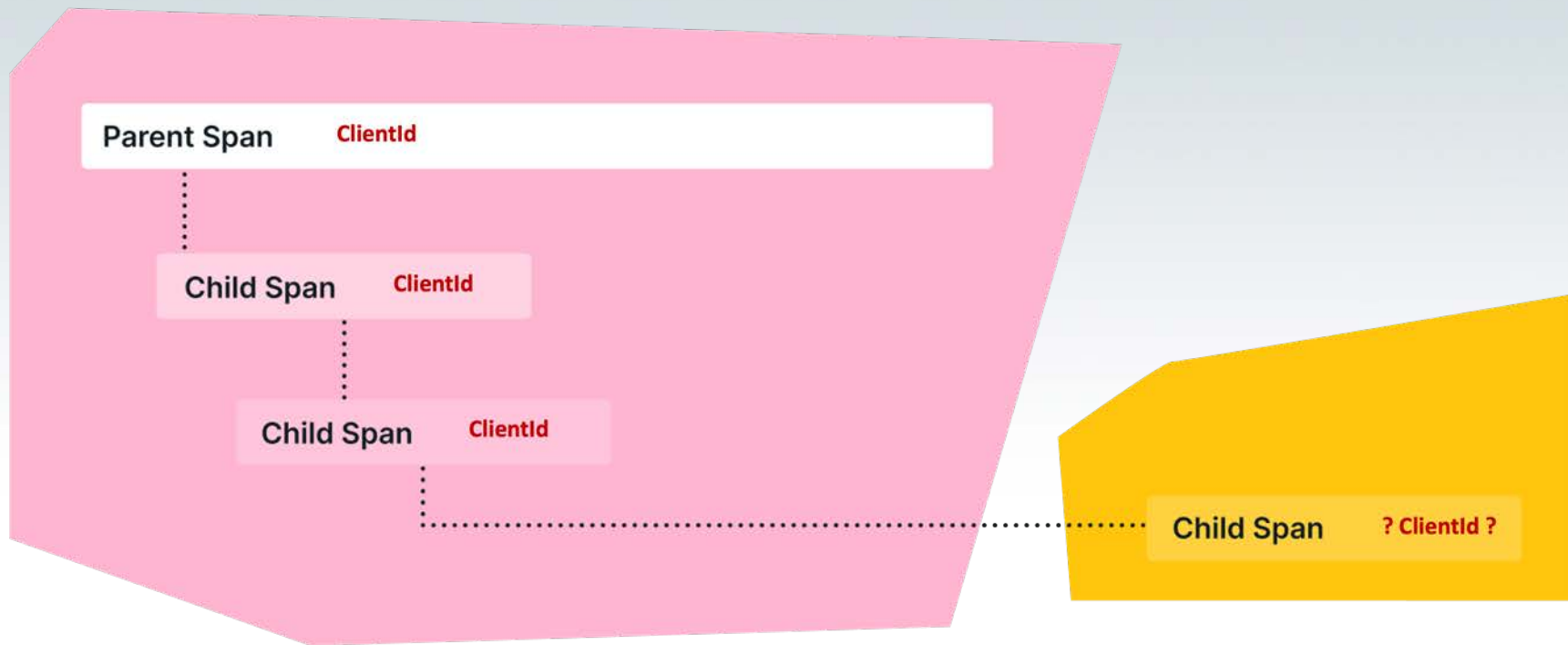
The collector is where the magic happens





The collector is much more than a data exporter

## Along with the three pillars: baggage



**Service A**

**Service B**

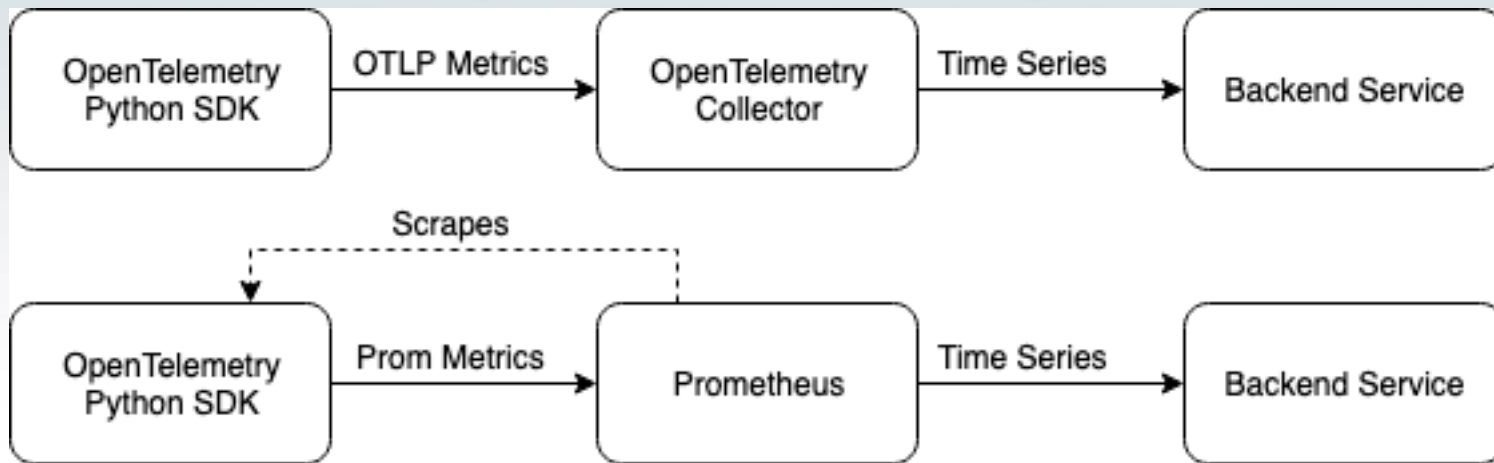
# Status and Releases

The current status of the major functional components for OpenTelemetry is as follows:

Language	Traces	Metrics	Logs
C++	Stable	Stable	Experimental
C#/.NET	Stable	Stable	Mixed*
Erlang/Elixir	Stable	Experimental	Experimental
Go	Stable	Alpha	Not yet implemented
Java	Stable	Stable	Experimental
JavaScript	Stable	Stable	Development
PHP	Beta	Beta	Not yet implemented
Python	Stable	Stable	Experimental
Ruby	Stable	Not yet implemented	Not yet implemented
Rust	Stable	Alpha	Not yet implemented
Swift	Stable	Experimental	In development

Support is better  
than you'd think!

# Ways to get started



THANK  
YOU!

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