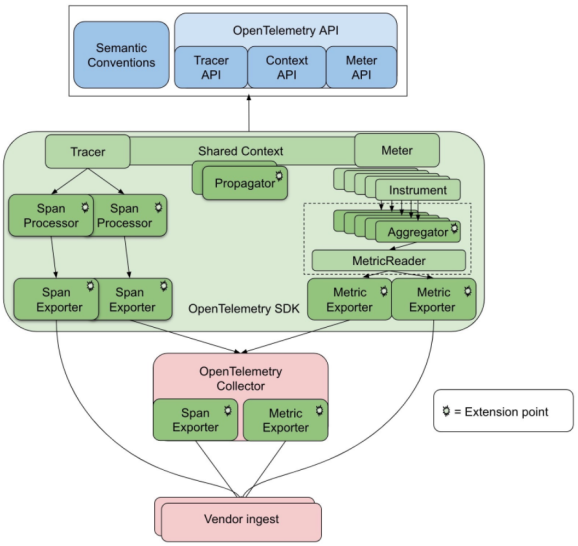
OpenTelemetry



OpenTelemetry

OpenTelemetryOpenTelemetry

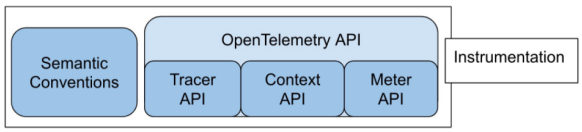
1. OpenTelemetry API
2. OpenTelemetry SDK
    - Tracer pipeline
    - Meter pipeline
    - Shared Context layer
3. Collector

OpenTelemetry API

Open Telemetry API()API

API

1. A Tracer API
2. A Metrics API
3. A Context API
4.



Tracer API

Tracer API spansspantraceIdTracerspansTracersapan

Metric API

Metric APIMetric instruments()Counters ObserversCounters ObserversObserversSpanCPU

Context API

Context API "context"spanstracesW3C Trace Context, Zipkin B3, New Relic distributed tracing APIspans traceMetric instruments

OpenTelemetry API spansspansAPIOpenTelemetry instrumentation()APM

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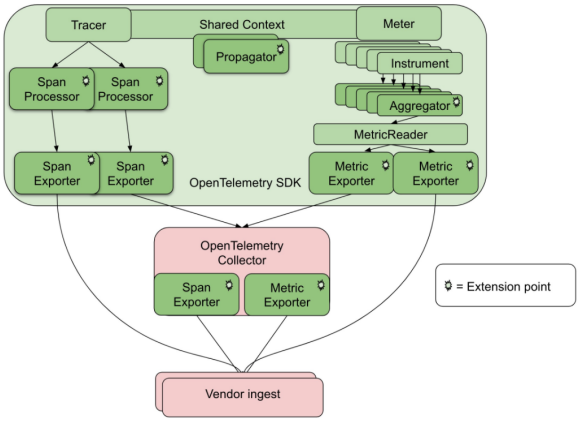
- Collector
-

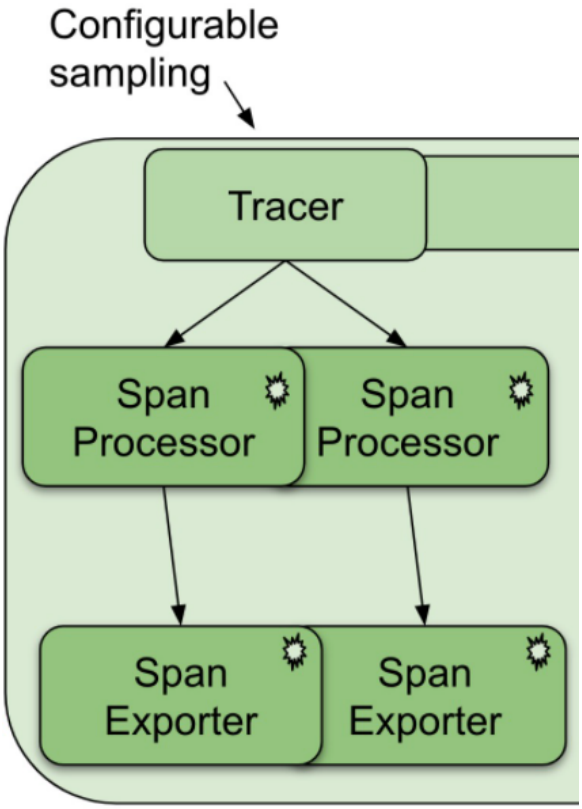
OpenTelemetry SDK

OpenTelemetry SDKOpenTelemetry APISDKAPITracer, Meter, Shared Context layer



SDK99%SDKTracer pipeline()Tracer pipeline

Tracer pipeline



SDK `SpanProcessors`Tracer pipeline`SpanProcessors`spansspansspans`SpanExporter`SDK SpanProcessorspansexporter

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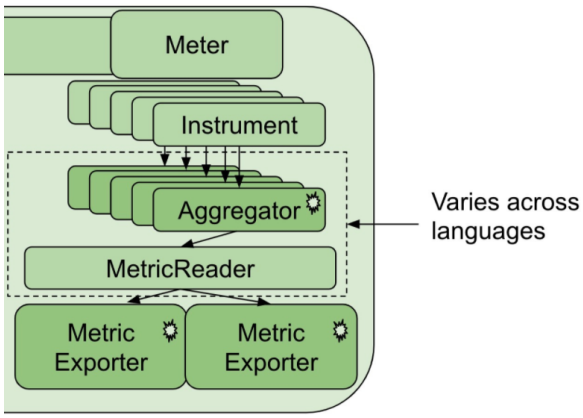
Tracer pipeline`SpanExporter`exporterOpenTelemetry spanstelemetrySpanExportertelemetry OpenTelemetry

Meter pipeline



Meter pipeline

Meter pipelineTracer pipelinemetricsspanjava SDK

Meter pipelinemetricCounters ObserversCountersObservers

(metric)

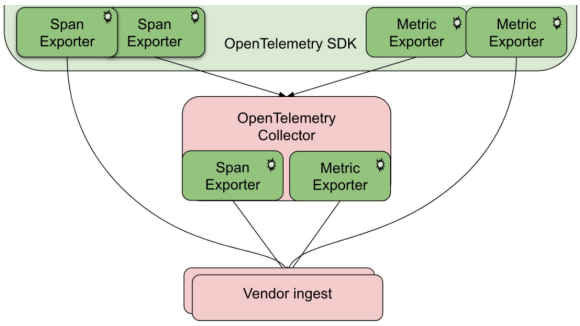
Meter pipelinemetric`MetricExporter`spansexportermetric aggregators

OpenTelemetryexporterexporters"push"exporterexporters"pull"New Relic pushPrometheuspush

Shared Context layer

Shared Context layerTracerMeter pipelinespanobservermetricpropagatorsContextspanOpenTelemetry SDKW3C Trace Context Zipkin B3 propagation

Collector



OpenTelemetry Collector(JaegerPrometheus)

OpenTelemetry collectorcollector

- opentelemetry-collector-contrib
- jaeger

collectorBlog Building your own OpenTelemetry Collector distribution

OpenTelemetry Collector Builder

- https://opentracing.io
- https://opencensus.io
- https://opentelemetry.io
- https://github.com/open-telemetry/opentelemetry-specification/tree/main/specification
- https://blog.newrelic.com/product-news/what-is-opentelemetry/
- https://www.mmbyte.com/article/124104.html