Virtual IMS User Group

NEWSLETTER 91 | JULY 2023

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Virtual IMS User Group Presentation

SIMPLIFYING IMS PERFORMANCE PROBLEM IDENTIFICATION AND DETERMINATION

James Martin was our June 2023 speaker. He is a Senior Solutions Advisor for *Rocket Software* and has extensive experience working with *IBM© Information Management System (IMS™)* performance tools, including three years with IBM as a client technical professional in the IMS tool space and 10 years at *Fundi Software* in Technical Sales. With his expertise, James presented strategies to simplify IMS performance problem identification and determination during a recent user group presentation. His approach involved using analytics to visualize problems and monitor ongoing operations. In this recap, we will explore the different tools and techniques James recommended to tackle performance issues in IMS.

James began his session with a presentation of the available tooling and how it can help address performance problems. The major tools that can cover most issues include the *IBM© IMS Performance Solution Pack*, *IBM© IMS Transaction Analysis Workbench*, and *IBM© OMEGAMON* for IMS. The Performance Solution Pack includes the *IBM© IMS Performance Analyzer*, *IBM© IMS Performance Investigator*, and *IBM© IMS Connect Extensions*. For more detailed performance metrics and analysis, there is now compatibility for the newest crop of tools on the market.

As James explained, each tool has its own "coverage area" and data granularity that it can provide.

The combination of *IMS Connect Extensions* (with *IMS Performance Analyzer* and *IMS Problem Investigator* (or *Transaction Analysis Workbench*) can provide comprehensive coverage for analyzing the entire transaction lifecycle within IMS. However, if you need details about the calls made by IMS or made into IMS, you should consider the *OMEGAMON for IMS Application Trace Facility (ATF)*. This tool writes the data directly into the IMS log, eliminating the need for data formatting and merging. In contrast, the IMS monitor collects the data into its own dataset, requiring additional steps to incorporate it into problem analysis.

Similarly, in an *IBM® CICS®* DB control environment, *OMEGAMON IMS* and *IMS Performance Analyzer* offer detailed information. However, for an overall picture, other tools are recommended. The *IBM Transaction Analysis Workbench* can allow this deep dive analysis and transaction tracking across multiple subsystems or systems of record in z/OS.

The standout feature of *IMS Performance Analyzer* is form-based reporting. This enables reporting at both the IMS system level and the transactional level. Customizable reports can be built, focusing on metrics relevant to the user. Key performance metrics, such as CPU usage and transaction scheduling, can be monitored and analyzed using this tool. The produced reports allow users to visualize average CPU time usage by transaction schedule and can be manipulated to set ranges and transaction schedules.

Furthermore, the *IMS Performance Analyzer* can generate LIST type forms-based reports, enabling the breakdown of individual transactions. This feature helps identify exceptional transactions or transactions that fall outside the service level agreement.

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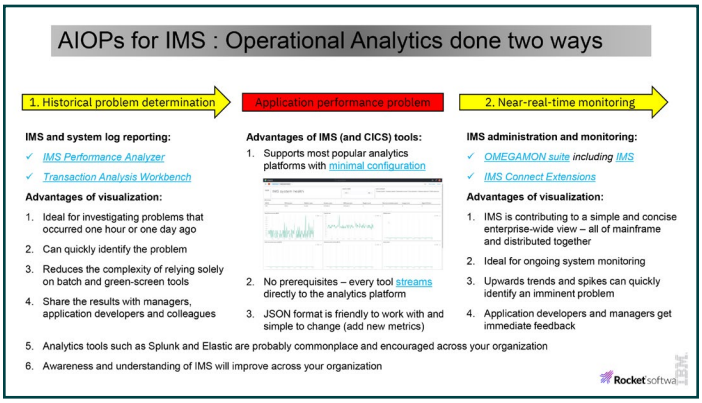
Another unique capability of the *IMS Performance Analyzer* is the production of an *IBM© IMS Transaction Index*. This specialized file simplifies performance analysis and problem determination in IMS by condensing vast amounts of data into a single record for each transaction. The *IMS Transaction Index* can be used in conjunction with the *Performance Analyzer* and tools like *Transaction Analysis Workbench* to track transactions across multiple subsystems, providing valuable visibility into transaction time.

During his presentation, James demonstrated how new tools enable the user to merge multiple data sources for analysis. He used an *IMS Transaction Index*, SMF file and Db2© log to chart and then identify performance issues caused by inefficient table scans initiated by a Db2 stored procedure. This example showcases the power of consolidating instrumentation data in a single tool to track a transaction from start to finish, facilitating the identification of performance issues in IMS and Db2.

As if it needed more functionality, the *IMS Performance Analyzer* includes a reporting section specifically designed for (ATF) records. These detailed reports can contain data such as CPU time, elapsed time in DLI Db2, CPU times, and elapsed times in Db2. Although retrieving this level of information requires combining multiple records and monitor-level detail, ATF reports can provide valuable insights not available through other tools.

Another way to analyze the data that you collect is to forward instrumentation data to off-host platforms. There are options for near real-time data analysis, such as Live Feed, Log Forwarding, and Enterprise Level reporting. Depending on your goals, you can use a number of tools for this.



The *OMEGAMON Data Provider* creates JSON streams into off-host analytics platforms, allowing users to monitor their system in real-time. Similarly, *IMS Connect Extensions* can provide near-live data by streaming JSON lines into platforms like Splunk and Elastic.

For batch analysis, *IBM Transaction Analysis Workbench* can forward all IMS-related logs, including *IMS Log*, *OMEGAMON ATF*, select SMF for CICS, Db2, and z/OS. The *IBM© IMS Problem Investigator* and *IMS Performance Analyzer* can also produce CSV files, while IBM is actively developing functionality for streaming JSON to platforms like *Elastic* and *Splunk*.

At the enterprise level, the *IBM© Z Common Data Provider (CDP)*, integrated with *IBM© Z Operational Log and Data Analytics*, offers near real-time operational analytics by streaming system logs, including SMG and SYSLOG. Additionally, tools like IBM zWIC and zWIN enable interdependency analysis across different z/OS workloads.

The *IMS Performance Analyzer and Transaction Analysis* Workbench are effective for historical problem determination, while the *OMEGAMON* suite, including IMS and *IMS Connect Extensions*, excels at near real-time system monitoring by intercepting and consolidating data in JSON format. *IMS Connect Extensions* offers more than just performance reporting; it includes operational capabilities for managing *IMS Connect* within the enterprise.

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NEXT VIRTUAL MEETING - AUGUST 8, 2023, 10:30 AM CDT

What does IBM Z Cyber Vault mean for an IMS environment

With both internal and external cyber-attacks on the rise, customers must deal with adherence to government regulations, fines for non-compliance, and most importantly negative publicity and customer impact if an attack does occur. While most customers have disaster recovery plans in place, recent events have revealed that DR not enough in the event of a cyber-attack. In this session, we'll give a brief introduction to the *IBM© Z Cyber Vault* solution, how it differs from DR, and how it can help customers reduce recovery time by providing an environment to help detect the attack sooner and verify recovery procedures before recovering to the production environment. Then we'll dive a bit deeper into what this means specifically for an IMS environment.

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Product Manager,
IMS Tools and z/VM Tools
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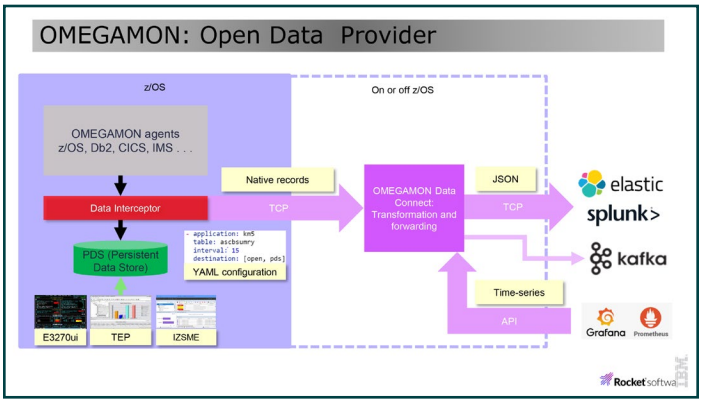
Modern performance tools are invaluable for modernizing systems and creating accessible performance metrics. These tools empower not only mainframe experts but also managers and application developers both on and off the mainframe. The *Transaction Analysis Workbench* provides the power of the *IMS Problem Investigator* across all subsystems, further enhancing visibility.

Ultimately, leveraging modern performance tools establishes a connection point with new generations of employees and enables effective communication with management and decision-makers. The strategic and current information they provide equips organizations with greater control. As James aptly stated, "the more information we have, the more power we have."



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NEWS AND ANNOUCEMENTS

- The user group has been in existence since 2007 and is well-respected among users of *IBM® IMS®*. The user group gives its sponsors an opportunity to show that they are working with, and helping to build, the IMS user community.
  Contact virtualusergroups@gmail.com for more information.
- After you register for our next event on August 8, save the date for our October 10th session with Edge Consulting's Stan Muse.
- Catch our IMS Sponsor BMC at SHARE next month!

ARTICLES AND BLOGS

- Updated Report Finds Mainframe Market is Projected to Grow to $2.90 Billion by 2025—July 3, 2023—Database Trends and Applications
- Green Cargo CIO avoids being shunted into legacy sidings—July 5, 2023—diginomica.com

Click HERE to complete our Poll!
We want to know how we can make the Virtual IMS User Group better.

ABOUT THE VIRTUAL IMS USER GROUP

The Virtual IMS user group was established as a way for individuals using IBM's IMS hierarchical database and transaction processing systems to exchange information, learn new techniques, and advance their skills with the product The Web site at https://itech-ed.com/virtualims provides a central point for coordinating periodic meetings (which contain technically-oriented topics presented in a webinar format), and provides articles, discussions, links, and other resources of interest to IBM IMS practitioners. Anyone with an interest in IMS is welcome to join the Virtual IMS user group and share in the knowledge exchange. The Virtual IMS user group is free to its members.

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