Virtual CICS User Group

CICS

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Virtual CICS User Group Presentation

USING CICS ARTIFACTS TO BUILD WEB SERVICE APIs

During our most recent CICS Virtual User Group Session, we had the privilege of listening to a presentation on the topic of "Using CICS Artifacts to Build Web Service APIs." The presentation was delivered by James Alexander, a seasoned software engineer with extensive experience in mainframe systems programming. James delved into the issue of legacy applications running on mainframes and the formidable challenge of accessing their underlying business logic. He introduced a groundbreaking concept—harnessing JavaScript engines installed within CICS to streamline business processes and create web service APIs, all without the need to alter existing applications.

In his opening remarks, James offered an insightful overview of the current state of systems. Astonishingly, there still exist between 200 and 800 billion lines of COBOL code in active production today. Simultaneously, the demand for web and mobile applications has surged to unprecedented levels. Given the substantial costs and, more crucially, the inherent risks associated with relocating applications or modifying their codebase, companies are actively exploring innovative avenues to unlock the potential of their mainframes and bring them into the modern era.

During his presentation, James presented a solution involving the installation of a JavaScript engine within CICS. This, in turn, facilitates the creation of web service APIs without necessitating any modifications to the host code. James underscored that the JavaScript engine employed is derived from Firefox and is optimized for CPU efficiency while operating on the Zip. He stressed that the services are sourced directly from the host, preserving the security, high availability, and exceptional throughput offered by the mainframe environment. To illustrate the practical application of this solution, James conducted a live demonstration employing Eclipse as the development environment. The demo showcased how to create a straightforward web service and seamlessly deploy it within CICS.

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NEXT VIRTUAL MEETING - November 14, 2023, 10:30 AM CDT

CICS and Recovery

CICS recovery provides the fundamental support for successful transaction processing. This presentation will discuss the concepts of recovery, and how they are applied within a CICS environment. It will talk about the relationships between transactions, units of work, logstream data and syncpoint processing. The various types of CICS restart will be considered, along with the actions CICS has to complete for both dynamic transaction backout and emergency restarts. We will discuss the different ideas within commit processing, and see how CICS manages its log data written to the z/OS Logger.

REGISTER

Andy Wright
IBM Master Inventor

USING CICS ARTIFACTS TO BUILD WEB SERVICE APIS
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Following this talk, James offered a technical walkthrough, demonstrating how to craft a web service API using existing business logic. He elucidated the process of executing JavaScript code from Eclipse and initiating a web service request from a web browser. James elaborated on the fact that they have compiled and stored the JavaScript code on the host, thereby enabling external applications to access the service effortlessly. He also emphasized the inherent reusability of these services, highlighting their accessibility from web browsers. The execution of their services was showcased, illustrating the input of parameters and receipt of output in either JSON or XML format.

As the session progressed, James delved deeper into the intricacies of creating web services using JavaScript within a mainframe environment. He delved into the process of transforming JavaScript objects into JSON for outbound communication and retrieving data from a DB2 database. Furthermore, he accentuated the degree of control and flexibility afforded to service creators, including the ability to manage data access and determine authentication requirements. Employing this methodology, it becomes feasible to simultaneously call upon multiple data sources, programs, and transactions.

James's session imparted invaluable insights into the realm of using JavaScript to develop web service APIs and seamlessly integrate them with mainframe applications. It effectively underscored the challenges entailed by legacy applications and presented an elegant solution that facilitates modernization without necessitating any modifications to the host code. Attendees had the privilege of witnessing practical demonstrations, which included the creation of web services using JavaScript within Eclipse and the retrieval of data from both CICS and DB2, all in real-time scenarios.

Access the Recording

NEWS AND ANNOUCEMENTS

- Sponsorship opportunity—We are looking for additional co-sponsors for the Virtual CICS User Group. The user group gives its sponsors an opportunity to show that they are working with, and helping to build, the CICS user community.
Contact **virtualusergroups@gmail.com** for more information.

- After you register for our next event, save the date for our January 9th session with Todd Havekost from Intellimagic.

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 **https://iteched.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 **virtualusergroups@gmail.com**. The Virtual CICS user group is free to its members.

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