

SOA and Web Services for CICS

HostBridge is mainframe-based software that allows mainframe applications and data to be accessed by, and integrated with, any type of distributed application. Mainframes continue to be the most reliable and scalable platforms for handling large amounts of data and large numbers of transactions, so staging integration engines on the mainframe is a good technical decision. HostBridge provides immediate access to mainframe resources as XML documents or web services. With more companies adopting Services-Oriented Architectures (SOAs), HostBridge support for a one-request/one-response model using mainframe-based process automation is a natural fit.

Integrate CICS using Web Services

Enabling your legacy applications as web services lets you deliver integration projects faster and cheaper because your legacy application groups and Internet groups use their existing knowledge to integrate the applications. By adhering to standards such as XML, SOAP, HTTP, and ECMAScript, HostBridge allows integration developers to use Java, .NET, or any other development platform to build their integration infrastructure.

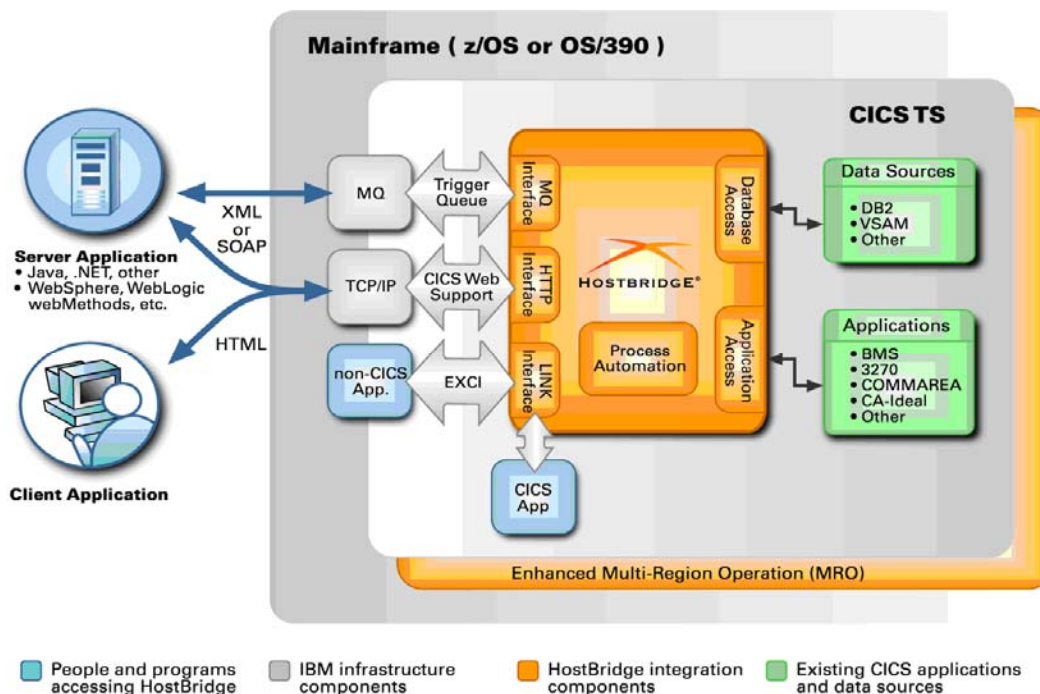


Figure 1. Combining data from applications and databases into a single response

The nature of CICS applications makes them complementary to SOAs and web services technologies. Non-visual COMMAREA applications take one request and return data to the requesting application in a single step. This maps well with the SOA/web services model because a single SOAP request would yield the required host data. Meanwhile, the majority of visual applications use a component of CICS called Basic Mapping Support (BMS). BMS essentially handles the presentation logic of the transaction and relieves the application developer from having to encode and decode 3270 terminal data streams. BMS expresses fields and data as name/value pairs, which can be converted to XML for consumption by web services.

HostBridge also supports CICS and non-CICS 3270 terminal applications, such as CA-Ideal and IMS. Although these applications generate 3270 datastreams, HostBridge converts the datastreams into well-formed XML that is easy for integration developers to understand.

Combine Data from Multiple Sources

HostBridge allows developers to script transaction sequences and save the scripts on the mainframe using ECMAScript in compiled form. Client, server or web-based applications can then invoke the automated process as a web service using a single request. HostBridge executes the micro-flows on the mainframe and eliminates the need for the middle-tier application to manage a complex flow of requests and responses.

Corporate data rarely resides in a single application or data source, and integration projects often combine data from multiple sources into a single application interface or make them available through a single business process. CICS-based ECMAScript allows developers to execute CICS transactions, query databases, and combine the returned data into a single response for use by requesting programs.

Develop Integration Scripts Quickly and Easily

HostBridge includes a workstation-based Interactive Development Environment (IDE) that makes it easy to develop and test process automation scripts for CICS. The IDE compiles the scripts before saving them to CICS in a standard VSAM file so run-time efficiency on the mainframe is outstanding. As a result, the HostBridge process automation engine provides fast, efficient run-time performance; furthermore, the process automation capability of HostBridge works with .NET, Java, and any other middle-tier environment.

HostBridge uses JavaScript because most integration developers know JavaScript but do not know to existing CICS programming languages such as COBOL and REXX. And, while Java is available under CICS, it does not yet perform well, support from IBM is still limited, and the mainframe community has yet to embrace it. The HostBridge IDE facilitates the development of the scripts, but the result is not “generated code,” which means it is easily editable.

Conclusion

CICS-based web services reduces latency between the middle tier and mainframes, prepares CICS to participate in Service-Oriented Architectures, and allows developers to combine data from multiple sources into a single callable service or object. Using JavaScript as the integration language enables a broad set of Java and .NET developers to use their existing skills and knowledge to create integration objects that perform exceedingly well under CICS.

Contact Information

For more information on HostBridge or to inquire about our free 30-day trial, please contact us using the information below:

Toll-free:
1.866.XML.CICS (965.2427)

International:
1.405.533.2900

Email:
info@hostbridge.com

Web:
www.hostbridge.com

Local:
1.405.533.2900