

Enabling Rapid ROI

With Java™-Based Business
Intelligence Applications

A Technology Brief

by Bob Ferrante

**Information
Builders** | The Standard for
Enterprise
Business
Intelligence

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A Growing Hunger for Information

The Java™ 2 Enterprise Edition platform, commonly known as J2EE, has become a stable and recognized standard for building Internet, intranet, and extranet applications. These Java-based technologies – such as Java messaging services, J2ME (Java 2 Mobile Edition), and the Visual Age development environment – are increasingly vital parts of the e-business, process management, and business integration strategies for many large and mid-sized organizations. But as the market adoption of this standard grows, so does the need for quality business intelligence solutions that leverage the unique processing efficiencies of Java-based application servers.

As your company evolves, and with it your application server-hosted Internet, intranet, and extranet solutions, your technical infrastructure will need a conduit for information about your business processes, operations, sales, and supply chains. You will confront a near-endless variety of individual solutions that can provide information to each of your company's constituencies – sales force, support personnel, back-office staff, management, customers, suppliers, and business partners.

How do you manage this multitude of information sources? How do you satisfy increasing demands for dynamic business information and analysis? WebFOCUS Services for Java Environments helps organizations meet these many challenges by eliminating limits for deployment and reach of business intelligence applications. WebFOCUS, renowned for superior scalability, now takes advantage of the processing efficiencies of Java-based application servers to deploy more applications to more people using the same hardware and software at a lower per-user-cost. The result is more efficient information delivery to everyone in your enterprise and, just as important, a quicker return on investment.

Feeding the Information Hunger With Robust, Scalable Business Intelligence

WebFOCUS Services for Java Environments provide a stable, robust, business intelligence platform for supplying rich, data-based content to Java application servers such as IBM WebSphere, BEA WebLogic, Sun/Netscape iPlanet, and Microsoft IIS with new ServletExec. Most importantly, WebFOCUS works across your entire enterprise, regardless of individual Web architectures, application platforms, operating systems, data sources, and end user tools. It's the most usable, deployable, and scalable business intelligence solution on the market today. Benefits and features include:

Usability

- The ability to read, analyze, transfer, format, deploy, schedule, request, and update any data on any platform
- Sophisticated point-and-click end-user tools hosted either in HTML, 100% Pure Java™, or Microsoft Windows™
- The ability to fully format all data content without requiring manual formatting of cascading stylesheets or Perl/JSP
- Flexible formatting of content based on users' needs; generates output that supports all standard Web formats (HTML, GIF, PDF, Excel 2000)
- The ability to create templates that allow you to quickly develop and deploy solutions that feature KPIs, CRM information, profitability analyses, Pareto and trend reports, and visual analysis – graphs, trends, progressions, regressions, scalars
- Powerful multidimensional analysis of any data – regardless of its source format
- A true Web Services API with a stable, consistent, and documented interface

Deployability

- Compatibility with all network protocols and operating systems
- The ability to work effectively and quickly with either transactional data or data warehouses
- Both real-time and offline information delivery
- 100% Pure Java implementation, requiring no native code and permitting portable operations across any platform

- An object-oriented, extensible design that is 100 percent plug-and-play compatible with your Java-centric architecture
- Insulation of your Web reporting solution from changes in Web architecture or new software releases

Scalability

- Native drivers for each data source and adapters for packaged applications, which result in better query efficiency by permitting better, more customized access with a faster response than JDBC
- An advanced language-based engine that allows greater code compactness – allowing you to control everything from code, and do more with less code
- A thread-oriented architecture for the industry’s only truly scalable reporting solution – scales from 100 to 200,000 users and beyond

Support for Open Standards

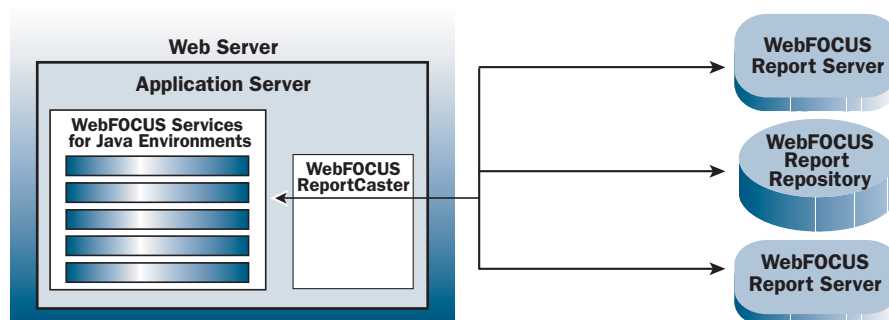
Today's application servers follow the trend toward open, standards-based technologies with their support for standard Java, standard messaging, and other standard platforms and protocols. Open standards provide many advantages:

- An equal playing field when determining solutions; uniformity of standards permits an objective gradient for evaluation
- More robust performance and support
- An expanded developer knowledge base; standards mean more developers have the skill sets you need
- Expanded choice of solutions – permits you to select and integrate solutions from multiple vendors

WebFOCUS Services for Java Environments support the Java 2 standard:

- Adherence to all Java 2 servlet architecture guidelines
- Standards-based Web applications that avoid native (CGI) code
- A Java interface architecture
- Support for cross-platform deployment using the same code

Other business intelligence suites rely on native-dependent interfaces, plug-ins, and proprietary architectures that make deployment on a standards-based architecture problematic. For best compatibility with your Java application server environment, you need a solution that plugs right in.



WebFOCUS Services for Java Environments plugs WebFOCUS right into the application server's architecture.

Getting at Data: It's What Fuels Business Intelligence

A business intelligence solution would not be successful without the ability to easily get at your organization's data, regardless of its format and location. WebFOCUS offers unparalleled access to more than 85 data sources on 35 platforms and provides seamless integration with minimal data-level work needed. Our data access adapters snap right into your existing infrastructure, providing rapid integration of all the data sources.

Which of the following data formats are in use in your organization?

WebFOCUS Direct Data Interfaces			
DB2	D&B Millennium	KSAM	RMS
DB2 UDB	DBMS	Lawson	Sands RDBMS
DB2/2	dBASE	Lotus	ShareBase
DB2/400	DL/1	Lotus Notes	Shared Medical Systems
DB2/6000	DMS	ManMan	SQL/DS
CICS Reporting and Transactions	DSM/MUMPS	MODEL 204	SUPRA
Informix	ENSCRIBE	MS-SQL Server	Sybase
Oracle	Essbase	MS-OLAP Services	SYSTEM 2000
SAP R/3	Excel Flat Files	MUMPS	System/36 Files
SAP BW	FOCUS	Net-ISAM	Tandem Non-Stop
XML	FOCUS Fusion	NOMAD	Teradata
Adabas	Hogan Financials	NonStop SQL	TOTAL
ALLBASE/SQL	IDS-II	ODBC	TurgoIMAGE
ALL-IN-1	IMS/DB	OLE/DB	UFAS
ASCII	IMS/DC	Omidex	ULTRIX/SQL
BPICS	IMS/TM	PACE	UNIFY
Btrieve	INFOAccess	PeopleSoft	UX C-ISAM
C-ISAM	Ingres	PickSystems	Walker Interactive
CA-DATACOM/DB	Integral	Proprietary Files	VSAM
CA-IDMS	ISAM	PROGRESS	WDS
CA-Ingres	IVISoft	QSAM	WIIS
Cloudbase	JDBC	RdB	WP
	J.D. Edwards	RedBrick	And more

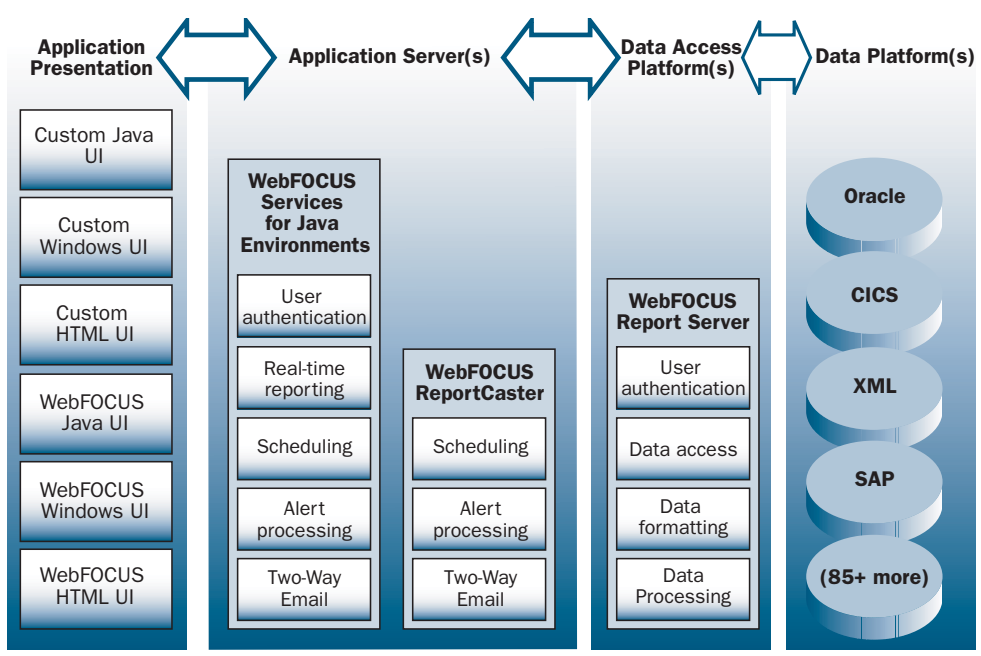
Architecture

The components of WebFOCUS Services for Java Environments are designed for maximum efficiency and scalability.

For small-scale deployments, you can deploy WebFOCUS Services for Java Environments on a single server, with all integrated components on one machine. And when your solutions need to scale to hundreds or even thousands of users, WebFOCUS Services for Java Environments can be deployed across a single server or multiple servers in your environment. Load balancing and pooling capabilities permit you to realize efficiencies of scale as you deploy solutions across heterogeneous networks.

Components of the complete solution include:

- **Web Server/Java Application Server**
- **Data engine:** WebFOCUS Reporting Server, which runs on all major platforms including Windows NT/2000, Solaris, MVS, Red Hat, Linux; note that this engine uses native code but is developed to be portable across every supported environment
- **WebFOCUS Services for Java Environments interfaces:** These provide a choice between an all-in-one servlet and component-based JavaBean™ interfaces that plug directly into your Java application server and provide a compliant on-server interface for the WebFOCUS data access and reporting engine
- **ReportCaster Information Delivery:** A Java application that allows users to schedule content for distribution via e-mail, create data-driven alerts and requests, and receive information on mobile devices through an optional two-way e-mail capability



WebFOCUS Services for Java Environments architecture.

Security

The WebFOCUS architecture includes its own robust user security solution, at both the data access and application access levels:

- **Data access security** controls not only the tables to which a particular user has access, but also the column, row, and value levels; at value level, you can limit the amount of data that users can view at one time (determine how much data will be accessed by a request before it is run), and even restrict access to column values that fall above or below particular levels
- **Application access security** controls access for individual users to individual applications and even individual reports
- **Personalization features** enable users to customize their own view of their applications

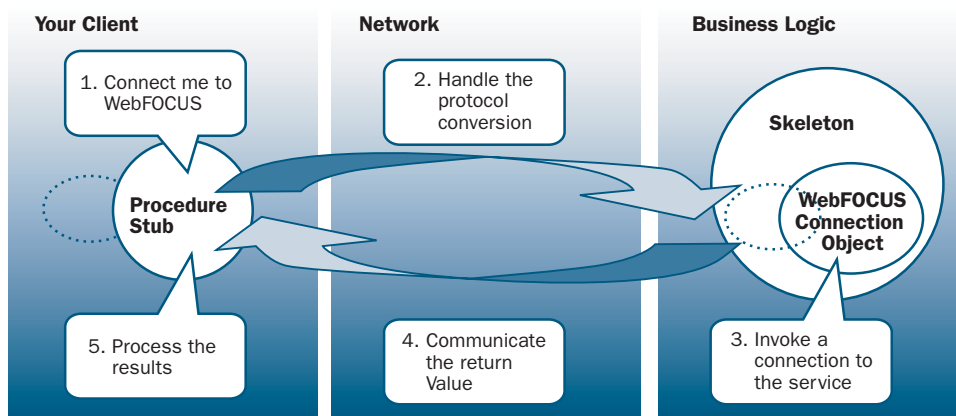
You can use our default security system or integrate WebFOCUS with external security systems (e.g., SecureWay, LDAP user repositories, nTrust, VeriSign, Operating System security, etc.).

Enterprise JavaBean™ (EJB) Support

EJB is a Java 2 platform that provides a powerful backbone for modern distributed computing. Using EJB gives you standardized, contracted methods for calling packaged code, business rules, and communications logic. EJB's localization features enable fast processing speed. What's more, EJB is versioned, which means even as software is upgraded, interfaces don't change.

Information Builders' WebFOCUS Services for Java Environments/EJB implementation permits a high degree of extensibility and customization, allowing you to reuse our Java Services interface for connecting any data in your enterprise.

Java developers will be able to quickly encapsulate any or all methods of our communications interface at any level needed for projects, up to and including developing your own fully customized Services for Java Environments interface based on our model. You can incorporate business rules at any level of the customized interface, adding your own proprietary security architecture (or any commonly adopted security protocol) to augment the defaults we provide.



WebFOCUS EJB remote procedure call architecture.

Making the Most of Your Systems Investment

Your company has invested a lot of resources, time, and effort in an e-business solution. Optimizing that investment requires the type of comprehensive business intelligence that can help your enterprise meet the information demands of all its constituents and manage processes most efficiently. WebFOCUS Services for Java Environments, with its open standards and broad cross-platform support, provides an ideal solution. To learn how WebFOCUS Services for Java Environments can help you fully realize the value of your Java application server, talk to us today. Call us toll-free in the U.S. and Canada at (800) 969-INFO.

WebFOCUS Services for Java Environments

Features	Benefits
Support for major application servers <ul style="list-style-type: none"> ■ IBM WebSphere ■ BEA WebLogic ■ Sun/Netscape iPlanet ■ Microsoft IIS with New Atlanta ServletExec 	Rapid integration of business intelligence applications with existing Java development environment
On-server deployment of business intelligence applications	More efficient processing of requests
Flexible deployment options <ul style="list-style-type: none"> ■ Deploy across a single server with all integrated components on one machine (all-in-one servlet) ■ Deploy on multiple servers with component-based JavaBean™ interfaces 	Easily scales to support any number of users
Leverage existing load balancing and pooling capabilities	Realize efficiencies of scale as applications are deployed across heterogeneous networks
Adherence to all Java 2 standard architecture guidelines and support for cross-platform deployment using the same code	<ul style="list-style-type: none"> ■ More robust performance and support ■ An expanded developer knowledge base; standard means more developers have the skill sets you need ■ Immediate compatibility and deployment
Native access to 85+ data sources, including Oracle, CICS, SML, and SAP...on 35+ platforms, including NT, Solaris, MVS, Red Hat, and Linux	<ul style="list-style-type: none"> ■ Real-time information delivery ■ Leverages existing infrastructure ■ Rapid integration of all sources ■ Portable, scalable architecture
Scheduled, event-driven, and on-demand information delivery	Business problems addressed in real time by delivering timely information to decision-makers in the formats they use every day – e-mail, Web pages, Excel, wireless devices, and PDFs
Security support at all levels, internal and external <ul style="list-style-type: none"> ■ System ■ Application ■ Database ■ Field-value 	<ul style="list-style-type: none"> ■ Integrity of data and systems ■ Reliability and business continuity

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