Welcome to the Virtual CICS user group newsletter. The Virtual CICS user group at virtualcics.hostbridge.com is an independently-operated vendor-neutral site run by and for the CICS user community.
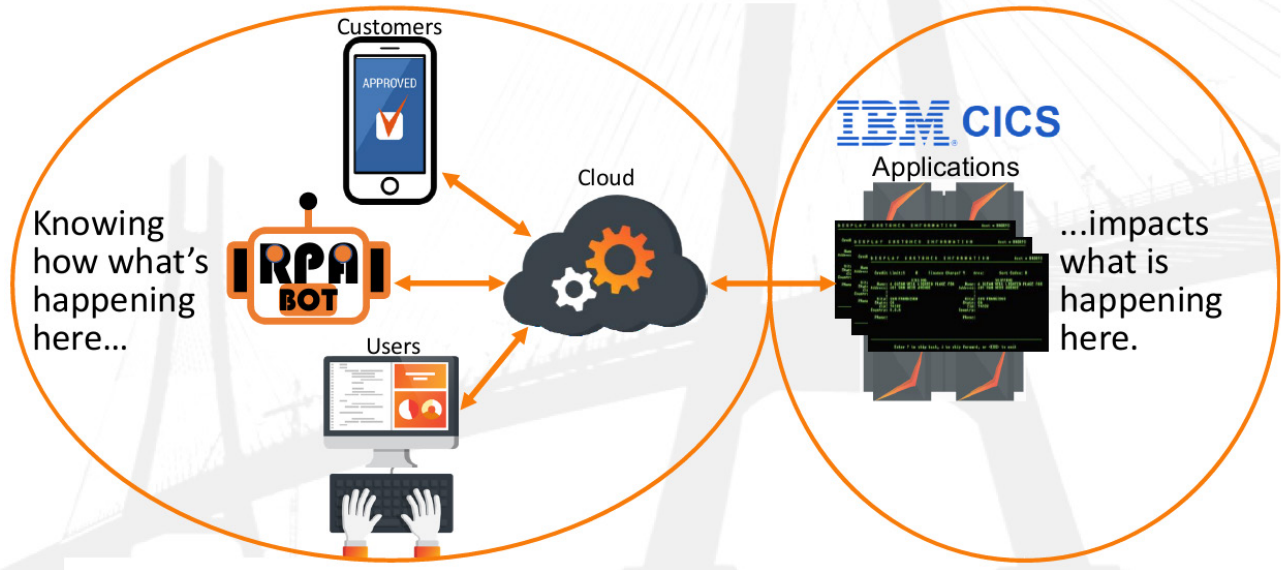
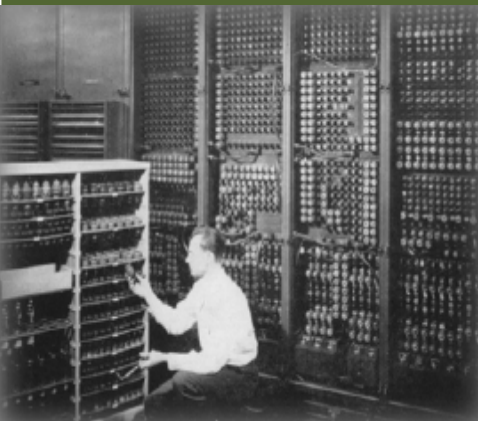Figure 1: What are Integration Analytics?

Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, "Getting and Using CICS Integration Analytics". It was presented by Russ Teubner, CEO and co-founder of HostBridge.

HostBridge is a provider of CICS integration, orchestration, modernization, and analytic software and services. Russ has conducted pioneering work in integrating IBM mainframes and applications with other systems and networks. He has been a contributing author to various

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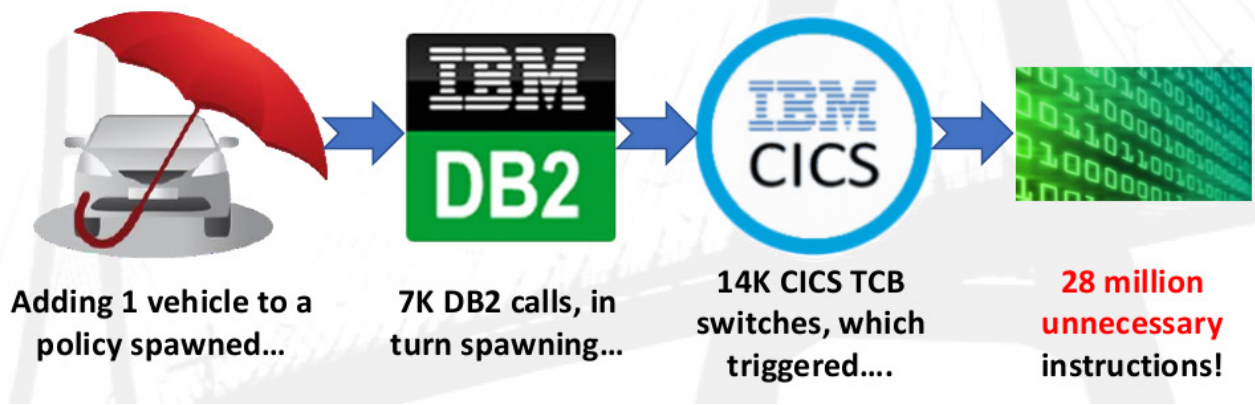
Figure 2: What integration analytics revealed

technical publications, and is the co-author of US Patent No. 6,981,257 pertaining to XML enablement of CICS applications, with other patents pending. His strategic business partnership with IBM spans decades, and he enjoys a long-standing relationship with the IBM CICS Lab in Hursley, home of CICS development.

Russ Teubner started off by explaining why it was important to move from the scenario in Figure 1, where the mainframe world is separate from other IT platforms to one where they were integrated. That way, he explained, integration analytics could provide end-to-end transaction tracking. Users could see and understand (with precision) the interaction, and understand how the off-host activity drives the mainframe workload.

The reason that sites need this is because mainframes are participants in hybrid IT strategies. Not all distributed apps are 'good citizens' in their mainframe interactions. Integration analytics lets users:

- Identify the offenders to optimize or remediate.

- Develop new, high-performing integrations.

Russ then used some case studies to illustrate his point. The first one was an auto insurer using a third-party core CICS business applications where:

- A routine business process – adding a vehicle to a policy – was spawning lots of mainframe activity.

- The activity was hard to forecast, difficult to manage, and consuming cycles at an unexpected rate.

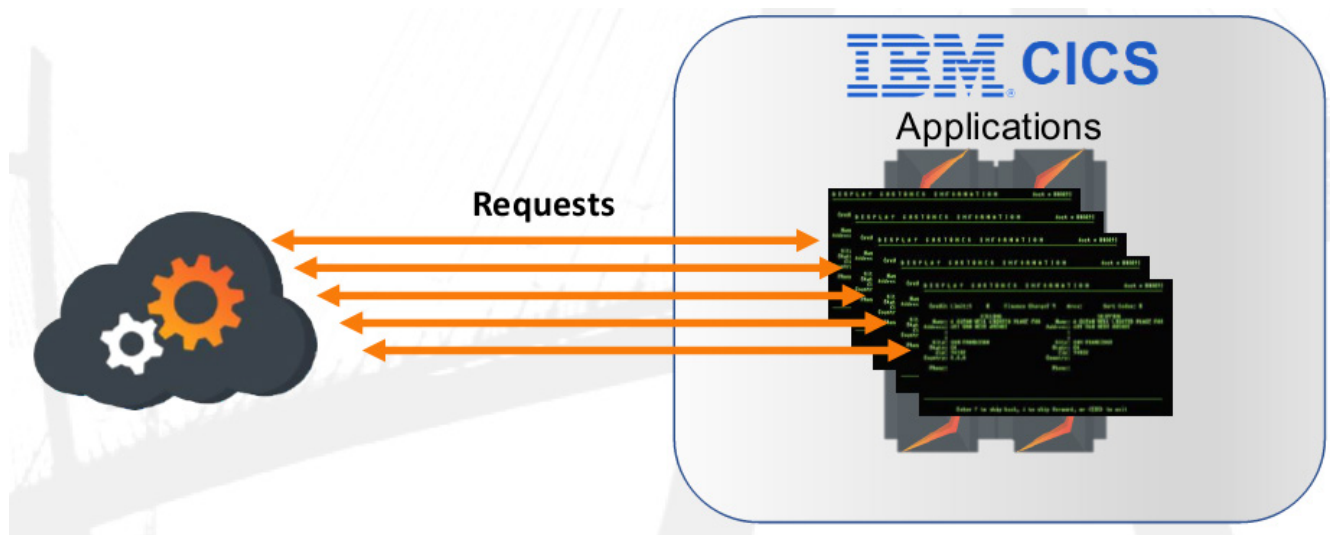Figure 2 shows what integration analytics revealed. The insurer used the findings to get their ISV to change the application.

Case study 2 was a public sector organization that found unexplained spikes in their CICS workload. This:

- Increased processing costs.

- Caused a performance bottleneck.

- Prevented other workloads from processing in time.

Integration analytics recommended a simple JavaScript step that reduced the multiple requests to a single request.

Case study 3 was a global tech supply chain that saw their business volume increasing in a linear manner, but their mainframe transactions were increasing exponentially. What integration analytics revealed was that although the end users were only sending a single transaction

Figure 3: What integration analytics revealed

each, an RPA (robotic process automation) bot was using screen scraping to retrieve data and creating hundreds or thousands of transactions per user. This was reducing efficiency, creating latency, and adding to their costs. Integration analytics recommended that data retrieval be changed to using an API rather than screen scraping. The result was that the bot now made a single call to the CICS API. Efficiency went up, and latency and costs went down.

Russ informed the group that the foundation of their integration analytics was SMF 110 records. The HostBridge Transaction Analytics Connector (HTAC):

▪ Runs inside CICS

▪ Leverages CICS Transaction Tracking infrastructure

▪ Extracts origin data/ metadata from external requests

▪ Annotates SMF 110 records with additional "origin data".

Customers see dashboards that perform analysis using Splunk. They can then see the kind of information illustrated in the case studies. An example dashboard is shown in Figure 4.

Russ Tuebner then posed the question whether CICS users needed integration analytics. He suggested the answer was 'yes' if people have:

▪ Unexplained spikes in performance or workload

▪ No or limited visibility into what is driving their CICS workload

▪ A need to identify inefficient applications/ practices

▪ High/unexplained volume from screen-based apps

▪ It's been a long time since they looked "under the covers!"

That was because it provided a complete, end-to-end view of hybrid apps that include CICS.

For people who have never done this before, Russ did offer some options, to get a feel for integration analytics. Firstly, people could send HostBridge some SMF 110 records. 1-2 hours of production data is enough. They will perform analysis and present dashboards to customers using an online meeting
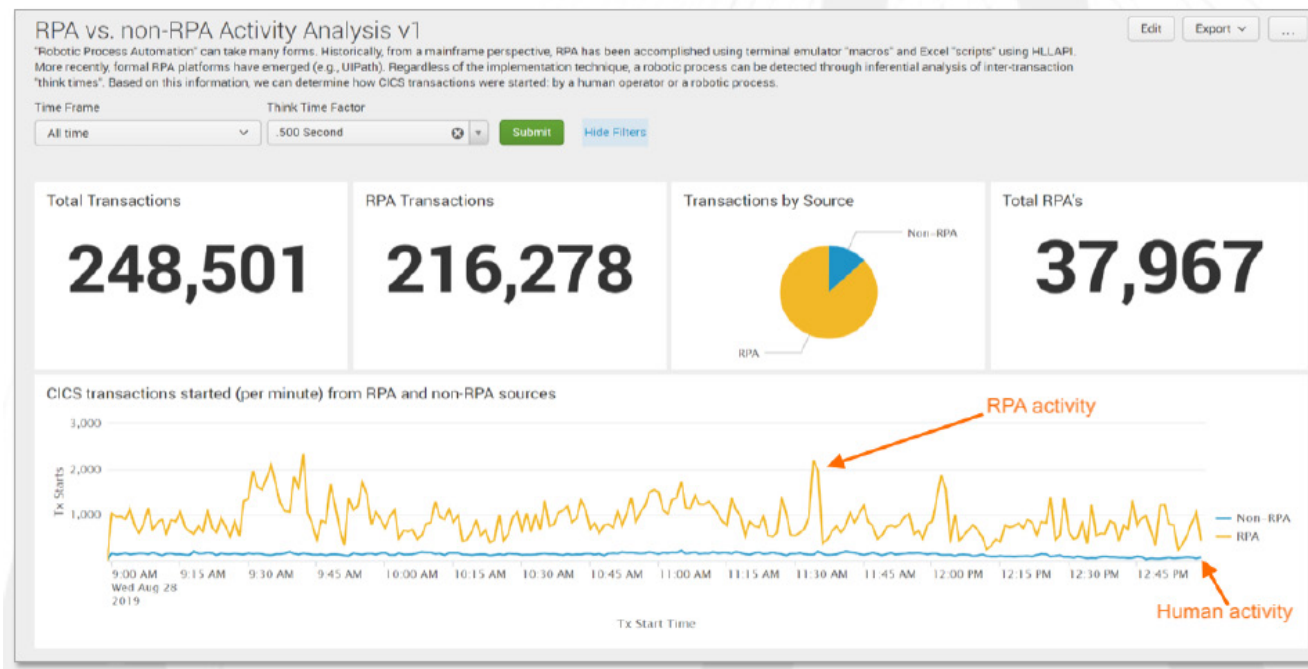
Figure 4: An example dashboard

The second option is onsite (for people with Splunk). They will make HTAC available for installation/demo on the customer's system. They will then provide remote support to perform analysis and use dashboards. Their third option was ongoing. They would offer services for dashboard building, analysis, and optimization consulting.

A copy of Russ Tuebner's presentation is available for download from the Virtual CICS user group website at virtualcics.hostbridge. com/presentations/ CICSanalyticsJul20.pdf.

You can see and hear the whole user group meeting at https://youtu.be/ hphmUAilSt4.

Meeting dates

The following meeting dates have been arranged for the Virtual CICS user group:

• On 8 September, we have Colin Pearce discussing "Installing and Connecting to CICS EXPLORER for a single CICS region".

• The following meeting is on 3 November, when Ezriel Gross, Principal Solutions Advisor, Rocket Software will be speaking.

We are using Zoom for the user group meetings.

CICS news

Microsoft has announced Host Integration Server 2020 (HIS 2020), which

allows organizations to use Microsoft services and products to connect to IBM tools such as CICS 5.4, z/OS 2.3, IBM i 7.3, MQ 9.1, and Db2, using industry-standard High Performance Routing (HPR) and TCP/IP. This reduces operating expenses and total cost of ownership while supporting existing and new computing workloads.

More information can be found at https://redmondmag. com/articles/2020/06/03/ host-integration-server-2020. aspx

Recent CICS articles

Additional CICS Products With Powerful Uses by Joseph Gulla in IBM Systems Magazine (20 July 2020).

> HostBridge is now offering services, support, expertise, and even free pilot software to help organizations rapidly make CICS applications available.

https://ibmsystemsmag.com/Trends/07/2020/additional-cics-products

6 CICS Products With Key Importance and Focus by Joseph Gulla in IBM Systems Magazine (9 July 2020): https://ibmsystemsmag.com/Trends/07/2020/6-cics-products

Improve Operation and Maintenance with IBM Z Common Data Provider by Qian Xia Song, Ai Ping Feng, and Ya Nan Tian in IBM Systems Magazine (24 June 2020): https://ibmsystemsmag.com/IBM-Z/06/2020/ibm-z-common-data-provider

Integrating Screen-Based CICS Applications: UI versus API

A recent blog at hostbridge.com/cics-integration-ui-versus-api/ looks at continuing to get the best value from CICS applications. This value is often contingent on allowing applications to participate fully as part of a hybrid IT strategy.

By far, the biggest challenge users face is integrating screen-based CICS applications into a hybrid IT environment. Too often, they mistakenly assume that an application's 3270 interface is the only point of integration for these terminal-based apps. This can lead to predictable problems such as brittle applications (any change in the position of a field can break the integration) and performance issues (screen scraping solutions can add milliseconds, or seconds, to the integration response time).

A far better approach is to access the application field name and value pairs, before the application generates a screen. This can be achieved using the HostBridge JavaScript Engine (HB.js), which runs within CICS on the mainframe. Developers can use HB.js to create an interface to any type of CICS application. The API makes these apps available as callable Web services from any other application, on or off the mainframe. Invoking the API is as simple as sending an HTTP request to HB.js to run the integration script. The script runs and returns JSON, REST, SOAP, XML, or whatever standard format the hybrid application requires.

Changes to the CICS application do not affect the integration. HB.js also provides orchestration by acting as a lightweight, federated automation engine running within CICS.

About the Virtual CICS user group

The Virtual CICS user group was established as a way for individuals using IBM's CICS TS systems to exchange information, learn new techniques, and advance their skills with the product.

The Web site at virtualcics.hostbridge.com 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 CICS practitioners. Anyone with an interest in CICS is welcome to join the Virtual CICS user group and share in the knowledge exchange.

To share ideas, and for further information, contact trevor@itech-ed.com.

The Virtual CICS user group is free to its members.