Wavefront Distributed Tracing
3D Microservices Observability – Metrics, Traces, Histograms

Challenges with Microservices Monitoring
Developers and engineering organizations are moving away from the old, monolithic application architectures and adopting modern microservices-based distributed application architectures. Traditional monitoring tools built for monoliths fail to provide the required visibility into this modern architecture, while point tracing tools can be complicated to set up and require heavy instrumentation.

Wavefront Distributed Tracing Value
Wavefront made it easy for SREs and developers to monitor modern microservices-based applications – with the built-in support for key health metrics, histograms and distributed tracing for common languages and frameworks. With minimal code change, developers can now visualize, monitor and analyze key health performance metrics and distributed traces of Java, Python and .Net applications built on common frameworks such as Dropwizard and gRPC.

Key functional differentiators of Wavefront’s Distributed Tracing include:
• **Single platform unifying metrics, histograms, and traces**, eliminates context switching that reduces MTTR for microservices
• **The cloud-scale tracing solution**, capable of handling millions of metrics, histograms, and traces per second needed to support high-growth, production cloud applications
• **Built-in support for all popular frameworks and languages** provides instant visibility into the health of your microservices
• **Combined lightweight agentless instrumentation**, a single open source library for collecting metrics, histograms, and traces. Unlike the bulky agents of traditional APM vendors, the Wavefront Observability SDK has negligible production impact
• **Full OpenTracing/OpenCensus compliance**. Wavefront provides a fully OpenTracing/OpenCensus compliant solution with a drop-in replacement for Zipkin and Jaeger for instant scalability and enhanced retention

**Configurable trace-level sampling** with full metrics retention delivers complete trace view without lost spans. Adapt sampling to your needs and decide what to keep - even 100% of traces. Wavefront retains all metrics regardless of sampling selection
Troubleshoot Faster with Metrics Context and Service Maps

Wavefront Service Maps highlight microservices dependencies and provide additional context with metrics health, enabling SREs and developers to isolate relevant microservices and reduce troubleshooting time.

Optimize Application Performance with Visibility into Bottleneck Spans and Traces

With the ability to visualize end-to-end request flow, developers can easily see where the request is spending most of its time. They can easily optimize their code and continuously improve the end-to-end request response time and customer experience by re-architecting those services.

- Quickly find performance bottlenecks, in development and production, by viewing health metrics, traces summary and traces detailed view.
- Easily query and narrow down traces with span response-time exceeding a threshold.
- Find APIs that need optimization by viewing the detailed span view – showing bottleneck spans and corresponding span tags.

To learn more, get started for free at the Wavefront sign-up.