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#KubeCon #CloudNativeCon

OpenTelemetry Project Update

Juraci, Marylia, Pablo, Severin





The open standard for telemetry

Check out the new opentelemetry.io design!



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Cool things



Declarative Configuration



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Stable!



Configure complex attributes



The same language (YAML)



Data model

More info



Declarative Configuration



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```
1 file_format: "1.0"
2
3 resource:
4   # Read resource attributes from the OTEL_RESOURCE_ATTRIBUTES environment variable.
5   # This aligns well with the OpenTelemetry Operator and other deployment methods.
6   attributes_list: ${OTEL_RESOURCE_ATTRIBUTES}
7   detection/development: # /development properties may not be supported in all SDKs
8     detectors:
9       - service: # will add "service.instance.id" and "service.name" from the OTEL_SERVICE_NAME
10      - host:
11      - process:
12      - container:
13
14 propagator:
15   composite:
16     - tracecontext:
17     - baggage:
```

Examples



Declarative Configuration



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```
1 tracer_provider:
2   sampler:
3     parent_based:
4       root:
5         always_on:
6   processors:
7     - batch:
8       exporter:
9         otlp_http:
10          endpoint: ${OTEL_EXPORTER_OTLP_ENDPOINT:-http://localhost:4318}/v1/traces
11 meter_provider:
12   readers:
13     - periodic:
14       exporter:
15         otlp_http:
16          endpoint: ${OTEL_EXPORTER_OTLP_ENDPOINT:-http://localhost:4318}/v1/metrics
17 logger_provider:
18   processors:
19     - batch:
20       exporter:
21         otlp_http:
22          endpoint: ${OTEL_EXPORTER_OTLP_ENDPOINT:-http://localhost:4318}/v1/logs
```

Examples



Declarative Configuration



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Languages



C++



Go



Java



JS

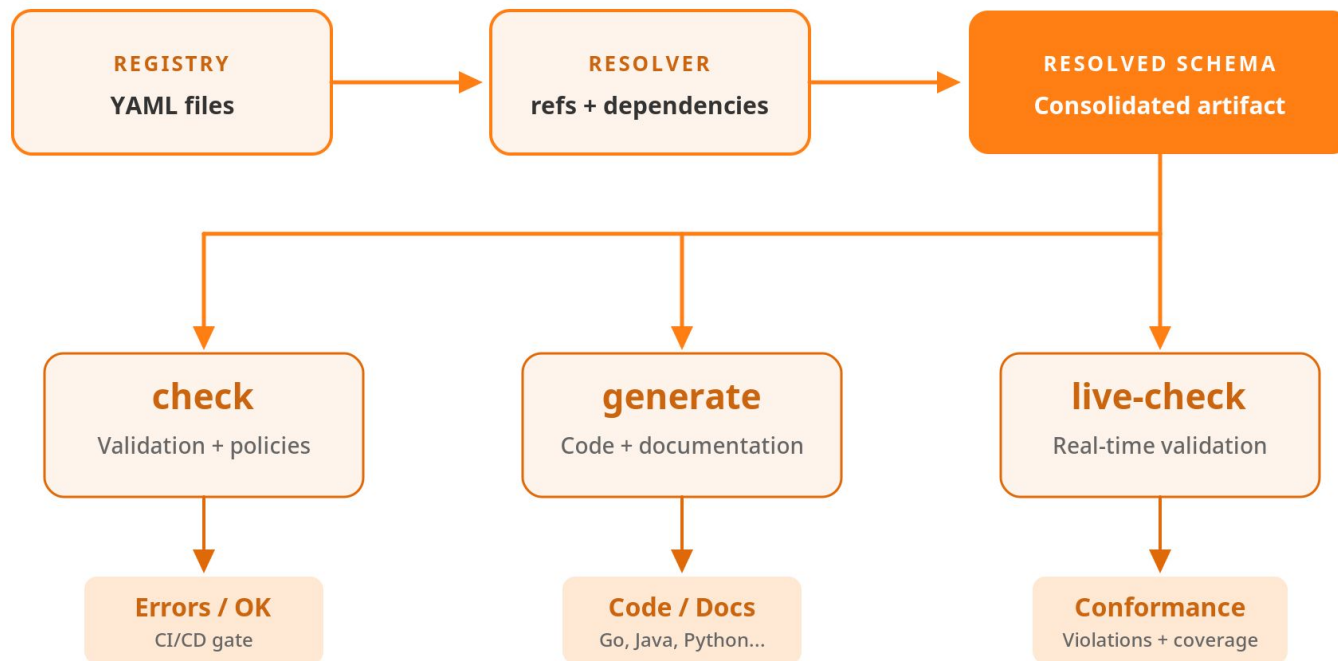


PHP

Compliance



**Weaver helps you define, validate, and
evolve YOUR telemetry conventions.**



Define a registry

```
# registry_manifest.yaml
name: minha-app
description: "Convenções de telemetria da minha app"
semconv_version: 0.1.0
dependencies:
  - name: otel
    registry_path: https://github.com/open-telemetry/semantic-conventions/archive/refs/tags/v1.30.0.zip[model]
```

Define your telemetry

```
# metricas.yaml
version: "2"

attributes:
  - key: pedido.tipo
    type:
      allow_custom_values: true
      members:
        - id: compra
          value: compra
        - id: devolucao
          value: devolucao
      stability: stable
      brief: "Tipo de pedido"

metrics:
  - name: pedido.count
    instrument: counter
    unit: "{pedido}"
    stability: stable
    brief: "Total de pedidos processados"
    attributes:
      - ref: pedido.tipo
        requirement_level: required
```

Custom policies

```
# Todos os atributos devem começar com "minha-app."
deny[msg] {
  attr := input.attributes[_]
  not startswith(attr.key, "minha-app.")
  msg := sprintf("Atributo '%s' deve começar com 'minha-app.'", [attr.key])
}
```

Custom policies - live check

```
weaver registry live-check \  
-r ./meu-registry/ \  
--otlp-grpc-port 4317
```

Custom policies

```
{  
  "id": "missing_required_attribute",  
  "level": "violation",  
  "message": "Atributo obrigatório 'pedido.tipo' ausente no span 'pedido.processar'",  
  "signal_type": "span",  
  "signal_name": "pedido.processar"  
}
```



Talks



When the Codebase Starts Instrumenting Itself - Whitney Lee, Datadog

[Click here to remove from My Schedule.](#)

 Monday March 23, 2026 16:30 - 16:55 CET

 E103-105 (1st Floor)



Schema Inference and Automation: A New Era for Telemetry Management - Nicolas Takashi, Coralogix & Arthur Silva Sens, Grafana Labs

[Click here to add to My Schedule.](#)

 Tuesday March 24, 2026 15:15 - 15:45 CET

 Hall 12



Inject an OpenTelemetry auto-instrumentation agent into a process

Support v0.4.0

Java

Node.JS

.NET

python

Injector



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```
# activate auto-instrumentation for all supported processes on the system
$ echo /usr/lib/opentelemetry/libotelinject.so >> /etc/ld.so.preload

# run your application without any modification
$ node myapp.js

# That's it :-)

# ... of course you can configure it
$ ${EDITOR} /etc/opentelemetry/otelinject.conf
```

Fast and Furious Adoption of OpenTelemetry With the Injector



Even more cool things!



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Go Metrics SDK performance

Benchmarking and analysis led to **4x to 30x** performance improvements by improving locking and doing hashing on attributes.

Changes on most metric instruments are available today, exponential histograms and attributes coming soon!

Span events deprecation

The Span Event API is getting deprecated in favor of Log-based Events.

Span events will be phased out over time, but existing data and views that show events on spans will keep working.

Stability



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"Stable by Default"

Cross-wide project to improve stability, documentation and reliability.

OBI progress

RC in next few months. Aligning with declarative config, and improving installation and docs.

K8s semconv RC

Kubernetes semantic conventions have a new release candidate.

Profiling goes alpha

The profiling signal will be alpha on OTLP v1.11.0. Already available on the Collector.

Collector stability

Renewed focus on most used components. Learn more in the next session on this room.

Community

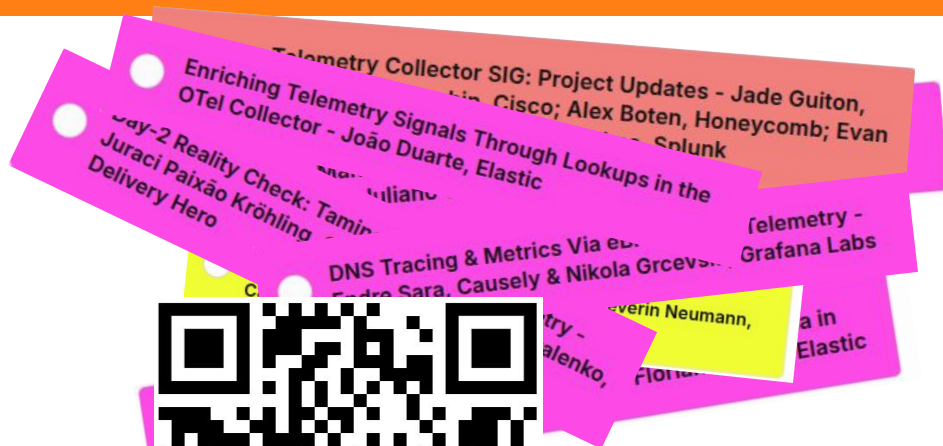
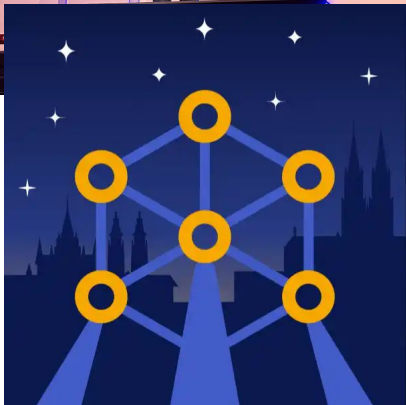


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Scan to see list
of OTEL talks!

Community



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WED	THU
Mar 25	Mar 26
Keynotes until 10:30	Keynotes until 10:30
10:30 - 17:00	10:30 - 14:00
11:00-11:50 System Semconv SIG	11:00-11:50 Weaver SIG
12:00-12:50 Collector SIG	12:00-12:50 Demo SIG
12:15 - 14:15 Lunch 13:00-13:50 GenAI SIG	12:15 - 13:45 Lunch 13:00-13:50 CICD SIG
14:00-14:50 Prometheus SIG	14:00 Solutions Showcase closes
15:00-15:50 End-User SIG: OTel Blueprints	
16:00-16:50 OpAMP SIG	



Scan to see list
of OTEL talks!



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Get Involved!



Get involved!



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Blueprints

**Collector
MCP**

**Browser
SIG**

Zig SIG

**Ecosystem
Explorer**

**OTel for
Beginners**

PHP Distro

Kotlin SIG





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Q&A

Stay on this room to attend

OTel Collector SIG: Project Updates

next!

(Starting at 17:00)

???



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No AI?

How we are dealing with AI slop



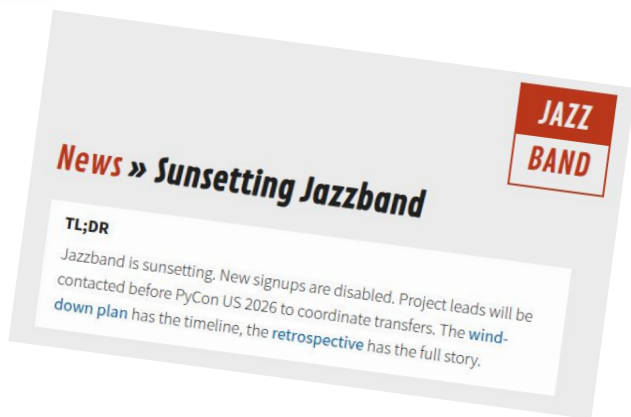
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No AI?



Commit formatting

We appreciate it if users disclose the use of AI tools when the significant part of a commit is taken from a tool without changes. When making a commit this should be disclosed through an Assisted-by: commit message trailer.

Examples:

Assisted-by: ChatGPT 5.2
Assisted-by: Claude Opus 4.5



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Q&A

For real this time

Stay on this room to attend

OTel Collector SIG: Project Updates

next!

(Starting at 17:00)