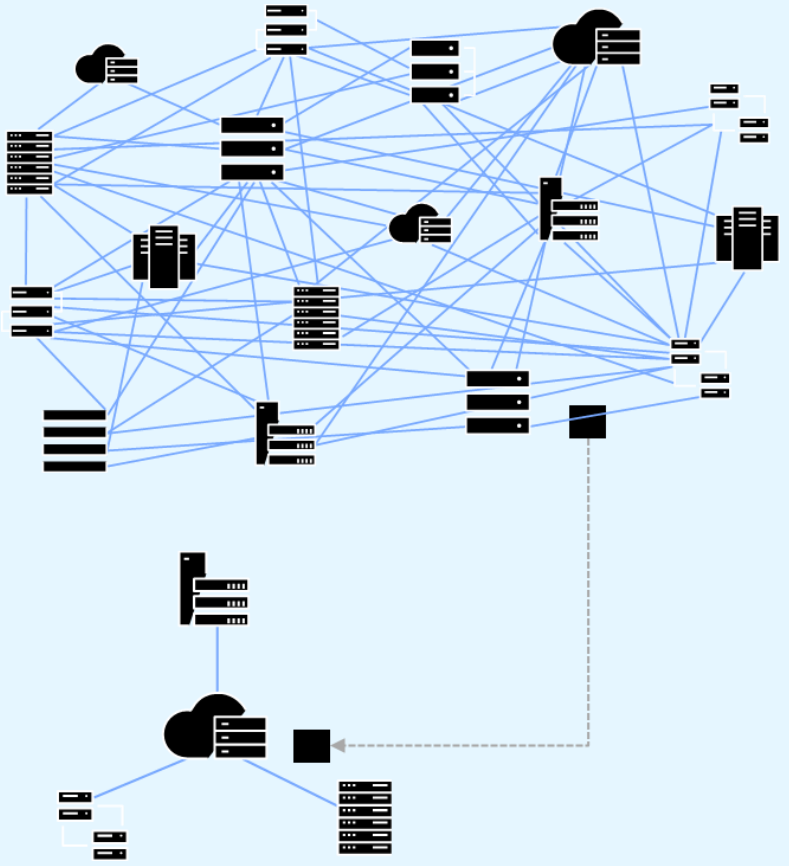
IBM Instana: Real-time observability for everyone—and anyone

INSTANA
an IBM Company

IBM

Observability is Much Harder than you Imagine

- Team & Data Silos – Effective observability requires buy-in across DevOps, engineering, and business teams.
- Data Volume & Speed – The volume, velocity, and types of data and alerts add complexity
- Cloud-Native Apps - Microservices, Containers, Kubernetes and Serverless can be difficult to manage



IT teams can’t afford to be reactive.....

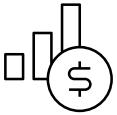
You’re facing pressure to deliver high-performing applications with greater agility – all while optimizing end-user experience

Increase deployment frequency

Accelerate the CI/CD pipeline to deliver apps faster

Optimize the end-user experience

Quickly identify issues and resolve them before they become incidents that impact the end-user



Avoid costly downtime

When apps don’t perform, they can cost organizations $250K per hour*

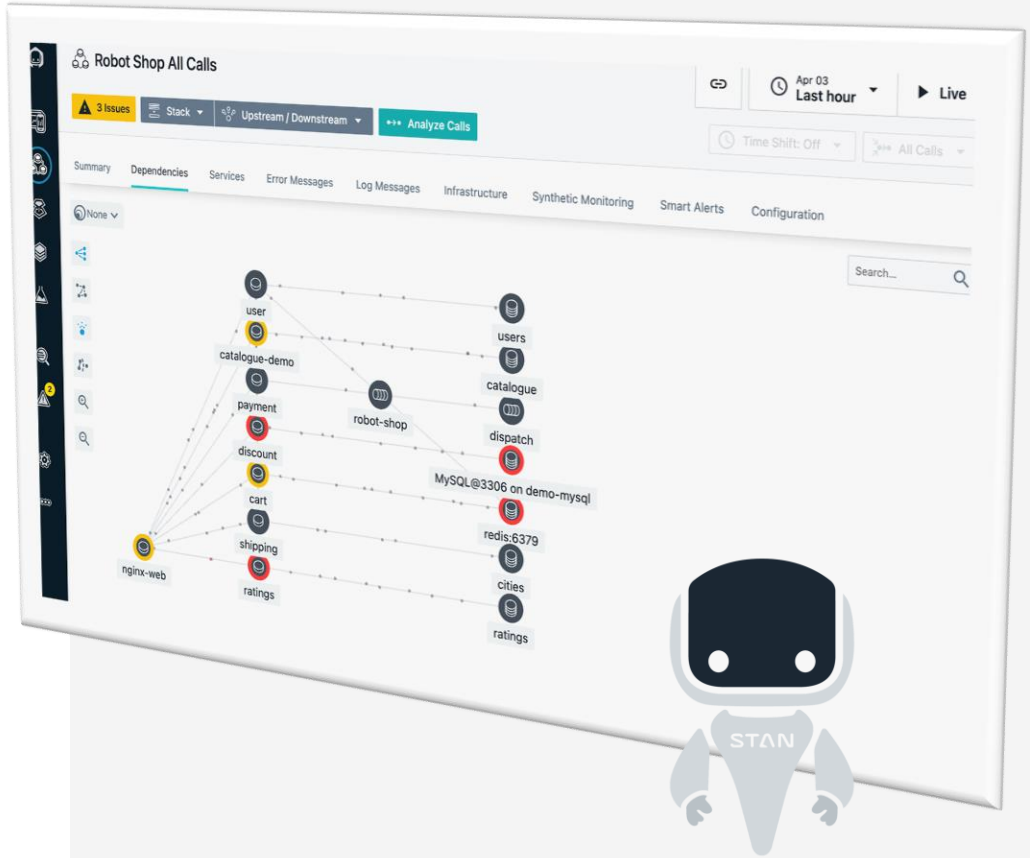
*Source: AIOPS and Observability Survey, IDC, November, 2022

What if...

Everyone (all teams) could get access to real-time, high-fidelity data, customized for them.

IBM Instana: Real-time observability for everyone – and anyone

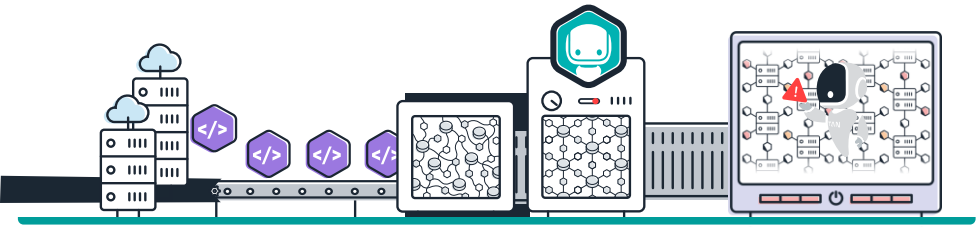
- Accurate, real-time data in context to all teams that need it
- High fidelity data - No Sampling, 1-second metric granularity and end-to-end tracing
- Reduce the noise - automating issue resolution with alerting
- Understand dependencies across mobile, web, applications and infrastructure – 300+ supported technologies.
- Easy to use. Easy to install. No specialized skills needed. Simple, transparent, and predictable pricing



IBM **Instana** Observability

Real-time observability for everyone—and anyone.

All the data. With all the context. For all your teams.



Automate full-stack visibility

Collect accurate data with context

Turn data into intelligent action

Ease of Use

MORE INNOVATION

20%

free developer time

MORE SPEED

3x

increase in deployments

MORE EFFICIENCY

52%

reduction in MTTR

Why Instana?

All application stakeholders, from DevOps and SRE to ITOps, Platform Engineering, Dev and even business side users - get the ***data they want*** with the ***context they need***.

Pricing is simple and predictable

Teams get unlimited use of the platform, worry-free without surprises.

- ✓ **Applications** are automatically discovered and monitored (no reboots, no labels, no tagging)
- ✓ **Full-stack context** is automatically discovered with 1-second granularity and an end-to-end trace of every call
- ✓ **Automatic** rollbacks and incident remediation can be triggered by intelligent action (before incidents impact end users).

Automate full-stack visibility

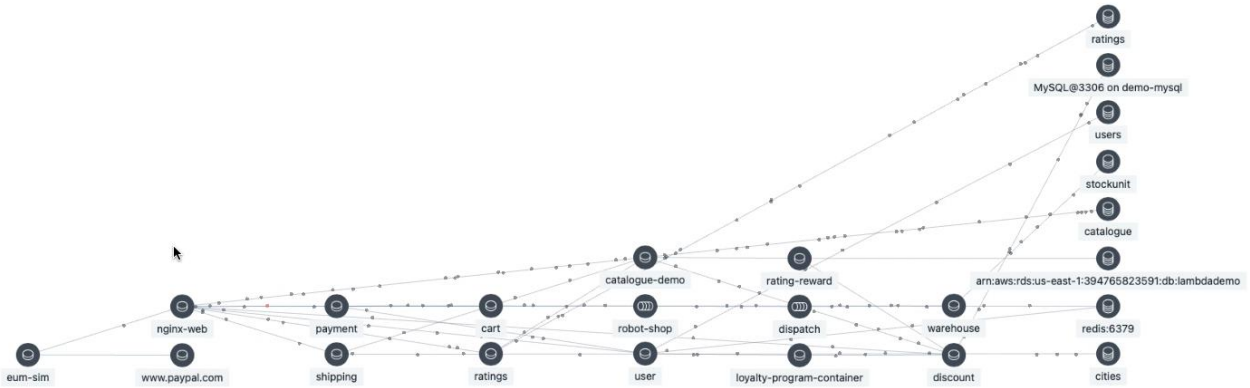
Automated, full-stack application visibility across the entire monitoring lifecycle - including real-time change detection, mapping, tracing and profiling.

- Self-monitoring, auto-updating single agent
- Automatic & continuous discovery, deployment, configuration and dependency mapping
- Zero-configuration dashboards, alerting, troubleshooting & remediation
- Always-on, automated health monitoring – tracing, logging and profiling

Accurate data in context for all teams

Real-time detection and mapping of all interdependencies reduces risk and decreases MTTR (Mean Time to Restore) by ensuring that you're always looking at accurate information.

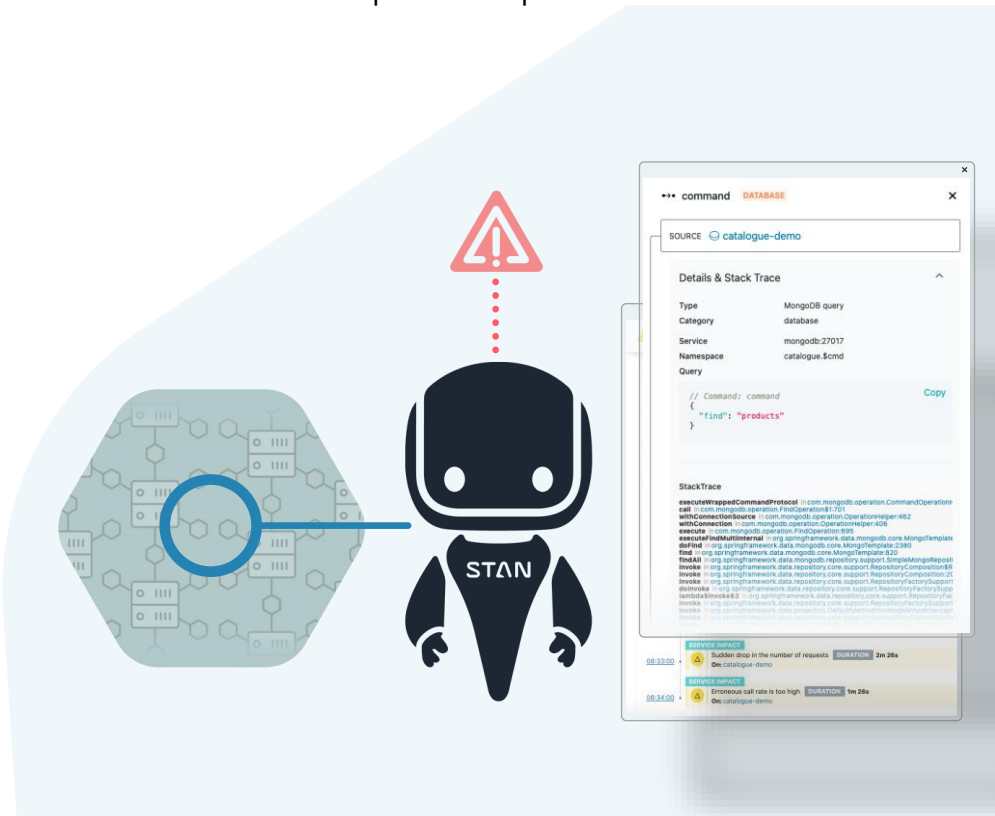
- Real-time detection and interdependencies mapping
- Dynamic graph
- Automatic Anomaly Detection
- Application Perspectives
- Open Source & Logging Integrations



Intelligent action

Resolve issues faster with an understanding of contributing factors. Analyze every user request from any perspective to quickly resolve bottlenecks and optimize performance.

- Incident prevention through automating issue resolution with alerting
- Guided Troubleshooting
- Immediate Feedback of Pipeline & Canaries
- Unbounded Analytics - Proactively identify potential issues and minimize human effort to resolve issues



Easy to use, **Easy** to deploy, **Easy** to understand pricing

- Simple, predictable and transparent pricing – no surprises
- Automated discovery and deployment
- All-inclusive (EUM/DX, mobile, database, synthetics, serverless, profiling)
- Unlimited users
- No data storage charge

"On a single screen, Instana presents the status of the complete architecture. Always simple to use and modify."

An IBM Instana user

★★★★½

From G2Crowd.com

Customers who moved from another APM provider to Instana have been able to **increase the number of managed entities by 5X**, covering more applications and infrastructure, for the same cost or less.

Leader in **automation, telemetry, & tracing**

Single agent w/ automatic configuration ***collecting 100% of distributed traces***!

True Automation

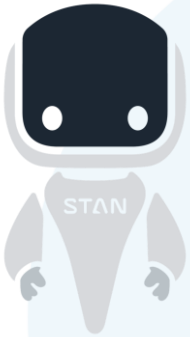
- Auto instrumentation (any/all languages)
- Continuous real time discovery, 300+ technologies (including mainframe)
- Full-stack dependency mapping
- Easy configuration and maintenance

High Fidelity Data

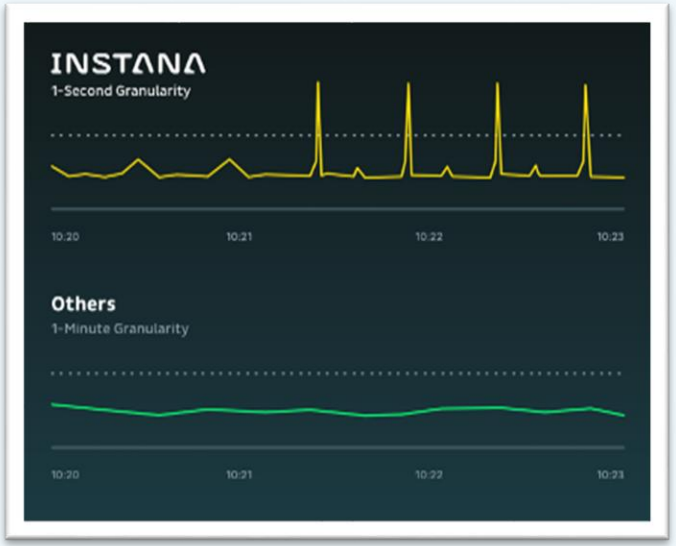
- 1-second granularity
- 100% trace capture, no sampling!
- Track every inter-dependency

Actionable Information

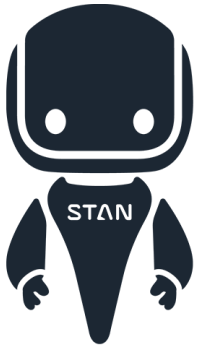
- OTB performance (KPI) dashboards
- Real-time anomaly detection
- Root cause analysis & correlated alerting



Why 1-second granularity?
Instana sees problems other tools miss



Instana differentiation



Detect hidden issues with **real-time (1 sec) granularity**

Automated Continuous Discovery & Config (production injection)

Complete and accurate **data fidelity**

Transparent & **predictable pricing**

Analyst **leader for modern tech** (cloud, containers, microservices)

Intuitive User Interface with OTB Dashboard filtering capabilities

Instana delivers business impact

Efficiency

- Increased operational efficiency
- Foster DevSecOps culture

86%
Time & Effort

20%
Free Dev Time

Risk

- Improved application availability
- Quicker resolution of incidents

52%
MTTR

69%
MTTD

Revenue

- Increased deployment frequency
- Improved end user service levels

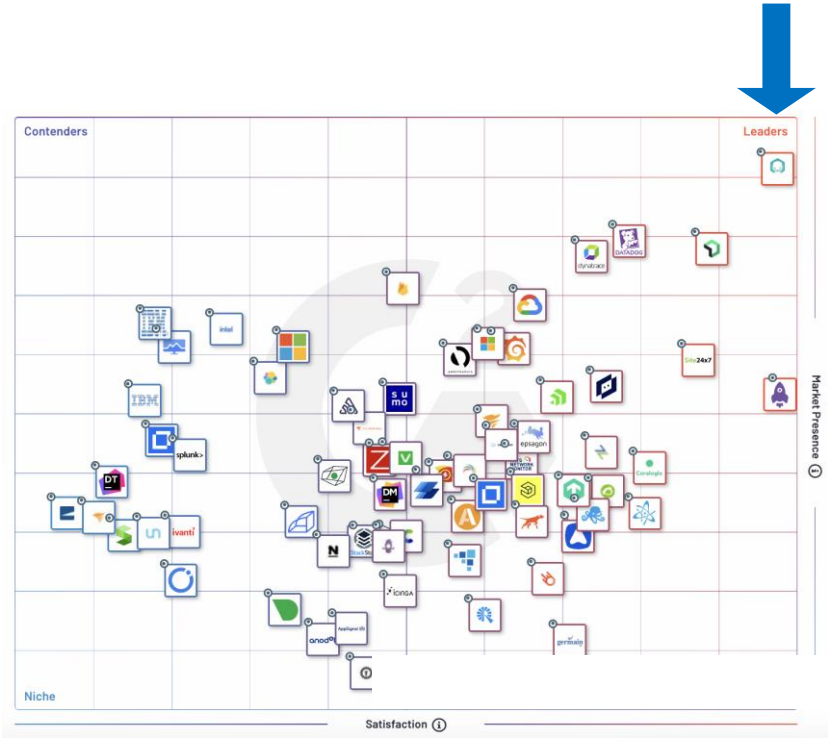
3x
Deployments

*Quantified Impact is based on actual customer metrics representing conservative average gains. Impact should be uniquely quantified for each company.

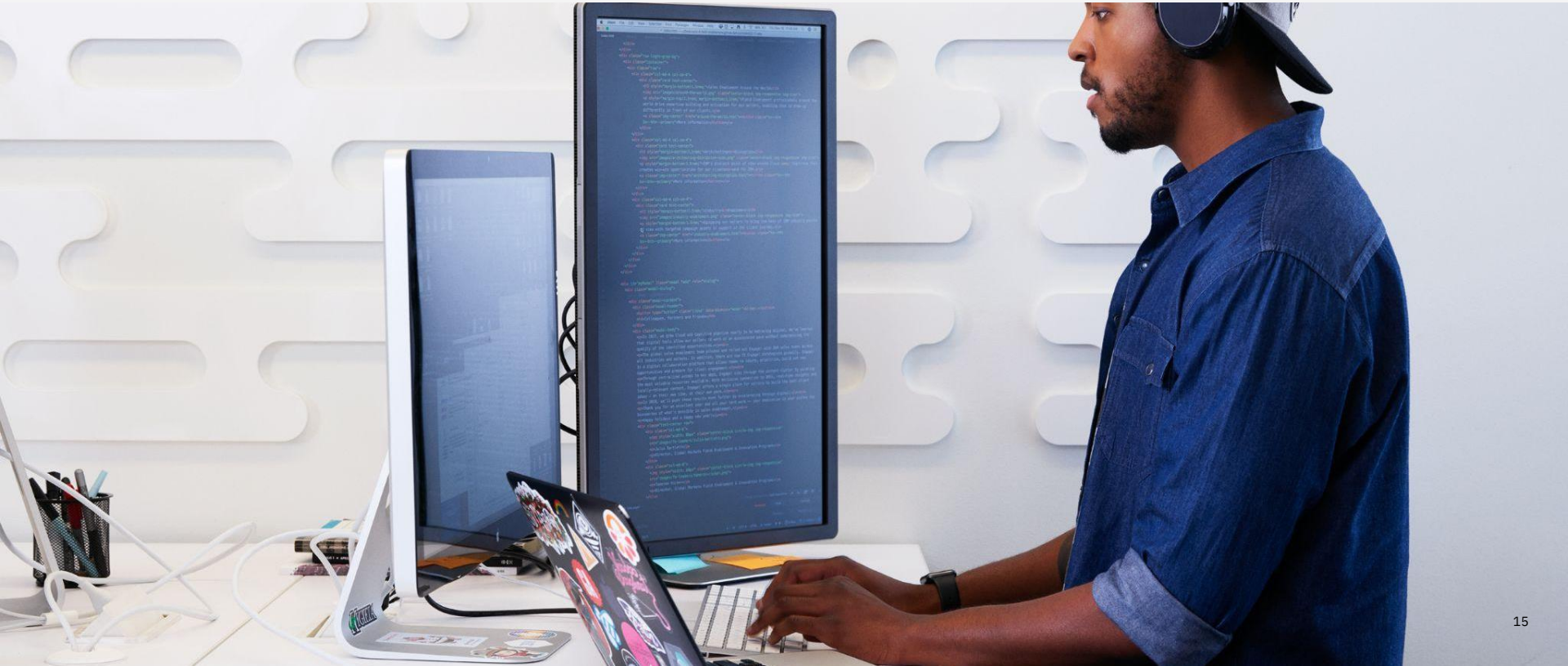
A leader in Observability

IBM Instana is ranked highest in G2 peer reviews...

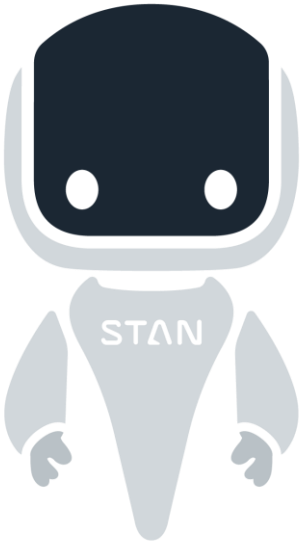
...and is by far the leader in G2's APM / Observability Grid



Demo
Let’s see it in action!



Backup



Dealerware

INSTANA
an IBM Company

How could Dealerware support a goal of 500% growth?

With Instana Enterprise Observability

>> **Read the full story**

Dealerware provides a solution that modernizes and streamlines fleet management for automotive retailers.

The company planned a set of growth initiatives intended to drive up rental and loaner contract volume and quintuple the number of vehicles under management.

But to support exponential growth with a recently containerized architecture, Dealerware needed an efficient way to ensure application performance and low latency.

It found its solution in IBM Instana Observability.

- Reduced delivery latency by 98%, from 10 minutes to 10 – 12 seconds
- Driving toward a latency goal of < 250 milliseconds

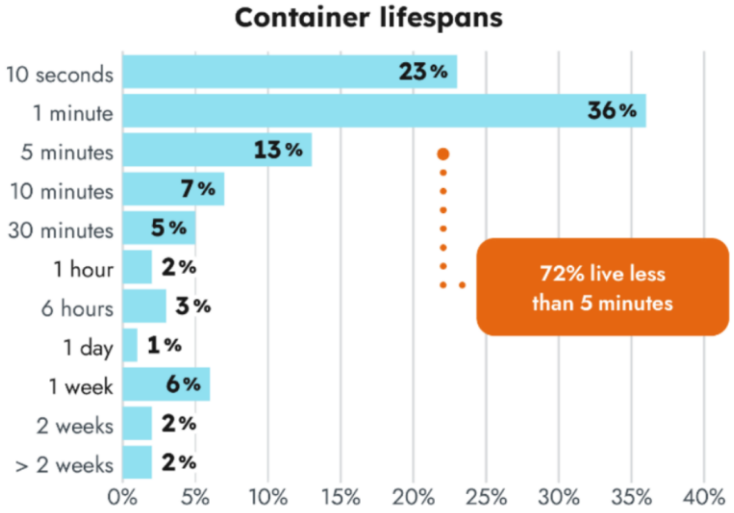
It's great to have something to be able to trace the root of the problem at the infrastructure view. It's provided insights into issues I wasn't aware of.

Kenneth Skertchly,
Senior DevOps Engineer, Dealerware

Solution component:

IBM Instana Observability

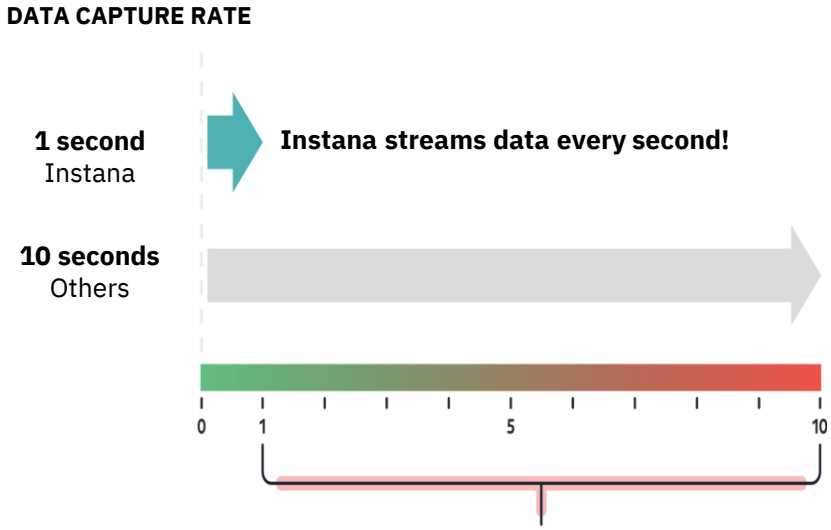
Finest Granularity: Most protection w/ 1-second collection
Highest Cardinality: Reduced risk w/ 100% trace collection



2023 Sysdig Container Usage Report

With data every 10 seconds, you're only seeing 77% of your containers!
With data every minute, you're only seeing 41% of your containers!

*In 2022, this report showed that 44% of containers lived less than five minutes. This is a **28% increase year-over-year**, which speaks to organizations maturing in their use of container orchestration.*



Other vendors not only capture data at 10-second intervals **they also sample this data!**

IBM

Instana Enterprise Observability Use cases

Improved Automation to Support Cloud Native Journey
Automated discovery of tech for full-stack observability
Automated instrumentation & correlation of services
Automatic tracing for *every* application/service
Automatic dependency map creation
Automated dashboards

Speeding Up Deployment
Integrating into CI/CD pipelines
Let the dev know within seconds how their release is performing
Empowers dev's to become self-sufficient
Improve developer experience

Correlation of MELT for Observability DIY framework
Prometheus (metrics)
Grafana (dashboarding)
Splunk/ELK (logging)
Jaeger (tracing)

Reduce APM / Observability Spend
No data ingestion costs
All-inclusive pricing
No hidden fees!

Reduce MTTD + MTTR with Real-time Root Cause Analysis
Real-time detection of infra & middleware component anomalies
Real-time detection of app/service latency & error anomalies
Reduce finger pointing & eliminate the blame game

Simplify Agent Maintenance
Single agent architecture
Reduce time spent updating multiple agents
No app restarts required

SRE Transformation
SLA/SLI/SLO support
Custom dashboards
- By end-user journeys
- By business transactions
- By technology
- By persona

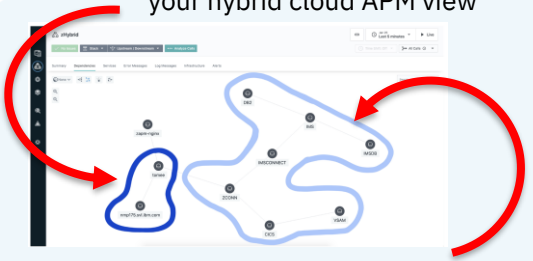
Optimize Infrastructure Resources
Reduced # of VM’s
Reduce cloud spend
Identify memory leak issues

IBM Instana Observability on z/OS

The Challenge

- As you invest in hybrid cloud applications that span cloud and on-prem resources including the mainframe, it is essential to have a full **end-to-end view** of these applications to detect performance issues prior to any negative impact on availability
- Most APM tools today have **limited or NO visibility** into IBM Z, leading to delays in isolating and repairing hybrid application components that run on the mainframe

Without Instana for z/OS, the mainframe is purely a **“black box”** in your hybrid cloud APM view



With Instana for z/OS, detailed observability is extended into your key subsystems running on z/OS giving a full end to end view

The Solution

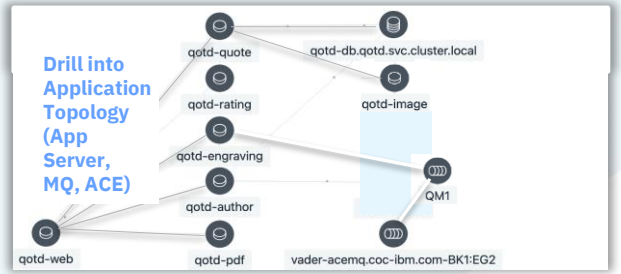
- Instana was **built to observe cloud native applications** that are based on micro-services and containers. Multiple analysts have acknowledged Instana as a leader in this type of observability
- Instana, with these strengths, combined with Instana on z/OS **extends application visibility beyond the cloud to the transactions and middleware running on the mainframe**, including key subsystems like CICS, IMS, MQ, and DB2, thereby eliminating blind-spots

The Benefit

- Instana on z/OS makes it possible to understand the health of your hybrid cloud applications from mobile to mainframe in a single view by:
  - detecting and isolating mainframe issues in the context of hybrid applications – even with limited IBM Z knowledge
  - integrating infrastructure metrics from OMEGAMON to provide additional context (Instana is the only observability solution with this integration)
- Reduction of lost business and customer confidence due to lengthy outages
- Silos between distributed and IBM z development teams are broken down when all components are fully observable

Instana Observability for IBM Middleware

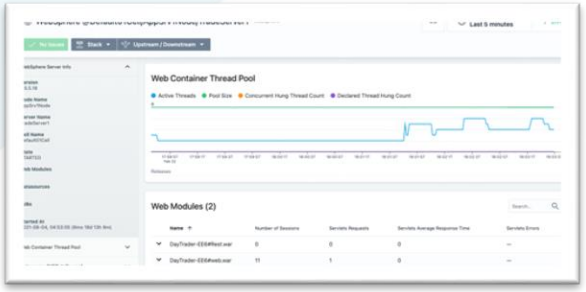
Instana on
Cloud Pak for Integration



Complete solution for CP4I observability

- Deep middleware monitoring
- ACE/IIB, MQ, DataPower, API Connect, Event Streams
- Full topology discovery
- Tracing call stack and timings

Instana on
WebSphere / Liberty

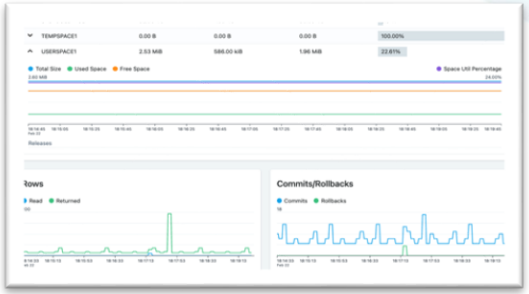


App Server observability

- JVM Monitoring
- End-to-end tracing
- Monitor other IBM products that use WebSphere and Liberty:

ODM ● Maximo ● Sterling ● and many more

Instana on
DB2



Deep database monitoring

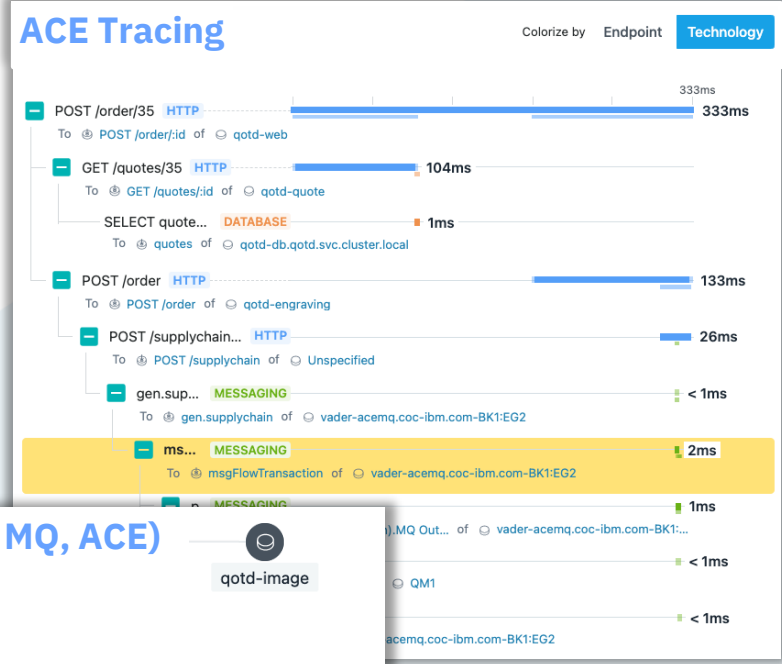
- DB2 included in traces
- JDBC calls from app server
- HADR monitoring
- Includes IBM I & z/OS support

CP4I Observability with Instana

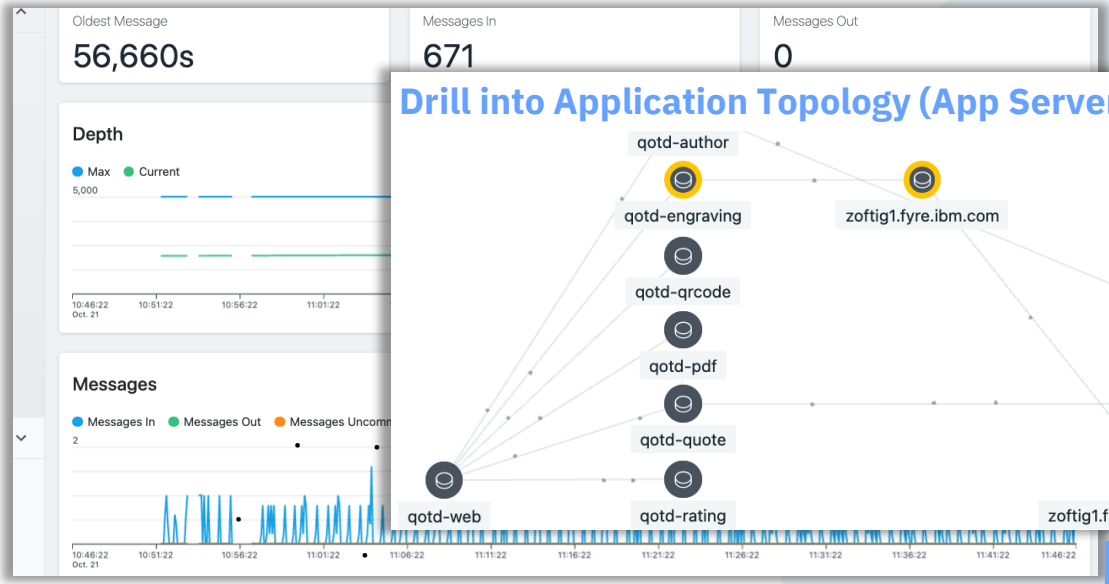
Scenario:

- Quote of the Day application has a problem
- Topology, Traces, and Metrics help identify where and what problem is

ACE Tracing



Observe Queue Details

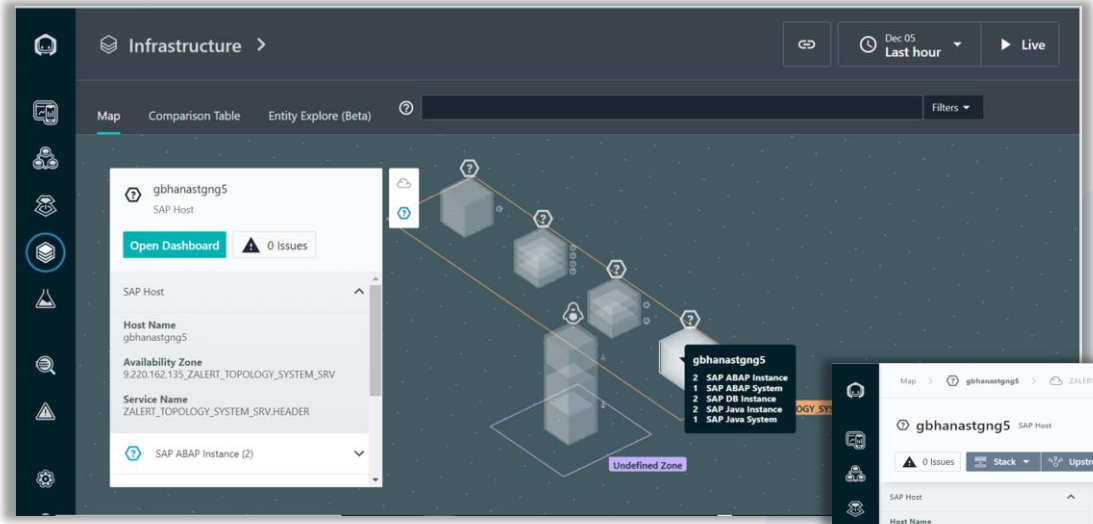


Drill into Application Topology (App Server, MQ, ACE)

ACE Integration Server

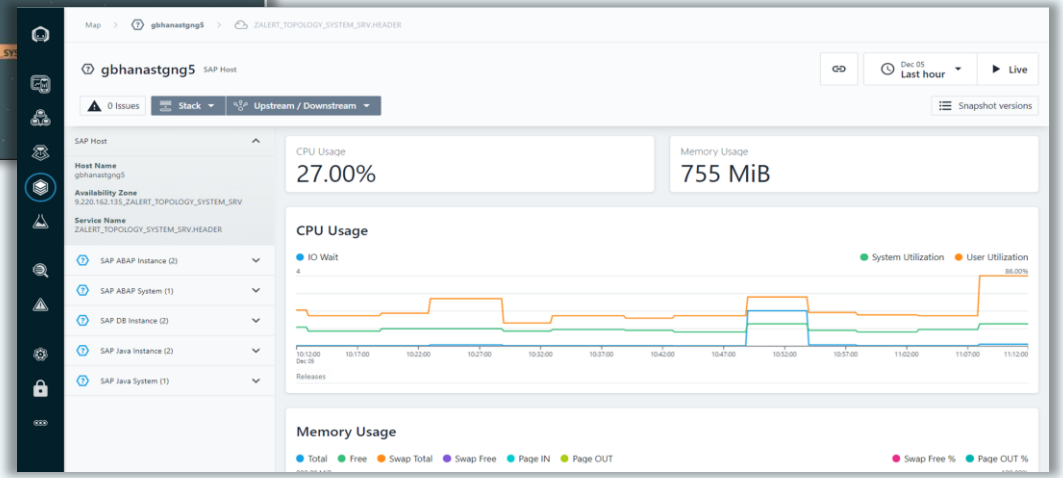
MQ Queue Manager

SAP Observability with Instana



Infrastructure Map View

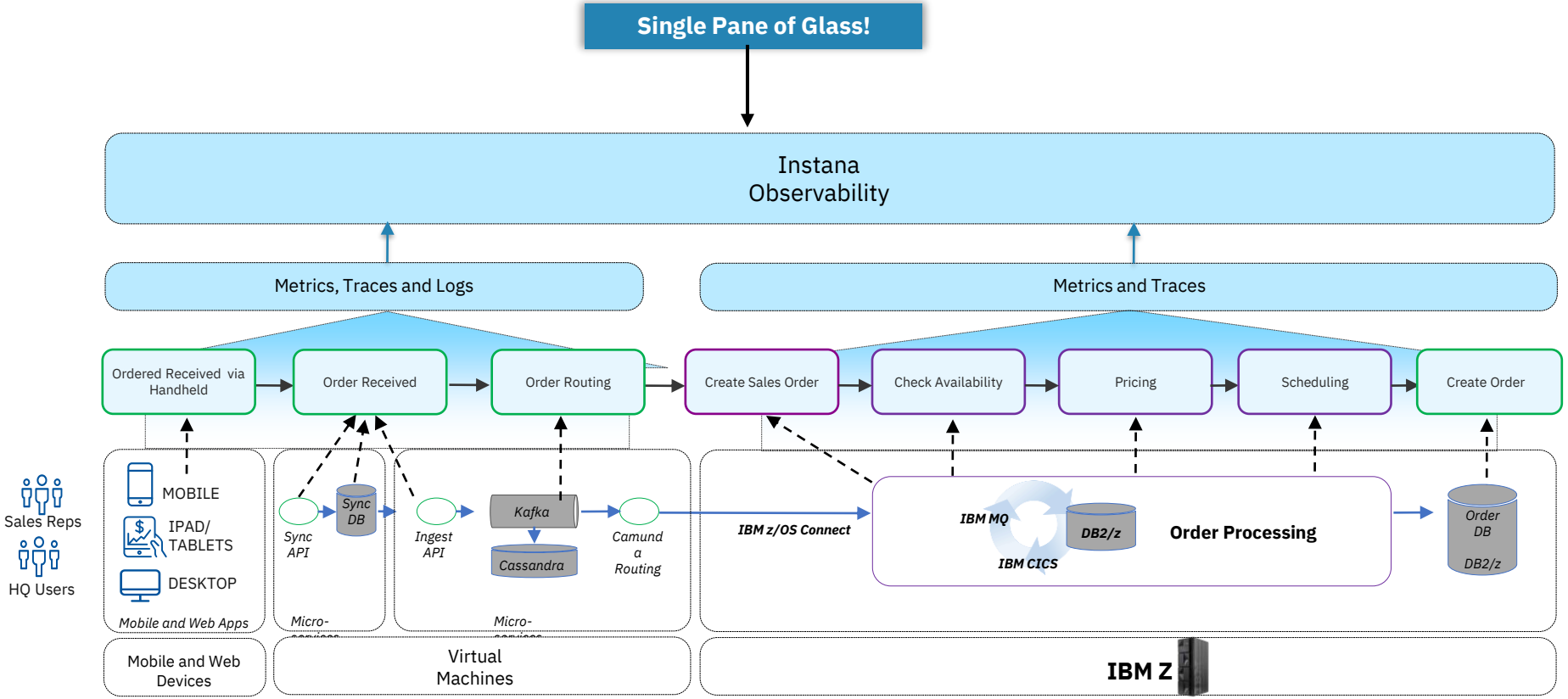
- Topology of entire observed environment, including a view of the SAP landscape
- All SAP entities
- Errors and warnings for any SAP entities
- Launch into more detailed SAP dashboards



Other Views

- Host performance
- Throughput for ABAP and Java AS processes, including response time, # of calls, # users, ...
- Alerts for error and warning conditions
- Tracing through SAP processes (phase 2)

Instana can observe the **entire Hybrid Application Landscape**



Better together: IBM Instana and Instabug

Bring teams together

DevOps and mobile development teams can now work together when troubleshooting mobile application issues.

End-to-end visibility

Mobile developers and SREs are enabled with end-to-end visibility of on-device and backend network flows for remediation and resolution of app quality incidents.

Solve issues quickly

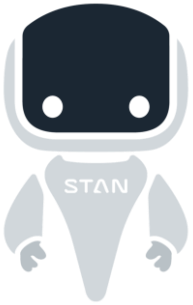
Developers and SREs can seamlessly connect on-device and backend network flows to resolve app quality incidents quickly and definitively.

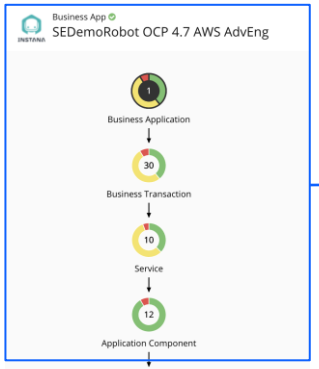
IBM **Instana** + IBM **Turbonomic**

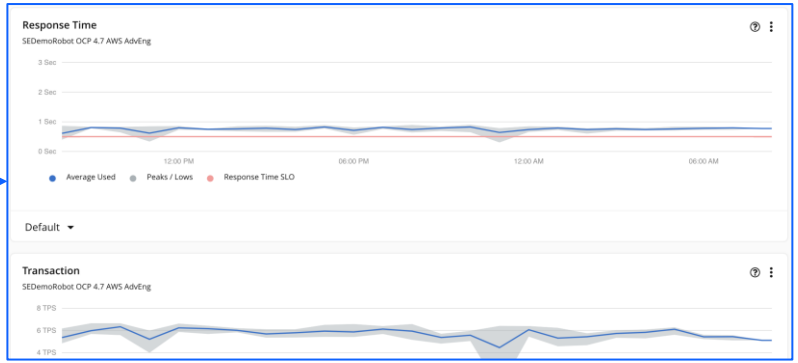
Powerful alone, better together

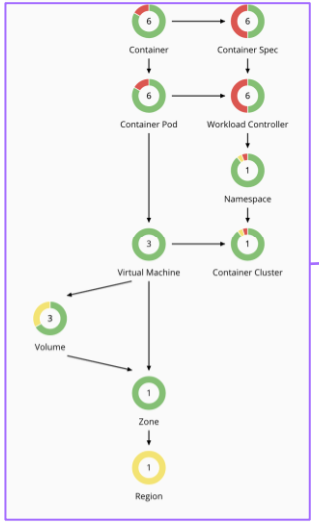
Only **Instana** provides real-time observability data with 1 second metric granularity

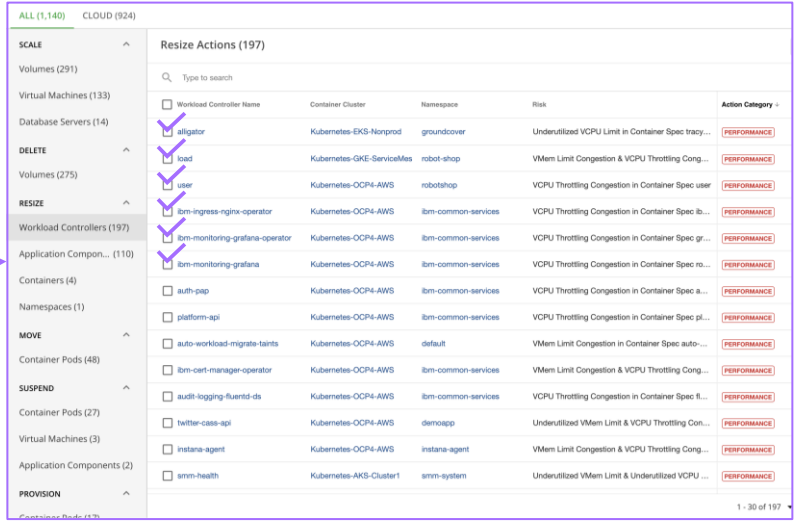
Only **Turbonomic** provides cost optimization you can operationalize and automate.



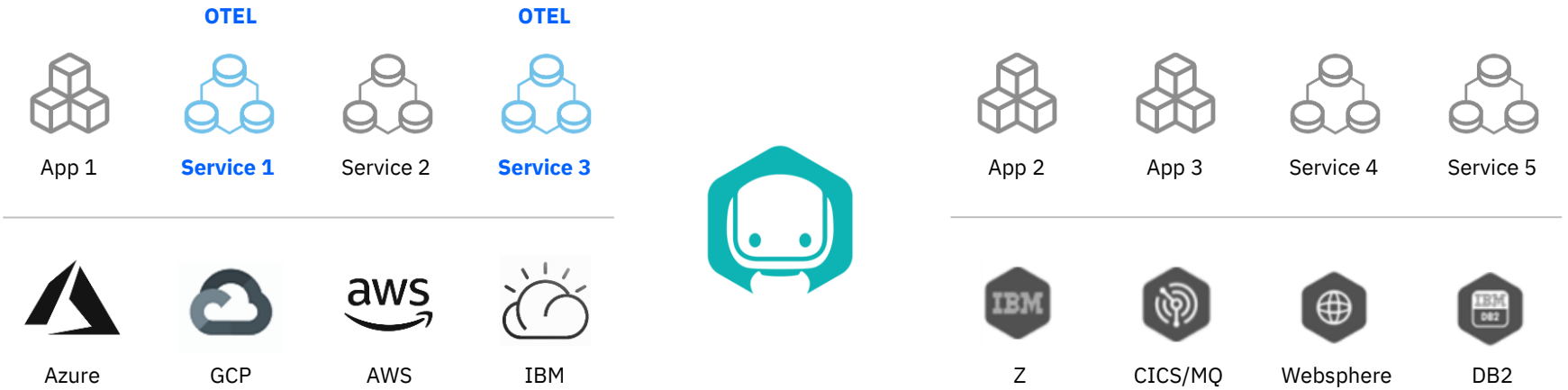




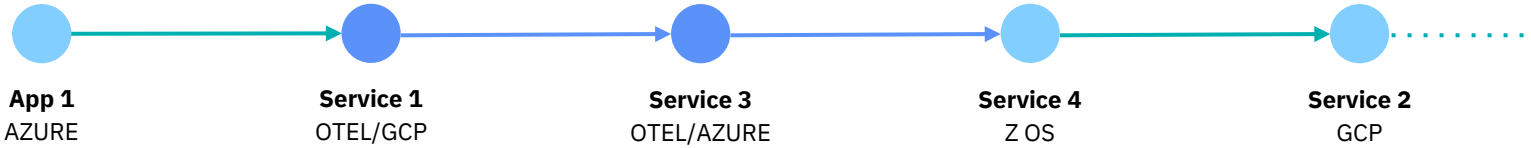


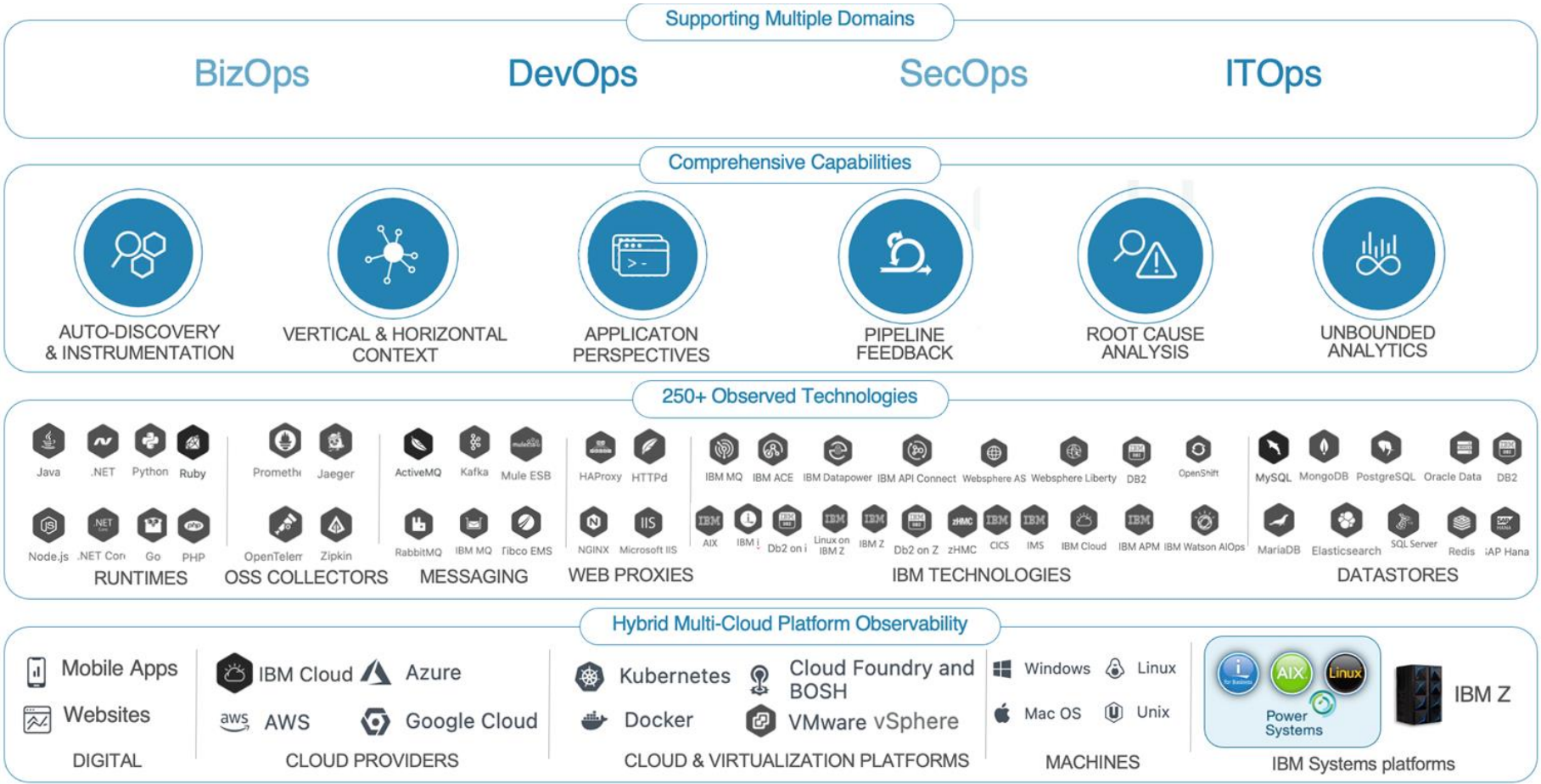


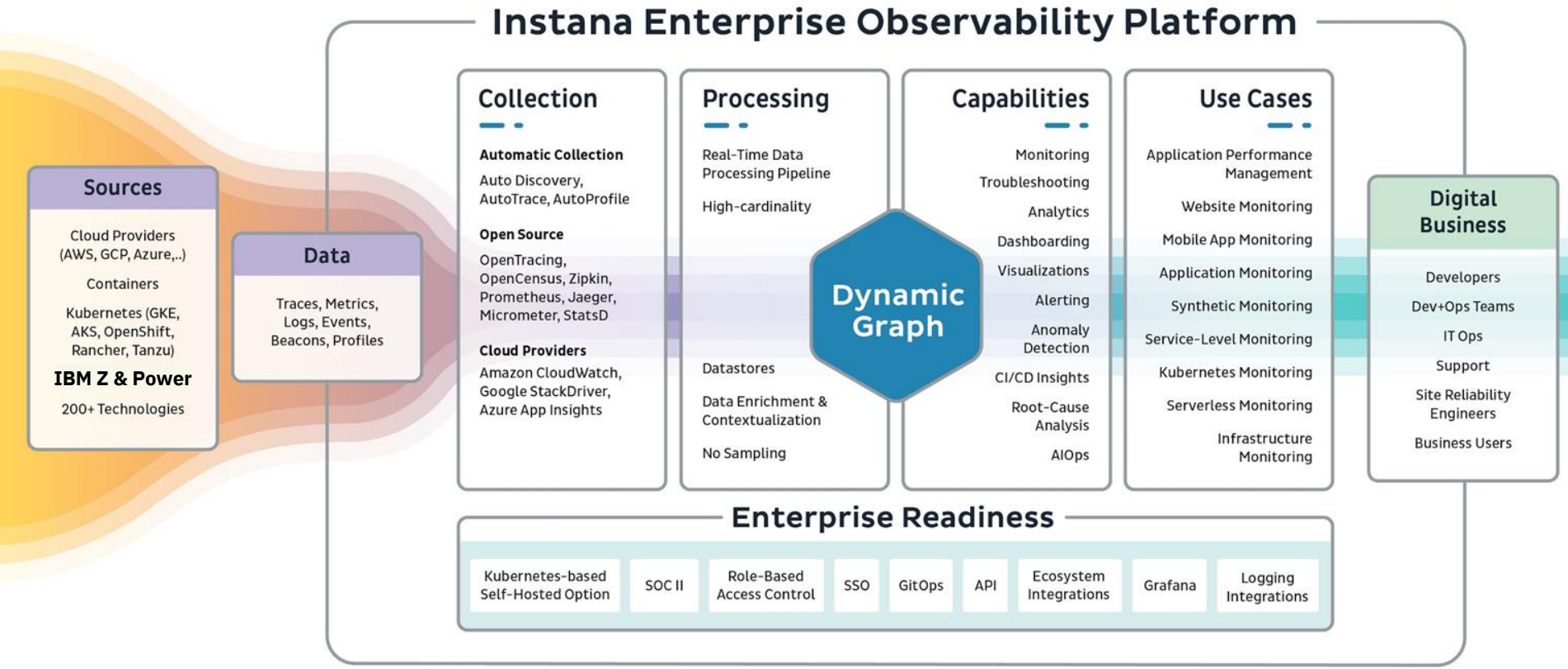
Observability for a hybrid world



MIXED TRACE EXAMPLE

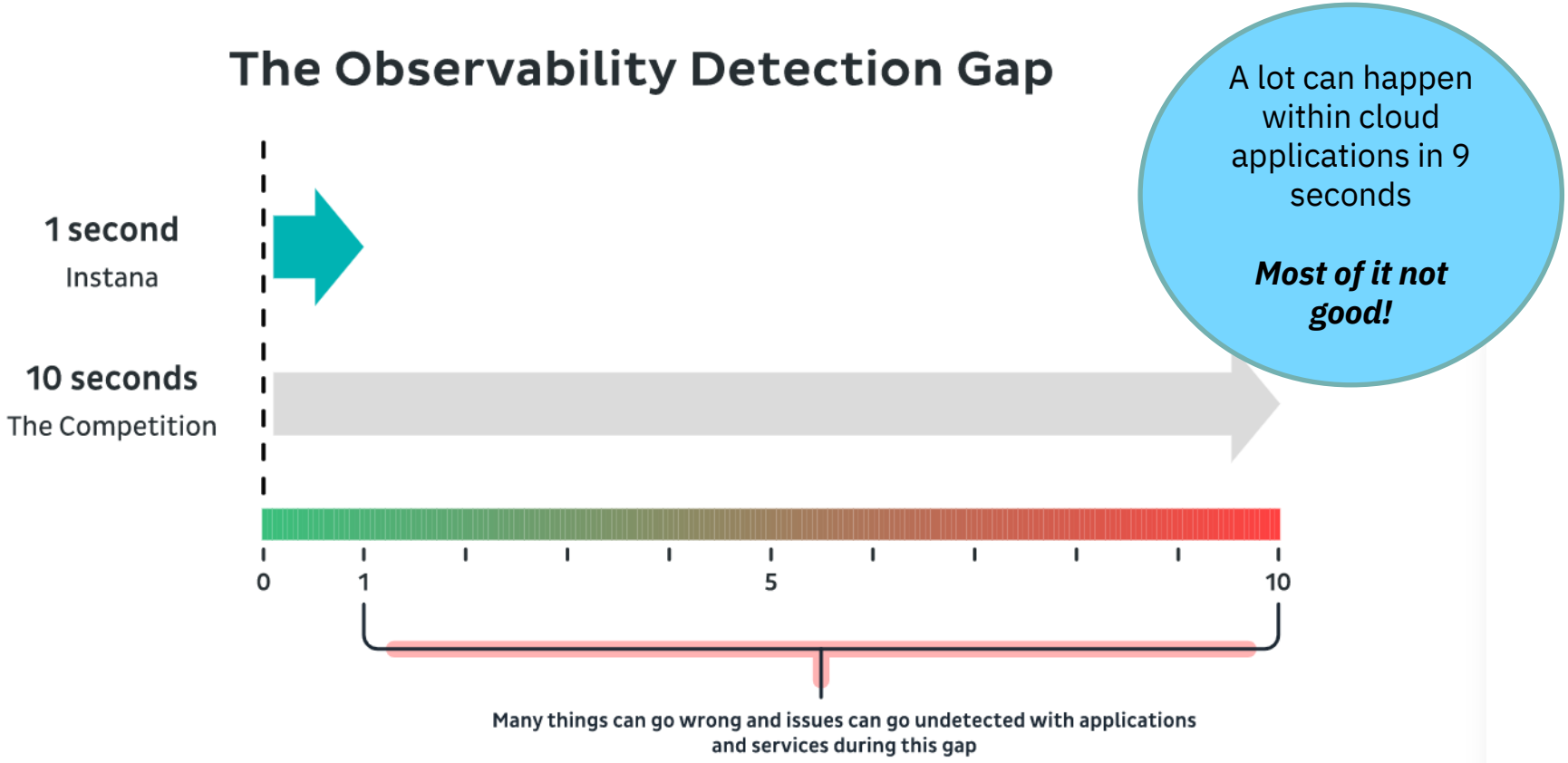



Supporting Multiple Domains
BizOps
DevOps
SecOps
ITOps
Comprehensive Capabilities
AUTO-DISCOVERY & INSTRUMENTATION
VERTICAL & HORIZONTAL CONTEXT
APPLICATON PERSPECTIVES
PIPELINE FEEDBACK
ROOT CAUSE ANALYSIS
UNBOUNDED ANALYTICS
250+ Observed Technologies
Java
.NET
Python
Ruby
Node.js
Go
PHP
RUNTIMES
Jaeger
Zipkin
OSS COLLECTORS
ActiveMQ
Kafka
Mule ESB
RabbitMQ
IBM MQ
MESSAGING
HAProxy
HTTPd
NGINX
Microsoft IIS
WEB PROXIES
IBM MQ
IBM ACE
IBM Datapower
IBM API Connect
Websphere AS
Websphere Liberty
DB2
OpenShift
AIX
IBM i
Db2 on i
Linux on IBM Z
IBM Z
Db2 on Z
zHMC
CICS
IMS
IBM Cloud
IBM APM
IBM Watson AIOps
IBM TECHNOLOGIES
MySQL
MongoDB
PostgreSQL
Oracle Data
DB2
MariaDB
Elasticsearch
SQL Server
Redis
DATASTORES
Hybrid Multi-Cloud Platform Observability
Mobile Apps
Websites
DIGITAL
IBM Cloud
Azure
AWS
Google Cloud
CLOUD PROVIDERS
Kubernetes
Cloud Foundry and BOSH
Docker
VMware vSphere
CLOUD & VIRTUALIZATION PLATFORMS
Windows
Linux
Mac OS
Unix
MACHINES
AIX
Linux
Power Systems
IBM Z
IBM Systems platforms



100% collection, **1-second** granularity with **no** consumption or user costs

Modern architectures demand **real-time observability**



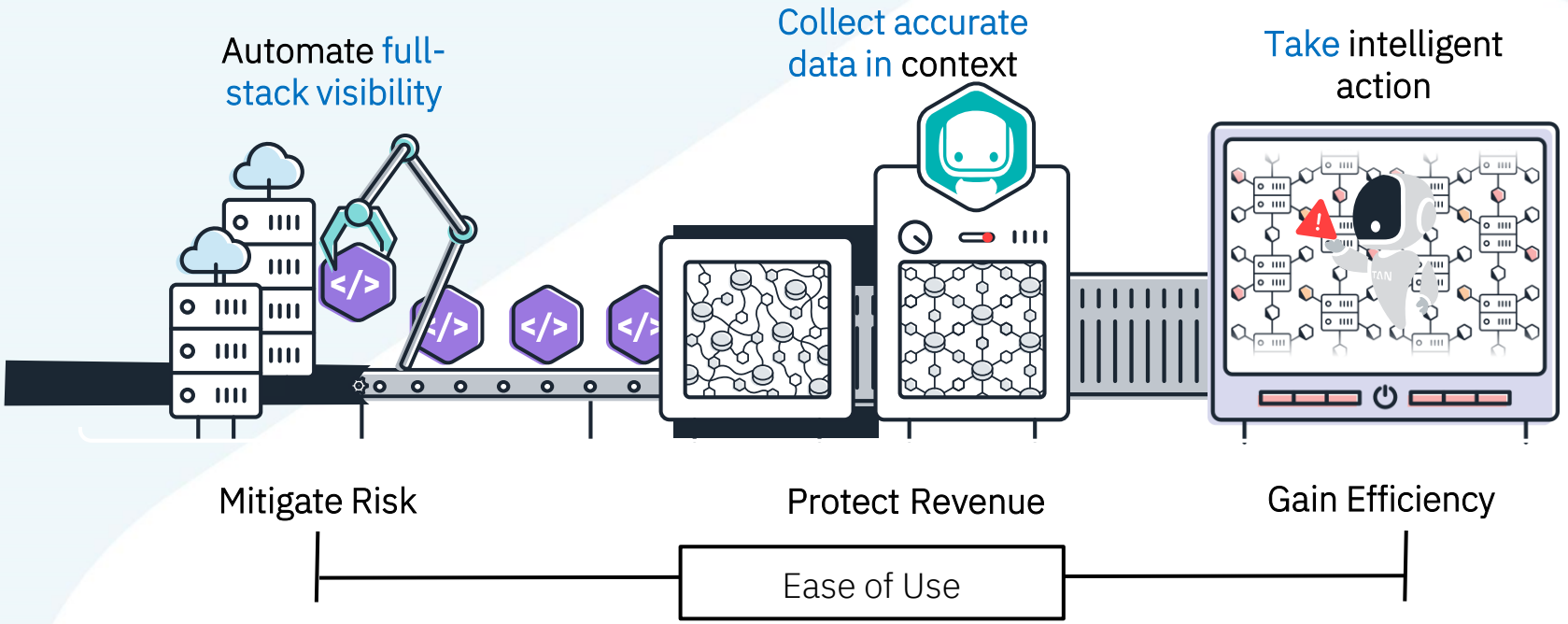
Instana Observability Strengths

OBSERVABILITY, ARM AND AIOPS

01	**REAL-TIME**	**High fidelity real-time data with 1 second metrics and every request is traced automatically, no sampling or partial traces**
02	**CONTINUOUS AUTOMATION**	**Automated full-stack application visibility including real-time change detection, mapping, tracing and profiling**
03	**FULL CONTEXT**	**Real-time detection and interdependencies mapping**
04	**INTELLIGENT ACTION**	**Incident prevention through automating issue resolution with alerting and a complete contributing factors understanding**
05	**PREDICTIVE ANALYTICS**	**Proactively identify potential issues and minimize human effort to resolve issues**

INSTANA
an IBM Company

Instana enterprise observability



Track every interdependency from code to customer