

INSTANA

an IBM Company



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Instana Integration with
IBM zSystems:

Application Tracing & OMEGAMON

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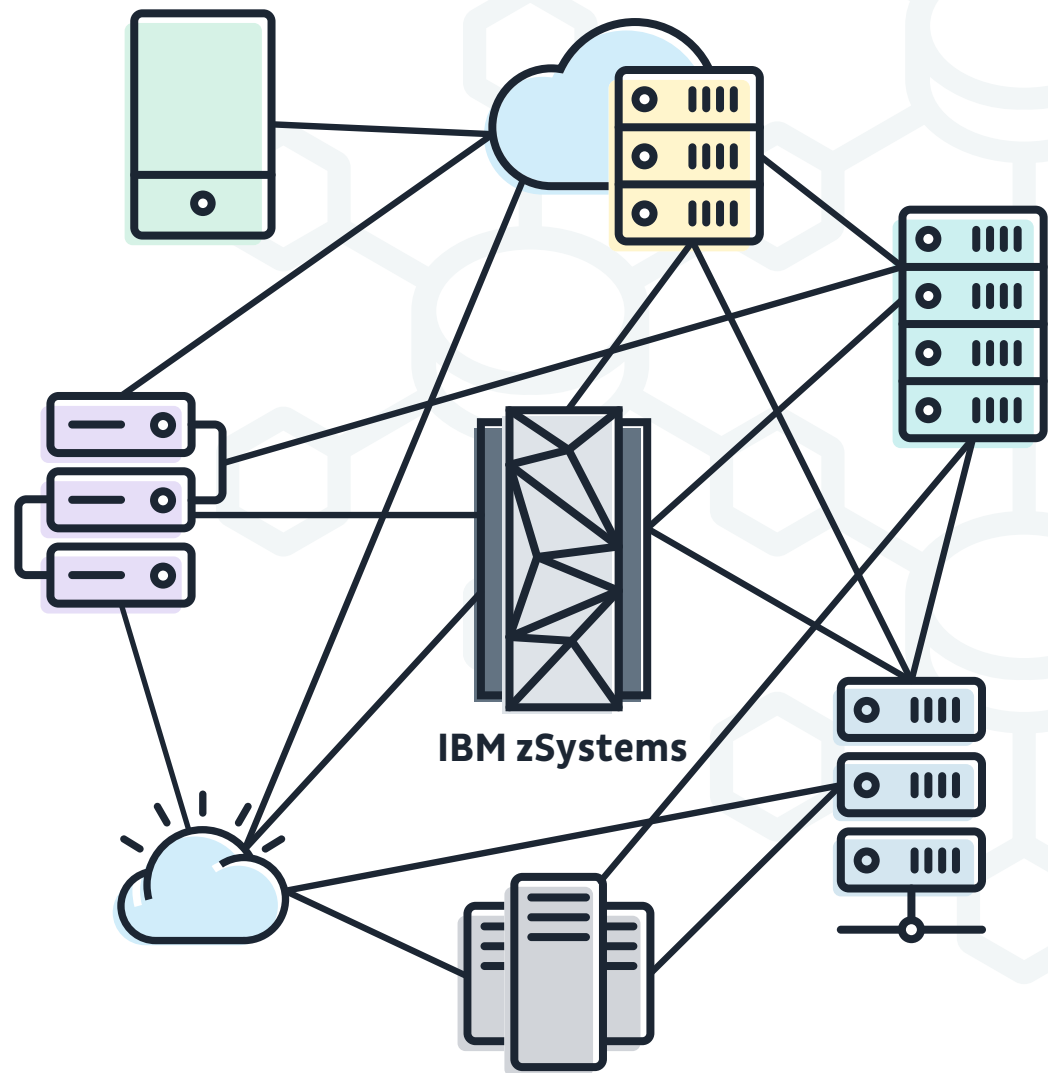
The Need for Observability



We live in a complex world. Modern consumer and business applications are driving transactional workloads that support business operations and consumer interactions. Delays - even if only for a few seconds - in making requests, searches, or payments can cause frustration and impact customer satisfaction. In worst case scenarios, system delays may cause reputational damage. As organizations modernize their applications and infrastructure to meet the demands of digital business operations, they realize that their existing operational tools and processes are costly, time-consuming and have inefficient performance.

More than ever, organizations are turning to observability solutions to ensure they can manage applications that exploit numerous technology stacks. The solutions track events, logs, and traces and produce metrics from these sources to build an application performance profile that determines when incidents or issues are prone to happen or are incurring in real-time. For example, an organization can deploy a rapid customer-facing application on the public cloud with the desire to keep critical data on-prem by leveraging the reliability, security, and scalability of the IBM zSystems.

Yet many of the leading observability solutions available today do not have the tools for tracing into the mainframe or have limited coverage of its functional operation. Thus, there is an absence of end-to-end monitoring of critical applications. When performance issues impact applications, time is lost trying to isolate the source of the problem. Typically, IT professionals meet on a conference call or in a “war room” to resolve the incident as quickly as possible. The IT team’s approach is reactive and results in extended delays in the isolation and resolution of incidents.

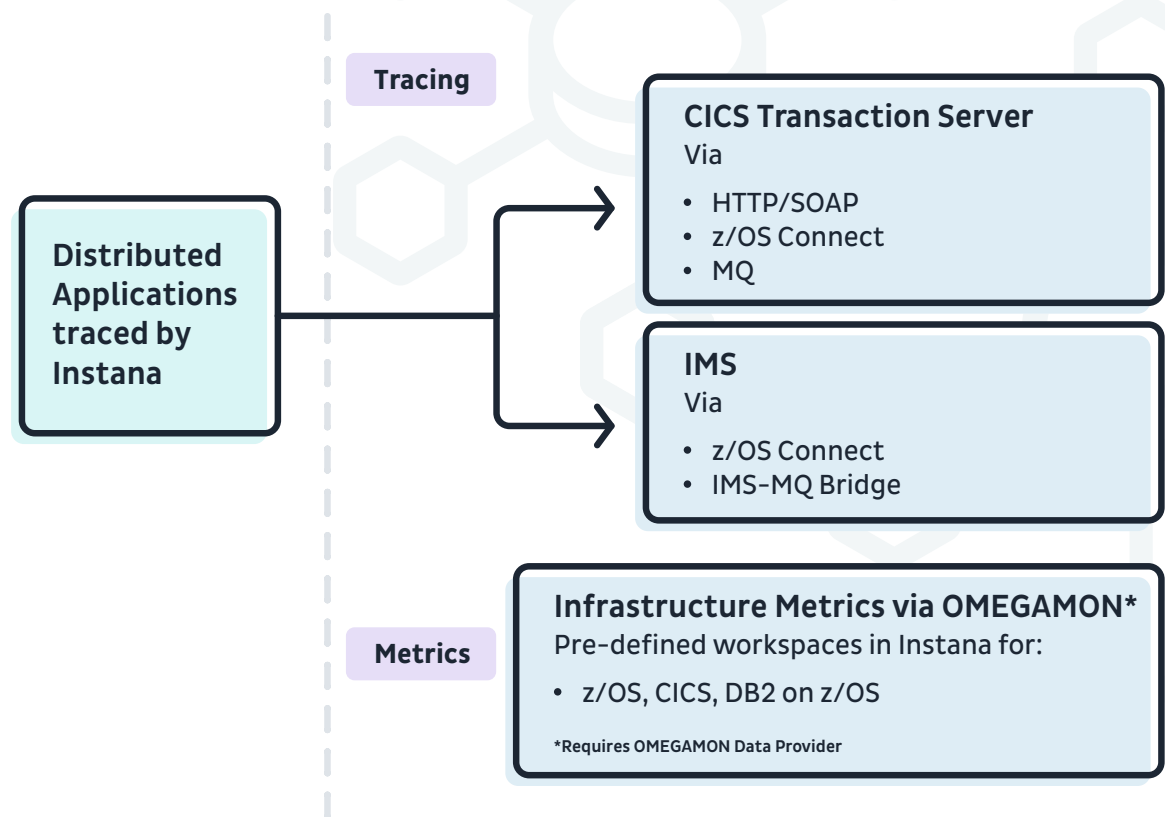


Expanding Application Tracing Visibility Into IBM zSystems

To address the challenge of managing hybrid cloud applications that include the mainframe, Instana has invested in bringing full end-to-end tracing capabilities that cover z/OS and the major subsystems that operate in mainframes. Transaction flows extend into z/OS and avoid blind spots within the application by deploying data collection agents onto the LPARs traces.

For example, CICS or IMS workloads that leverage z/OS Connect or MQ as a means of being called from applications outside of z/OS can now be automatically stitched to these calling applications without complex instrumentation processes or need to rewrite applications.

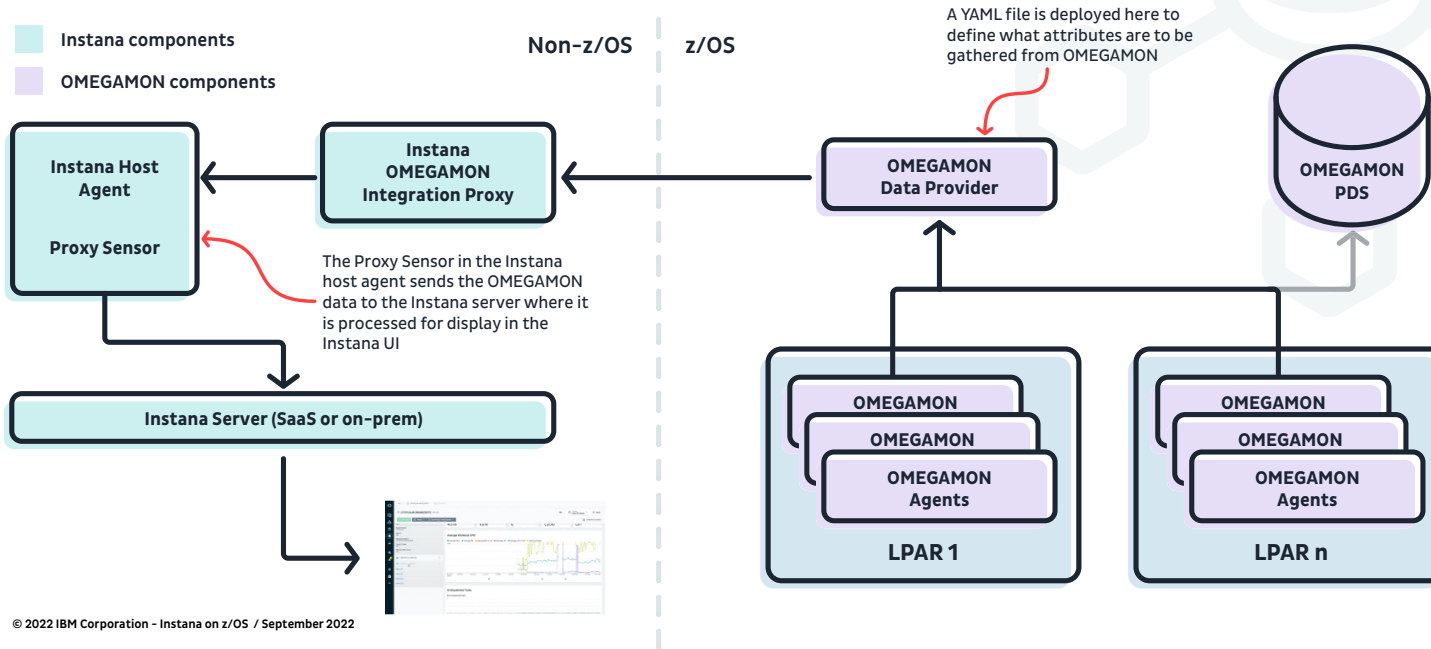
End-to-end monitoring provides insights into the business applications, so there are no blind spots, and when issues occur, the right subject matter experts are engaged immediately. Incident investigations and “war room” calls are mitigated before end users are impacted by system failure.



Integration With OMEGAMON

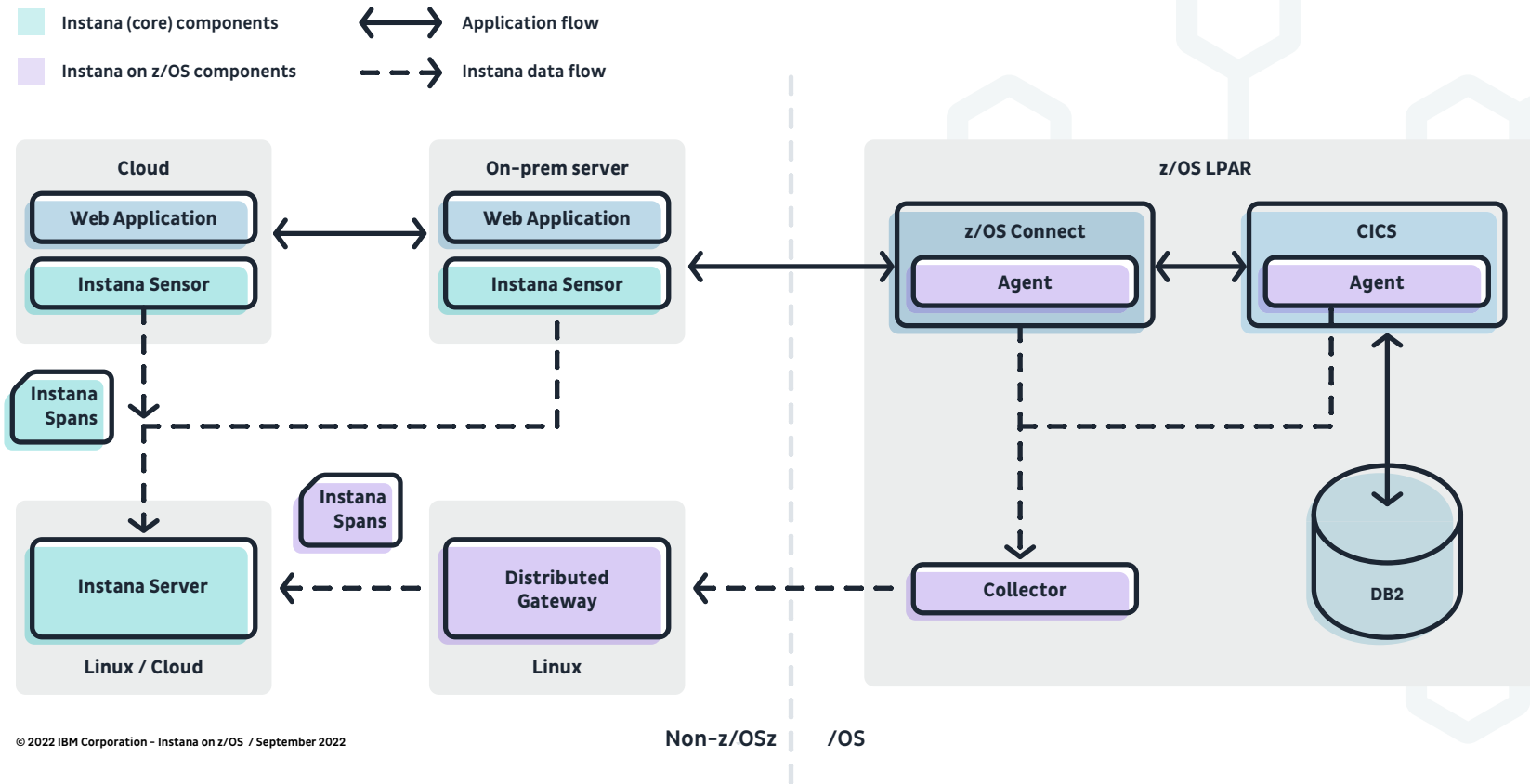
Monitoring z/OS-based resources has been a critical task of IT operations teams for decades, and there are many specialized tools available that provide deep-dive metrics into z/OS and the subsystems such as CICS, IMS, and Db2. Mainframe subject matter experts depend on these metrics for investigating performance issues, taking timely action to correct the problem, and verifying a solution of the incident.

Instana + OMEGAMON architecture



The need to track and analyze application performance metrics does not change in the era of Observability solutions. These tools are complementary to Instana, and by working together in concert, they enable application issues to be detected, isolated, and resolved faster than before. Instana can now integrate key performance metrics sourced directly from OMEGAMON agents directly into the infrastructure perspective within the Instana UI.

Example Instana on z/OS architecture for tracing



The integration occurs through a new component known as the OMEGAMON Data Provider. The OMEGAMON Data Provider component gathers selected attributes directly from agents running on z/OS LPARs and streams them to an Instana proxy agent. With both tracing and metric information available in a single dashboard, hybrid application issues that drive z/OS-based workloads do not lack visibility into the mainframe when attempting to isolate the source of the problem.

With end-to-end observability

The response time of our principal customer-facing application has increased significantly over the past 30 minutes...it **looks like the problem is within a CICS system.** I'll reach out to our CICS expert right now to look closer.



An example business case might be an application that makes API calls into z/OS via z/OS Connect. It invokes multiple CICS transactions and updates within DB2 on z/OS. The tracing capabilities provided by Instana enable the end-to-end view of the application flow of these critical services. As an operator investigates the causes of the delay, it takes only a few seconds to determine there are longer than expected periods spent within one of the CICS regions. With metric data about this region collected by OMEGAMON for CICS and fed directly into Instana, IT professionals can link directly to infrastructure metrics within the user interface to see if there are known problems that could help solve the issue. Once the incident is confirmed, a hand-off of the problem can take place to a CICS specialist. The specialist can then use OMEGAMON to address the root cause before it impacts end users.

By integrating Instana with the existing OMEGAMON agents, we ensure consistency of information between teams and keep processing overheads in check through collection from a single source. If you are yet to experience IBM Instana, sign up for a free [14-day trial](#). Your free trial includes using the full capabilities of IBM Instana observability with your cloud-based and mainframe applications.

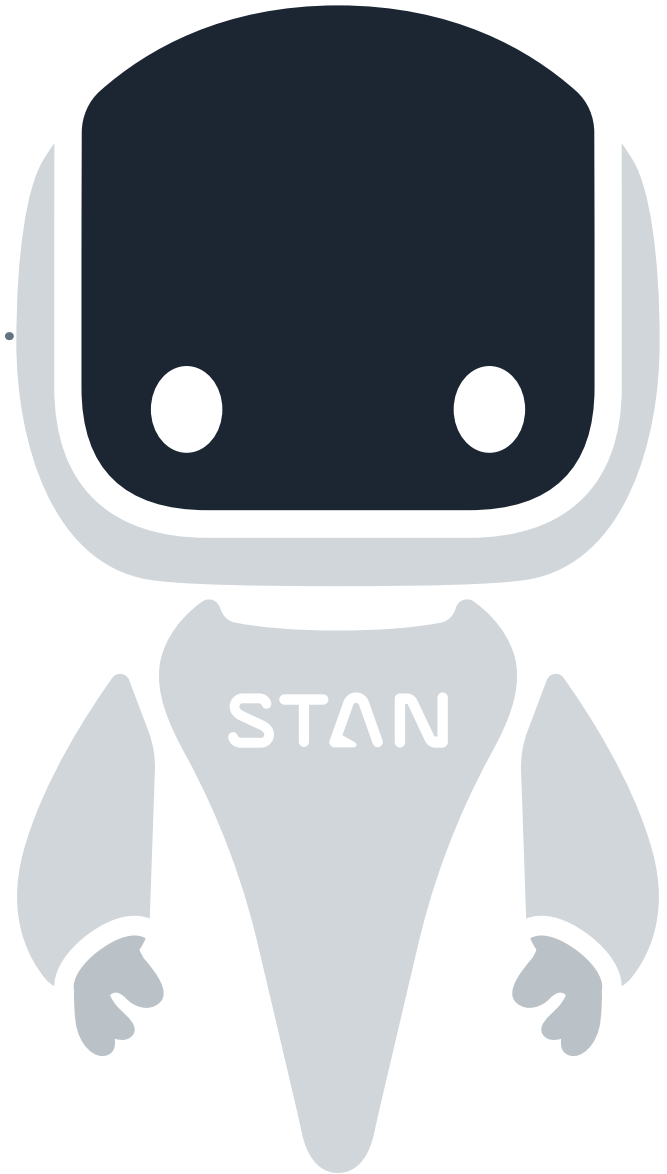
About Instana

Instana, an IBM Company, provides a real-time, automated [Enterprise Observability Platform](#) that includes [application performance monitoring](#) capabilities to businesses operating complex, modern, cloud-native applications no matter where they reside—on premises or in public and private clouds, including mobile devices or IBM Z® mainframe computers. Users can control modern hybrid applications with Instana's precise metrics, full end to end traces for all transactions and AI-powered contextual dependencies discovery inside hybrid applications.

Instana helps System's Reliability Engineers improve the reliability and resiliency of cloud-native applications by preventing issues from turning into incidents and by providing fast remediation times when incidents occur. Instana also provides visibility into development pipelines to help enable closed-loop DevOps automation with actionable feedback for optimizing application performance, enabling innovation, mitigating risk, and managing cloud technology expenditures.

For more information, visit <https://instana.com>.

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