



Virtual CICS user group: Newsletter 62



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.

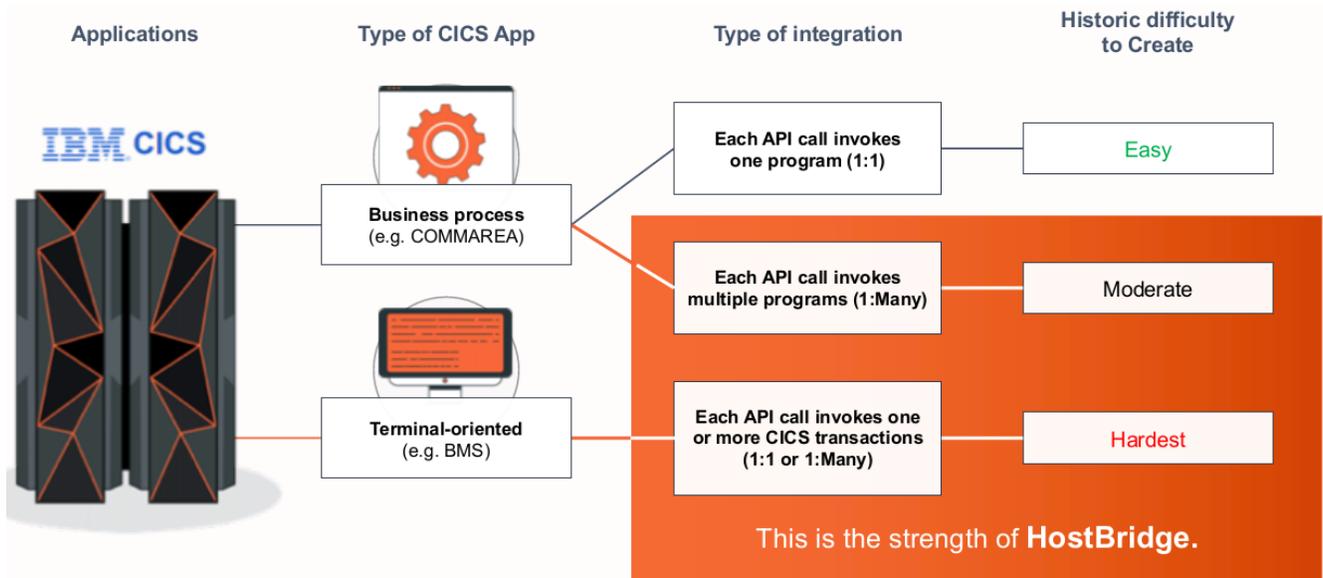


Figure 1: HostBridge Simplifies Difficult Integrations with APIs

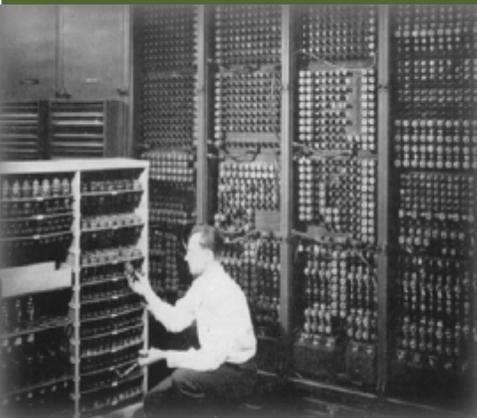
Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, "Building a CICS API". It was presented by James Alexander, Director of Technical Services for HostBridge Technology.

James has over three decades of experience in mainframe systems programming and managing large IT organizations. He currently manages Technical Services and HostBridge product support, where his primary duties are advising and supporting

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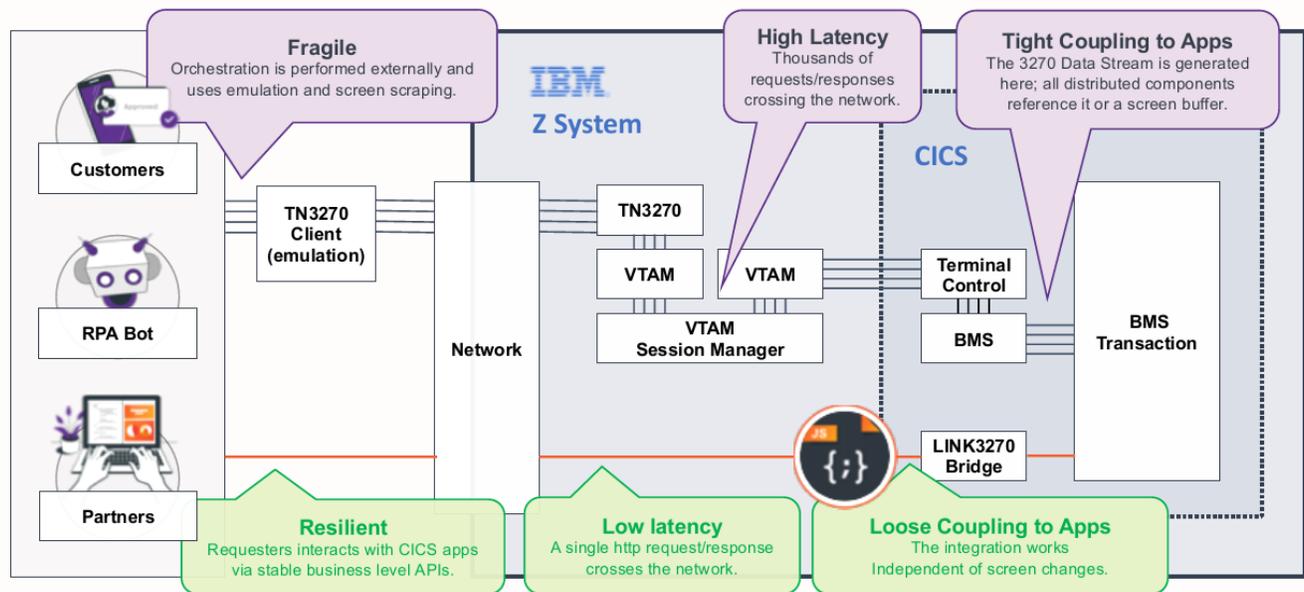


Figure 2: Evolving mainframe integration

customers in their CICS modernization, optimization, and integration efforts. Prior to HostBridge, he was head of IT services for Oklahoma State University, where he set direction for IT services – including network operations – and oversaw integration of disparate technologies into uniform business solutions.

James Alexander started the session by saying that he wouldn't spend too much time running through the slides he had, but would spend the time actually building an API from scratch.

Figure 1 illustrates which areas have traditionally been easier when it comes to integrating APIs and which have been harder.

The next slide looks at API design and suggests that

not all APIs are the same. Technology-based APIs are platform dependent, expose implementation details, need more effort/skill, require implementation level coupling, and are a bottom-up approach. Whereas business-level APIs are platform agnostic, driven by workflow logic, require modest effort, use business flow coupling, and are a top-down approach.

The evolving nature of mainframe integration is shown in Figure 2.

Modernization using the API philosophy allows mainframe sites to:

- Leverage existing business logic on the mainframe

- Deploy business-oriented APIs to expose it
- Extend the reach to cloud, web, or mobile platforms
- Evolve their hybrid IT world.

Moving on to API fulfilment, Figure 3 illustrates how the HostBridge JavaScript Engine works.

Figure 4, the slide that James showed, illustrates that more than just integration is needed, API orchestration is the key to scaling success. The HostBridge JavaScript Engine (HB.js) offers:

- API Implementation via CICS-based Orchestration
- Supports any/all CICS-based apps and data

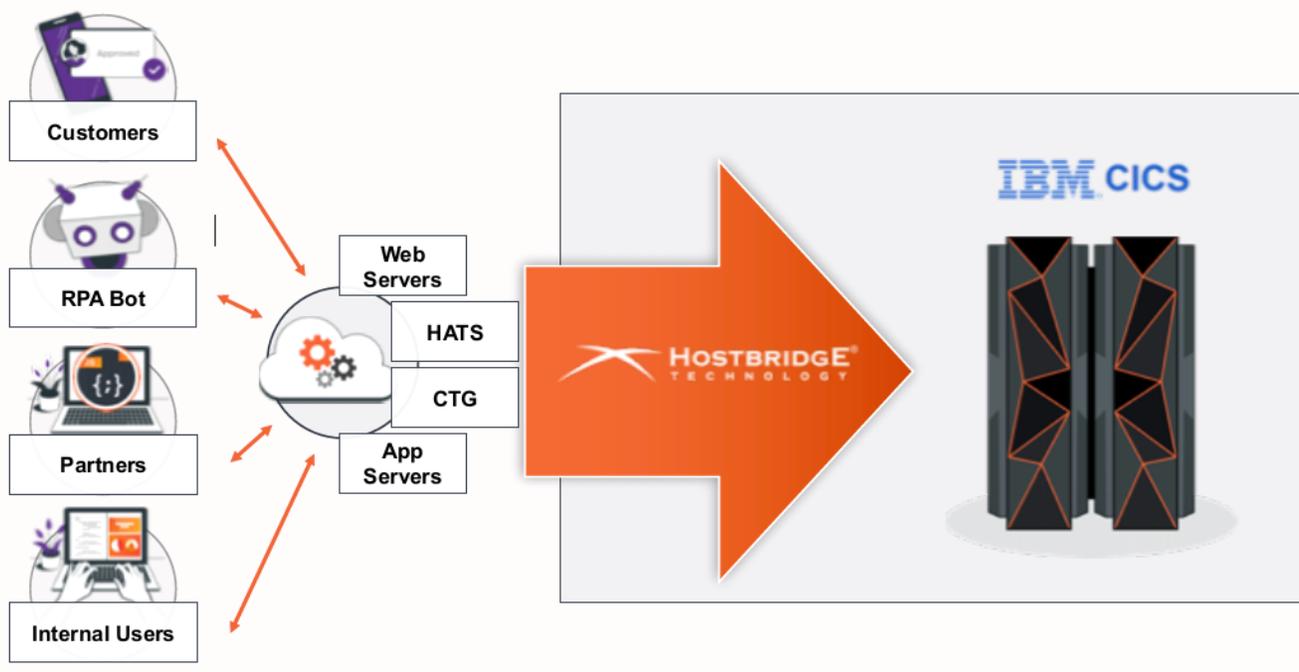


Figure 3: HostBridge JavaScript Engine

- Eliminates screen scraping for BMS transactions
- Easy to create and deploy APIs
- Server-side JavaScript that runs natively under CICS and is zIIP-enabled
- Quick ROI, and creates a strategic “pivot point”.

The next slide shows the advantages of using HB.js, which were:

- Performance with low latency
- Speed, both in terms of development and deployment

- Efficiency, because it has a minimal mainframe footprint
- Agnostic because it is standards-based.

James spent most of his presentation showing how to create an API from scratch. He also said that HB.js pilot software was available to anyone who was interested.

A copy of James Alexander’s presentation is available for download from the Virtual CICS user group website at virtualcics.hostbridge.com/presentations/CICSAPIMay21.pdf.

You can see and hear the whole user group

meeting, and watch the step-by-step way to build an API, at <https://youtu.be/2PF7pvmo8m4>.

Meeting dates

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

- On 13 July, we have Colin Penfold, Technical Leader for IBM CICS Transaction Server Security, will be discussing, “What’s New in CICS Security”.
- The following meeting is on 14 September when Colin Pearce will be discussing, “Collecting and Analysing CICS Statistics”.

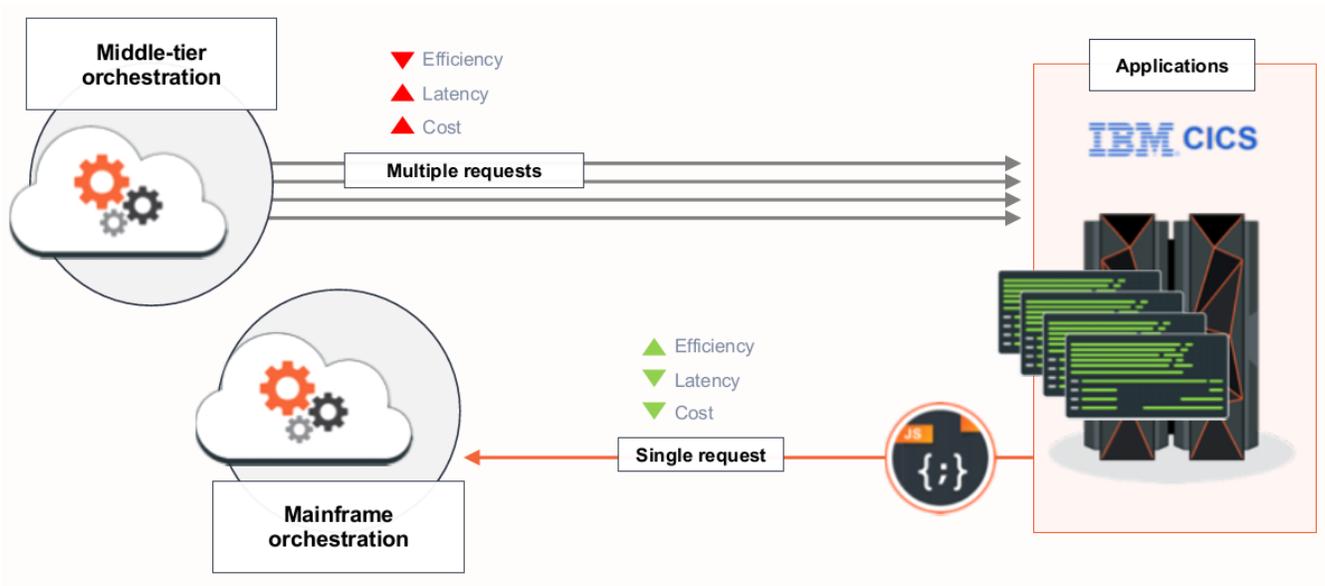


Figure 4: More than Integration – API Orchestration

We are using Zoom for the user group meetings.

Recent CICS articles

The CICS Command Level Translator by Darren Beard and Andy Wright in Enterprise Tech Journal (Issue 2 2021). You can find the article at: <https://mydigitalpublication.com/publication/?i=708161&ver=html5&p=24>.

Using APIs for CICS Modernization.

A recent blog at <https://www.hostbridge.com/apis-for-cics-modernization/> looked at modernizing CICS using APIs. It suggested that modernizing mainframe applications is an important element of many digital

transformation strategies. Letting legacy apps participate in the hybrid cloud is a high priority for the IT organization. It can also save money.

Not All APIs are the Same, API design fits into two categories:

- 1 Technology-based APIs: these are platform-dependent APIs that expose the details of the current implementation of some business logic or data. This API type requires more effort and skill to exploit because of the tight-coupling these APIs create.
- 2 Business-level APIs: rather than developing APIs to call specific programs, it's better to design APIs around

business-level activities. Rather than build an API to call a program, a business-based API allows the invocation of a particular business process. These APIs are platform agnostic and expose workflows. They make it unnecessary for the programs that wish to use the APIs to worry about the technical details of the API, or the artifacts underneath them. They create a loose-coupling that requires less effort to use, and they are less brittle than technology-based APIs.

Business-level APIs are critical because they create an enterprise “pivot point”, ie they satisfy objectives for both the mainframe and the cloud computing

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

environments. Where screen scraping is the pervasive integration technology, it leads to an unwillingness to evolve the applications out of fear the change will break the integration. Decoupling the implementation from the use of an API lets us decouple development activities, timelines, and in general reduce the risk.

On the cloud side of the modernization challenge, rather than having to focus on technology-based APIs, the focus is on enabling the business process. Using business-level APIs creates a loose coupling that makes it easier to extend and scale functionality. As a result, it's easier to evolve mainframe assets and extend them to the hybrid cloud. The business-level API serves as a pivot point when the organizational objective is migrating business logic off the mainframe. A business-level API simplifies this migration in this way:

- 1 Create a business-level API to the existing mainframe application.

- 2 Use the API to access the business logic on the mainframe.
- 3 Develop the business logic on the new platform.
- 4 Redirect the API to the logic on the new platform whenever it's ready.

The API becomes the pivot point for migrating business logic. Business-level APIs are both strategic and tactical at the same time, depending on an organization's migration strategy. Regardless of where business logic will ultimately run, the best, first step is creating an API that makes it available. Such an API preserves the flexibility to evolve the backend while also serving as a strategic pivot point for possible future migration.

We can summarize our philosophy of using APIs for CICS modernization in this way:

- 1 Leverage existing business logic that runs on the mainframe.
- 2 Deploy business-level APIs to make this logic available.
- 3 Extend the reach and business value of these underlying System Z components to cloud, web, or mobile platforms.
- 4 Evolve your hybrid application portfolio quickly and easily.

The blog goes on to give a case study of this kind of modernization.

HostBridge has the technology to build business-oriented APIs for CICS modernization. The HostBridge JavaScript Engine (HB.js) allows the creation and implementation of APIs inside 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.