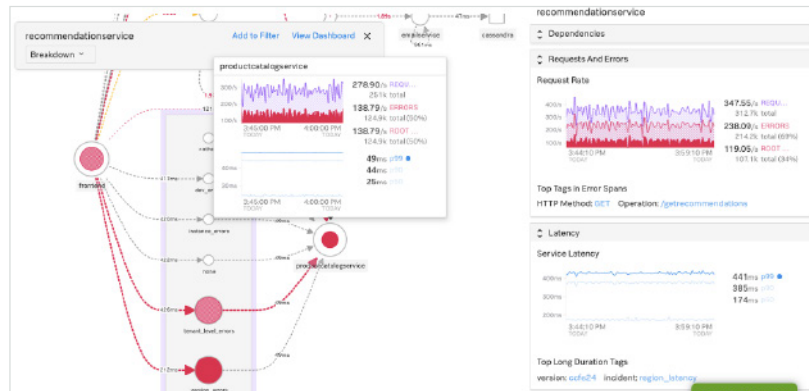


# Splunk Application Performance Monitoring

Open, full fidelity tracing powers AI-driven monitoring and troubleshooting for modern applications

**Splunk APM** is the most advanced application performance monitoring and troubleshooting solution for cloud-native, microservices-based applications. With **open and flexible** instrumentation, **NoSample™ full-fidelity tracing**, collecting 100% of traces, a highly scalable streaming architecture, and powerful **AI-Driven Directed Troubleshooting**, DevOps teams can quickly and easily find the root cause of any issue.



AI-Driven Directed Troubleshooting analyzes 100% of traces to find root cause errors.

Key Benefits	
Improve User Experience	By ingesting ALL traces, Splunk APM ensures that no anomaly goes undetected, so issues are alerted on before they affect customers with a mean time to detect up to <b>80% faster</b> than competitors.
Accelerate Developer Productivity	<b>AI-Driven Directed Troubleshooting</b> can quickly isolate traces and surface patterns that help SREs and developers pinpoint problems impacting user experience and overall application performance.
Future-Proof Your Applications	With open standards such as OpenTelemetry, Splunk Microservices APM helps you <b>free your code</b> from the constraints of any single vendor, releasing you of vendor lock-in, and enabling you to use the languages and frameworks that work best for you.

## Architecture

### NoSample™ full-fidelity tracing

Splunk APM ingests ALL traces across distributed services with highly granular details.

### AI-driven directed troubleshooting and streaming analytics

To quickly make sense of vast amounts of data, and act on them in seconds, our AI-Driven Directed Troubleshooting helps minimize MTTR by pointing you to root cause issues.

### Open standards approach for data collection

As founding members and active contributors to OpenTelemetry, we designed Splunk APM to support open, vendor-neutral instrumentation giving customers complete flexibility and choice for instrumenting their applications.

## Key Capabilities

### AI-driven problem detection and alerts

Sophisticated data science and advanced statistics on trace metrics, including latency and error rate, enable real-time, granular, and accurate service-level alerting. Trigger alerts based on dynamic thresholds and multiple, complex conditions, including sudden changes and historical anomalies.

### Auto-instrumentation

Automatic instrumentation of popular languages and frameworks, including: Java, Kotlin, Python, Ruby, Node.js, Go and PHP for fast time to value.

### Custom instrumentation

Manual instrumentation via open, standard APIs and client libraries to support selective capture of trace spans and relevant span metadata tags for specific blocks of code.

### Data links

Data links enable context-aware workflows across metrics, traces and logs to quickly troubleshoot a performance issue. Start with Splunk dashboards powered by metrics and traces and link into Splunk's best-of-breed log analytics solutions for deeper analysis.

### Dynamic service maps

Dynamically generated service maps give instant, accurate, and out-of-the-box visibility into all service interactions, inferred services, dependencies, and performance.

### Infinite cardinality trace exploration

Unique ability to breakdown ALL traces and observe application behavior for every single customer, container, service names, operations, organization IDs, or any other important business logic.

### Latency contribution analysis

Instantly identify bottlenecks with automatic calculation of the top contributors to trace latency. Trace visualization displays constituent operations, their duration, and the percentage of total latency attributed to the operations.

### Root cause error mapping

For each microservice, AI-Driven Directed Troubleshooting automatically indicates which errors originated in that service and which were originated in other downstream services.

### Service alerting with trace context

Service alerts within the context and time window of a trace, all the way down to the code level, to expedite troubleshooting and root cause analysis.

### Service-to-infrastructure correlation

Automatic correlation of infrastructure dependencies at a granular span-level to provide a more comprehensive view of application performance within a single visualization, which helps DevOps and SRE teams more quickly troubleshoot incidents caused by infrastructure problems.

### Trace navigator

Easily view and explore traces with thousands of spans using intuitive node and waterfall visualizations, which support quick zoom-in and zoom-out, and filtering to display only the traces and spans of interest.

### Trace exemplars

Easily view details of traces exemplifying different point-in-time system behavior.

### Unified service dashboards

Single-pane-of-glass view from a single dashboard to get instant insights on application and infrastructure performance, including rate, error and duration (RED) metrics. Unified dashboards enable quick triage of the root cause of a performance issue.

Learn more about **Splunk APM**: [https://www.splunk.com/en\\_us/en\\_us/software/application-performance-monitoring.html](https://www.splunk.com/en_us/en_us/software/application-performance-monitoring.html)

Check out our observability demo at: <https://events.splunk.com/Observability-Demo>