

z/IRIS - Configuring Instana APM integration

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Related content

- [z/IRIS - Latest Release Notes](#)
- [z/IRIS - Minimum Requirements](#)
- [z/IRIS - Latest Administration and User Guide](#)
- [Apache Kafka - Configuration Guide](#)
- [z/IRIS - FAQ](#)

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Summary

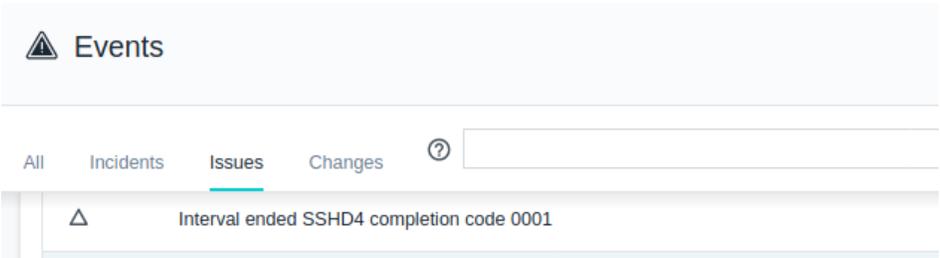
z/IRIS integrates with partner APM ISV solutions and tools to enable mainframe-inclusive APM functionality. z/IRIS creates APM related traces from mainframe performance data and posts these mainframe traces to APM servers. All mainframe traces created by z/IRIS are viewable in the APM ISV UI.

This article describes how z/IRIS is configured to integrate with Instana APM.

application.conf

The following module configurations can be customized to override defaults:

Property prefix: <code>irontap.apm.instana.</code>			
Property	Description	Default Value	Notes
<code>tracing.db2.trace-delimiter</code>	A single ASCII character (except "0-9" and "a-f", "A-F") used to separate the trace information.		ASCII code 124 (vertical-bar, pipe)

tracing.db2.trace-field	The client information property field (JDBC) used to provide trace information. The following fields are available: ClientHostName ApplicationName	ClientHostName	For Instana Apm integration only one field is necessary.
sdsf.returnCodeEventsEnabled	IronTap will create events for jobs (SMF 30) with a completion code > 0	false	

Example config to enable Instana Events for mainframe jobs:

application.conf dot notation

```
irontap.apm.instana.sdsf.returnCodeEventsEnabled: true
```

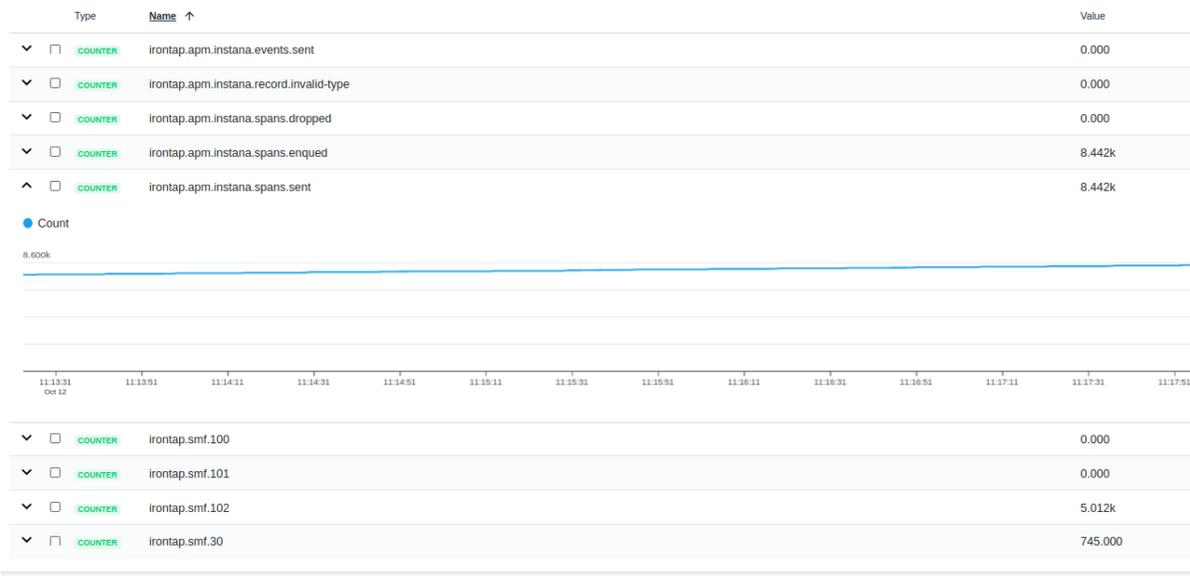
application.conf Json notation

```
irontap{
  apm {
    instana{
      sdsf{
        returnCodeEventsEnabled: true
      }
    }
  }
}
```

Metrics overview

click on the image to enlarge

Micrometer Custom Metrics (9)



z/IRIS IronTap metrics are visible in the Instana UI. Open the z/IRIS IronTap JVM Dashboard and scroll down towards the Micrometer Custom Metrics.

Metric	Description
irontap.apm.instana.events.sent	Events that were successfully sent to the Instana Agent.
irontap.apm.instana.spans.sent	Spans that were successfully sent to the Instana Agent.
irontap.apm.instana.spans.enqueued	Spans ready to be sent to the Instana Agent.
irontap.apm.instana.spans.dropped	Dropped Instana Spans. Spans might be dropped if the Instana Agent is not available and the internal queue is full.
irontap.apm.instana.record.invalid-type	Records that aren't supported by your current setup.
irontap.smf.xxx	Number of records processed for each enabled SMF record type.

Debugging

⚠ Activating debug features may impact the performance of z/IRIS and the delivery of spans into the Instana backend.

Span Dumps

This feature is enabled by setting a non-empty string for the `instanaSpanDumpDirectoryPath` property. z/IRIS IronTap will write all spans into the provided directory. Multiple spans may be joined into a JSON array in one file.

JSON file name example

```
2019-05-07T14.40.29.955+02.00-204.json
```

Each file name consists of a timestamp (when this span was sent to the agent) followed by a dash ('-') and the agent HTTP response code or the string "connection-error" if no connection was established.

Instana designated z/OS in-memory resources

z/IRIS z/OS clients will automatically discover and connect to IBM z/OS in-memory resources, where names match the following pattern:

- **.INSTANA.**

Instana designated resources do not need to be specified in the `ziris.comm.config` file and will be automatically connected.

Example of an Instana designated In-memory resource

```
IFASMF . IFA . INSTANA . INMEM . DB2
```

Considerations

- z/IRIS IronTap must have access to an Instana agent to send spans to the Instana APM backend.
- Mainframe-inclusive tracing requires the client application on distributed infrastructure to be fully instrumented by Instana agents. This ensures that Instana trace-ids are populated within the meta-data of client application calls, ensuring mainframe related spans, processed by z/IRIS, are appended to the correct application traces within the Instana backend.