



## Five Requirements for Choosing a Web Reporting Platform

## Business Challenge

Many companies wrestle with the challenge of identifying a Business Intelligence (BI) web reporting solution that allows users to easily harness and analyze a growing amount of data from a multitude of sources to remain competitive, adapt to fluid business situations and make informed business decisions. The right solution for most companies is one that can be implemented quickly, is scalable, offers users intuitive tools to easily devise their own reports, provides reporting that supports all information delivery methods and formats and also includes strong customer focus, training and responsive support.

## Top Business Drivers

Businesses are fighting to remain competitive. There is a pressing need for access to near real time data as organizations look for opportunities to improve operational efficiency. Whether your aim is it to keep tabs on your company's call centers and network operation centers, drive inbound and outbound cross selling, or deliver up to the minute transaction information, real time performance metrics, alerts and dashboards, the right BI reporting solution delivers the information necessary to make business decisions on the fly.

A top concern for enterprises is scalability. Will the solution in question extend BI both across and outside the enterprise? Can it handle many concurrent users and can it process large amounts of real time information while minimizing performance impacts?

Will it meet the users' expectations and allow rapid retrievals to optimize good decision-making?

Another key issue is will the proposed solution support all the information delivery methods a company uses for their reporting needs. An ideal embedded reporting solution is one that works across all data sources and with all output formats – HTML5, HTML, CSV, PDF, Printer, Excel, XML, etc.

## Top 5 Requirements

Before implementing an embedded BI web reporting solution an organization should first identify specific business reporting requirements, assess application architecture, data access and integration, analytical processing power, user interface and delivery options. In particular, the five areas that developers need to research include:

1. **Does the BI Solution Offer Ease of Integration?**
2. **How Well Does this Solution Scale?**
3. **Is Report Design Quick and Easy?**
4. **Are All Report Format and Delivery Methods Supported?**
5. **What Level of Customer Support is offered?**

## BoxTone Use Study

BoxTone technical lead Randy Messing walks us through the evaluation process he used before choosing JReport Server Live to handle his organization's reporting requirements for their enterprise class Blackberry monitoring service – delivered to more than 300,000 users every day.

In reviewing web reporting platforms, the top five issues that played a role in the selection process for BoxTone were ease of integration, the speed and flexibility of the report designer, scalable architecture, the level of support offered and a development roadmap that offered future protection and would grow with their needs.

Before settling on JReport for their reporting needs, BoxTone evaluated four products: Actuate BIRT, Crystal Reports, Cognos and Oracle Application Express. Actuate BIRT seemed better suited for a single thread deployment and BoxTone wanted to avoid the costs involved with upgrading to Actuate's Enterprise product. The concern Messing had with Crystal Reports was that integration would not be straightforward. To get ad hoc reports, dynamic formats, scheduling and version control BoxTone would have had to choose Crystal Enterprise and add a second server. Another choice that Randy Messing reviewed was Cognos. He determined that this solution was more heavy weight than BoxTone needed. Finally, Oracle Application Express was not a good match because their product did not offer multiple report methodologies, pixel perfect layout or a report designer, all of which BoxTone required in their reporting platform.

BoxTone needed a solution that integrated with their current application server (JBoss). Ideally they were looking for a reporting platform that was transparent to the end-user, not just a separate "add on" reporting engine.

*“We did not want to sacrifice functionality for ease of integration. JReport offered us the flexibility to deliver reports in multiple formats and supported pixel perfect design layout, both critical components of our functional requirements. JReport’s backend schema supported easy integration to our database.”*

– Randy Messing, BoxTone Technical Lead

JReport delivers a rich set of API’s for calling on-demand and scheduling reports. BoxTone liked being able to call the reports from their default web interface. Messing was pleased that report design was so straight forward, allowing for sixteen reports to be developed, tested and deployed in under three weeks. All in all, the reporting product took three BoxTone developers just six weeks to implement from inception to deployment.

*“In the 8+ months JReport has been deployed it has been an extremely reliable, stable solution and our customers are thrilled with the new reports we are providing.”*

-Randy Messing, BoxTone Technical Lead

BoxTone chose Jinfonet because JReport Server Live and JReport Designer met these essential reporting needs:

BoxTone Business Need	JReport Solution
Ease of Integration	Seamless Integration
Scalable Architecture	Architecture supports Application Server /JReport Clustering Solutions
Intuitive Report Designer	Robust, Easy to use Report Designer.
Flexible Report Delivery	Customizable Reports for all Formats and Outputs
Responsive Support	Strong Customer Training and Support

To hear more details on how BoxTone evaluated web reporting platforms, visit the [Five Requirements for Choosing a Reporting Platform webinar](#).

About BoxTone: BoxTone software is trusted by more than 110 of the world’s leading enterprises and government agencies, including 40 in the Fortune(R) 1000, to manage, monitor and support their BlackBerry platforms. Built on patented SmartMP technology and conforming to industry standard ITIL practices, BoxTone’s comprehensive modular platform and role-specific consoles enable IT and services organizations to collaboratively reduce support costs, accommodate rapid device growth, and guarantee the high quality of service that mobile users demand. Learn more from the expert in mobile user management at [www.BoxTone.com](http://www.BoxTone.com)

## Solution Description

For maximum flexibility, a 100% Java-based embedded reporting product is the best solution. Enterprise organizations can easily embed JReport into their applications or they can run it stand-alone and use ad hoc reporting functionality.

JReport offers the scalability necessary to meet your future business needs. Many solutions do not demonstrate this scalability without the need for high-performance and costly hardware investments or complex software solutions. Scalability and performance requirements are particularly important when considering the transmission of real-time data which must be rapidly presented and analyzed to provide maximum value to enterprise organizations. JReport fully delivers in this area, offering a cost effective solution that allows processing of reports to be distributed over many inexpensive servers rather than concentrating processing on a single top tier hardware platform.

Report designers find JReport Designer powerful and easy to use, allowing them to meet reporting demands quickly. An intuitive visual design environment, reusable report components and hundreds of ready to use objects, charts, and tables allow developers to build reports that efficiently deliver information to users.

JReport Server Live offers customized reporting capabilities with a low total cost of ownership by leveraging an organization's existing IT investments. Interactive report functionality presents the user with dynamic, actionable data that can quickly and easily be reshaped. Filter, sort, drilldown, pivot, rotate, and convert features offer unmatched flexibility and insight.

The right solution delivers strong customer support so you can deploy quickly, maximize functionality and create tailor-made reports. Jinfonet offers extremely comprehensive customer support including POC, product support, consulting and training. As the BoxTone use case highlights, it is critical to identify a vendor who offers responsive, on-going support and is committed to providing the customization your company needs.

## BI Explained

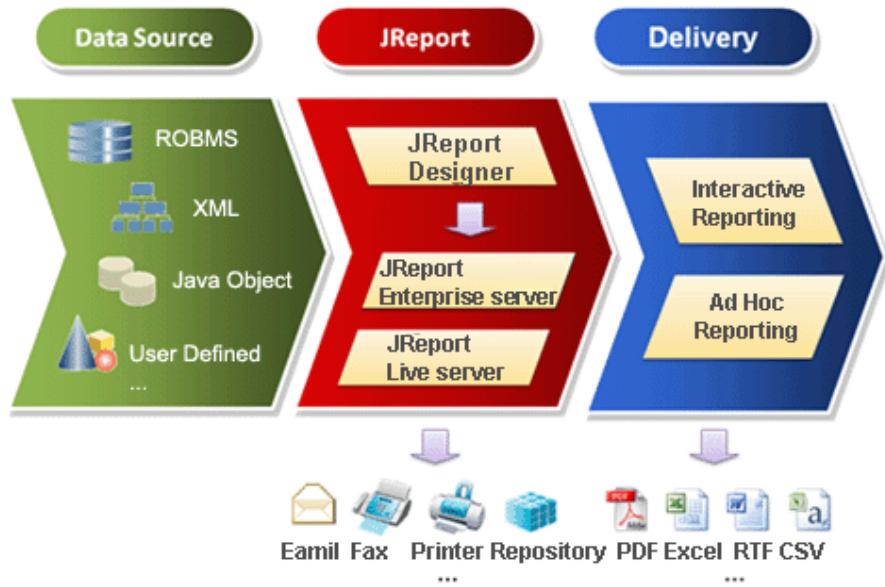
Traditional BI Applications (see **Figure 1**) are built on a data warehouse concept where a star schema is designed and complex ETL operations are performed to update the data warehouse on a scheduled basis such as the end of each week or each month. Building the schema to define the dimensions, measures and facts and changing the schema when a user requests change is a very complex process. Thus, analyzing the data using the analytic tools has historically required highly trained data analysts.

Figure 1: Traditional BI Model



**Figure 2** illustrates how JReport brings the same dimensional view of data to every business user using current live transactional DBMS and XML data sources with almost no training. Simply run the report then use the Report Cube technology to do the same type of OLAP analysis. There is no need to go back to the DBMS for additional data since this data can be included in the original query when you first run the report. The Report Cube acts a meta-data layer which provides an OLAP-style cube view of relational data.

Figure 2: JReport Solution

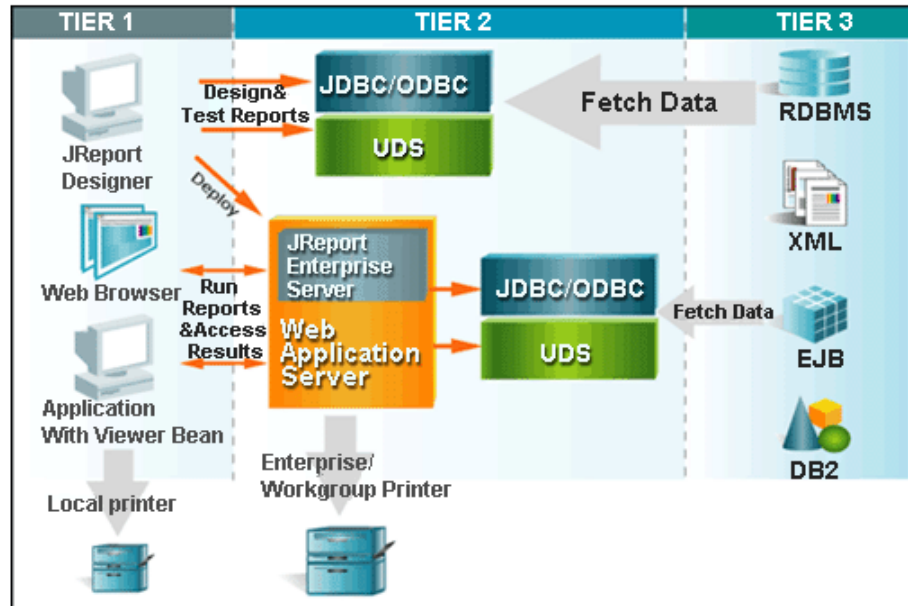


## Solution Benefits

### Seamless Integration

By offering the scalability, portability and ease of integration associated with Java EE technology, JReport can be deployed on any OS, hardware or application server without worrying about upgrades when hardware or OS configuration changes occur. JReport's Java architecture makes it easy to access any type of data such as those existing in legacy systems, web services, XML files. Any data source which can be accessed through JDBC or a Java method (user-defined data source) can be used for reporting. There is no need for costly Enterprise Information Integration (EII) products or services.

Figure 3: JReport Architecture Illustration



JReport easily embeds in any application to deliver actionable information to users enterprise-wide

### Zero Client-Side Code

JReport requires zero client-side code and deploys in a pure thin-client implementation. End users do not need to install any client application applets or plug-ins to get started. Report supports static HTML and interactive HTML5 outputs that can be embedded seamlessly into any Web application. Both HTML and HTML5 reports can be viewed through any supported browser.



### **Zero Training Requirements**

No client downloads are needed. Customizable user interfaces and incredibly intuitive report design means JReport can be deployed to any user audience inside or outside of your organization with no training. This translates into rapid deployment time, high adoption rates, reduced training costs and users empowered with the ability to find the information they want, when they need it.

### **National Language Support**

JReport's National Language Support (NLS) is an important benefit for many global organizations. NLS is available for every language Java supports. When NLS is enabled, all of the features of Java NLS are available to format numbers, currencies, dates and text to localized versions based on the locale of the user. The developer simply has to translate a property file with the localized text and deploy it with the reports. Likewise, JReport formats numbers, currencies and dates so report results match location settings.

### ***Scalability***

JReport is built on a high performance engine that handles any workload demand and easily scales from single-CPU to large multi-CPU and clustered server environments. It is designed to easily handle a proportional increase in system performance as system resources increase. Scaling is remarkably simple: plug in a new server, power it up and execute JReport's clustering software. Right away, the clustering software recognizes the new server and begins utilizing it to process workloads.

### **High Availability**

To ensure system availability and access to JReport functions and report output, JReport Server Live enables fail over mechanisms that are fault tolerant to any single point of failure. Should the Administration server fail, all of the functions automatically transfer to another server, which is promoted to be the new cluster Administration server. At the same time, workload is re-allocated among the remaining servers in the cluster.

### **Performance Management**

JReport has several features that optimize performance by making the most efficient use of system resources. The ability to fine-tune the use of data buffers during report generation as well as "push-down" technology maximizes data access and system performance. Three processing queues plus 10 levels of priority and dynamic priority adjustments ensure that long running reports do not interfere with high priority on demand reports.

### **Resource Caching**

Caching reports and their resources after a report is run significantly enhances performance when the same reports are requested many times a day. The report resources stay in memory so they do not have to be read from disk and converted to Java objects every time a report is requested.

### **Server Cluster Management**

System administrators can choose from a variety of flexible load balancing strategies, including the ability to create their own strategy. JReport Server allows tasks to be assigned to a new server in a pre-determined sequence, randomly, or based on current load. JReport supports report level load balancing; ensuring the workload on each server is proportional to its resources, resulting in optimal server performance. Using JReport Server Monitor the administrator can easily manage all the nodes in the cluster including stopping and starting nodes and getting detailed metrics on performance of each node.

## ***Report Designer: Robust & Easy to Use***

### **Maximum Flexibility**

Interactive GUI objects can be embedded directly into Web-based reports to modify and control report views. Control Objects in JReport include images, buttons, text fields, check boxes, and radio buttons and drop down menus. Objects can be defined to perform actions such as sorting, filtering, printing and exporting. These web controls allow report developers to embed the functionality that is relevant to that report or set of users.

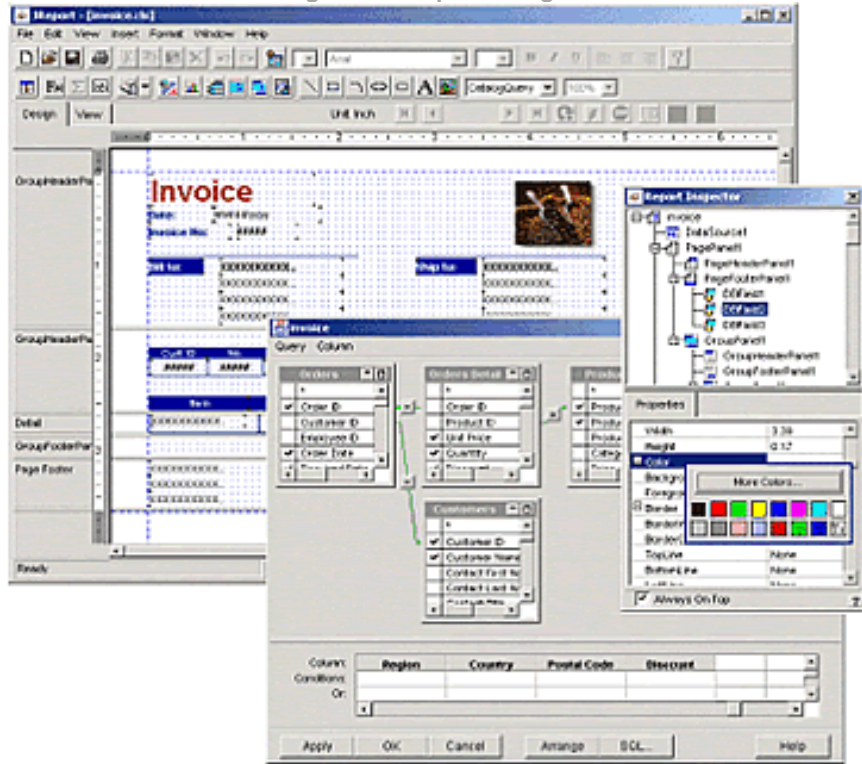
### **Intuitive Interface**

JReport Designer offers an intuitive visual design environment that translates into extremely fast report creation. Users can create custom reports on their own with drag-and-drop functionality or use Report Wizards to guide them in selecting data sources, creating queries and choosing design layouts. WYSIWYG interface and on-demand data views enable users to view outputs immediately within the design environment.

### One-Click Modification

Report Designers use JReport's Report Inspector to quickly identify and edit report objects and their properties and to speed report modification by grouping and editing multiple objects with common properties at the same time.

Figure 4: JReport Designer



### Access any Data Source

JReport Designer allows users to easily connect to and display information from virtually any data source, including relational databases, Data Warehouse, Java Objects, XML data types and metadata layers. JReport Designer is uniquely able to generate reports based on the data structure, inherent in hierarchical data sources like XML and Enterprise Java Beans (EJBs).

Connecting to and accessing data is easy. Database objects are accessible through JDBC and ODBC connections or via a user-defined data source. A Query Editor Wizard can dynamically build queries to facilitate data access or users can import their own SQL statements, select from over 300+ built in formulas to generate calculations or create custom logical and mathematical expressions for flexible query and calculation building.

### **Precise Layout Control**

The JReport Designer provides a high level of control over every section of the report ensuring data is presented in a consistent coherent format that matches existing corporate design guidelines. A “view during design” mode allows the report to be viewed at any point during the design process.

### **Object Catalog**

Reusable components are stored in a user-defined Catalog which expedites the design process by housing commonly used objects in a central location. Database connections, queries, formulas and parameters are created once and then maintained within the catalog, speeding report generation.

### **Sophisticated Security**

JReport’s security features allow designers to define user security permissions at design time, enabling one report template to serve multiple users with different permissions. JReport supports single sign on (SSO) which can authenticate users at run-time by synchronizing with existing directory services (LDAP, Microsoft Active Directory, Microsoft Site Server, Lotus Domino and Novell Directory Server). JReport’s internal security can also authenticate and authorize access down to the individual cell level.

### **Web 2.0 Support**

With enhanced functionality like portal and AJAX support, JReport Server Live supports a Web 2.0 user experience. An interactive, wizard-based designer allows users to easily and intuitively create sophisticated reports. Figure 5 shows a sample sales dashboard viewable by sales category and country.

## ***Flexible Report Delivery***

### **Endless Report Options**

JReport can format and deliver reports in exactly the manner your audience needs: HTML and HTML5 for web viewing, PDF for printing and XML for electronic processing. Reports results can also be output to Excel with live charts and formulas, RTF, CSV, FTP, email and fax.

Report scheduling is both easy and flexible. Users can select from one time or choose any recurring interval to run reports, as well as at a particular time on a specific day.

### **Interactive Actionable Reports**

From any web browser users are able to define report criteria, customize data views and run ad hoc queries while using existing report templates.

### Subscription and Caching Support

Reports can be deployed in a “subscription model”. Once a report is run, it is saved in a specific location and a pre-defined list of users can be notified via email with a report link for easy viewing. Report caching also is supported, allowing one report output to be viewed by many users without being re-run each time a user request is received.

Figure 5: Sample Sales Dashboard Report



### Report Bursting and Page Level Security

JReport supports several ways to run a single report and ensure each user just sees the data that they are authorized to see or are interested in. Report Bursting will split a report up in a full hierarchy of groups so one run of the report can generate an entire report with all data and split reports which contain just the portions of the report the person has access to. In a similar vein, Page Level Security allows one report result to be viewed by different people with different roles and each viewer of the report result can only see the data he is authorized to see. These can greatly improve performance because one report result can serve the purpose of 100s of individual reports.

### Fast Report Navigation

Reports created with JReport Designer can display a dynamic table of contents that provide one click access to any report component. Users can view multi page reports sequentially or jump directly to a particular page. A powerful search function allows users to quickly locate critical data points for faster decision-making. JReport supports embedded hyperlinks which speeds access to related reports or information.

### **Ad Hoc and Analytics**

JReport's Interactive analytics are based on multi-dimensional cubes. Users can create ad hoc queries using a Business Cube or by creating a new Ad Hoc Report using existing queries. JReport offers users the ability to create new reports using JReport's Cube technology or they can slice and dice data using an existing report. This is particularly useful since JReport is able to map a cube meta data layer over an existing query and report, granting the user many of the benefits of an OLAP cube without the overhead and training required to use real OLAP cubes.

### **Dynamic Paging and Searching of Reports**

All reports are fully navigable and searchable. On demand HTML5 paging offers users the ability to execute and view pages one at a time. Context sensitive search functionality gives users the ability to quickly locate critical data within a report.

### **Limitless Data Drilling**

JReport offers many data view options. Users can retrieve detailed or summary data on demand by drilling down for detail, across for context and scope or up for the big picture.

### ***Strong Customer Focus and Support***

Once you've chosen a solution you'll want to know you have strong customer support to figure out how to maximize functionality and create tailor-made reports. Identifying a vendor who understands this and is committed to making sure you get the customization you need is critical. JReport Server Live and JReport Designer offer intuitive interfaces which translate into minimal training requirements. Overall, Jinfonet provides responsive, comprehensive support including standard and premium maintenance options.

## Summary

Determining which company offers the right embedded BI reporting solution for your organization can be challenging. Many of today's tools are complex, sophisticated and difficult to learn, requiring specialists or the investment of significant training costs. Whether the need is an out-of-the-box solution or a toolkit to embed in a custom Java EE application, JReport provides a reporting solution that precisely meets end-user requirements.

By leveraging JReport's high-performance reporting engine and clustering technology, JReport scales to meet the most demanding service level requirements, allows application developers to meet ever-changing business requirements and accommodates all end-user reporting needs. JReport delivers a highly intuitive user interface that empowers business users to find the information they need to make smarter business decisions.

Enterprises can rest easy with the knowledge that JReport's 100% Java platform will adapt and scale with their business needs. In addition to the flexibility that Java technologies deliver, Jinfonet developers offer a true partnership with organizations, allowing them to continue to anticipate future needs. Through technical innovation, diligent future planning and listening closely to customers, Jinfonet will continue to meet those needs.

With over ten years of experience Jinfonet is the leading BI software vendor for Java reporting applications. Easy integration, scalability, quick report design, responsive support and strong future protection have made JReport the choice of more than nine hundred organizations and over a million users for customizable, easy to use reporting.

## More Information

[Schedule a Free Evaluation to Review Your Web Reporting Needs](#)  
[Request a Live Demo to See JReport Web Reporting In Action](#)  
[Test Drive JReport](#)

## Contact Us

Tel:	+1 240-477-1000
Fax:	+1 240-465-0355
Website:	<u><a href="http://www.jinfonet.com">http://www.jinfonet.com</a></u>
General Info:	<u><a href="mailto:info@jinfonet.com">info@jinfonet.com</a></u>
Sales:	<u><a href="mailto:sales@jinfonet.com">sales@jinfonet.com</a></u>
Support:	<u><a href="mailto:support@jinfonet.com">support@jinfonet.com</a></u>
Marketing:	<u><a href="mailto:marketing@jinfonet.com">marketing@jinfonet.com</a></u>

## About Jinfonet

Jinfonet Software is a company committed to delivering flexible, timely, and actionable information to all users across an enterprise via advanced visualization. Headquartered in Rockville, Maryland in the heart of the I-270 Technology Corridor, and equipped with a team of more than 160 expert Java developers, Jinfonet is the provider of the leading embedded Java reporting solution. Founded in 1998, and experiencing year-on-year growth since, Jinfonet is currently in its 11th release cycle of JReport.

## About JReport

The JReport Product Suite is comprised of JReport Designer, JReport Server Live, and JDashboard. This comprehensive reporting software is the leading embedded reporting solution offering intuitive reporting from directly within existing applications. Featuring 100% Java architecture, The JReport Product Suite reaches millions of end users worldwide on a daily basis via the more than 25,000 downloads completed since the product's inception.