

NJAMS REACHES PARTS INSTANA CANNOT REACH

MONITORING

IIB / ACE & DATAPOWER

NJAMS VS INSTANA

E-BOOK

Summary

Integrated infrastructure environments can be complex and chaotic.

Monitoring end-to-end processes across an integrated IT landscape can be a nightmare. Finding the right monitoring tool can empower you and your team to quickly identify issues and utilise insights to achieve operational excellence.

This paper looks at monitoring IBM's integration servers, comparing nJAMS and Instana. It highlights how **nJAMS reaches parts Instana cannot reach.**

Introduction

Centralised monitoring of a complete integrated IT landscape has become increasingly business critical.

Identifying, reacting and responding to incidents, measuring business outcomes - across integration platforms, enterprise applications and cloud services are key to drive efficient decision making.

The market place is full of solutions to support system and application integration, selecting the right process visibility suite to monitor these integration layers and components can be daunting. Monitoring integrations can be difficult, the right monitoring tool should simplify the process, support effective monitoring of end-to-end process execution in highly demanding environments.

Here we compare Instana and nJAMS (not Just Another Monitoring Solution) to help identify the best solution to monitor your IBM IIB/ACE and Datapower installations.





Comparison

The tables below provides a quick comparison of the features for nJAMS and Instana in the monitoring of IIB, ACE and DataPower.

Feature	nJAMS	Instana
Performance charts	✓	✓
Alerts	✓	✓
Inter-platform correlation	✓	✓
Path taken through nodes in message flow	✓	✓ IIB and ACE only
Path taken through nodes in subflow	✓	
Show message flow & subflow topology	✓	
Drill down through message flows & subflows	✓	
Track error-handling in subflows	✓	
Search on business data	✓	

There are three main functions highlighted that require further analysis.

- Message flows and sub-flows
- Finding error root cause
- Metrics and Dashboards

IIB/ACE Message flows and sub flows

nJAMS provides details for message flows and subflows at a node level. This is not currently possible within Instana.

Within nJAMS, each message request pictorially displays

- the layout of each flow involved
- highlighted nodes on the path taken
- the elapsed time for each node and its payloads.

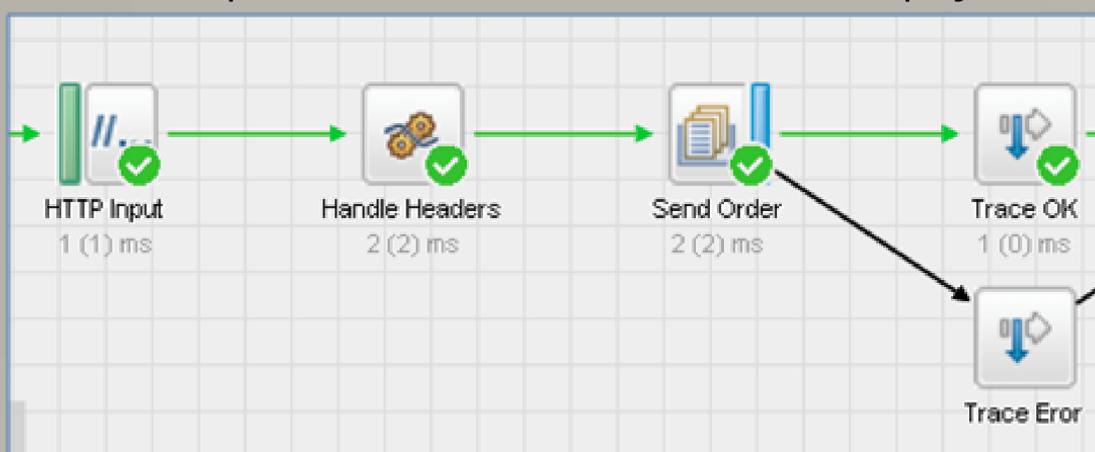


Figure 1: nJAMS Message flow - HTTP input to MQ output



Figure 2: nJAMS DataPower 'client to server' Rule

This level of detail is visible across all the IBM platforms and is essential to provide insight into the cause of business-related issues to enable resolution.

Instana does not go to this level of detail.

Instana's display of the path taken by a message stops at the message flow level for IIB and ACE, i.e. it does not include the path taken within subflows. This is unfortunate, since subflows are where business processing is actually performed. Nodes in the path are displayed as an ever-indenting list. With the number of nodes in a typical flow, this becomes difficult to use.

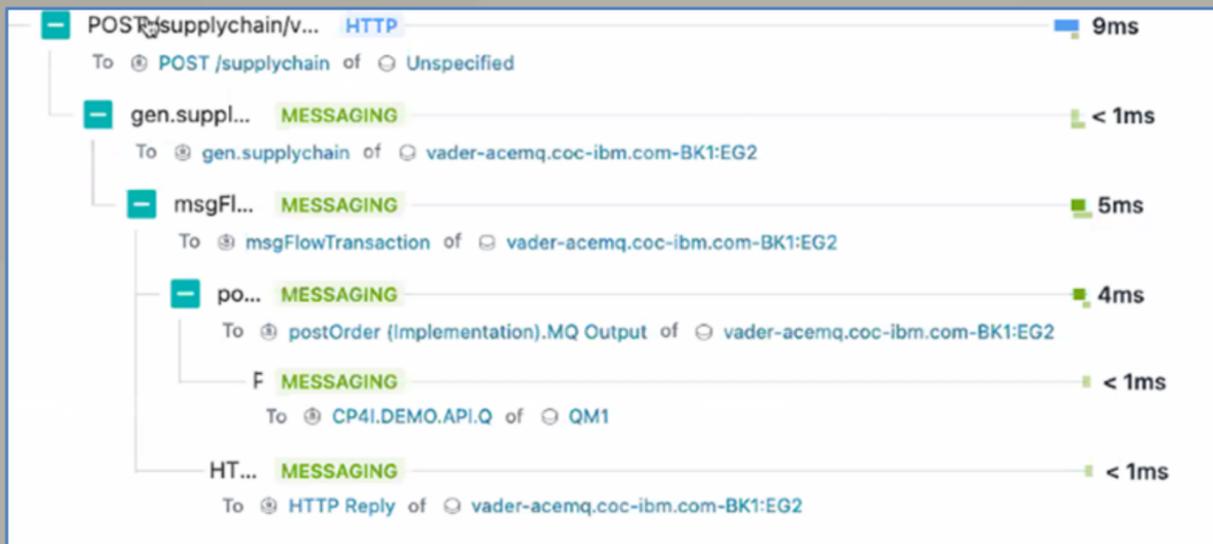


Figure 3: Instana message flow in a REST API

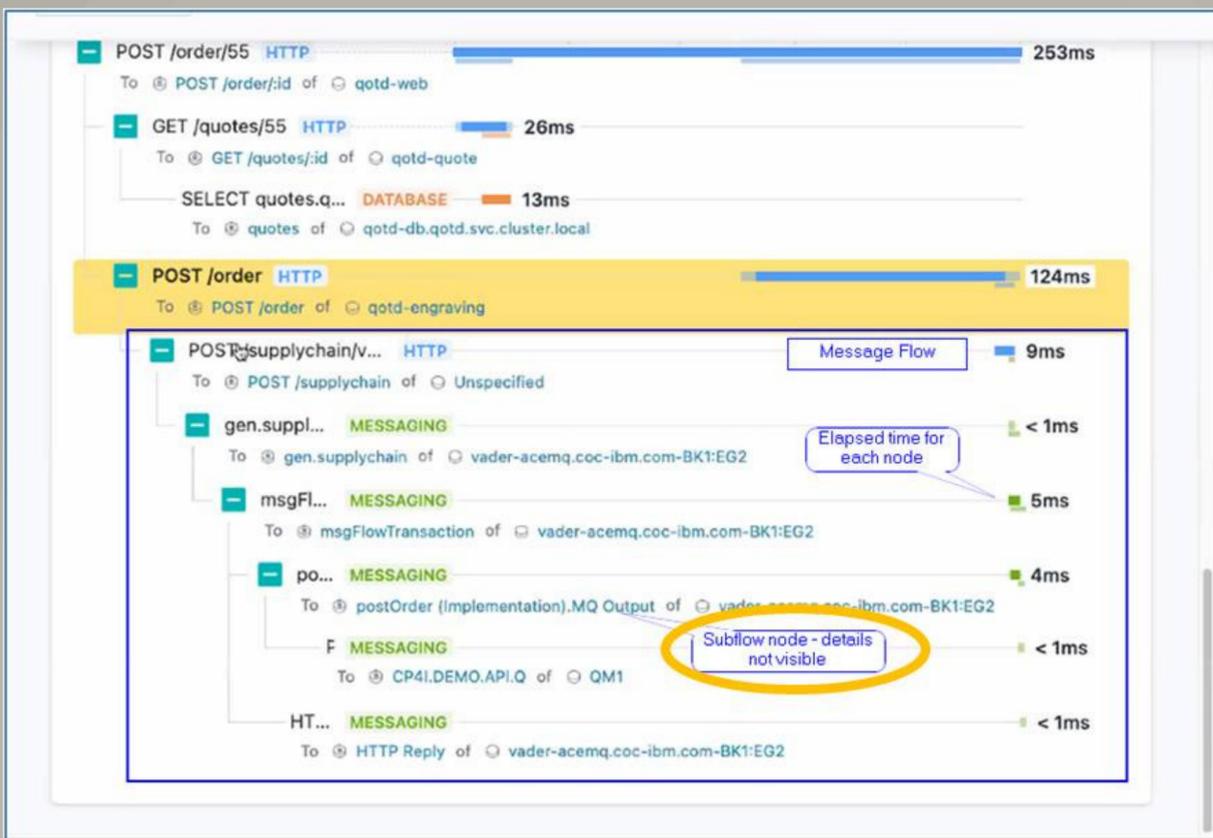


Figure 4: Instana monitoring for a message flow

The above screenshot shows Instana reporting the correlated flow from the source of the message into the message flow, along with the timings for each step. For the message flow, only the nodes through which the message passed are listed. The postOrder (Implementation) is a subflow node – which is where the actual processing for the request is performed, but its details are not displayed.

With nJAMS, you could double-click on the subflow node and see what happened in the subflow.

Instana does not provide any internal details for DataPower.

Finding Error Root Cause

When the root cause of an error lies somewhere within the business logic, we need to turn to business monitoring for a speedy solution.

To demonstrate how nJAMS can provide that speedy solution, the following example shows orders taken by a coffee shop, which are sent to Salesforce to retrieve item details such as price and tax. In this system, the order flows from a handheld device through DataPower, ACE and Salesforce.

An identified order has failed, nJAMS powerful search facility enables the customer's order to be easily located. The screens below show the search criteria and results as seen in nJAMS.

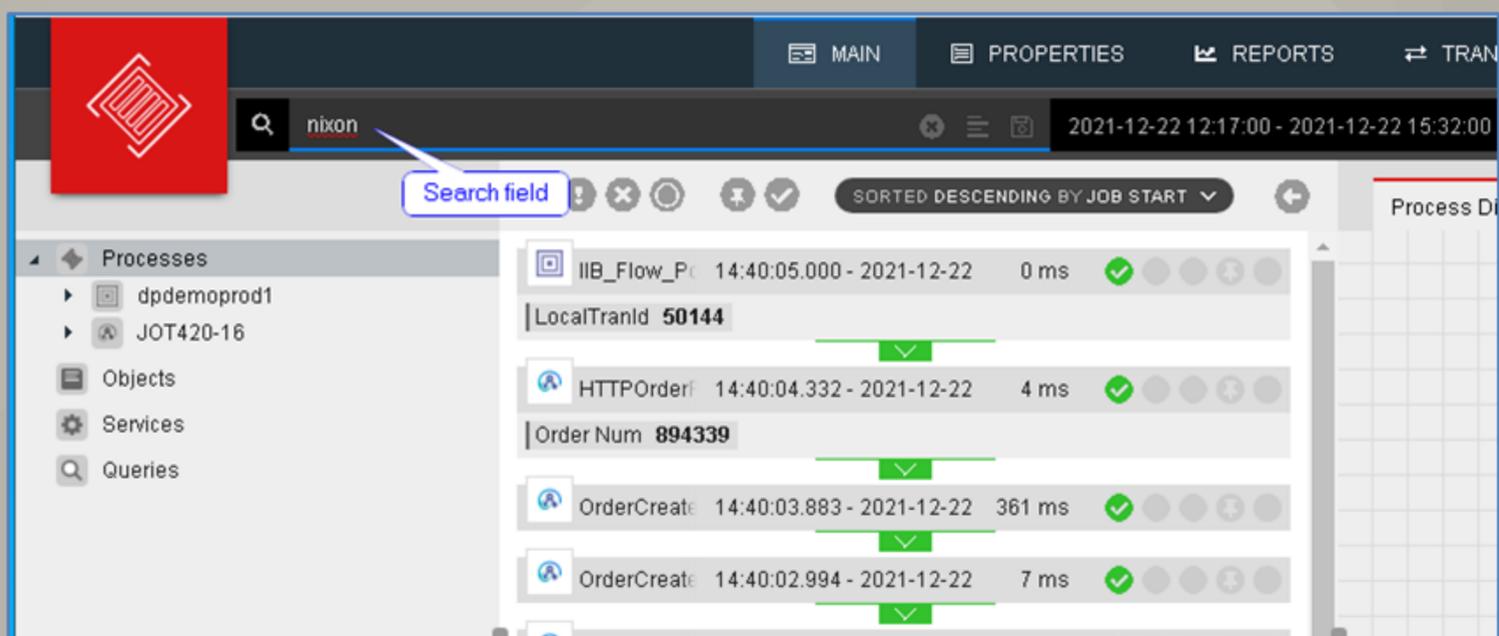


Figure 5: The nJAMS search facility

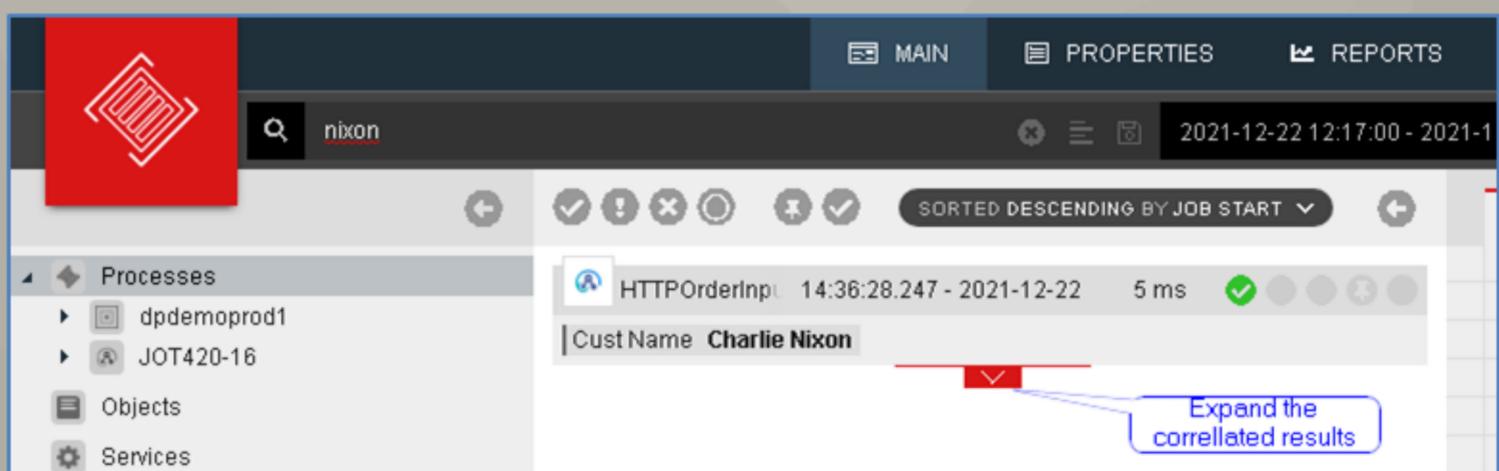


Figure 6: the nJAMS search results

When DataPower sends a request message, it generates a unique Global Transaction Id (GTID). This is used to correlate the ACE flows in the transaction. These correlated results can be expanded for further analysis, shown below.

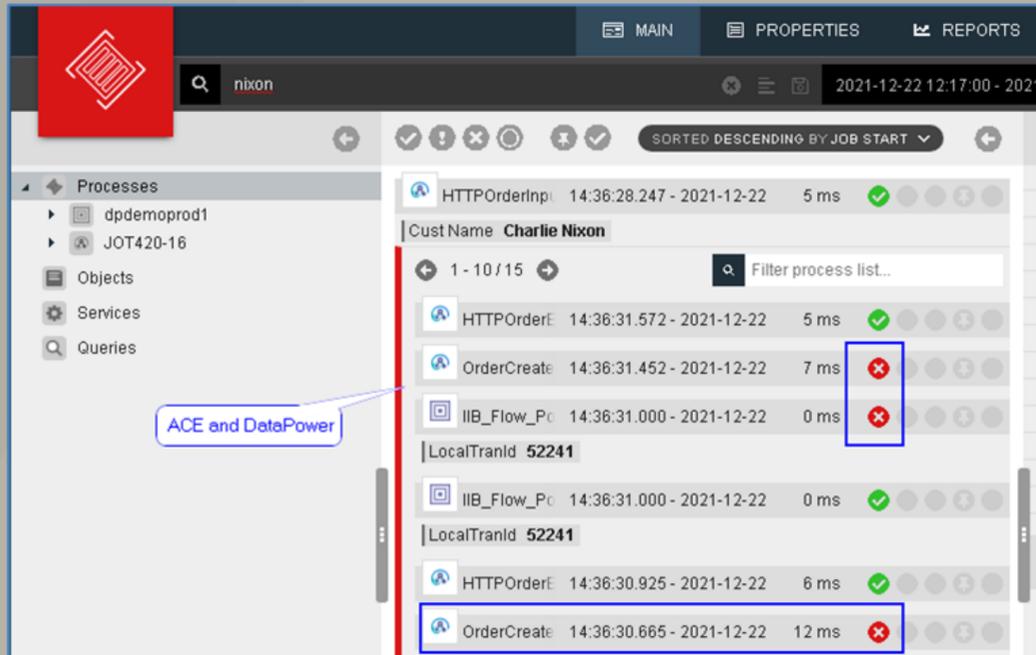


Figure 7: the njAMS expanded results

Those results returning an  indicate an error is being reported. Further investigation tracks the error back through DataPower and ACE to an issue in the product data loaded in Salesforce.

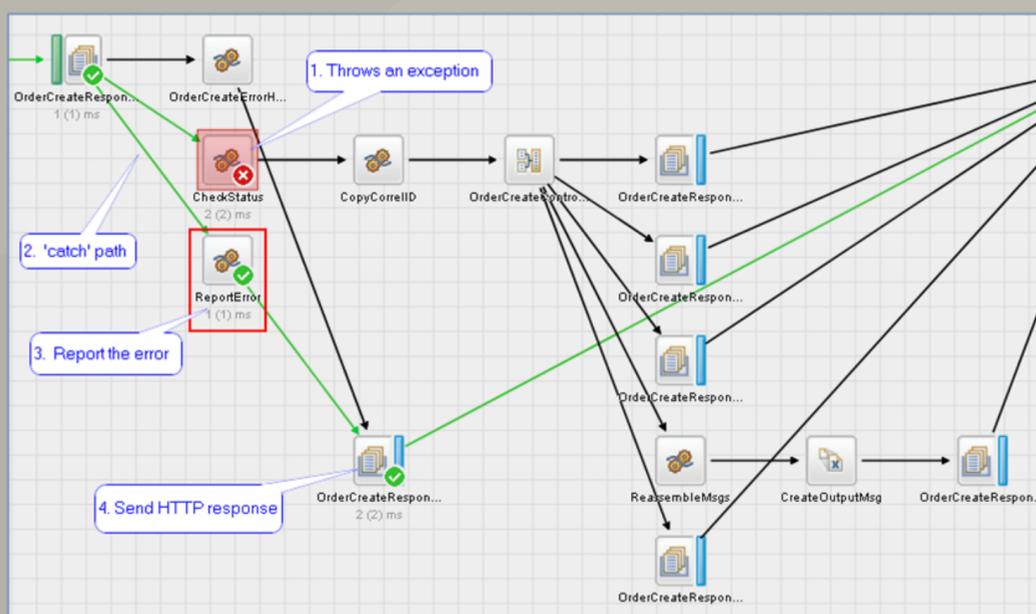


Figure 8: njAMS displaying the nodes in the ACE message flow – note the green lines indicate the path the message has taken through the flow

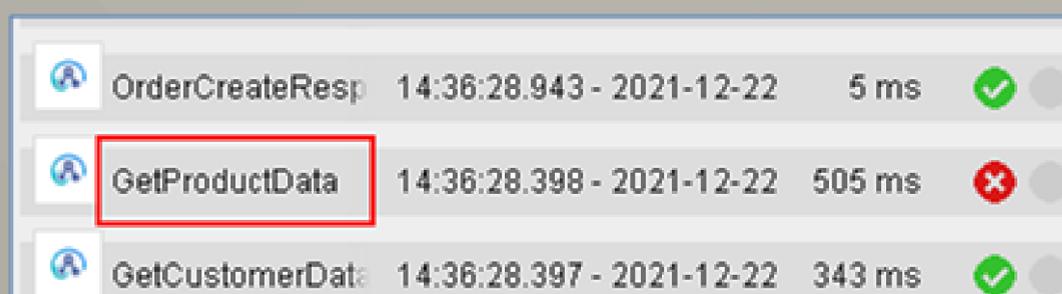


Figure 9: njAMS 'GetProductData' message flow reports an error in Salesforce

It is currently not possible to action this within Instana – therefore no comparison can be made.

Metrics and Dashboards

All monitoring systems' dashboards and graphs provide insight into the performance of your end-to-end workload. This enables you to quickly measure your KPIs against pre-defined SLAs that are crucial for your operations.

Within nJAMS each client has a configuration file that specifies what processes and flow will be monitored. The nJAMS client auto-discovers these items, their topology and their relationships to each other. No changes are required to the server code.

nJAMS helps you visualise your progress, process performance and KPIs on a user-friendly, dynamic dashboard. Real-time alerts allow you to take immediate action when required.

A customization wizard allows users to develop charts tailored for their business needs and role-specific charts enable business and IT users to speak the same language to facilitate effective decision making.

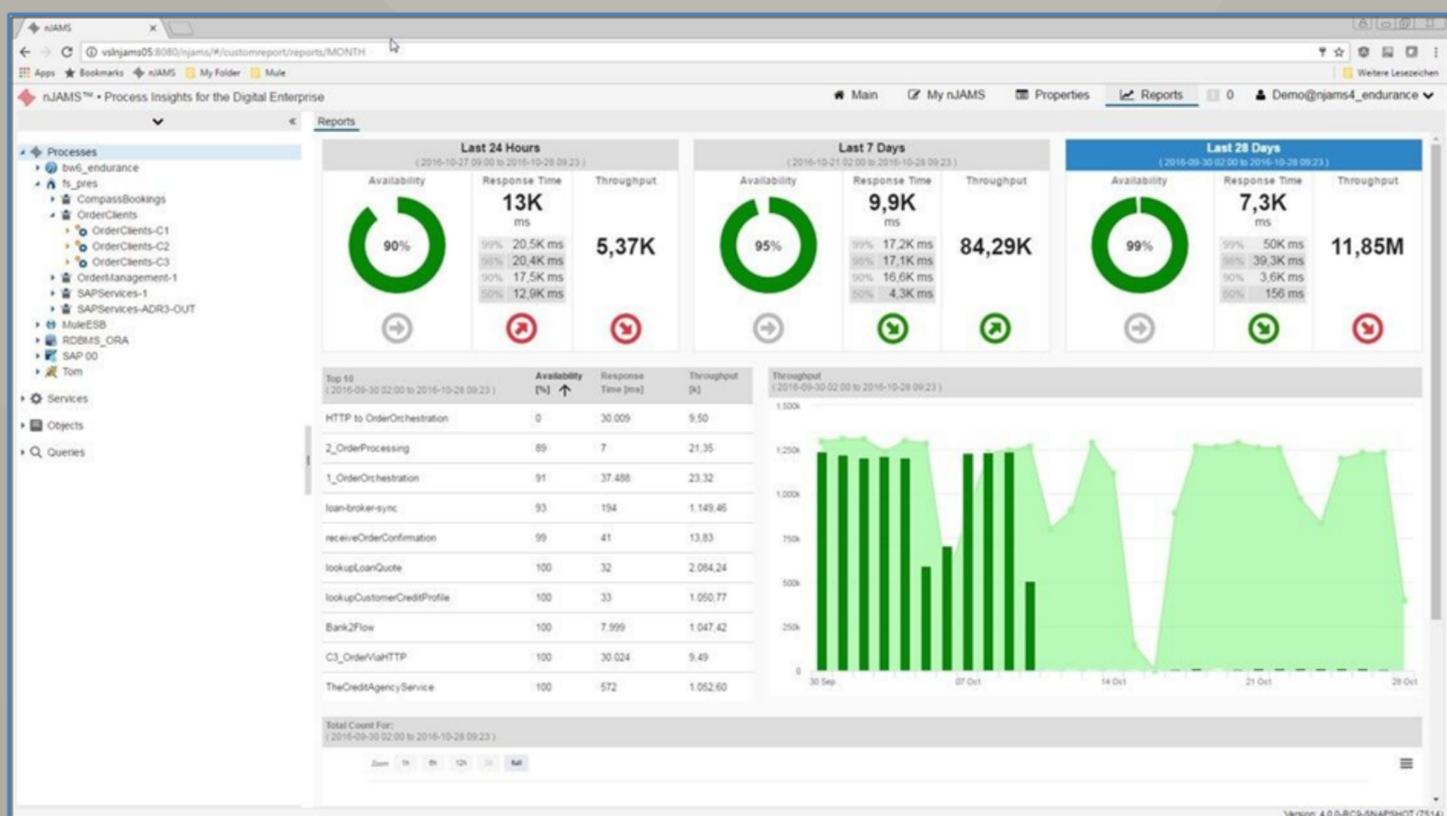


Figure 10: nJAMS dynamic dashboard on the 'Reports' tab

Instana's coverage differs between IBM integration servers. For IIB, ACE and DataPower, each agent's properties have to be configured to define what is being monitored.

Instana's coverage for DataPower is at a Domain level and includes:

- CPU usage
- System load
- File-system usage
- Ethernet interfaces

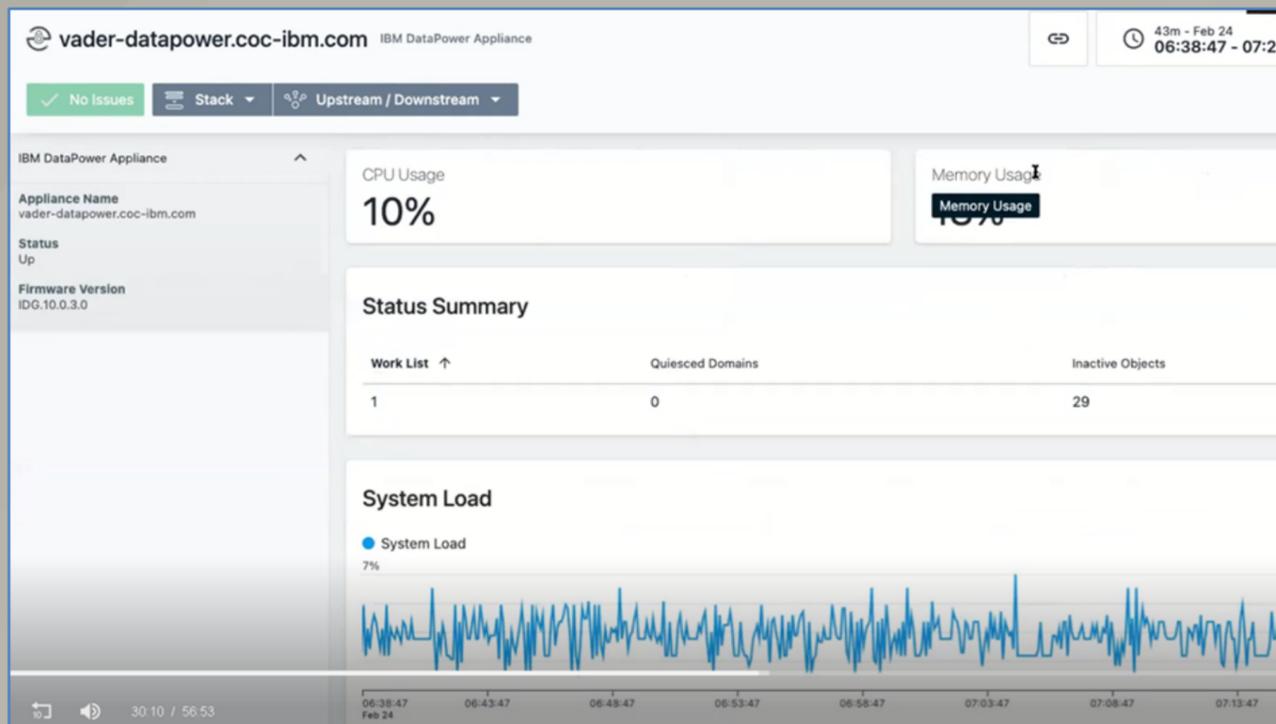


Figure 11: Instana DataPower Domain load and status



Figure 12: Instana CPU usage for a Domain

Instana's monitoring metrics for ACE and IIB include:

- Integration server
 - Initial Heap Memory, Used Heap Memory, Committed Heap Memory
- Message flow
 - Total Elapsed Time, Maximum Elapsed Time, Number of Transaction Commits
- Message flow node
 - Total Elapsed Time, Number of Invocations, Number of Input-type Terminals

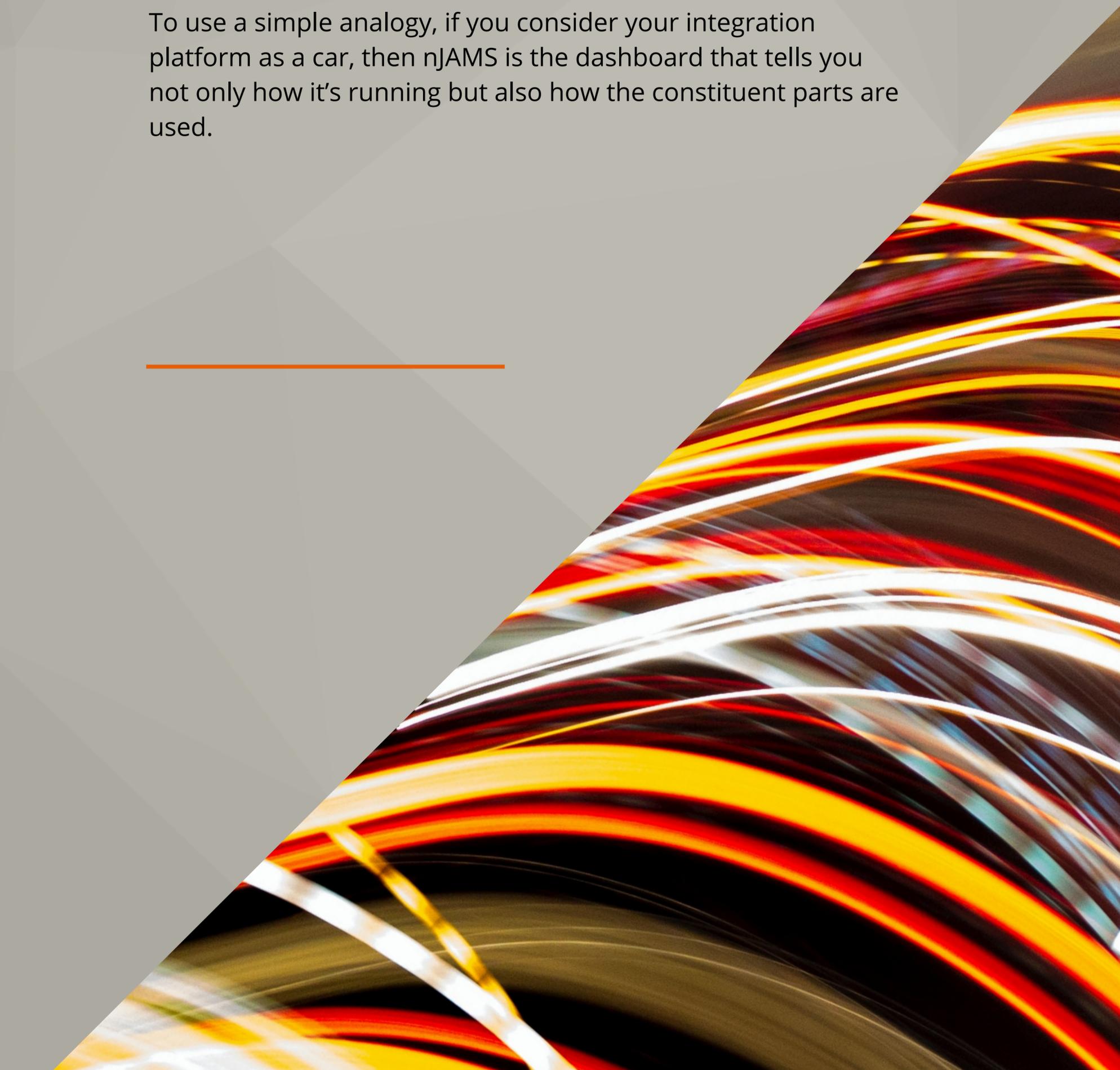
Conclusion

nJAMS reaches parts Instana cannot reach.

Instana is a popular choice as an IBM product. However, it only offers a birds-eye view of IIB/ACE message flow implementations. When placed head-to-head with nJAMS there are obvious gaps in its capabilities and observability.

The Instana product helps troubleshoot and optimise performance, whilst nJAMS takes its capabilities further by helping to deliver and improve business outcomes with its enterprise-wide perspective of process flows and transaction data.

To use a simple analogy, if you consider your integration platform as a car, then nJAMS is the dashboard that tells you not only how it's running but also how the constituent parts are used.



ABOUT US

W3Partnership is an independent provider of business consulting and Integration expertise, offering strategic consulting and Integration services at the point where business and technology converge.

W3Partnership uniquely provides solutions and services that help organisations make sense of their digital applications and services, through integrated platforms and patterns. We are in a position to design, develop, host, manage and monitor such platforms.

For more information or to discuss nJAMS please contact
W3Partnership

0845 868 5041

INFO@W3PARTNERSHIP.COM

Author: John Ormerod
Enterprise Solutions Consultant
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