

z/IRIS[®]

ENABLING MAINFRAME-INCLUSIVE APM

With z/IRIS, mainstorconcept aims to provide mainframe telemetry for business transactions that integrate with mainframe systems and applications.

There is a short supply of APM vendors who can support mainframe technology. This is despite the fact that around 70% of Fortune 500 companies use mainframe technologies and every second, 1.1 million high-volume customer transactions occur on mainframe, compared to just 60,000 Google searches a second.

DevOps teams want to monitor and manage the performance of their applications as well as the processes that these applications depend on.

This means that mainframe support must be made available to ensure that DevOps can be an effective tool in organizations that depend on mainframe systems.

z/IRIS leverages open standards like OpenTelemetry to easily integrate with cloud-native and on-premises software solutions and provide cost-effective and cutting-edge mainframe observability in APM solutions. z/IRIS creates and supplies traces that contain metadata so that mainframe related traces can be interpreted alongside distributed application traces and enable comprehensive analysis of business applications. z/IRIS metrics can be streamed to in-house data sinks that feed into analysis software, so that mainframe systems can be incorporated into system monitoring platforms.



KEY FEATURES

ZIIP ELIGIBLE

z/IRIS z/OS clients can run on zIIP processors. This minimizes the running costs for our mainframe customers and ensures general purpose processors available for business application workloads.

OPENTELEMETRY SUPPORT

This CNCF project is an observability framework that defines an open standard for telemetry data, including traces and metrics. mainstorconcept acknowledges the importance of such an open standard, as its capabilities will ensure sustainable, vendor-neutral APM support for z/IRIS customers.

APACHE KAFKA INTEGRATION

z/IRIS integrates with an in-house Apache Kafka cluster to stream and store SMF data, while leveraging Kafka's distributed, highly scalable, elastic, fault-tolerant, and secure event streaming technology.

INTEGRABLE

The z/IRIS plug-in architecture provides seamless integration into partner ISV APM products, open-source enterprise APM software and distributed metric data stores. Custom integration solutions can be contracted through our professional services.

ARCHITECTURE OVERVIEW

z/IRIS is composed of one or more z/OS clients that run on mainframe LPARs and distributed servers that run on Linux.

A z/IRIS z/OS client, is a sleek IBM JZOS-based application that can run on zIIP processors to reduce the running mainframe costs. The clients read SMF data from predefined and customizable SMF in-memory resources. The SMF records are streamed, in real-time, to an existing, network accessible Apache Kafka cluster.

Using an in-house Apache Kafka cluster to store and stream SMF records, provides users with the following capabilities:

- Leverage Kafka's highly scalable, fault-tolerant and secure event streaming platform.
- Store raw SMF data streamed from the z/OS clients, using customized retention configurations that meet business requirements.
- Compatible 3rd party tools can access the raw SMF data in the Kafka cluster, in real-time. This increases the business value of SMF data and helps convert post-processing activities into real-time events.

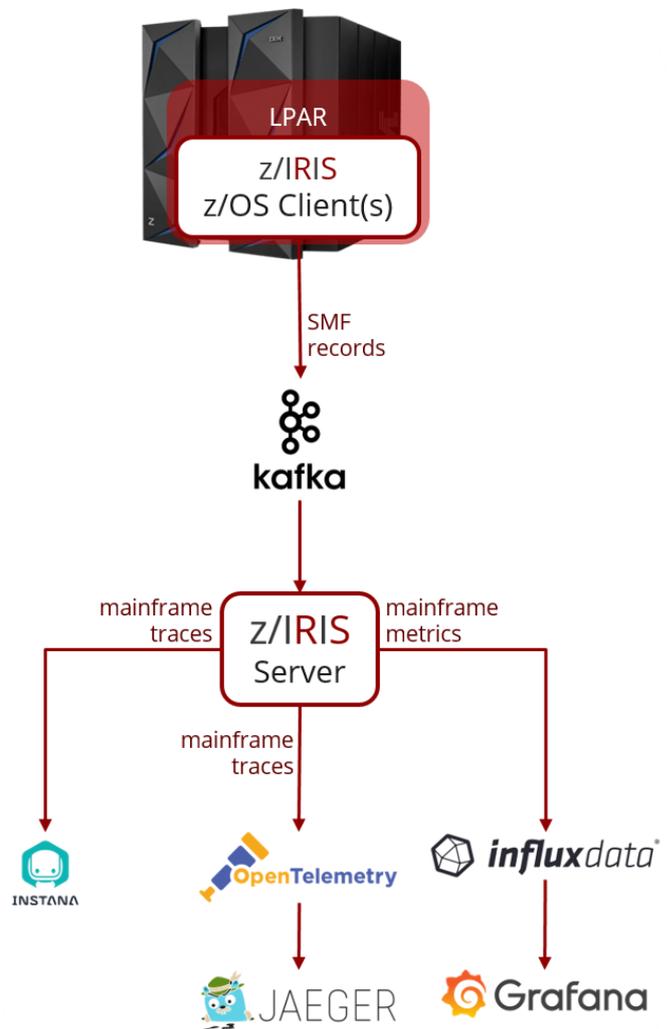


FIGURE 1: Z/IRIS HIGH-LEVEL DESIGN

The z/IRIS server reads SMF data from the Kafka cluster in near real-time and creates mainframe traces from SMF data by transforming, formatting and normalizing the data according to OpenTelemetry's OTLP format. This ensures compatibility with any APM solutions that natively support OpenTelemetry. The mainframe traces are posted to a pre-configured APM system for processing using generally available APIs provided by the APM vendor.

With z/IRIS, DevOps teams can:

- view mainframe traces and performance data in familiar APM user interfaces.
- search and filter mainframe traces within the context of their business applications.
- configure alerts based on data provided by z/IRIS mainframe traces
- stream mainframe metrics to in-house data sinks for analysis
- use z/IRIS importable and customizable Grafana dashboards to visualize z/IRIS metrics in Grafana

POPULAR USE CASES

DISTRIBUTED DB2 FOR Z/OS OBSERVABILITY

DevOps teams can monitor the performance of JDBC requests processed on IBM's Db2 for z/OS systems hosted on the mainframe. Using in-house APM software, users can configure alerts on deadlocks affecting distributed business applications, identify which applications are blocking Db2 resources on z/OS and identify and monitor inefficient SQL requests or slow responses from specific Db2 systems.

MAINFRAME MONITORING

z/IRIS creates metrics from various SMF records and streams these metrics to an available data sink in real-time. Feed these into analysis software to monitor the performance of mainframe systems and processes. Adding mainframe metrics can help teams identify related events that lead to slow-response times and errors, system contention, inefficient load-balancing and more.

Z/OS CONNECT OBSERVABILITY

DevOps teams can monitor the performance of client REST API calls processed by IBM z/OS Connect servers on the mainframe. Users can identify latencies between z/OS Connect and the System-Of-Record (a.k.a. service provider), distinguish network latencies from processing time, and more.

Z/OS WORK OBSERVABILITY

Mainframe programmers and administrators can monitor z/OS batch jobs, address spaces and TSO user activity in modern APM products. They can identify long-running tasks, CPU-intensive batch jobs or processes. Depending on the APM product, users can setup automatic alerts for errors reported by batch jobs and job steps or jobs that run longer than usual.

CONTACT US

BECOME A Z/IRIS CUSTOMER

Contact us to arrange a no-obligation demonstration of z/IRIS and discuss how we can resolve your mainframe-backed DevOps needs. We will gladly assess any unsupported APM products to determine the quality of service we can provide. We also offer contracted professional services to develop proprietary and/or custom integration with z/IRIS to meet your unique business requirements.

BECOME A Z/IRIS APM PARTNER

If your customers invest in mainframe technology, providing mainframe support will ensure that they have access to required application performance data. Our z/IRIS solution will enable mainframe-inclusive observability using your integration features and functionality. We also provide professional services and support to your customers to ensure a fast start-up and quick ROI.

MORE RESOURCES

All product documentation, administration and user-guides, how-to's and other technical information can be found on our knowledge base: public.mainstorconcept.com.

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