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Making the Most of Your Enterprise Reporting Investment
10 Tips to Avoid Costly Mistakes

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Charts, graphs, tables, crosstabs… business information can be accessed, formatted, and presented in a multitude of ways. However, successfully deploying this information across the enterprise introduces new challenges and new technologies that may be unfamiliar to some organizations.

While reporting tools are commonplace among enterprises today, deploying a comprehensive enterprise information delivery solution requires addressing issues of report delivery and customization, system integration and scalability, and information usability.

In order to best equip your organization with ready access to critical business information, you know you need to invest in your information delivery strategy. The following Top 10 list answers some of the key questions you need to consider when evaluating enterprise reporting solutions.

How Can We Address the Needs of Users with Different Information Requirements?

Most industry analysts have identified information usability as a critical issue facing enterprises. Because users across an organization have different information needs, an effective information delivery solution must be flexible enough to service all of those needs.

Recently, the concept of "actionable information" has arrived in the Business Intelligence marketplace. Actionable information refers to the ability for the end user to customize a report (representation of data) to meet specific individual needs. In an actionable report, fields can be added and removed from reports; data can be dynamically sorted, filtered, and grouped; crosstabs can be pivoted; and users can drill down, up, or across data to get detailed and aggregate information. All of these actions help users shape a report to best respond to their individual information needs or requirements.

The main advantage that actionable information offers is that it allows end users to perform analysis on an existing production report. A solution that can make static reports actionable actually extends the utility of those reports and provides the entire enterprise with the ability to access relevant information in the most meaningful manner for each individual.

How Can We Streamline the Information Delivery Process?

In order to improve the efficiency of information access, enterprises are turning to Web 2.0 interactivity (AJAX). Web-enabled solutions are extending client/server or LAN-based applications beyond the traditional confines of the office to the familiar interface of a Web browser while keeping the important user interactions those client/server applications provided. By empowering end users with a web-enabled reporting solution, your company can ensure business information is available when and where it is needed.

To fully harness the power of the Web, a reporting solution should offer ad hoc querying and analysis capabilities so that your end users can create and customize reports on-demand. Users need to be given the capability to slice and dice the data and look at it from every possible dimension without the complexity of OLAP tools which only a highly trained business analyst can use. The ability to analize data also should not require reorganizing the data into a star schema or cube representation in a data warehouse which often means the data is out of date by the time it is available to analyze.

Static report delivery is fine in some instances, but on-demand access and management of data representations provides higher-level functionality and usability. Ad hoc reporting also reduces the burden on IT staff who no longer need to focus on report generation, turning their attention instead to other business critical areas. The IT staff should be able to provide a few pre-defined templates which the end user can modify at runtime without assistance from IT to create the reports they need on operational data.

How Can We Migrate from Our Existing Reporting Architecture while Leveraging Our Existing IT Investment?

Enterprise-readiness is an important aspect of any software solution. Solutions that can be easily integrated into an existing IT architecture with little to no professional service support are ideal. Because enterprise-ready applications require no additional hardware or software support, they are the best way to maximize your current IT investment.

Solutions based on a Java EE platform generally offer the most seamless integration. And, as businesses continue to shift towards utilizing the Web, the rate of adoption and migration to Java technology is rising. Other considerations to determine the enterprise-readiness of a reporting solution are open connectivity and support for your existing data sources.
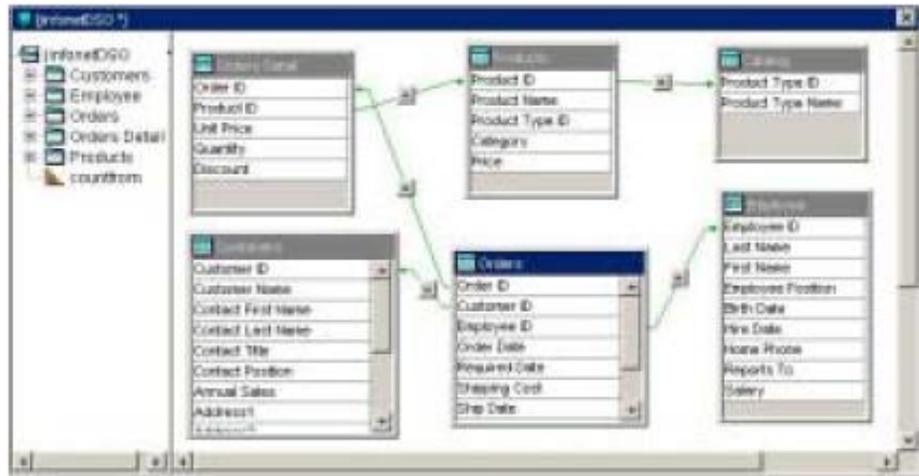
Reporting solutions should allow IT staff to easily establish relationships between existing corporate data sources

If you are currently using a reporting tool and are considering another solution, you also need to take into account any migration downtime and the effect that will have on your end users. Turnkey reporting vendors will be able to provide you with a tool to convert your legacy reports to the new solution, and they will offer design services to reduce downtime and speed time to deployment.

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How Can We Access All the Data Sources Used Throughout Our Enterprise?

It would be nice if there were one homogenous data source that contained all of an enterprise's critical data. It would make the job of reporting on and analyzing business data much easier. The reality is we rarely encounter an environment where a single data source can manage all of a department's data, much less an entire organization's data.

Information delivery tools need to be adept at establishing relationships with multiple data sources. In addition, this support must extend to different data source types – JDBC, ODBC, XML, Web Services, etc. The most robust tools provide support for multiple data sources and types, and offer APIs to access user-defined data sources from user applications.

Another key consideration for some organizations is how support is provided for hierarchical data sources, like XML. With many solutions, the XML file structure is flattened, rendering the inherent data relationships and groupings unusable. The most useful information delivery tools will support the hierarchical data source and preserve its embedded structure, thus automatically building grouping criteria to save time and effort when building reports or performing analysis.

How Can We Ensure Data is Always Available?

Today's enterprises require 24x7 data availability. Systems must continue to operate and provide reporting services even when there is a single point of failure. For heavy report workloads, systems should scale and utilize multiple server resources transparent to the end user.

Fail-over mechanisms that are fault tolerant for any single point of failure are critical to ensuring a system runs with zero downtime. This is particularly true in clustered server environments, where an Admin server directs the workload and functionality of multiple "worker" servers. When a server failure is detected in a clustered environment, the cluster re-distributes workload to the functioning servers only. In the case that the Admin server fails, a designated backup would automatically assume the Admin functions.


Typical Clustered Server Environment

How is System Performance Optimized, Particularly during Peak Workloads?

When workloads are particularly heavy, effective load balancing is essential to ensure the system operates as efficiently as possible and continues to deliver reports when and where they are needed. Load balancing provides for maximum cluster performance and directly improves cluster scalability by ensuring the workload on each server is approximately proportional to its resources.

Organizations should employ a performance monitor to provide a view of the status and statistics of individual system components. A performance monitor allows for managing the load balancing properties of a system and identifying any instances of system failure or slowdown. For convenience and remote administration of the system, it is also advisable to implement a web-enabled performance monitor.
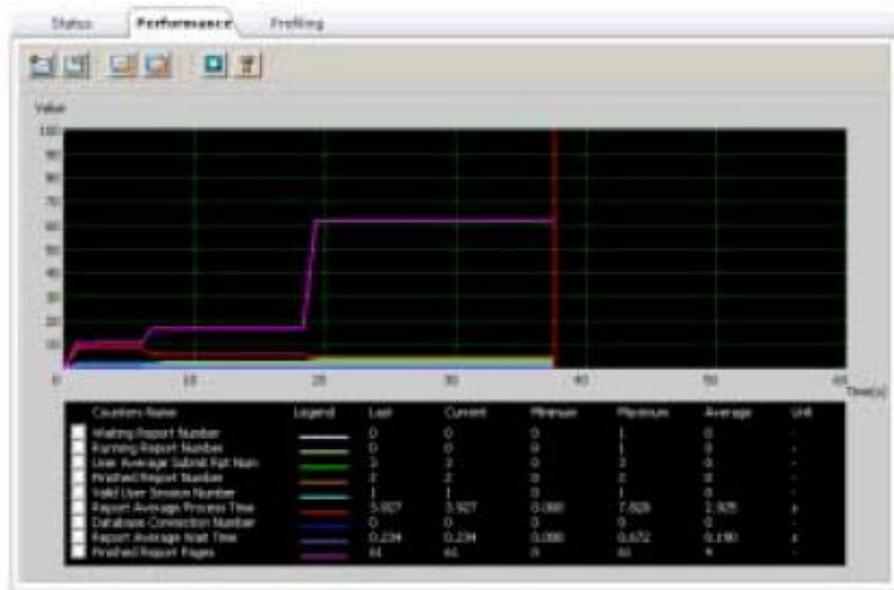

A system performance monitor tool helps your IT department manage and maintain peak system performance

How do We Ensure Data Security, Especially when Delivering Information via the Web?

Today, enterprises worldwide are making information availability a top priority. They are finding that the Web enables them to deliver and access information from virtually anywhere, at anytime. This new paradigm, however, does not preclude a traditional business concern – how do we ensure any individual user is authorized to access a particular set of data?

Reporting solutions should offer multiple security features, including the ability to leverage an organization's existing login and password information through LDAP authentication. Record-, page-, and row-level security is equally important, allowing businesses to authorize end-user access to personalized information from a shared report, minimizing the overhead necessary to create and manage separate reports.

Page-level security (PLS) and report bursting are two features that ensure that when scheduled reports are ran, each user can only see the data he is authorized to see, either by embedding the security control into the report result (PLS) or physically splitting the report into physical files only the authorized user can access (report bursting). Single Sign On releases users from having to authenticate twice to access the application and the reports.
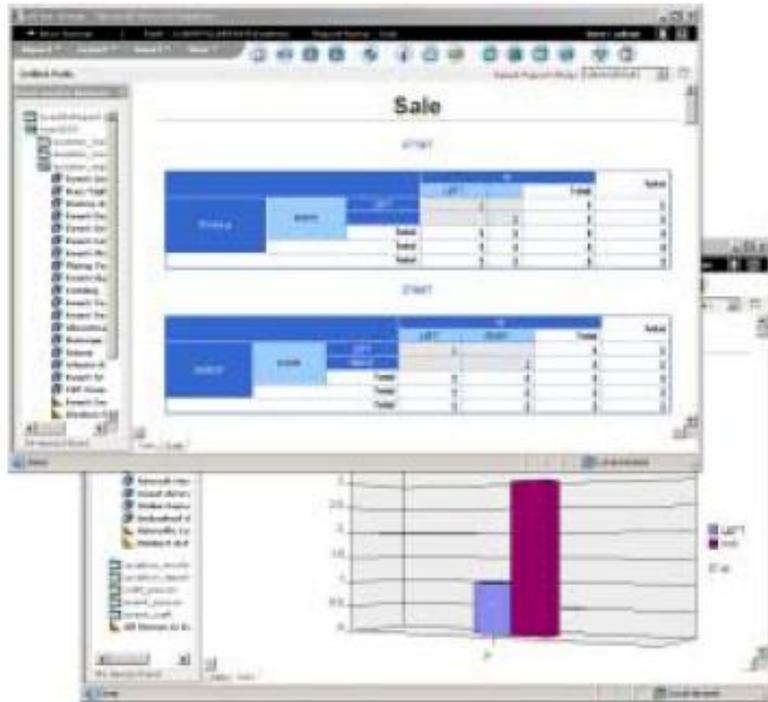
IT departments need to be able to maintain data security and integrity, even with the widespread report distribution capabilities of the Web

How do We Know the Solution will Grow with Us?

To achieve maximum ROI from your reporting tool investment, it is essential to consider the scalability and flexibility of a solution. As your business grows, your reporting workload is likely going to increase, and the needs of your users may also change. Finding a solution that is ready to handle changing workloads and adapt to changing reporting demands is critical to your long-term investment.

A solution should address your current and future reporting needs by having the ability to scale to any workload. Often, this includes the ability to scale to multi-CPU and clustered server environments. A scalable solution will support a proportional increase in system performance given an increase in the amount of system resources. Adding servers to a cluster should be as easy as plugging in the new servers, powering up the new servers, and executing your reporting software. Your solution should have an engine which dynamically and automatically recognizes the added servers and immediately begins using them to process workloads.

What is the Overall Cost of Ownership?

In addition to maximizing your existing IT investment, it is equally important to consider your total cost of ownership (TCO) for any software solution. The TCO includes the cost of the solution plus variable costs like professional integration services, training, maintenance, and additional required equipment. Solutions that are designed to be easily deployed and used lower your TCO because the amount of professional services required to get an application into production is minimal.

Traditional OLAP applications require heavy integration and training resources. The time needed to deploy these applications is often sluggish, at best, and maintaining these systems is taxing from a financial and personnel standpoint. Enterprises should seek out information delivery solutions that are intuitive in nature, and that remove the complexity from reporting and analysis. Look for solutions that incorporate design wizards to facilitate report generation and that require little end user training. In this manner, a solution can be deployed quickly and enterprise-wide adoption is fast.

Open source solutions entice users to use the free reporting tools only to find that all the advanced features such as security, clustering, bursting, analysis and ad hoc are only in the professional version of the tool which has annual subscriptions rates which quickly make the TCO higher than traditional commercial tools.

How does the Vendor Handle Support, Maintenance, and Training?

A commitment to customer care is often a significant differentiator between vendors. Customer care includes reliable technical support, product maintenance, and end user training.

When evaluating reporting solutions, you need to make sure quality support is available to you and your users when you need it. You should understand how the vendor's support escalation process works and how that process is defined when the first tier of support staff cannot solve a problem.

Product maintenance is standard for software application vendors and is usually available in different "packages" that provide one to two years (or more) of software maintenance. Think of maintenance as an insurance policy that helps your enterprise avoid technology obsolescence. By keeping your maintenance policy current, you will receive free product fixes and upgrades as they become available, ensuring you always have the most functional and up-to-date version of your reporting solution.

In most cases, you will want a reporting solution that is easy to deploy and use, reducing your need for end user training. However, web-based training can be a cost-effective means for educating all of your end-users, particularly when you have multiple end users in different locations. Web-based training is generally available through live web conferencing with a training specialist, or as a pre-recorded demo that can walk end-users through typical uses of the product.

Summary

Evaluating reporting solutions can be a challenging task. The market is crowded with vendors trying to get your attention. It is important for you to consider these 10 critical issues to give yourself the best chance of recommending and investing in a solution that can meet your enterprise needs today and into the future. And, before you buy, make sure you get an evaluation copy of the software to determine for yourself how easy the solution is to integrate, scale, and use.

More Information

Schedule a Free Evaluation to Learn How to Leverage Your Reporting Investment with JReport
Request a Live Demo to See JReport In Action
Test Drive JReport

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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.

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