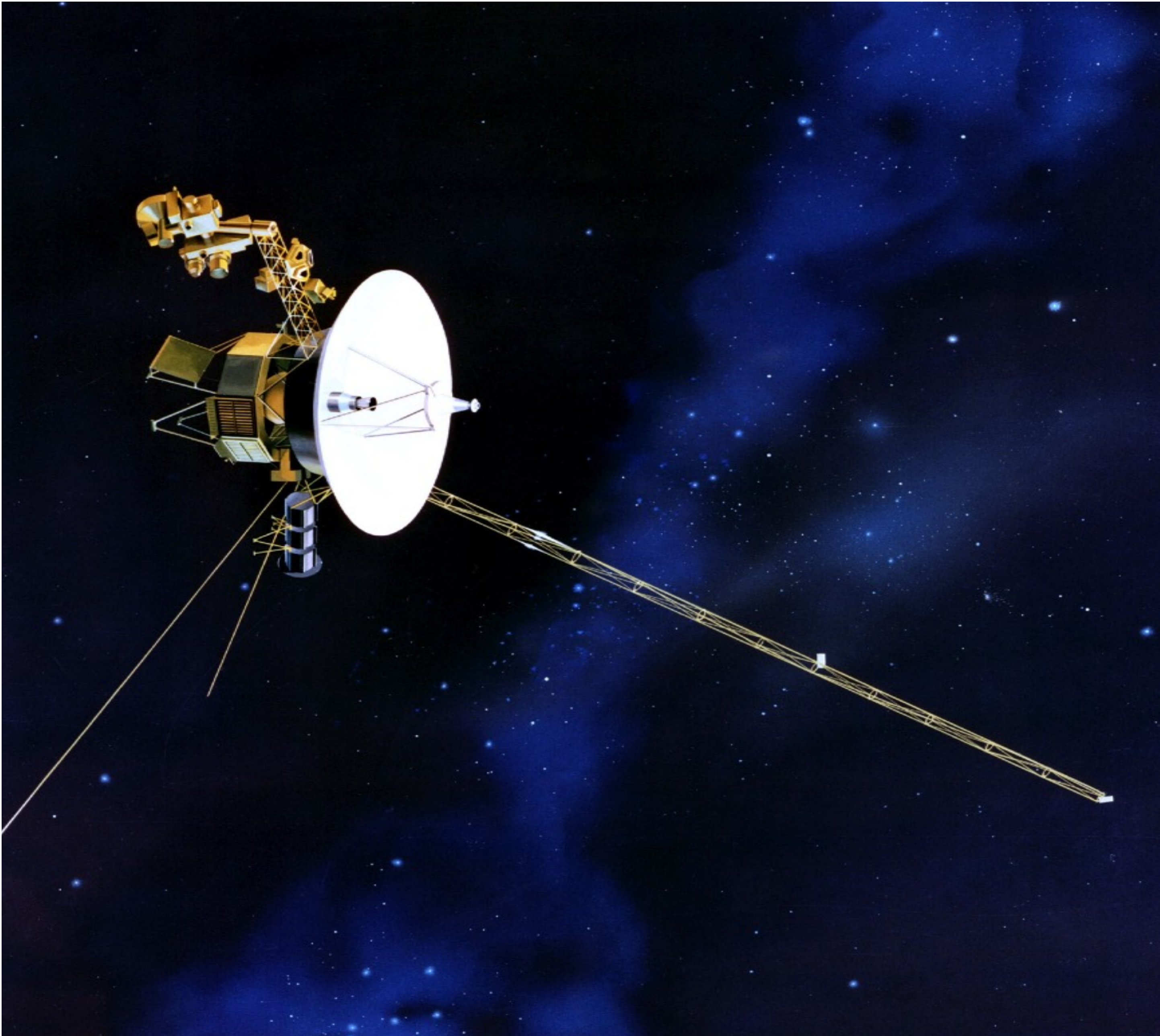
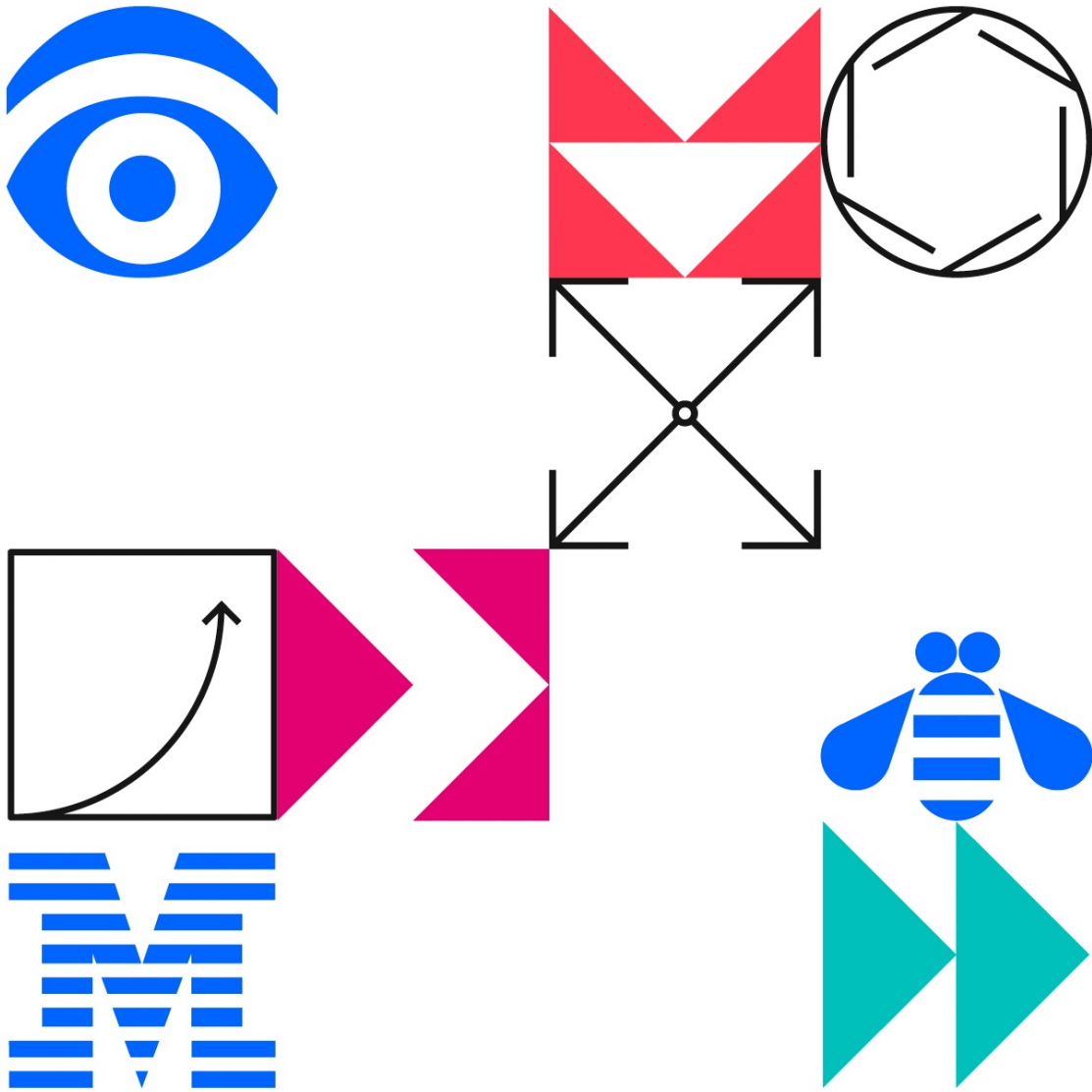


Application Performance Monitoring with OpenTelemetry



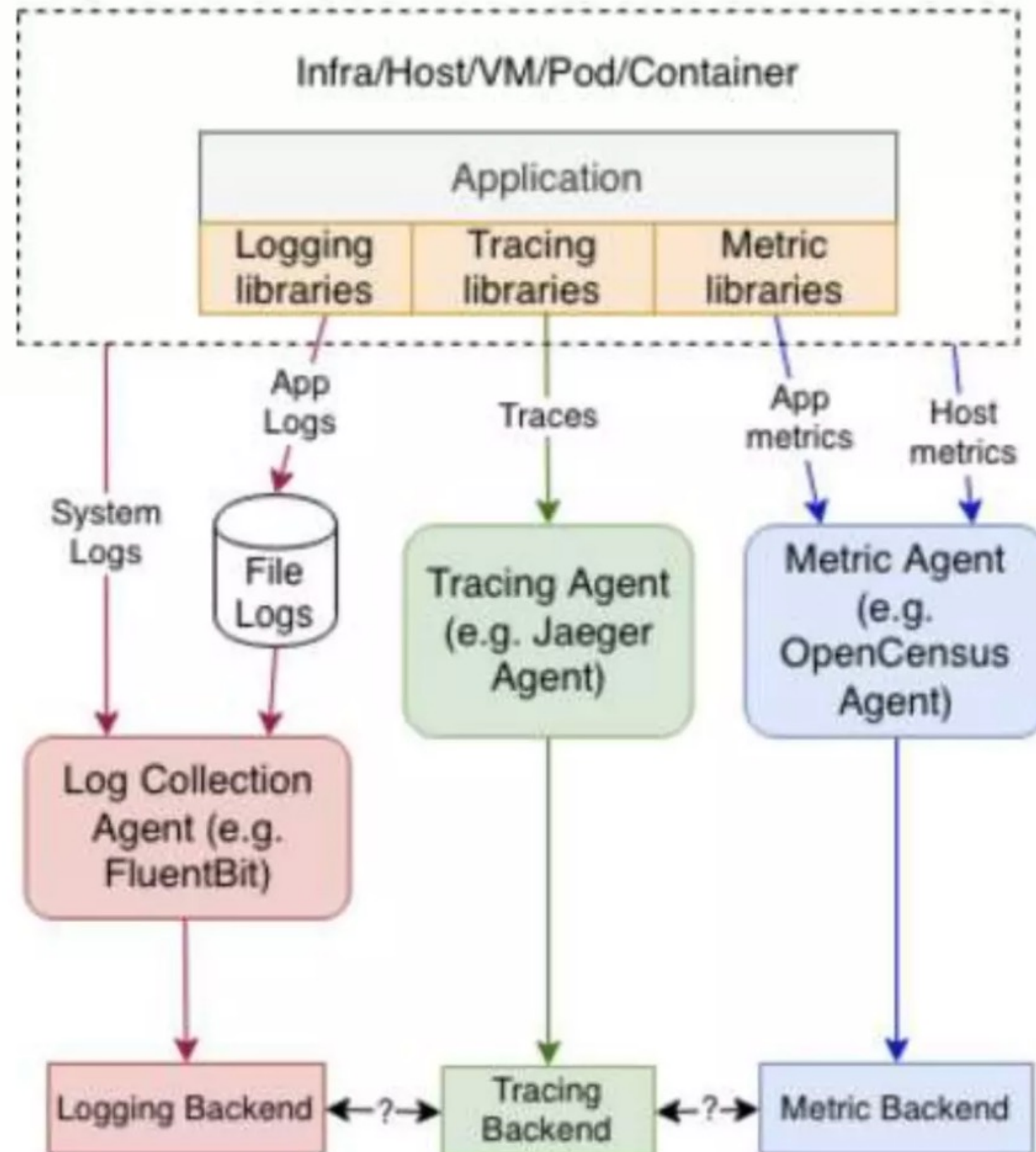
OUR PROBLEM

What are we trying to solve?

Silos

- Logs, Metrics, Traces
- Multiple stacks
- Investigation time
- Knowledge required
- High cognitive load
- ...

Separate Collection



OUR GOAL

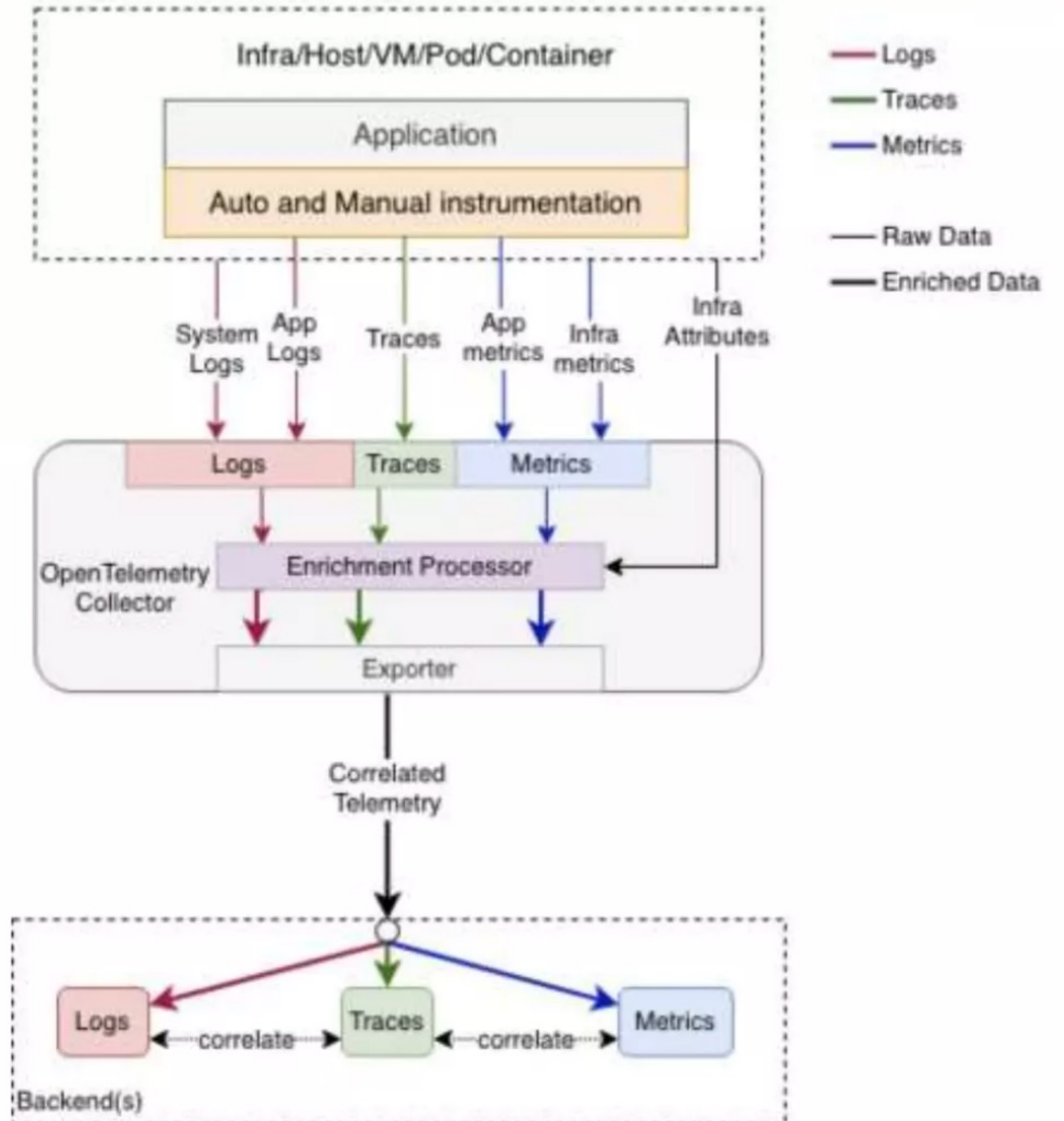
Where we want to go

Unified Platform

- Single visualization UI
- **Correlation**
- Evolutive



OpenTelemetry Collection



OpenTelemetry (a.k.a. OTel)



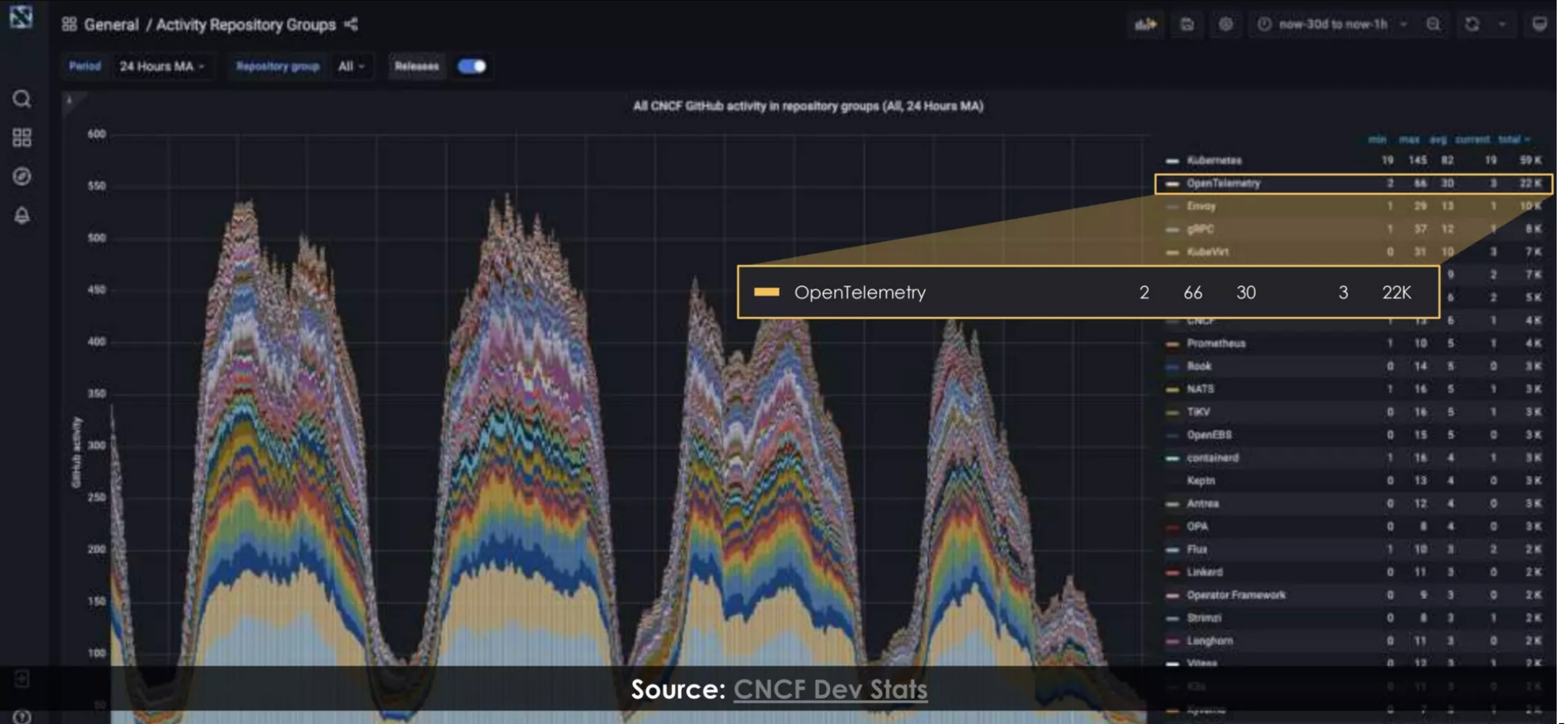
CLOUD NATIVE
COMPUTING FOUNDATION

“OpenTelemetry is an observability framework – software and tools that assist in **generating and capturing telemetry data** from cloud-native software.”

Across Traces, Metrics, Logs

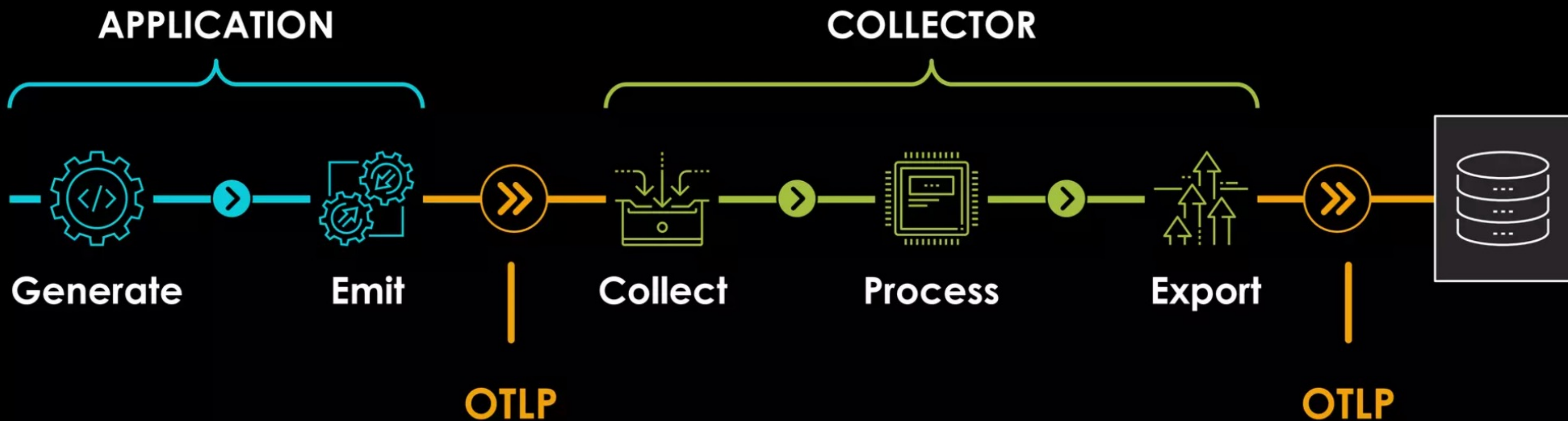


Second most active CNCF project

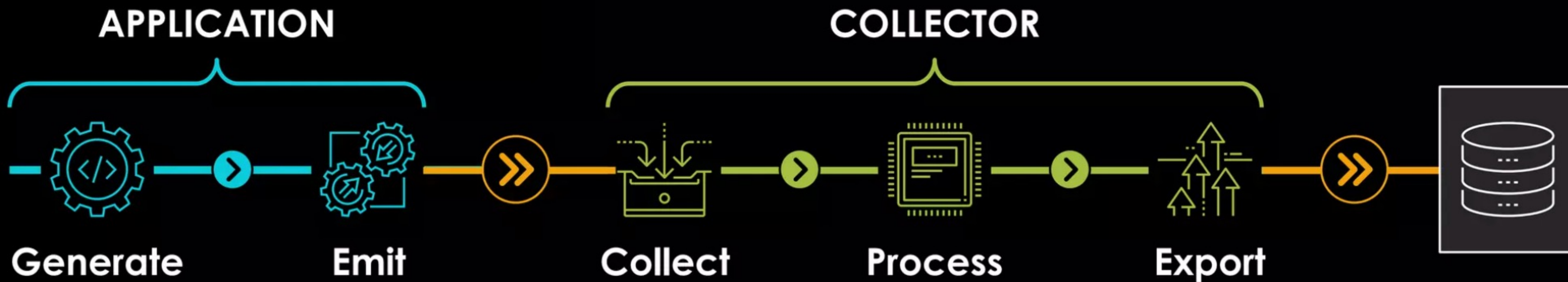


OpenTelemetry

A unified set of vendor-agnostic APIs, SDKs and tools for generating and collecting telemetry data, and then exporting it to a variety of analysis tools.



OpenTelemetry Specification

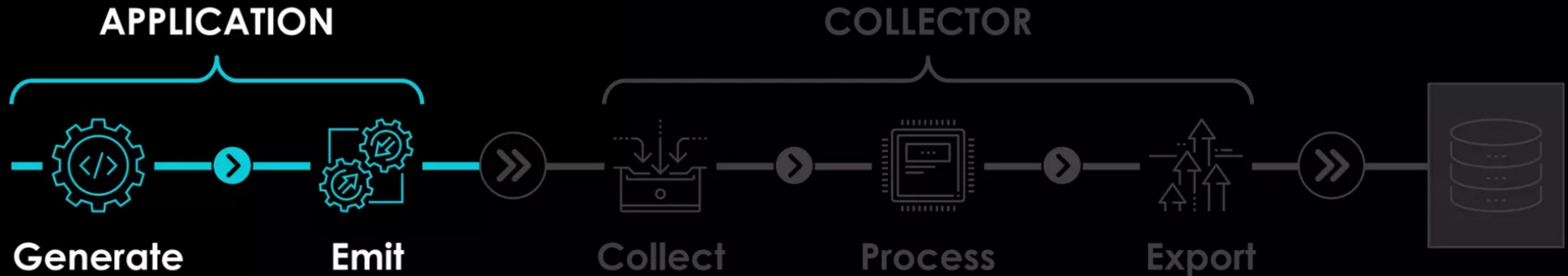


**Cross-language requirements for all
OpenTelemetry implementations**

API specification | SDK specification | Data specification

For traces, metrics and logs

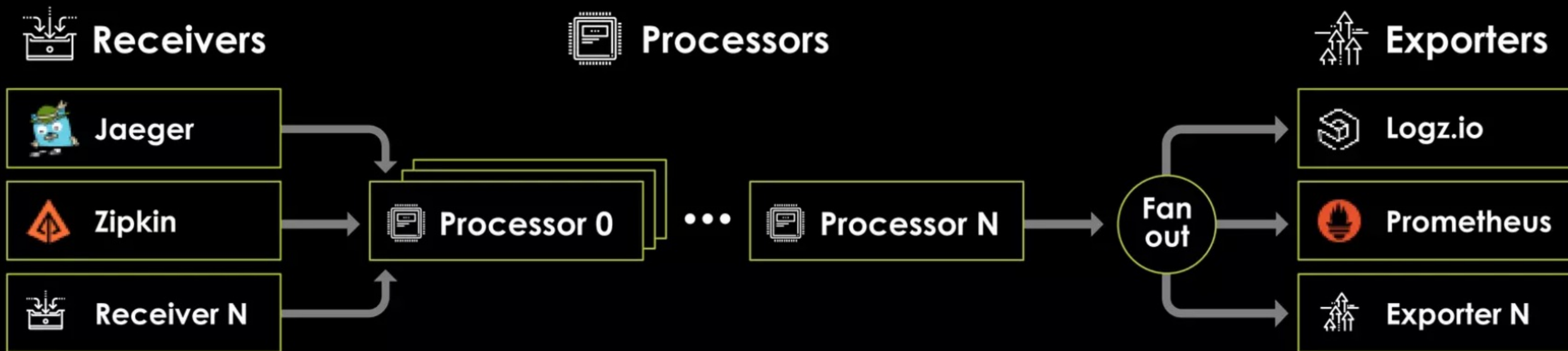
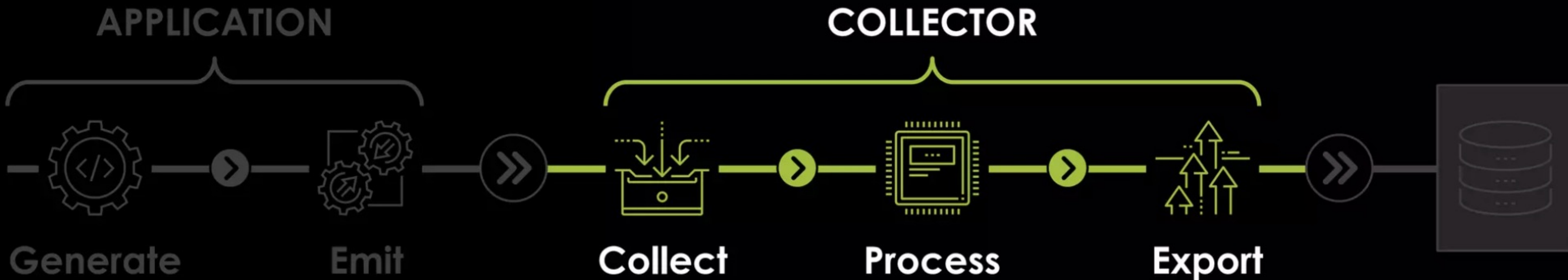
OpenTelemetry Client Libraries



State of the signals

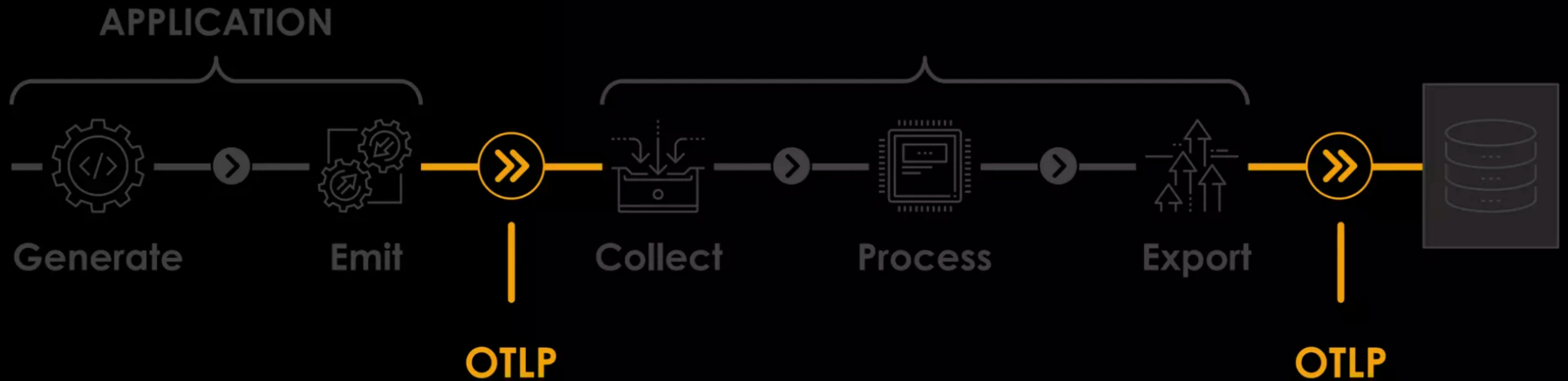
Language	Traces	Metrics	Logs
C++	Stable	Stable	Stable
C#/.NET	Stable	Stable	Stable
Erlang/Elixir	Stable	Experimental	Experimental
Go	Stable	Stable	In development
Java	Stable	Stable	Stable
JavaScript	Stable	Stable	Experimental
PHP	Stable	Stable	Stable
Python	Stable	Stable	Experimental
Ruby	Stable	In development	In development
Rust	Beta	Alpha	Alpha
Swift	Stable	Experimental	In development

OpenTelemetry Collector

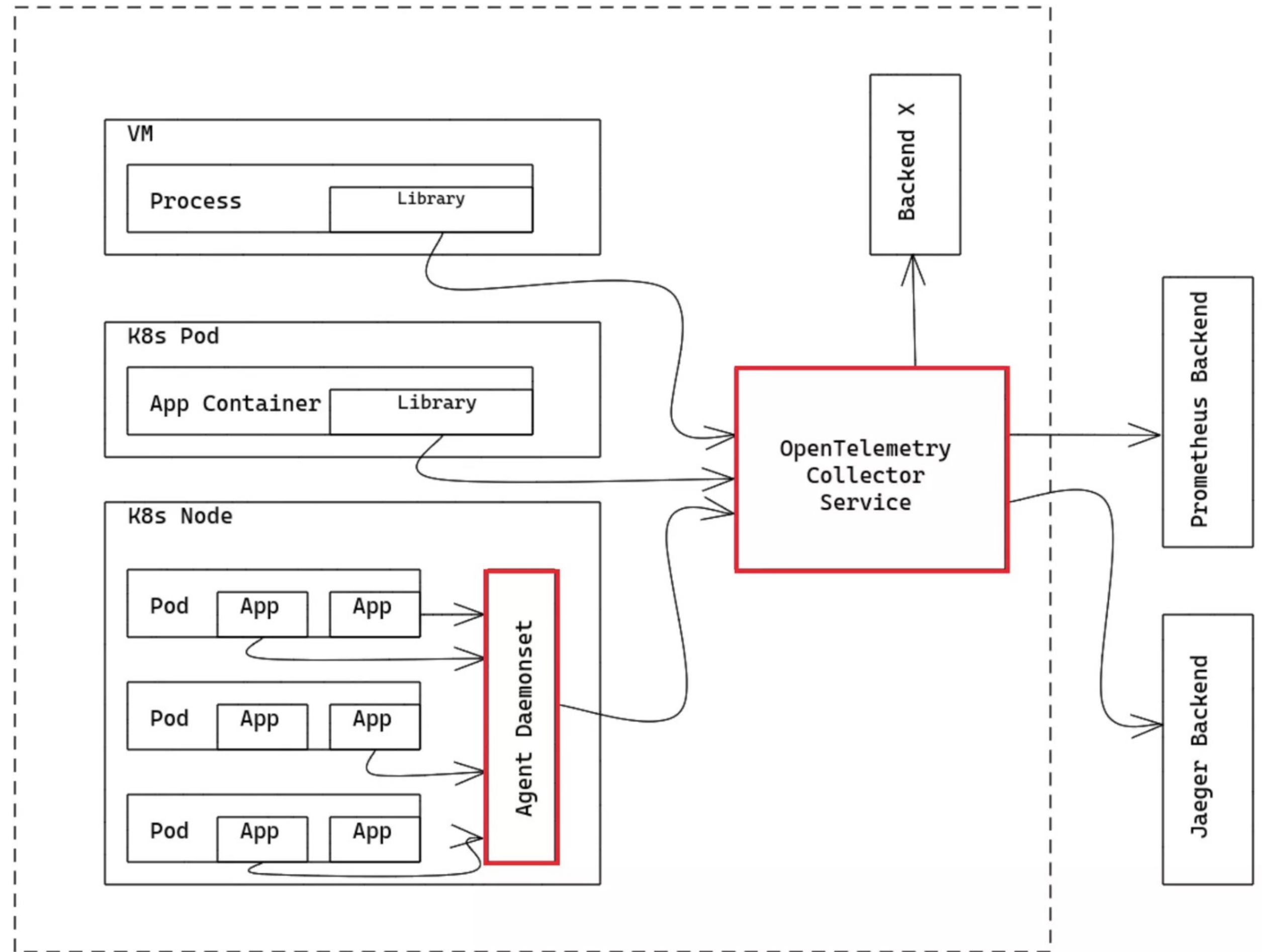
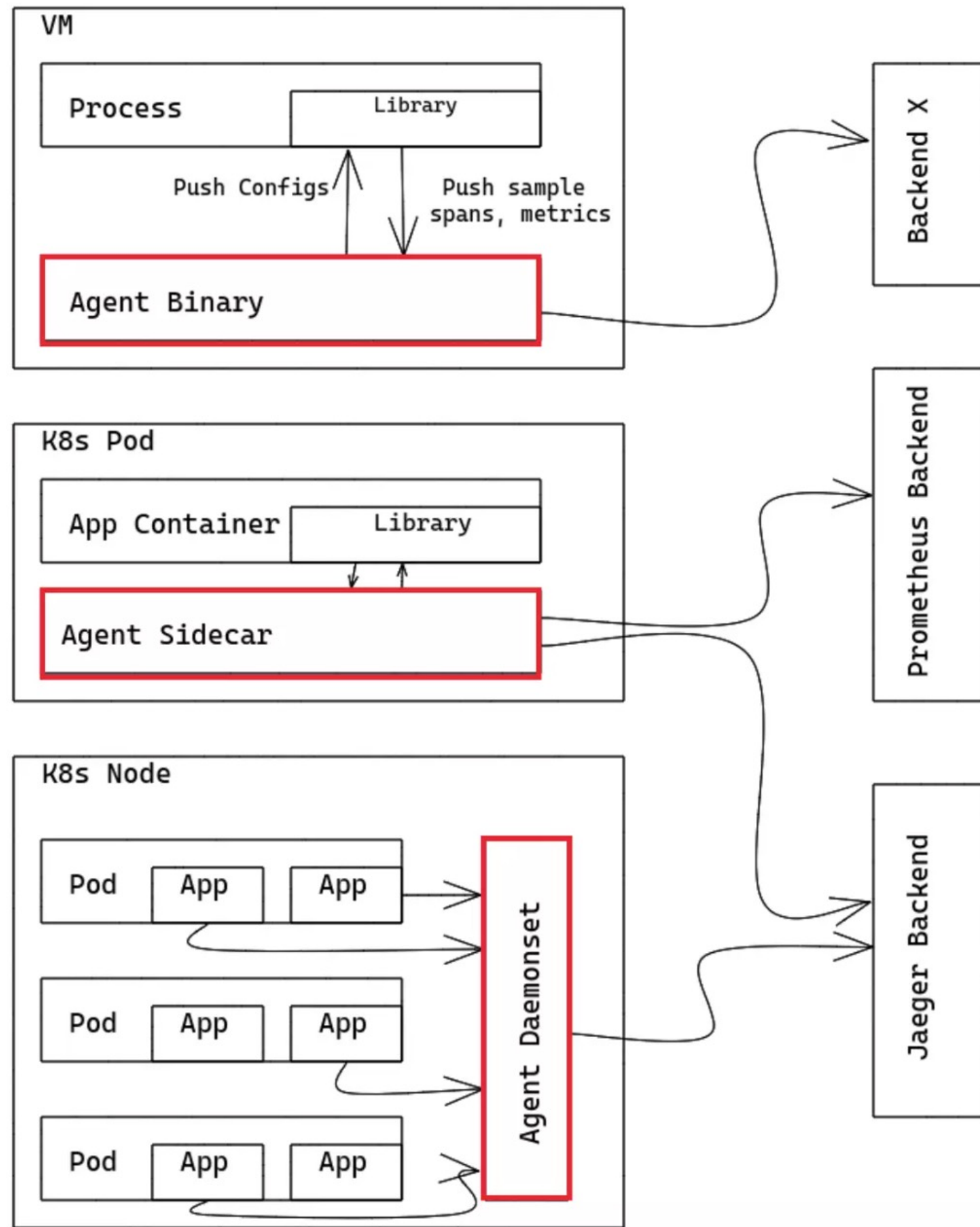


90+ receivers available for various technologies

OpenTelemetry Protocol (OTLP)



Transport: grpc and HTTP 1.1 | Encoding: protobuf | Telemetry data model



Nouveautés MQ 935

- <https://www.ibm.com/docs/en/ibm-mq/9.3?topic=935-whats-new-in-mq>

► Multi

New for IBM MQ for Multiplatforms - base and Advanced entitlement

On [Multiplatforms](#), the following features and enhancements are available with both base product entitlement, and with Advanced entitlement.

Administration

- ► AIX [Support for AIX compiler IBM Open XL C/C++ for AIX 17.1.0 \(XLC 17\)](#)
- [Enhancements to the IBM MQ Console](#)
- [Stand-alone IBM MQ Web Server](#)
- [OpenTelemetry tracing](#)

Application development

- [Additional JSON Web Token \(JWT\) support](#)

OpenTelemetry tracing

- <https://www.ibm.com/docs/en/ibm-mq/9.3?topic=network-opentelemetry-integration>

OpenTelemetry tracing

From IBM MQ 9.3.5, IBM MQ provides a tracing service that allows you to integrate with an OpenTelemetry tracing system. For more information, see [OpenTelemetry integration](#).

OpenTelemetry tracing

OpenTelemetry tracing enables you to observe how applications are behaving within a data flow. The data flow can, and often does, incorporate several different applications. Tracing can show you the entire journey and provide insights into each individual application's behavior. IBM MQ provides a tracing service that enables you to integrate with an OpenTelemetry tracing system.

The IBM MQ OpenTelemetry tracing service is implemented as an IBM MQ API exit. It is provided as an IBM supporting program, which means that you have entitlement to use the tracing service and receive support as part of your IBM MQ entitlement. Note that your IBM MQ entitlement only permits use of the IBM MQ Tracing exit component of the IBM Instana supporting program.

Issues arising from the use of the exit must be reported to IBM MQ Support unless you are using the tracing exit with an IBM Instana monitoring system and IBM Instana entitlement.

The exit can be downloaded here: <https://ibm.biz/mqinstanaexit>.

Installation

Installing and configuring the IBM MQ Open Telemetry tracing service [↗](#)

Full details of how to install and configure IBM MQ tracing can be found here: [IBM MQ Tracing](#).

Details of the supported platforms for the IBM Instana IBM MQ exit can be found here: [Supported platforms for on-premises IBM MQ](#).

Le lien : <https://www.ibm.com/docs/en/instana-observability/current?topic=mq-tracing#enabling-ibm-mq-tracing>

Donne les details d'installation :

- dézipper le fichier téléchargé dans :

Linux: `/var/mqm/exits64`

Windows : `C:\ProgramData\IBM\MQ\exits64`



Configuration 1/2

Enabling IBM MQ Tracing for all the queue manager instances

Editer le fichier mqs.ini

- On Linux and AIX, add the following lines:

```
ApiExitCommon:  
Sequence=100  
Function=EntryPoint  
Module=/var/mqm/exits64/mqtracingexit  
Name=TracingApiExit
```

- On Windows, add the following lines:

```
ApiExitCommon:  
Sequence=100  
Function=EntryPoint  
Module=C:\ProgramData\IBM\MQ\exits64\mqtracingexit  
Name=TracingApiExit
```

Enabling IBM MQ Tracing for a queue manager

Editer le fichier qm.ini

Configuration 2/2

Editer le fichier mqtracingexit.conf (Tous les QMGRS) ou mqtracingexit_<QMNAME>.conf pour un seul QMGR

Démo