Virtual CICS user group: Newsletter 52

Welcome to the Virtual CICS user group newsletter. The Virtual CICS user group at www.fundi.com/virtualcics is an independently-operated vendor-neutral site run by and for the CICS user community.

Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, “Mainframe Integration – Handling Legacy Application Challenges”. It was presented by Glenn Schneck, Principal Technical Architect at GT Software.

Glenn has 44 years of IT experience and has 35 years of CICS Systems Programming experience in insurance, entertainment/ theme parks, and banking. Glenn has been a speaker at numerous conferences and is currently the Project Manager of the CICS Project at SHARE. Glenn is currently a Principal Technical Architect at GT Software.

Glenn Schneck started the session by saying that the mainframe is definitely not dead, and there’s lots

Figure 1: Lessons learned, war stories, successes

happening on the mainframe. For example: 71% of Fortune 500 companies use mainframes; mainframes handle 87% of all credit card transactions; mainframes handle 68% of the world’s production IT resources, yet they account for only 6% of IT costs; mainframes handle 30 billion business transactions a day; and as

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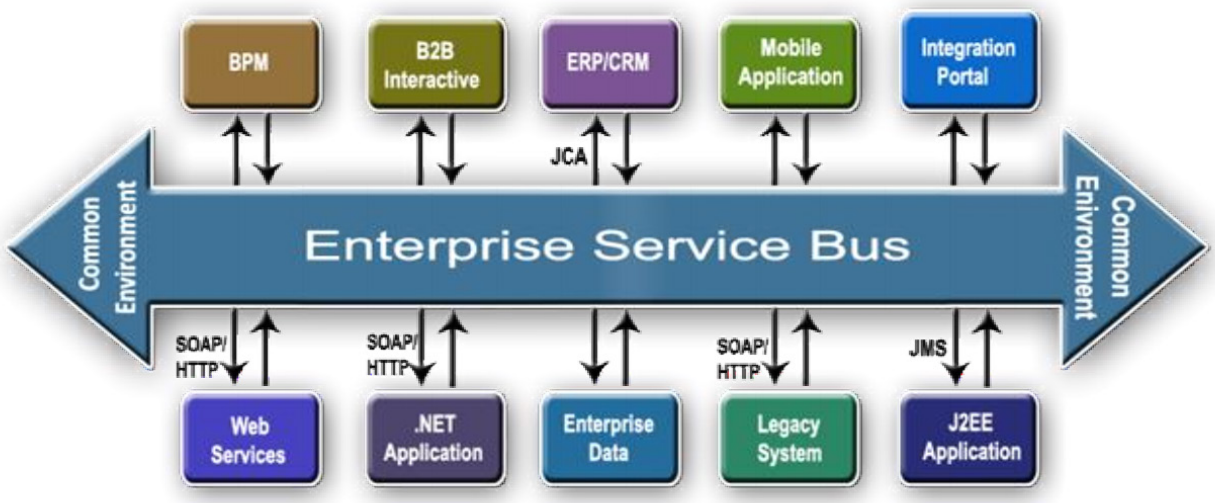

Figure 2: Enterprise Service Bus

of 2017, 92 of the world's top 100 Banks continued to use mainframes.

Glenn went on to describe today's business needs, which include: building and deploying APIs rapidly; Web self-service, mobile/ cloud, and BYOD; real-time access to enterprise data residing on any platform; integrated views of related information; customer and business focused IT Industry standards; and integration between mainframe and distributed systems.

Glenn suggested that, for most sites, using APIs involved getting things wrong a few times before getting it right (see Figure 1).

Many sites felt that they were making the most of APIs because they had an Enterprise Service Bus that they used to connect different parts of their enterprise (see Figure 2), but that wasn't enough.

Glenn had some more questions for sites to answer about whether they had the right mainframe integration technologies. Here are his questions:

- How old are your legacy backend applications?
- What technologies are they using?
- Is the application code structured or unstructured?
- Did your core applications first start out as commercial offerings?
- What third-party components are embedded in the code?
- How complex is the code and data structure design?
- Do your support teams fully understand the application?
- How many coding 'standards' have been used over the past years?

Glenn Schneck then gave us some thoughts about understanding your legacy applications and API requirements:

- Most mainframe online applications were designed to interact with 3270 terminals (end user dialog).
- Integration technologies should be transparent to the backend systems.
- Changing legacy code to work better as an

Figure 3: Legacy mainframe apps

API introduces more complexity and code to manage.

- Fine grain APIs (microservices) may be easier to build, but put more work onto the consumer.
- The more intelligent the API, the less effort for the API consumer processing logic.
- Legacy mainframe apps are like a box of chocolates, it is hard to see what's inside (see Figure 3).

Legacy application complexities can include:

- Message switching / multiple program calls
- Multiple input and output messages
- Variable length, multi-part messages, different layouts
- Complex structures (REDEFINES and ODO – Occurs Depending On)
- Null terminations, non-standard code
- Screen macros
- Conversational dialogs
- External and other 3270 applications
- Complex conversational transactions.

APIs are like building blocks that can be used to build new applications.

Your CICS transaction could be talking to the Web, mobile, COTS (commercial off-the-shelf) products, Cloud, ESB, BI tools, Blockchain, AI, RPA (robot process automation), and others.

To enable that, requires consumer API processing logic and an API manager. There will be REST APIs and SOAP APIs. And, as well as IMS, the environment may include some or all of: Github (source version control); Jenkins (automation); .NET, Java, Node.js, COBOL; Linux (Red Hat) JBOSS; Tomcat (HTTP Web server environment); MoogSoft (AI platform for IT operations); dynatrace (application performance management, artificial intelligence for operations, cloud infrastructure monitoring, and digital experience management); and UrbanCode (DevOps approach to orchestrate, automate and deploy applications, middleware and database changes into development, test and production environments).

Glenn then looked at design methodology. You can use base services, which are closely matched to individual transactions when possible. Or you can use composite services with combined calling of multiple base services for a business service. And you can have outbound calls to third-party software from COBOL.

When it comes to a financial example, and to illustrate the

surprising complexity, Glenn knew of companies with links from IMS systems of record to:

- Instant Payment (Europe)
- Outbound calls to Google resources
- Outbound calls to Credit resources
- Outbound calls to Account Control Website
- Outbound calls to Terrorist Check sites
- Inbound API calls to existing IMS transactions with no code change
- ATM system inbound APIs (SOAP then REST).

Glenn then showed some real-life companies that have started to use APIs and GT Software's Ivory Suite.

He also discussed where these APIs can be stored – for example IBM API Connect, 3scale, CA/APIM, MuleSoft, and Apigee.

A copy of Glenn Schneck's presentation is available for download from the Virtual CICS user group Web site at fundi.com/virtualcics/presentations/CICSLegacyAppChallengesSep19.pdf.

You can see and hear the whole user group meeting at https://youtu.be/QO60kB94uUY.

Meeting dates

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

- On 12 November 2019, Eugene S Hudders, President of C\TREK Corporation, will be discussing "CICS TS LSR Tuning Revisited".
- The following meeting is on 14 January 2020, when Ezriel Gross, Principal Solutions Advisor at Rocket Software, will be presenting.

We are using Webex for the user group meetings.

Recent CICS articles

CICS libraries now available in Maven Central by Nina Ben Cox on CICS Developer Center (10 September 2019). You can find the article at: https://developer.ibm.com/cics/2019/09/10/maven-central-dependencies/

CICS PA adds new capabilities by Nina Mirski-Fitton on CICS DevCenter (21 August 2019). You can find the article at: https://developer.ibm.com/cics/2019/08/21/cics-pa-adds-new-capabilities/

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 www.fundi.com/virtualcics 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.