

Université **IBM i**

19 et 20 novembre 2024

IBM Innovation Studio Paris

S12 – AIOps : garantissez la performance applicative avec *Instana*

19 novembre 13:30 - 14:30

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uui2024

#ibmi

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Agenda

- Introduction : AIOps, APM (10 minutes)
- IBM Instana et l'agent IBM i (10 minutes)
- Démonstration (30 minutes)
- Questions/Réponses (10 minutes)

IBM Client Engineering | EMEA

Custom Demos, Architecture Workshops, MVP Prototyping...

Let's create 
value together

Data & AI
Squad

IBM Z &
Modernization Squad

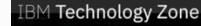
Sustainability Squad

Hybrid Cloud
& AIOps Squad



Example of IBM i modernisation workshops:

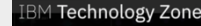
01 API-zation / REST / Core Business Integration



02 DB2 Data Modernization: from Native to SQL

03 OpenShift, Merlin and DevOps



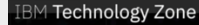


04 Open-Source Adoption with Legacy on IBM i





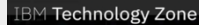
05 Power/IBM i move to cloud: IBM Cloud PowerVS



06 IBM i Resilience: PowerHA, DB2 Mirror

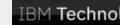
07 Ansible Automation and AIOps





08 Data Governance & MLOps with CP4Data



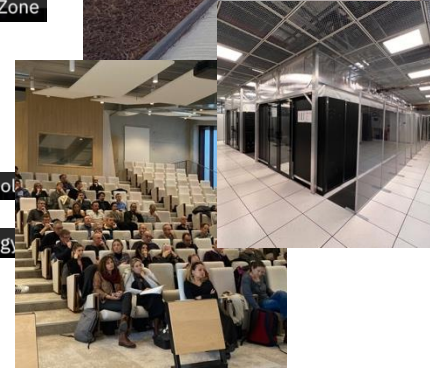
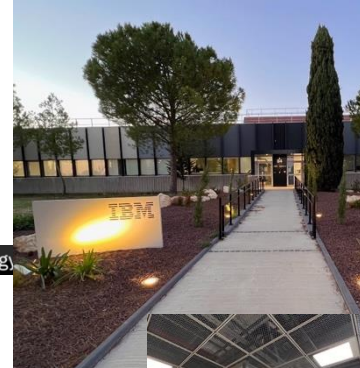


09 Infuse AI in core business apps





NEW: IBM Watsonx Code Assistant for Z





Introduction : AIOps, APM

Qu'est-ce que l'AI Ops ?

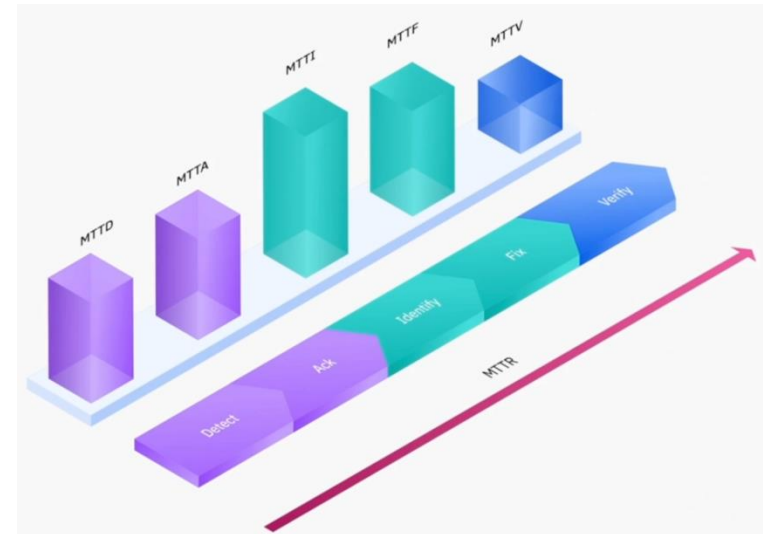
Intelligence Artificielle pour les Opérations IT

Utilise l'**intelligence artificielle** et le **machine learning** pour automatiser et améliorer les opérations informatiques, mieux gérer et optimiser l'environnement IT.

- **Analyse de Données** : Collecte et analyse de grandes quantités de données IT (logs, événements, métriques) en temps réel.
- **Détection d'Anomalies** : Identifie les schémas inhabituels et les problèmes de performance de manière proactive.
- **Actions Automatisées** : Automatise les réponses aux problèmes IT courants (ex. : redémarrage de services, mise à l'échelle des ressources).

Objectifs:

- **Résolution plus rapide des problèmes** grâce à une analyse automatisée des causes profondes. (réduire le MTTR →)
- **Réduction des temps d'arrêt** par la maintenance prédictive.
- **Efficacité opérationnelle accrue** en supprimant les tâches manuelles.



La puissance combinée de l'AIOps et de l'APM

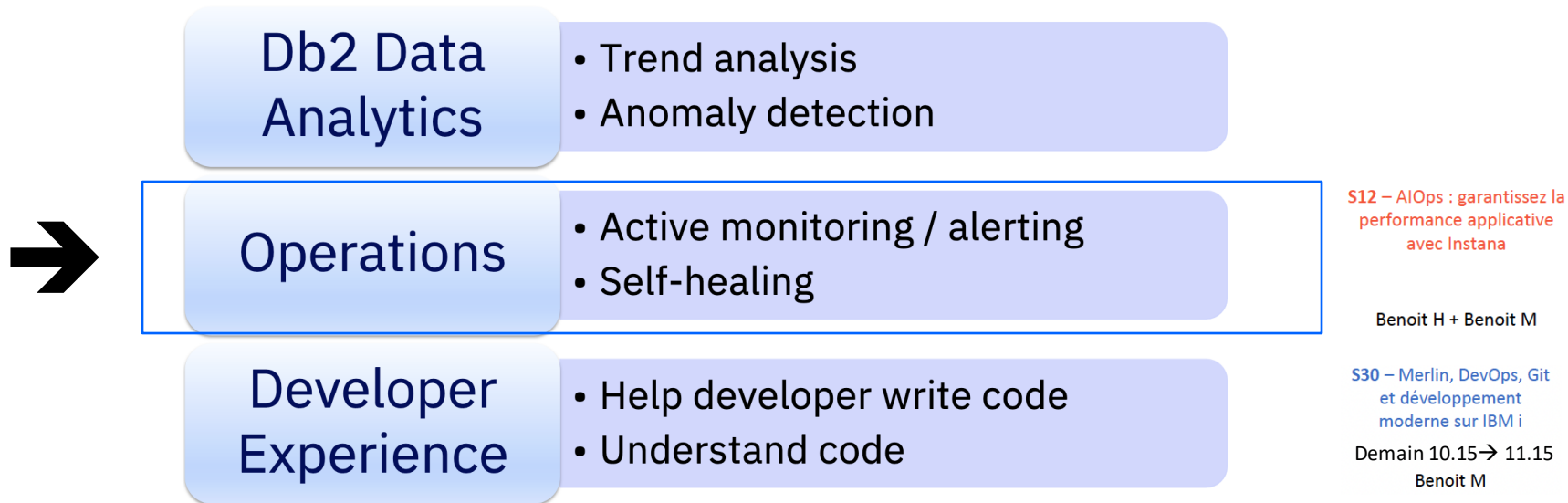
APM (Application Performance Management) est un ensemble d'outils et de pratiques visant à **surveiller et gérer la performance** des applications logicielles pour assurer leur bon fonctionnement. On utilise des outils de tracement / **d'observabilité** des applications afin d'obtenir ces données de surveillance.

Combiner **AIOps** et **APM** = une synergie puissante pour gérer les environnements IT modernes

- **Surveillance proactive** : L'APM surveille la performance des applications, tandis que l'AIOps utilise l'IA pour prédire et prévenir les problèmes.
- **Résolution automatisée** : L'AIOps automatise le dépannage basé sur les données APM, réduisant les interventions manuelles.

Scenario : Si une application ralentit, l'APM détecte le problème, l'AIOps analyse les données, identifie la cause profonde et corrige automatiquement le problème ou fournit des recommandations, le tout en temps réel.

Stratégie AI pour IBM i





IBM Instana et agent IBM i



IBM Instana: Observabilité temps réel pour tous

Des données précises et en temps réel mises en contexte pour toutes les équipes qui en ont besoin

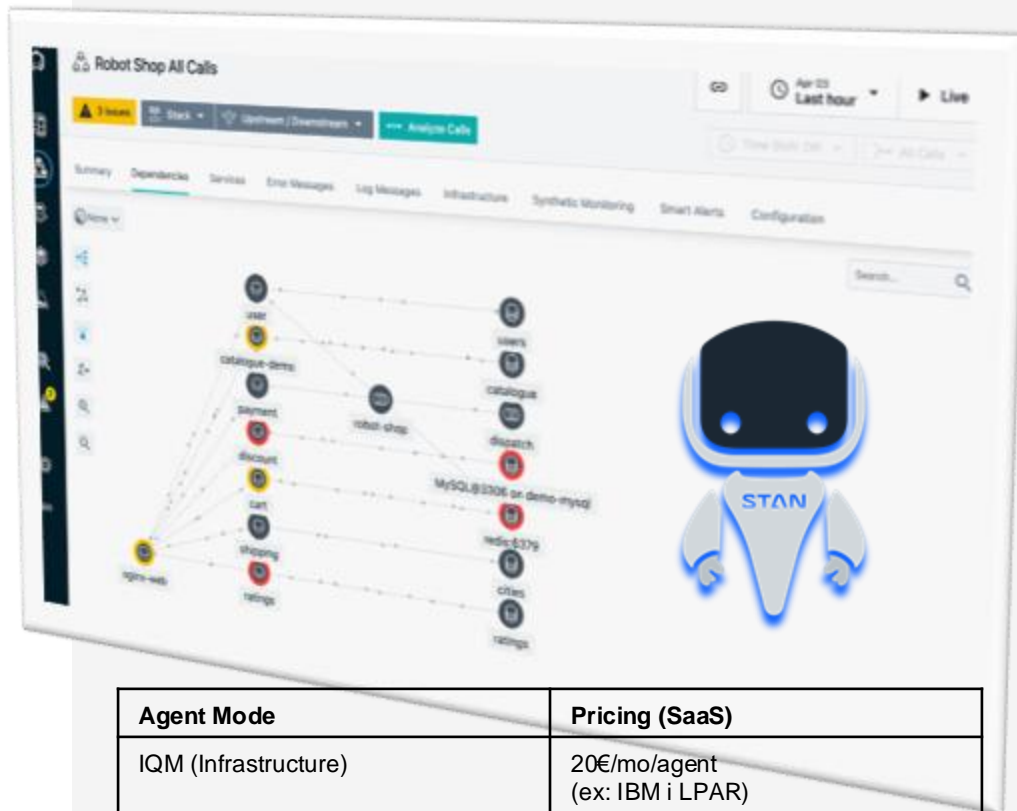
Données haute fidélité - Pas d'échantillonnage, granularité métrique d'une seconde et traçage de bout en bout

Automatisez la résolution des problèmes grâce aux alertes

Comprenez les dépendances entre les applications mobile, Web, les applications et l'infrastructure – plus de 300 technologies prises en charge.

Facile à utiliser. Facile à installer. Aucune compétence spécialisée requise. Tarification simple, transparente et prévisible

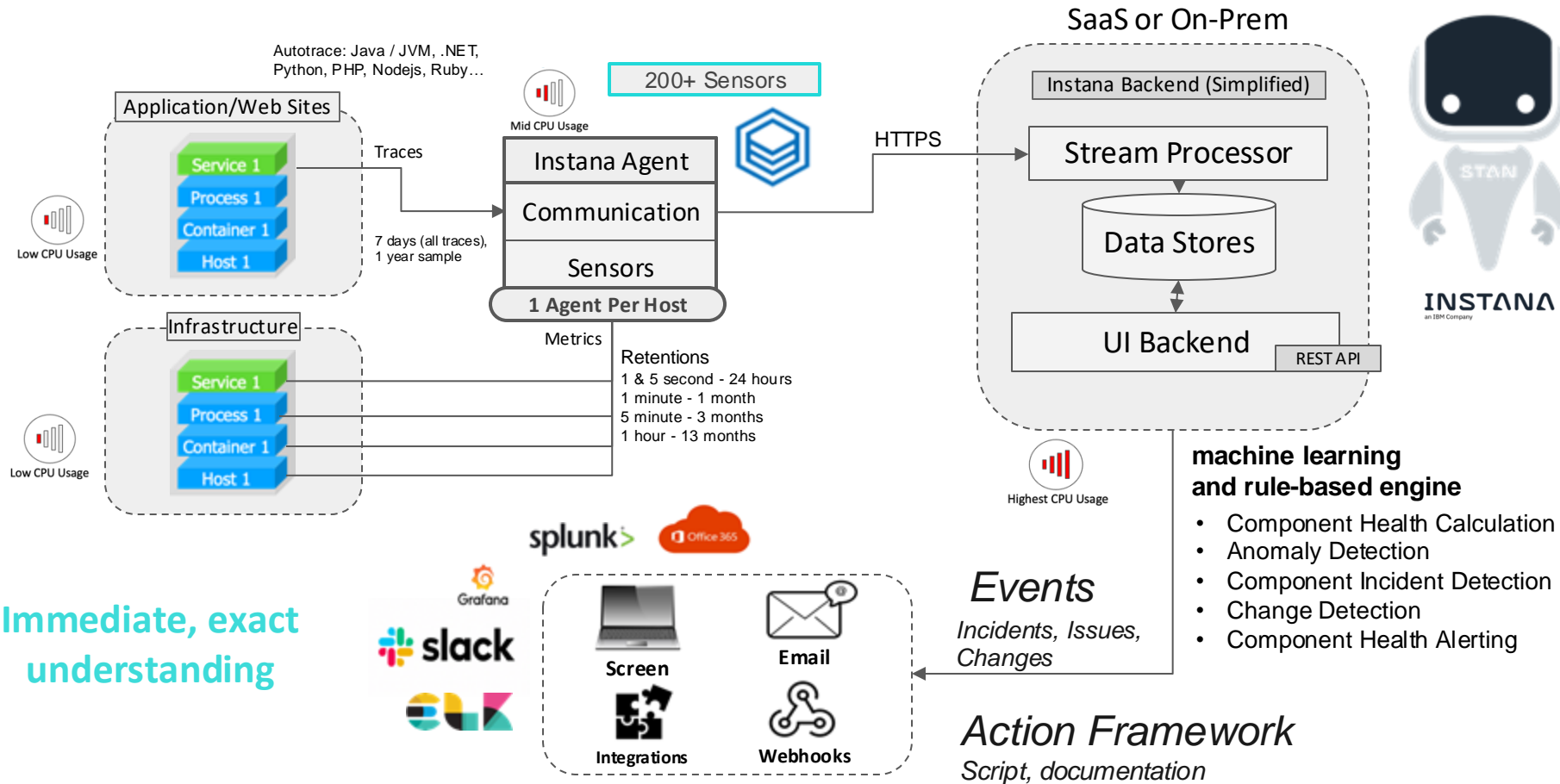
<https://www.ibm.com/docs/en/instana-observability/current?topic=configuring-monitoring-supported-technologies#agent-sensors>



Agent Mode	Pricing (SaaS)
IQM (Infrastructure)	20€/mo/agent (ex: IBM i LPAR)
APM (incl. IQM)	80€/mo/agent
On Preams:	SaaS Price + Infrastructure cost

En general , 60-70% IQM, 30-40% APM

Instana : Architecture Générale



Immediate, exact understanding

Instana & Agent IBM i : Tech Preview

- Agent « Remote » :
 - Agent sous linux
 - Sondes basées sur Script SSH/GO PERFORM
 - Métriques limitées
- Sensor Power HMC etc.
 - Remontées d'évènements Hardware
- Nouveau !!
 - Agent et sondes en local (natives) sur IBM i
 - Données Infrastructure et applicatives



IBM i



Db2 for IBM i

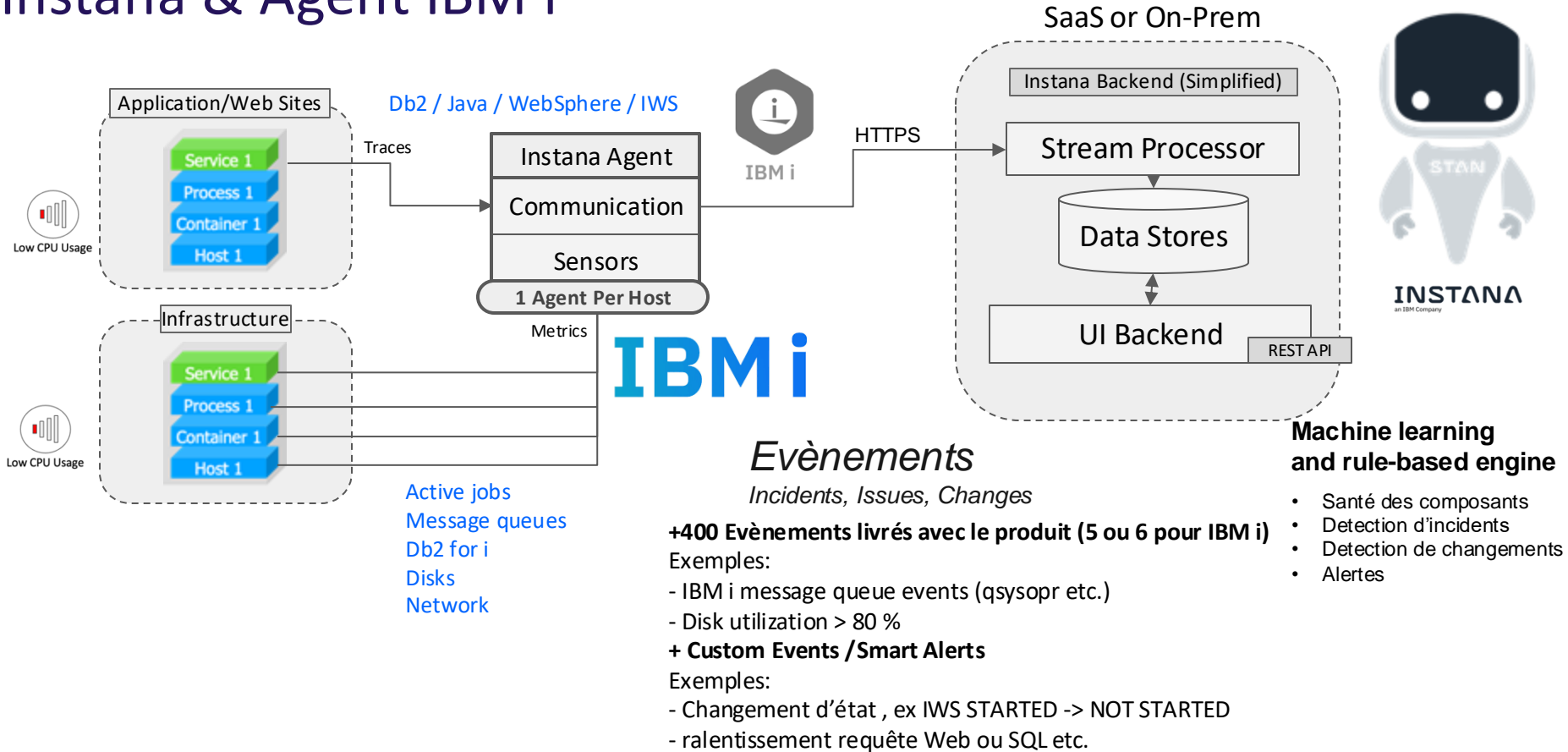
<https://www.ibm.com/docs/en/instana-observability/current?topic=configuring-monitoring-supported-technologies#agent-sensors>



IBM i

Active jobs
Message queues
Db2 for i
Disks
Network
Java / WebSphere / IWS

Instana & Agent IBM i



IBM i

Evènements

Incidents, Issues, Changes

+400 Evènements livrés avec le produit (5 ou 6 pour IBM i)

Exemples:

- IBM i message queue events (qsysopr etc.)
- Disk utilization > 80 %

+ Custom Events /Smart Alerts

Exemples:

- Changement d'état , ex IWS STARTED -> NOT STARTED
- ralentissement requête Web ou SQL etc.

Machine learning and rule-based engine

- Santé des composants
- Détection d'incidents
- Détection de changements
- Alertes

Instana & Agent IBM i : Evènements

EVÉNEMENTS ET ALERTES

- Evénements
- Alertes
- Canaux d'alerte
- Fenêtres de maintenance
- Contenu personnalisé

GESTION DE JOURNAL

- Supprimer les journaux

AUDIT

- Journal des actions

S'affiche dans la description du problème. Doit être aussi descriptive que possible. Prend en charge Markdown.

Gravité du problème: Avertissement

Incident:

Délai de grâce: Sélectionner...

2. Condition

Source: Métriques intégrées

Type d'entité:

- ibmi
- Événement IBM i/OS/390
- Db2 on i
- IBM i
- Informations réseau sur IBM i
- Informations sur les disques sur IBM i
- Informations sur les files d'attente de messages sur IBM i
- Informations sur les travaux actifs sur IBM i

Métrique: Sélectionner...

+ sondes applicatives : Node.js , Liberty etc.

Installation de l'Agent natif IBM i

Procédure <https://www.ibm.com/docs/en/instana-observability/current?topic=agents-installing-i>

Démarrage et verifications:

Scripts /opt/instana/instana-agent/bin/start , stop, status

L'agent est une jvm démarrable en batch (sbmjob)

2 fichiers de configuration à paramétrer avant démarrage

```
benoitm@9.128.137.104's password:
***** IBM i 7.5 BOIKO *****

### ##### # # ##### #####
# # # ## ## # # # #
# # # # # # # # #
# ##### # # # # #####
# # # # # # # # ## #
# # # # # # # # ## # #
### ##### # # # # # ## #####

***** DEMO MERLIN INSTANA *****
[[21:56:37][PPSIBMIMERLIN.SHOWBC.IBM.COM][~]# /opt/instana/instana-agent/bin/status
Checking Host machine for TLS 1.3 support
IBM Semeru Runtime Certified Edition (build 11.0.22+7)
Running ... (pid 162174)
[[21:57:41][PPSIBMIMERLIN.SHOWBC.IBM.COM][~]# █
```

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continuous innovation
continuous integration

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Démonstration

Démonstration

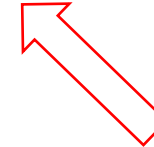
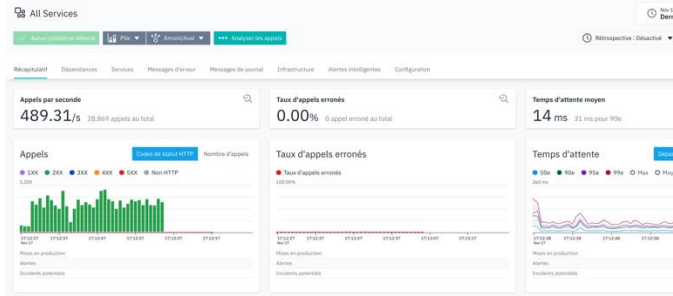
Observabilité d'une application hybride Web/IBM i sous stress, et ciblage/résolution rapide de problèmes de performance.

AI : machine learning et moteur de règle



INSTANA
an IBM Company

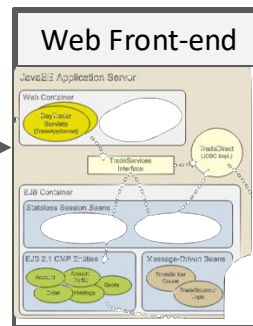
Évènement personnalisé "Smart Event"

Utilisateurs (simulation jmeter)

HTTPS

Cloud Native .NET
→ **Java/Liberty**
PHP
Node.js
Python
OpenShift/K8s
...



Liberty

JDBC
HTTPS



IBM i

Oracle
AIX
→ **IBM i**
→ **Db2 for i**
Mysql
IBM Z
...

API/RPG/DB2 Backend

Liberty/IWS

Sensors:

- Active jobs
- Message queues
- Disks
- Network
- Db2 for i
- Java/Liberty/IWS



WHERC



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Démonstration

Installation de l'Agent natif IBM i

Vue de l'infrastructure :
IBM i "host agent" et ses sondes db2 , queues , jobs , jvm etc.

The screenshot displays the Instana monitoring interface. On the left, a 3D perspective view of an infrastructure shows multiple server nodes, with one highlighted in yellow and labeled 'PowerHMC Remote Monitor'. A label 'IBM i' is visible at the bottom of this view. On the right, a detailed view of the host agent is shown for 'PPSIBMIMERLIN.SHOWBC.IBM.COM'. The host is in an 'Undefined Zone'. The interface includes a 'No Issues' status and a list of installed agents: Instana Agent (1), JVMs (2), and WebSphere Liberty Servers (6).

Host	Status
PPSIBMIMERLIN.SHOWBC.IBM.COM	No Issues

Agent Name	Count
Instana Agent	1
JVMs	2
WebSphere Liberty Servers	6

Situation initiale : Agent natif IBM i

IBM Instana

Map > IBM i @PPSIBMIMERLIN.SHOWBC.IBM.COM

IBM i @PPSIBMIMERLIN.SHOWBC.IBM.COM IBM i

No Issues Stack Upstream / Downstream

IBM i Info

- Host Name: PPSIBMIMERLIN.SHOWBC.IBM.COM
- OS Version: 7.5
- Total CPU: 2
- Total Memory: 49152
- Configured CPU: 1
- Configured Memory: 16384
- Partition ID: 21
- Number of Partitions: 30
- Restricted State: NO

CPU Utilization (avg): 18%

Active Jobs: 213

Threads: 946

CPU

Rate: 82%

CPU Utilization

Avg: 220%

Jobs

Active: 180,000

Pools de mémoire actifs

Nom	Espace de stockage utilisé	Stockage réservé	Stockage défini	Unités d'exécution actives
*BASE	24.76 GiB	9.05 MiB	0.00 B	1,097
*INTERACT	3.02 GiB	0.00 B	3.02 GiB	1
*MACHINE	2.15 GiB	1.11 GiB	2.15 GiB	149
*SPOOL	309.71 MiB	0.00 B	309.71 MiB	0

- Active Jobs, Db2, Disk, MSGQ, Network, Java...

Situation initiale : Agent natif IBM i

Map > IBM i @PPSIBMIMERLIN.SHOWBC.IBM.COM > Active Jobs Information @PPSIBMIMERLIN.SHOWBC.IBM.COM

Active Jobs Information @PPSIBMIMERLIN.SHOWBC.IBM.COM Active Jobs Information on IBM i

Aug 29 Last hour Live

No Issues Stack Upstream / Downstream

IBM i Info

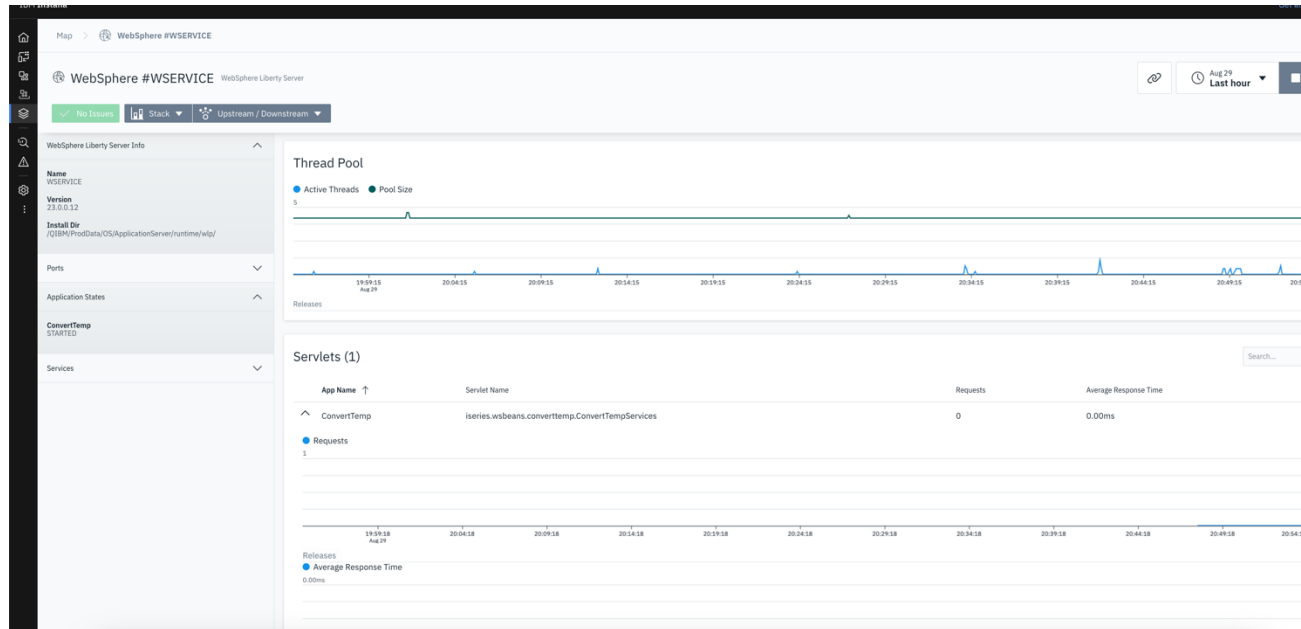
Host Name
PPSIBMIMERLIN.SHOWBC.IBM.COM

Top Active Jobs (as of 2024-08-29, 20:58:10)

Job Name	User Name	Elapsed CPU Percentage ↓	Temporary Storage	Job Status	Job Type
891955/QUSER/QZDASOINIT	QIBMPCSC	6.49%	32 MiB	RUN	PJ
890125/QUSER/QZDASOINIT	INSTANA	5.04%	51 MiB	TIMW	PJ
891445/QUSER/QZDASOINIT	BENOITM	3.60%	47 MiB	RUN	PJ
890089/QSECOFR/QPOZSPWP	BENOITM	2.62%	310 MiB	THDW	BCI
723324/QWFRADMIN/ADMIN1	QWFRADMIN	0.69%	423 MiB	THDW	RCT

- Active Jobs, Db2, Disk, MSGQ, Network, Java...

- APM pour Java, WebSphere Liberty et IWS sur IBM i



WebSphere Liberty (IWS) avec un service convertTemp (situation initiale avant deployment)

Déploiement d'un service dans IWS et intégration APM

The image displays two screenshots of the WebSphere Liberty Administration Console, illustrating the deployment and status of a service.

Left Screenshot: The console shows the 'Manage Deployed Services' page for 'WSERVICE - V2.6 (web services)'. The data is current as of 29 août 2024 20:51:52. A table lists two services:

Service name	Status	Type	Startup type
ConvertTemp	Running	SOAP	Automatic
floc	Installing	REST	Automatic

The total number of items is 2. Buttons for 'Deploy' and 'Refresh' are visible.

Right Screenshot: The console shows the same 'Manage Deployed Services' page for 'WSERVICE - V2.6 (web services)'. The data is current as of 29 août 2024 20:52:18. The table now shows both services in a 'Running' state:

Service name	Status	Type	Startup type	Service definition
ConvertTemp	Running	SOAP	Automatic	View WSDL
floc	Running	REST	Automatic	View Swagger

The total number of items is 2. Buttons for 'Deploy' and 'Refresh' are visible.

Deployment d'un service REST dans WebSphere Liberty (IWS)

Déploiement d'un service dans IWS et intégration APM

Démonstration

<https://instana-server.showbc.ibm.com/s/jOoKqs4Qlu-gW-6NIRRdg>

WebSphere #WSERVICE WebSphere Liberty Server

No Issues Stack Upstream / Downstream

WebSphere Liberty Server Info

Name WSERVICE
Version 23.0.0.12
Install Dir /QIBM/ProdData/OS/ApplicationServer/runtime/wlp/

Ports

Application States

ftoc STARTED

ConvertTemp STARTING

Thread Pool

Active Threads 4

21:14:13 Aug 29

Releases

Event

All Incidents Issues Changes Monitoring issues

Incidents Critical Warning Offline Online Changes

Title	On	Started ↓	End
online	[172.18.0.23]:5701...	2024-08-29, 21:10:09	2024-08-29, 21:10:0
offline	[172.18.0.23]:5701...	2024-08-29, 21:10:04	2024-08-29, 21:10:0
Change detected	WebSphere #WSERV...	2024-08-29, 21:08:54	2024-08-29, 21:08:5
Change detected	WebSphere #WSERVICE ↓ 2511	2024-08-29, 21:08:49	2024-08-29, 21:08:4

Event reporté en case d'ajout de service, d'indisponibilité d'un service (redemarrage par exemple)

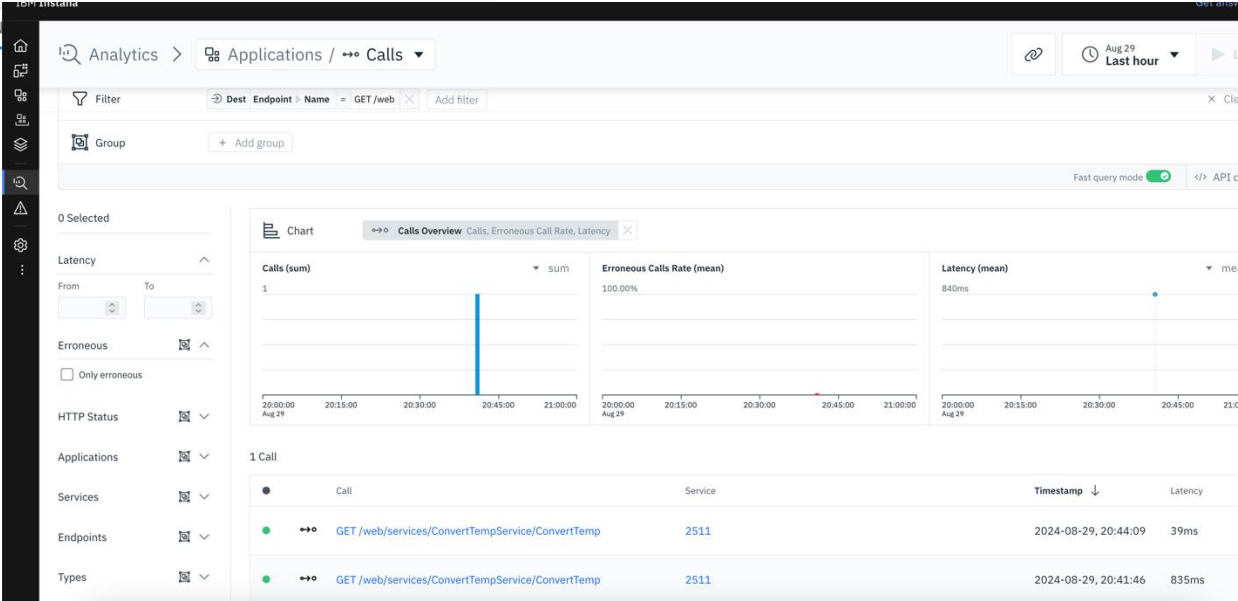
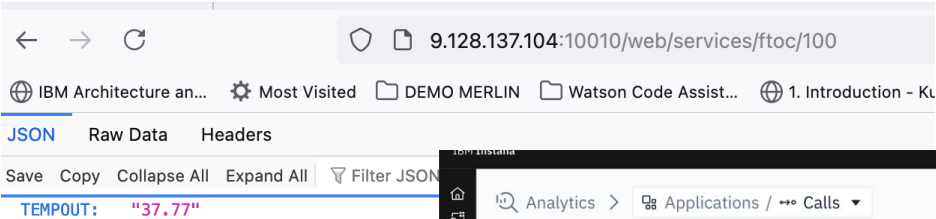
Déploiement d'un service dans IWS et intégration APM

The screenshot displays the IBM Instana Event monitoring interface. The top navigation bar includes 'Event', a search icon, and a clock showing '1h - Aug: 17:00:'. Below the navigation bar, there are tabs for 'All', 'Incidents', 'Issues', 'Changes', and 'Monitoring issues'. The main content area shows a list of events with columns for status, ID, timestamp, and details. A modal window is open over the list, showing a detailed view of an event with status 'online' and a message icon. The modal content includes a list of events with status 'online' and a list of alerts with message icons and titles such as 'Message Queue Infor...', 'Network Information...', 'Disk Information @P...', 'IBM i @PPSIBMIDM2', and 'Active Jobs Informati...'. The alerts are dated '2024-08-29, 17:52:28'.

Status	ID	Timestamp	Details
offline	[172.18.0.23]:5701...	2024-08-29, 17:58:04	2024-08-29, 17:58:04
System load too high	instana-server.show...	2024-08-29, 17:56:10	2024-08-29, 17:58:41
online	[172.18.0.23]:5701...	2024-08-29, 17:56:09	2024-08-29, 17:56:09
offline	[172.18.0.23]:5701...	2024-08-29, 17:56:04	2024-08-29, 17:56:04
online	Message Queue Infor...	2024-08-29, 17:52:28	
online	Network Information...	2024-08-29, 17:52:28	
online	Disk Information @P...	2024-08-29, 17:52:28	
online	IBM i @PPSIBMIDM2	2024-08-29, 17:52:28	
online	Active Jobs Informati...	2024-08-29, 17:52:28	

D'autres événements et alertes peuvent être remontés par l'agent natif IBM i (disk, msgq, CPU, etc.)

Scenario: Montée en charge IWS (ou Java)



Injection de charge et données de performance d'un service (SOAP, REST...)

Scenario: Montée en charge IWS (ou Java)

The screenshot shows a web browser window with the address bar displaying `9.128.137.104:10010/web/services/ftoc/100`. Below the address bar, there are tabs for "IBM Architecture an...", "Most Visited", "DEMO MERLIN", "Watson Code Assist...", and "1. Introduction - Ku". The main content area shows a REST client interface with tabs for "JSON", "Raw Data", and "Headers". The "JSON" tab is active, and it displays a "TEMPOUT: '37.77'" and "8 Calls". Below this, a table lists the calls with their service names, timestamps, and latencies.

Call	Service	Timestamp ↓	Latency
→ GET /web/services/ftoc/1000	2511	2024-08-29, 21:28:10	4ms
→ GET /web/services/ftoc/100	2511	2024-08-29, 21:28:07	2ms
→ GET /web/services/ftoc/100	2511	2024-08-29, 21:28:07	3ms
→ GET /web/services/ftoc/100	2511	2024-08-29, 21:28:07	3ms

Injection de charge et données de performance d'un service (SOAP, REST...)

Scenario: Montée en charge IWS (ou Java)

APPLICATION :

All Services Nov 15 Dernière minute

Aucun problème détecté Pile Amont/Aval Analyser les appels Rétrospective : Désactivé Appel

Récapitulatif Dépendances Services Messages d'erreur Messages de journal Infrastructure Alertes intelligentes Configuration

Appels par seconde

1,858.90/s 109,675 appels au total

Taux d'appels erronés

0.00% 0 appel erroné au total

Temps d'attente moyen

2 ms 2 ms pour 90e

Appels Codes de statut HTTP Nombre d'appels

1XX 2XX 3XX 4XX 5XX Non HTTP

Code de statut HTTP	Nombre d'appels
1XX	0
2XX	1,638
3XX	182
4XX	0
5XX	0
Non HTTP	0

Mises en production

Alertes

Incidents potentiels

Taux d'appels erronés

Taux d'appels erronés

Mises en production

Alertes

Incidents potentiels

Temps d'attente Dépassement du tem

50e 90e 95e 99e Max Moyen

Percentile	Temps d'attente
99 th	36 ms
95 th	5 ms
90 th	2 ms
50 th	< 1ms

Mises en production

Alertes

Incidents potentiels

Scenarior: Montée en charge IWS (ou Java)

APPLICATION :

IBM Instana

Application All Services > 1837 > POST /daytrader HTTP WebSphere Liberty

Aucun problème détecté | Pile | Amont/Aval | Analyser les appels

Récapitulatif | Flux | Messages d'erreur | Messages de journal | Infrastructure

Appels | Temps d'attente | Erreurs

Service	Appels	Temps d'attente	Erreurs
POST /daytrader HTTP	659	116 ms	0.00%
orderejb DATABASE	1,350	2 ms	0.00%
accountejb DATABASE	1,119	< 1 ms	0.00%
quoteejb DATABASE	909	< 1 ms	0.00%
accountprofileejb DATABASE	498	1 ms	0.00%
holdingejb DATABASE	332	2 ms	0.00%
CONNECT DATABASE	4	1.23s	0.00%



IWS/Liberty



OCPDT Library
(database schema)

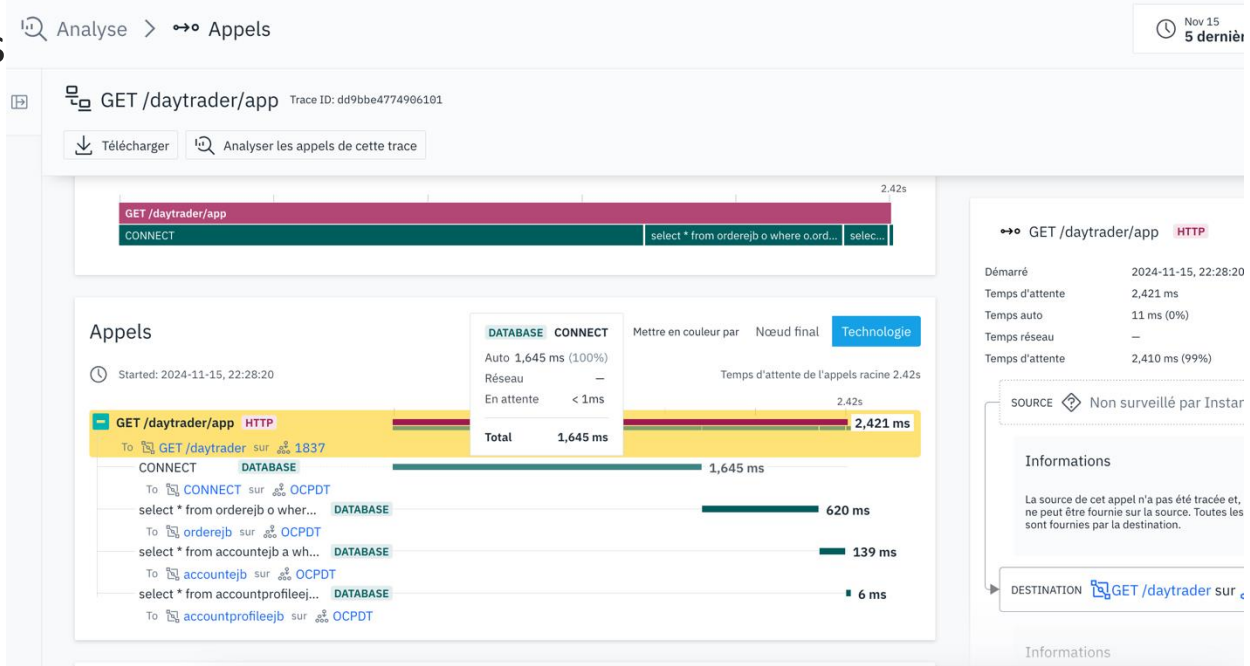
Scenario: Montée en charge IWS (ou Liberty/Java)

ANALYSE :

- Temps de réponse important ?

Determination de root cause quelques instants:

Ici, CONNECT trop long,
 ➔ Pool de connexion trop petit?



Scenario: Montée en charge IWS (ou Liberty/Java)

- ANALYSE :
 - Remontées des erreurs applicatives pour analyse

GET /daytrader/scenario Trace ID: 611cbfbd07605243

Télécharger Analyser les appels de cette trace

Sous-appels 3	Appels erronés 1	Journaux des erreurs 0	Journaux des avertissements 0	Durée 1.99s
------------------	---------------------	---------------------------	----------------------------------	----------------

Chronologie

Démarré : 2024-11-15, 22:16:02

INTERNAL com.ibm.websphere.samples.daytra...	
Auto	861 ms (90%)
Réseau	-
En attente	87 ms (9%)
Total	948 ms

Technologie

! GET /daytrader/scenario HTTP

Démarré 2024-11-15, 22:16:02.969

Temps d'attente 1,991 ms

Temps auto 1,991 ms (100%)

Temps réseau -

Temps d'attente < 1ms

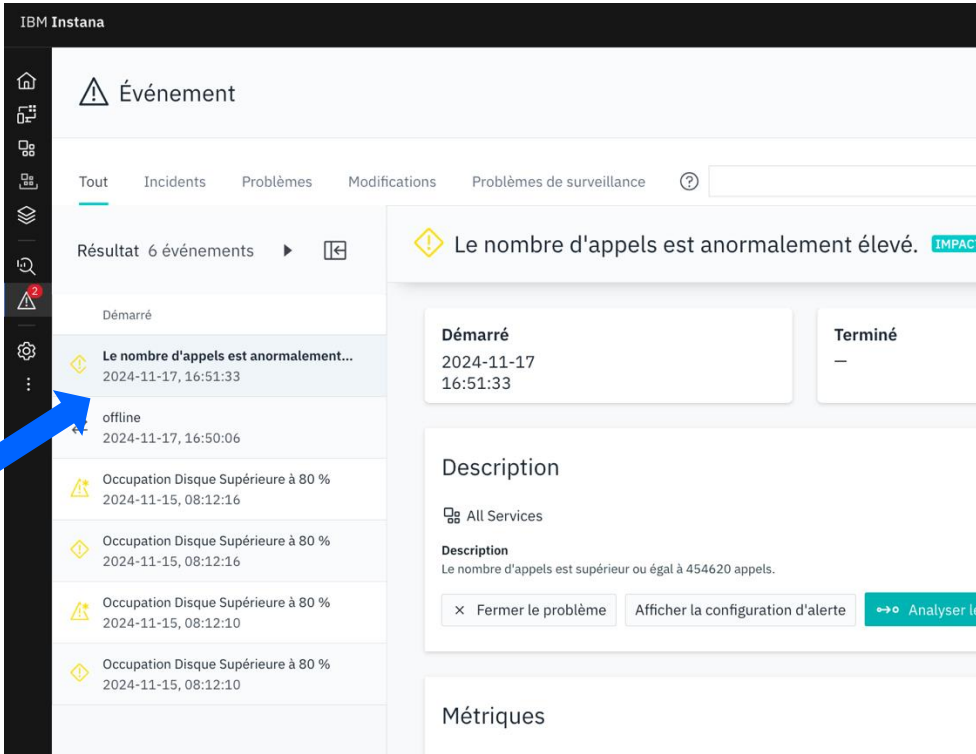
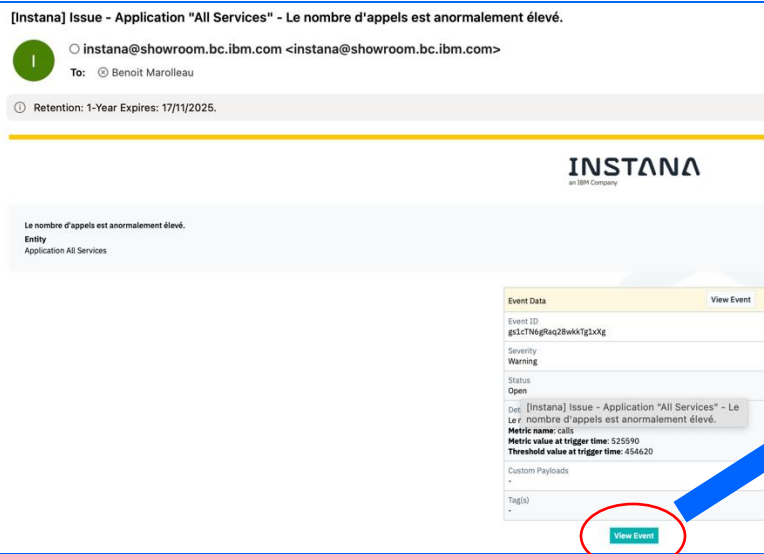
SOURCE Non surveillé par Instana

Informations

La source de cet appel n'a pas été tracée et, par conséquent, ne peut être fournie sur la source. Toutes les informations sont fournies par la destination.

Evènements et Alertes

- ALERTING
ex: Email channel



Evènements et Alertes

- Détail d'un évènement et évènement associés

IBM Instana

Évènement

Tout Incidents Problèmes Modifications Problèmes de surveillance

Occupation Disque Supérieure à 80 %

Cet évènement a-t-il été utile ?

Déclenché 2024-11-15 08:12:10	Terminé —	Durée 14 h 26 m 2s	Gravité Avertissement
--	---------------------	------------------------------	---------------------------------

Évènement déclencheur

08:12:10 * Occupation Disque Supérieure à 80 % DURÉE 14 h 26 m 2s
Activé : IBM i @PPSIBMIDM1

Évènements associés (2)

Timeline showing associated events from 2024-11-15, 08:09:10 to 2024-11-15, 18:09:10. One event is visible: online Activé : IBM i @PPSIBMIDM1.

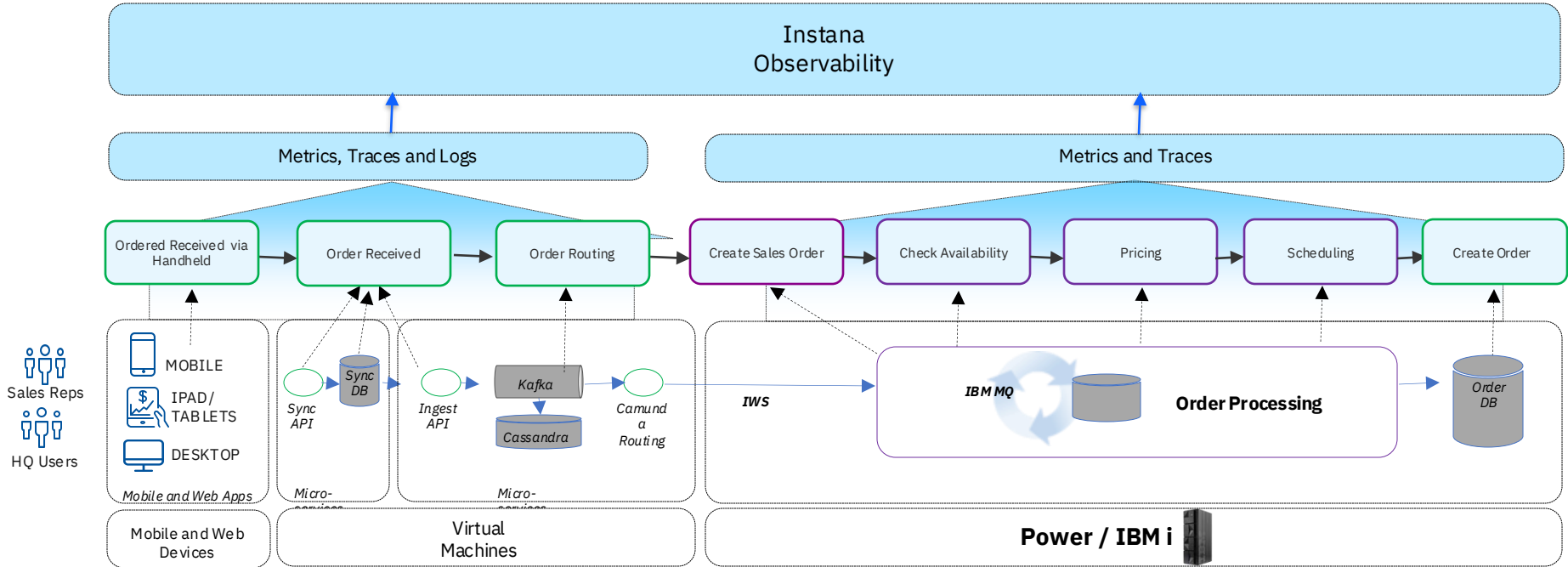


Backup slides

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

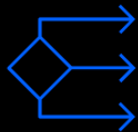
Single Pane of Glass!

- Alert [channels](#) : Slack, Teams, email, Prometheus, Splunk ...
- Intelligent [Action](#) framework : link to docs, **Script**, HTTP, GitHub issue, Jira task etc...



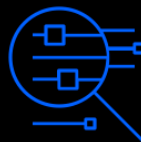
IBM's Hybrid Cloud Management

AI-driven automation of IT



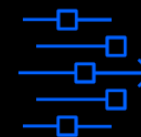
Faster Decision Making

Full-stack, enterprise observability



Smarter Resource Allocation

Dynamic resource management and cost optimization



Analytic Insights

Autonomous problem determination, remediation, avoidance

Observe

INSTANA

an IBM Company

Real-time understanding of environment

Optimize

turbonomic

an IBM Company

Maximize efficiency, compliance

Automate



IBM Cloud Pak for Watson AIOps

Automate IT availability

AI-Powered Automation

IT under pressure: Meeting greater customer demands with fewer skilled employees

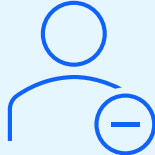
43%

of customers have **changed brand loyalty** due to a bad user experience



50%

of all employees need to upskill or reskill by 2025 for responsibilities arising from automation and new technologies



\$250K

the average cost of an hour of downtime when a revenue generating production service is impacted



IBM Instana Observability

Real-time observability to understand your application and infrastructure stack



Full-stack visibility with context to assure application health and performance

Enterprise Observability



Full-stack application visibility

Mapping, tracing, and profiling

1 second granularity and no sampling

Automatic and Continuous



Self-monitoring, auto-updating single agent

Discovery, deployment, and configuration

Real-time change detection and dependency mapping

Context and Visualization



Zero-configuration dashboards, alerting, troubleshooting

Automatic anomaly detection

Unbounded analytics

Intelligent Action



Root cause analysis with correlated alerting

Guided troubleshooting

Immediate feedback of pipelines and canaries

Instana delivers measurable business outcomes



Risk

- Improved application availability
- Quicker resolution of incidents

↓ 69% MTTD
↓ 52% MTTR
↑ +5 bps Availability



Revenue

- Increased deployment frequency
- Optimized infrastructure spend

↑ 3x Deployments
↑ 75% Cloud efficiency
↓ 50% Cloud spend



Efficiency

- Increased operational efficiency
- Fosters DevSecOps culture

↓ 86% Time & effort
↑ 20% Develops time

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

Acceleration to AI-powered IT Operations separates leaders from their peers...



Provides mission-critical file transfer solutions for companies in 100 countries, receives > 50 million API calls daily. IBM **Instana** provides instant visibility into application performance issues.

56.6%

reduction in mean time to resolution (MTTR)



Worldwide enterprise producing 60 million appliances yearly, automated IT with CP4WAIOps boosting efficiency and contributing to ambitious environmental sustainability goals.

1,000 hours

per year saved



Providence deployed Turbonomic which freed up financial and human resources — which can now be invested into modernization initiatives that provide better healthcare outcomes for patients.

\$2M

reduced Cloud spend



Previously, when one of its SAN volumes ran out of space, Devereux faced a three-hour system disruption. With SevOne NPM they detected the SAN issue hours in advance, instead of having a three-hour disruption

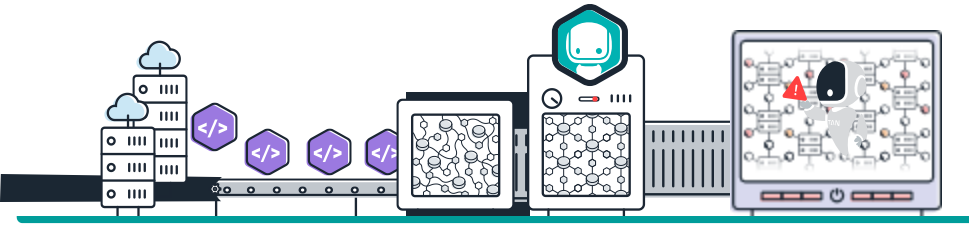
40%

of issues caught before end user impact

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).

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 ingestion charge
- No data storage charge
- **No variable charges!**

Agent Mode	Pricing (SaaS)
IQM (Infrastructure)	20€/mo/agent (ex: IBM i LPAR)
APM (incl. IQM)	80€/mo/agent
On Preams:	SaaS Price + Infrastructure cost

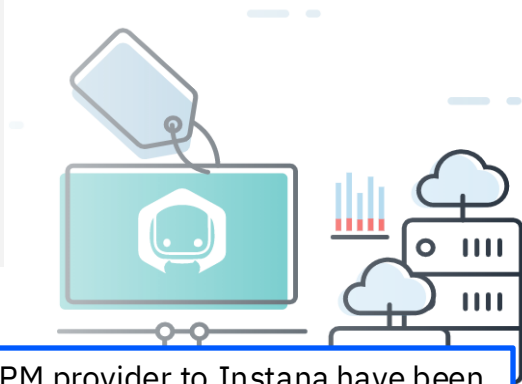
En general , 60-70% IQM, 30-40% APM

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

An IBM Instana user



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.