Xcentrisity Business Information Server for \textit{extend}

IT organizations maximize their effectiveness by being able to distribute applications across platforms, operating systems and the Internet with a minimum of programming and maintenance effort. Frequently, new business requirements require enhancement to core application capability driving change across delivery channels, the user base and business operations. IT needs a better way to bring existing systems together to share data and business logic with back-office and business users.

By leveraging a Service Oriented Architecture (SOA) using Web Services it is possible to integrate existing business functionality with other systems to act as strategic assets with proven business logic, accessible to end users and applications.

Xcentrisity Business Information Server (BIS) gives application developers the ability to build Service Oriented Architecture (SOA) applications that incorporate existing business data and logic freely mixed with the latest web languages and tools.

\textbf{Product Overview}

The Xcentrisity Business Information Server is a web server environment that manages application sessions and makes them available via any web browser or other web user agent that is granted access to the BIS server.

Xcentrisity BIS means remote users can access data, perform application functions and execute service programs on single or multiple servers located anywhere. For example, a sales force can check order status for customers during the day and enter new orders in the evening as they travel. Emergency room doctors can read patient histories on primary care physician files in another region and primary care physicians can see insurance claims status. Bank customers can see account status, pay bills, transfer funds and make investments from the comfort of their own homes, and taxpayers can access public records from anywhere.

With BIS, any modern application architecture, function and appearance is now possible.

\textbf{Key Benefits}

- Improved time to market through rapid development by reusing existing business processes in a standard SOA infrastructure
- Native COBOL environment for building and deploying Web Services
- Integration with standard Application Servers
- Enhanced XML features in COBOL

\textbf{Key Features}

The tools provided by Xcentrisity permit a wide range of web application architectures to be used while still retaining and reusing most of the core COBOL code.

\textbf{System Requirements}

\textbf{On Windows (32- and 64-bit)}
- Microsoft Internet Information Server (IIS) must be installed. BIS cannot be installed unless IIS is already present.

\textbf{On UNIX.} BIS requires a shared distribution of \textit{extend} software and a host machine running one of the operating systems below:

- IBM pSeries running AIX 7.1, 7.2 32-bit & 64 bit
- IBM pSeries running AIX 5.3 32-bit & 64 bit
- IBM pSeries running AIX 6.1 32-bit & 64 bit
- PA-RISC running HP-UX 11i 32-bit & 64 bit
- PA-RISC running HP-UX 11.31 32-bit & 64 bit
- PA-RISC running HP-UX 11.31 32-bit & 64 bit
- Linux (glibc 2.x) 32 bit & 64 bit
- Linux PowerPC 32-bit & 64 bit
- Sparc running Solaris 9 32-bit & 64 bit
- Sparc running Solaris 10 32-bit & 64 bit
- The Apache 2.2.x web server must be installed.
Xcentrisity Business Information Server (BIS)

Built on the power of XML as the foundation of connectivity, Business Information Server (BIS) is a COBOL-specific Web Application Server. Together with industry standard web servers such as Microsoft IIS and Apache, BIS gives application developers the capability to build state-of-the-art browser-based web applications or SOAP-based Web Services comprising ACUCOBOL-GT programs and COBOL data files and databases.

BIS has two major components:
- The Request Handler is a web server extension that integrates either with Microsoft Internet Information Server (IIS) or the widely used Apache web server.
- The Service Engine executes COBOL code under the control of the Request Handler.

Ease of Use

Business application developers using ACUCOBOL-GT with XML Extensions and BIS do not have to become experts in XML, HTTP, HTML and Web Services to effectively and efficiently provide leading edge e-business functionality to their customers. Business rules are brought to the new environment of the web, but are left intact.

XML Extensions

The eXtensible Markup Language (XML) is at the heart of Xcentrisity. XML Extensions for ACUCOBOL GT allows ACUCOBOL-GT applications to interoperate freely and easily with other applications that use the XML standard. XML Extensions enable the import and export of XML documents to and from COBOL working storage in a way that is natural and intuitive for the COBOL programmer.

As XML is the universal format for structured documents and data on the web, XML Extensions means that ACUCOBOL-GT applications can access XML documents. Adding structure to documents facilitates searching, sorting or a variety of operations that can be performed on an electronic document.

XML Extensions consists of a library xmlif, a COBOL callable runtime library used to implement a series of COBOL statements available to the developer to direct the import and export of COBOL data as XML.

Import and Export XML Documents

XML Extensions support the import and export of XML documents to and from COBOL working storage. Specifically, XML Extensions allows data to be imported from an XML document by converting data elements (as necessary) and storing the results into a matching COBOL data structure. Similarly, data is exported from a COBOL data structure by converting the COBOL data elements (as necessary) and storing the results in an XML document.

UTF-8 Data Encoding Support

Support has been added to both the UNIX and Windows implementations of XML Extensions to allow the in-memory representation of element content to use UTF-8 encoding, a format for representing Unicode. This is useful for COBOL applications that need to pass UTF-8 encoded data to other processes. XML documents are normally encoded using Unicode. XML Extensions for ACUCOBOL-GT always generates UTF-8 data.

Easy Integration with COBOL

As standard COBOL data structures are imported from and exported to XML documents, XML Extensions enables the direct processing and manipulation of XML-based electronic documents by the ACUCOBOL-GT application programmer. The application programmer does not have to become familiar with the numerous XML-related specifications and the time-consuming process required to produce and use well-formed XML.