



## Key Benefits

- **Actionable insights:** Performance telemetry for mainframe applications is streamed near real time to provide users with the latest state of application health.
- **Universal observability:** z/IRIS conforms to the semantics and specifications of OpenTelemetry, a Cloud Native Computing Foundation observability framework that defines the creation and exchange of application performance telemetry, such as traces, logs, and metrics. OpenTelemetry enables sustainable and vendor-neutral integration capabilities that can be configured to address your enterprise observability requirements.
- **Seamless integration:** z/IRIS is a plug-in solution that transforms mainframe telemetry to open standards, enabling mainframe application health data to be easily ingested and processed by a wide variety of enterprise observability platforms.
- **Scalable architecture:** A robust data streaming design that is effortlessly scaled up and out to easily meet the throughput of mainframe performance data in your enterprise environment.

# WatchTower Platform™ Real-Time Streaming (z/IRIS®)

## Mainframe-inclusive observability eliminates enterprise performance management silos

### Overview

The Broadcom® WatchTower Platform™ for mainframe AIOps enables flexible, mainframe-inclusive observability with its integrated real-time information streaming (z/IRIS®) capability. z/IRIS adds performance data from mainframe applications to enterprise observability tools to enable end-to-end transaction workflow monitoring and performance management in real time.

### Business Challenges

Enterprise-wide observability tools, such as Application Performance Monitoring (APM) products, are commonly used to improve the availability and reliability of business services. With application data flowing from various sources, it is critical to uncover hidden relationships across IT silos and achieve comprehensive observability across your systems.

However, many industry-leading observability tools lack visibility into application services hosted on mainframe infrastructure, even though mainframes typically host core business services that manage crucial customer data. Insufficient coverage of all the systems providing digital business services makes it impossible for IT to comprehensively analyze these services, identify performance bottlenecks, and assess any impact on the end-user experience.

### Solution Overview

WatchTower z/IRIS seamlessly integrates your mainframes into enterprise observability tools, enabling analysts to gain invaluable insights into the performance of mainframe applications for your business's critical services. This empowers your organization to make well-informed investments in IBM Z technologies and resources, resulting in tangible and transformative outcomes for the enterprise. Providing every member of your organization with a comprehensive, end-to-end understanding of how your applications are functioning enables your business to more easily meet or surpass customer demands with consistently available and high-performing services.

WatchTower z/IRIS enhances enterprise observability by creating traces for mainframe application activity that are triggered by distributed application requests. These traces are appended to distributed application traces in observability tools, such as Datadog, Grafana, New Relic, Splunk and Jaeger, extending the view of a request's workflow to make interactions with mainframe services visible. This end-to-end observability ensures comprehensive analysis of digital business services and the ability to identify bottlenecks and their impact on end-user experience.

## Key Features

- **Anomaly detection:** Uncovers abnormal patterns through delivery of actionable data.
- **Multiple data collectors:** Provides broad visibility, more in-depth insights, and increased accuracy of predictions.
- **Dynamic threshold alerting:** Supplements a monitor's static thresholds, which may be improperly set, not maintained, or relevant for a particular period.
- **Adaptable analysis:** Flexible configuration enables best-fit monitoring for all subject matter experts.

With WatchTower z/IRIS, enterprise service graphs are extended to depict telemetry signals from business services on z/OS, such as CICS, Db2 MQ, Batch Jobs, and z/OS Connect. Depending on the enterprise observability tool implemented, users are able to drill down to each request trace and analyze latency and utilization from the end user to IBM Z. Additionally, the z/IRIS data feeds AIOps and machine learning algorithms that detect otherwise hidden anomalies and extrapolate likely root causes.

WatchTower z/IRIS is composed of one or more z/OS-based observability clients and one or more distributed observability servers. Observability clients read SMF data from predefined and customizable SMF in-memory resources and stream this data in real-time to a network-accessible Apache Kafka cluster. The observability servers process this SMF data from the Kafka cluster in near real-time and produce performance telemetry like traces and metrics by transforming, formatting, and normalizing the SMF data into telemetry used by your chosen observability tools according to the OpenTelemetry specification and semantic conventions.

## Critical Differentiators

**Cost-efficient processing:** WatchTower z/IRIS client processing is eligible to run on zIIP engines, offloading their mainframe-based workloads to more cost-efficient processors.

**OpenTelemetry traces for z/OS applications:** Spans from mainframe workloads like z/OS Connect APIs, CICS transactions, and MQ message processing are correlated by z/IRIS to trace from upstream distributed applications and microservices so that users gain end-to-end visibility into how mainframe services are utilized by business applications.

**Comprehensive performance context:** WatchTower z/IRIS creates spans that describe the identify the application and describe latency and resource utilizations using tags and attributes that DevOps engineers use to quickly identify root-cause and promptly provide a solution to end-users.

**Leverage machine learning for optimal enterprise-wide performance insights:** Industry-leading APM tools include machine learning algorithms to provide insights into performance anomalies. With WatchTower z/IRIS, analysis will include performance insights from mainframe applications and improve the organizations understanding of overall health of digital business services.

## Next Steps

The WatchTower real-time streaming capability is included in the **WatchTower Platform Suite**.

For more information, please visit our site at:  
[mainframe.broadcom.com/WatchTower](https://mainframe.broadcom.com/WatchTower)