
Crystal Reports XI

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- ▶ *An End-to-End Overview*

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Contents

Executive Summary	iv
Exceed User Expectations	1
Crystal Reports XI – User Profiles	2
IT Professionals	2
Report Designers	2
Developers	3
Information Consumers	3
Crystal Reports XI – Product Family	4
Crystal Reports Server	5
Crystal Reports Developer	5
Crystal Reports Professional	5
Crystal Reports Standard	5
Key Features by Edition	5
Crystal Reports XI – Technology That Grows with Your Business	6
Universal Integration with Applications and Portals	6
Scale with Ease for Increased Application Longevity	6
Data Access	7
Increase Efficiency	8
Empower Users with Report Interactivity	9
Scheduling and Security	10
Conclusion	11

Executive Summary

The monthly sales meeting is in full swing, but it immediately stalls because none of the sales figures in the PowerPoint presentation match the data compiled by the sales managers.

Fulfillment is working towards better efficiencies in product shipment times. Based on one set of reports, customers are receiving shipments within three to four days of placing their order. However, a second set of reports indicates that shipments are taking up to 14 days for delivery. Should time be spent improving the system? Or does everyone deserve a raise?

The monthly reports generated within HR show an alarming increase in the rate of turnover. But further investigation uncovers information indicating that retention is at an all-time high. Which set of data is right?

These scenarios are real and occur every day in businesses around the world. Does your company provide consistent, trusted data to the people who need it? Are the decisions made within your organization based on fiction or fact?

Creating and Delivering Information for Extreme Business Insight

Crystal Reports® XI allows you to access, format, and deliver information to drive better decision-making—with the flexibility and power necessary to provide your internal and external users with the information they need, when they need it, while minimizing IT overhead.

A proven, award-winning reporting standard, Crystal Reports XI addresses all aspects of the reporting process, allowing you to:

- ▶ Transform any data into highly formatted reports
- ▶ Securely deliver reports over the web for end-user interaction
- ▶ Manage and integrate reports into your environment

Exceed User Expectations

Crystal Reports XI delivers powerful authoring, extensive distribution, and flexible integration. It is the most proven reporting tool, with billions of Crystal reports (.rpt files) used in Fortune 1000 companies around the world.

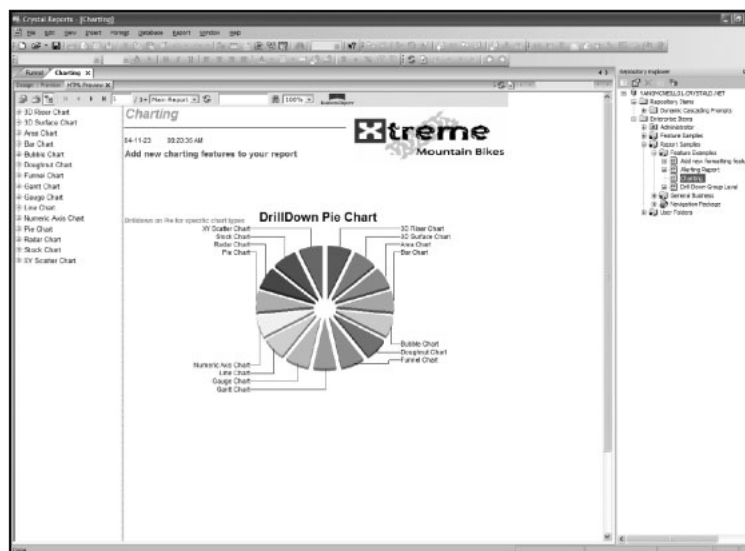
Crystal Reports allows you to create flexible, feature-rich reports and then integrate them into web and Windows applications. You can access and format data, and embed reporting into Java, .NET, and COM applications using a comprehensive set of software developer kits (SDKs). Crystal Reports is the de facto reporting standard sold by over 500 independent software vendors. And it is embedded in leading software from Microsoft, SAP, Borland, BEA, PeopleSoft, and IBM.

When delivered within the BusinessObjects™ Enterprise XI business intelligence (BI) platform, you can publish Crystal reports to the web, view them in portals and applications, and manage and deploy them using a standardized information infrastructure. With BusinessObjects Enterprise XI, organizations can deploy Crystal Reports on Windows, Unix, and Linux platforms.

Create Reports That Are Exactly What Your Users Want

The open design environment within Crystal Reports provides a significant degree of flexibility and control so that you can create highly formatted, feature-rich reports. Crystal Reports includes a complete set of layout and design controls to give your reports a professional, pixel-perfect appearance—without any custom coding. You can streamline the number of required reports by using parameters, and you can organize data in a logical manner using grouping and sorting. Increase the graphical impact of your reports with charts and maps—including the new intelligent charting that automatically recommends the best chart type for your data.

For novice users, Crystal Reports includes an intuitive report design expert and object-oriented explorers to simplify common reporting tasks. For more advanced users, Crystal Reports includes fine-grain control over most features, including formulas, conditional formatting, and object positioning, so you can customize the report exactly as you wish.



The highly productive design environment gives you control and flexibility over how data is presented and formatted.

Crystal Reports XI – User Profiles

Reports are synonymous with just about any type of business and industry—from sales reports to inventory reports, customer account reports to profit and loss reports—and everything in between. If you're in business, you're developing, designing, creating, reading, and most importantly, making significant business decisions based on information that is contained in a report.

We have organized users into separate groups. To better understand the context of each group's "report reality" and motivation, we have also included the unique challenges and business problems they encounter.

IT Professionals

IT professionals manage operational reporting. They produce any kind of report that a user may require, including individual-use reports created specifically for a particular person and mass-consumption reports that are distributed to hundreds and even thousands of users, both internally and externally. Ideally, they prefer to publish reports to their intranet or the internet for enhanced decision quality at all levels of the organization. Usually these reports must be exported and repurposed to the electronic formats (PDF, Excel, etc.) most familiar to their users.

User	Business Problem
IT Professionals	<ul style="list-style-type: none">• Majority of time is spent updating, modifying, and maintaining reports. This results in a large and ever-growing report backlog, long queues, and many disappointed customers.• Reporting tools are incapable of designing flexible, feature-rich reports.• Reporting tools are not quick and easy to learn.• Multiple data sources with complex schemas cannot be accessed.• Once distributed, reports cannot be interacted with or changed.• Reports are not smart enough to automatically highlight the relevant information.• Although users are drawing from the same data source—each one applies their own business rules.• Reporting solutions are not affordable and are usually incapable of scaling with the growth of the company.

Report Designers

Report designers create highly formatted, interactive reports. They use layout and design controls to give the reports a professional appearance. Report designers create reports for their own use, or for others to use—usually as a means to get answers to predefined questions. They tend to email or print the reports they create.

User	Business Problem
Report Designers	<ul style="list-style-type: none">• Reporting tools can be complex and difficult to use.• Users need reports in familiar formats.• There are too many requests to customize reports. Users should be able to make their own updates and modifications to published reports.• Data is difficult to access and update.• Time is wasted on inefficient and redundant tasks.

Developers

Developers are comprised of two different groups—coders and managers.

Coders are traditionally corporate developers within the IT applications department. They develop custom applications to address business initiatives within the organization and are often responsible for developing a specific part of an application (e.g. viewers, wizards, etc.) or a complete application (e.g. data access, business logic, presentation layer definition).

Managers, or development managers, are usually found in the IT department. They manage the overall resources and timelines for key projects. They lead teams of developers who create and maintain custom applications—refining business processes and supporting strategic initiatives within the organization.

User	Business Problem
Developers-Coders	<ul style="list-style-type: none">• A lack of prebuilt tools and components results in a significant amount of complex coding in order to access and format data• Integrating dynamic data into application presentation layers is difficult and time consuming• The perception exists that using a prebuilt tool (versus hand-coding) compromises flexibility and control• Unclear and ever-changing user requirements mean that time is wasted on numerous cycles spent continually modifying and maintaining application presentation layers
Developers-Managers	<ul style="list-style-type: none">• Data presentation tasks are time consuming and require a significant amount of coding—even though the results are often not reusable• Application longevity is risky because available reporting tools are not designed for enterprise-wide scalability or cross-platform use• Additional training and maintenance costs are necessary due to the absence of a common standard for data presentation

Information Consumers

Information consumers receive the final report and apply the information to make decisions that drive and grow the business. They use the regularly scheduled reports created and distributed by IT professionals to monitor the business and identify any troubling data or trends. They ask specific questions that are answered with the highly-formatted and interactive reports created by report designers. And they identify specific business initiatives within the organization that require custom applications built by developers. Although they do not often work directly with the full reporting technology—they drive the work of all other users involved in the reporting cycle.

User	Business Problem
Information Consumers	<ul style="list-style-type: none">• Needs are constantly changing which means a different report is required for almost every situation• Report information requests are always urgent in nature• Reports must be used immediately before the data becomes stale

Crystal Reports XI – Product Family

Crystal Reports Server

New to the Crystal Reports product suite, Crystal Reports Server XI is an enterprise reporting solution that can help your business create, manage, and deliver reports over the web or embedded in enterprise applications. Crystal Reports Server is designed to support departmental or workgroup requirements and is ideal for small- and medium-sized businesses. With Crystal Reports Server, you can design Crystal reports and then publish them to the web in a single server environment.

SECURITY. Take advantage of granular object, user, and data-level security by specifying user access and actions within a particular report.

SCHEDULING. Flexible scheduling capabilities ensure that information can be processed efficiently when and where you need it. You can schedule reports based on events or at specific times and in the formats you require.

SCALABLE CENTRAL ARCHITECTURE. Crystal Reports Server can support high-volume reporting. This includes a set of report processing services for speed-of-thought information access. Innovative page-on-demand technology helps expedite processing by serving only those pages requested by users. On-demand caching helps maintain fast performance levels by reusing common content requests to service multiple users.

Crystal Reports Developer

Designed for easily integrating report viewing, printing, and exporting capabilities into applications, the Developer Edition provides report creation and integration tools for presenting data within applications.

Crystal Reports Professional

Designed for the creation and maintenance of highly formatted reports, the Professional Edition includes all features in the Standard edition plus access to almost any enterprise data sources.

Crystal Reports Standard

Crystal Reports Standard Edition is available for creating reports from PC-based data sources.

Key Features by Edition

The following table provides an overview of the differences by edition for key features within Crystal Reports XI:

Crystal Reports Key Features by Edition	Crystal Reports Professional	Crystal Reports Developer	Crystal Reports Server
Data Access and Report Design			
Native, ODBC, OLE DB, and JDBC connectivity to relational, OLAP, XML, legacy, and enterprise data sources	✓	✓	✓
Custom, user-defined data through JavaBeans, ADO.NET, and COM data providers		✓	✓
Visual report designer for rapid data access and formatting	✓	✓	✓
Report Integration			
Extensive SDKs for report viewing, printing, and exporting in applications		✓	✓
Report processing resides within a custom application		✓	✓
Offloaded report processing on a separate report server			✓
Report creating APIs for end-user report modification and creation ¹		✓	✓
Customizable report viewers		✓	✓
Delivery and Management ²			
Rapid web report publishing for workgroups and departments			✓
Scheduling capabilities based on events, calendars, or specific points in time			✓
User, group, object, and folder security			✓
Powerful semantic layer (business views) for end-user view of database			✓
Repository for reusing common report objects across multiple reports			✓

¹ For Report Designer Component users, these APIs are available in the Developer Edition

² Professional and Developer editions include a special five-named user introductory offer of Crystal Reports Server

Crystal Reports XI – Technology That Grows with Your Business

Universal Integration with Applications and Portals

Successful businesses grow and so should their technology. Crystal Reports XI is an enterprise reporting solution that easily integrates with existing systems, applications, and infrastructure.

For application developers, Crystal Reports includes extensive SDKs for easily integrating report viewing, printing, and exporting into Java, .NET, and COM applications. Additional interactive application programming interfaces (APIs) are available in Crystal Reports Server for end-user report modification and creation at runtime. New cross-platform APIs make it even more efficient to use Crystal Reports across multiple application projects. Custom user function libraries have also been enhanced so you can incorporate your own Java or .NET code into Crystal Reports. Upgrading your Java or .NET application to use Crystal Reports Server is straightforward because these technologies are built using a common underlying object model.

Crystal Reports also supports leading web application servers and platforms. You can take advantage of Crystal Reports as your single reporting standard to address any deployment requirements and to increase the longevity of your applications. With Crystal Reports, you can write your application in Java, .NET, or COM and deploy on Windows, LINUX, and UNIX. You can even call reports stored from a single Crystal Reports Server deployment from within multiple applications that were created using Java, .NET, or COM. There is no longer any need to maintain redundant report repositories for individual applications.

Scale with Ease for Increased Application Longevity

Reporting is often the foundation for future business intelligence projects. Crystal Reports is an integral part of the unified BI product suite from Business Objects. Based on the same underlying infrastructure (BusinessObjects Enterprise), Crystal Reports makes for a seamless extension of your existing deployments to BI.

Should your needs evolve to require query, analysis, dashboards, scorecards, OLAP, or data integration capabilities; you can easily migrate your system from Crystal Reports to BusinessObjects Enterprise. Or, if you simply need to scale your Crystal Reports Server deployment across multiple servers for mission-critical, fault-tolerant reporting, you can migrate to BusinessObjects Enterprise with minimal code changes.

Crystal Reports is already integrated as the reporting standard in leading Java and .NET IDEs for report integration that can be accomplished without the need to leave a familiar environment. You can upgrade the reporting components included in Borland JBuilder, Borland C#Builder, Microsoft Visual Studio .NET, BEA WebLogic Workshop, and IBM Rationale WebSphere to Crystal Reports XI for greater ease of integration.

Data Access

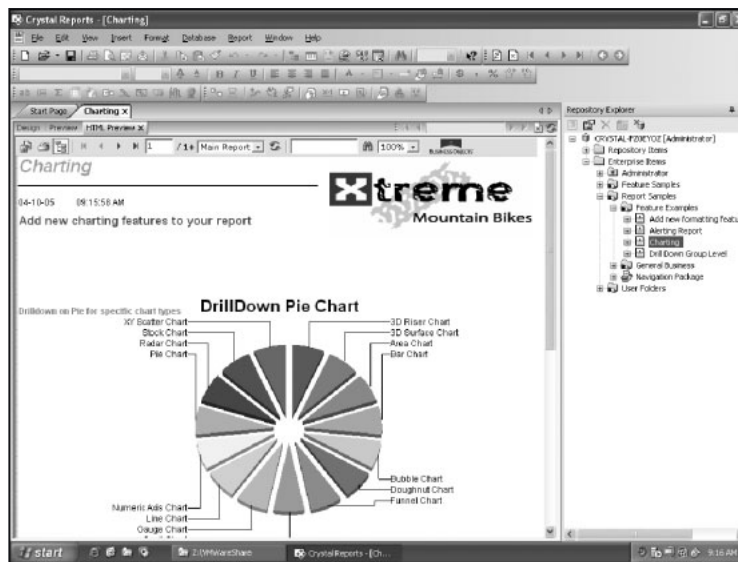
Crystal Reports gives you flexible and unconstrained control over data connectivity so you can satisfy end-user information requirements. Whether you require native, ODBC, OLE DB, or JDBC connectivity to databases, files, logs, enterprise applications, or program elements, Crystal Reports is the only tool you'll need. More than 35 data drivers are included for direct, code-free access to virtually any relational, OLAP, XML, or in-memory data. Choose to write your own SQL commands or use the powerful query generation capabilities for complete control over how the data is queried. It's easy to present data from multiple sources and in multiple languages within the same report with Crystal Reports.

Crystal Reports XI makes data connectivity even easier. Now you can connect to BusinessObjects Enterprise universes, a powerful semantic layer that masks the complexity of the data so that it's easier to understand. Plus, business views eliminates the hassles associated with manually moving reports from development to production. Crystal Reports XML, JDBC, IBM DB2, and Exchange data drivers have also been updated to give you even more data access options.

Increase Efficiency

Crystal Reports can help you speed report production and reduce redundant report maintenance so you can spend more time on other critical tasks. Create customized templates to automatically apply formatting and layout to any report. Use custom functions to extract the business logic from formulas so they can be used across multiple reports without redundant coding. You can store common report elements, including text objects, custom functions, SQL commands, and images, in a central repository so they can be shared amongst multiple report developers and updated from a single location. With Crystal Reports, there's no need to manually update individual reports and application presentation layers when these objects change.

The reports you create render precisely in a web environment or exported format. For example, you can create reports and preview them at design time. You can save recommended export options with your report to ensure optimal output and you can preview your work in HTML before publishing to the web.



The HTML preview feature allows you to preview a report in HTML before you publish it to the web.

The dynamic and cascading prompts feature makes it even easier for you to address a variety of end-user needs with a single report—while reducing report maintenance hassles. As your database content changes, parameters will automatically reflect the latest information so end users can create an up-to-date, individual view of the data in a report.

For application developers, Crystal Reports helps minimize presentation layer maintenance requirements that result from ever-changing, end-user specifications. It supports the separation of data access and report design from business logic so that you can easily add new reports or modify existing reports without impacting the core business logic. Java and .NET developers can take advantage of data binding using unbound fields in the Crystal Reports designer and binding application to these fields at runtime. Use the dependency checker feature to identify broken links, formula errors, and dependency issues. This can significantly reduce your quality and assurance time.



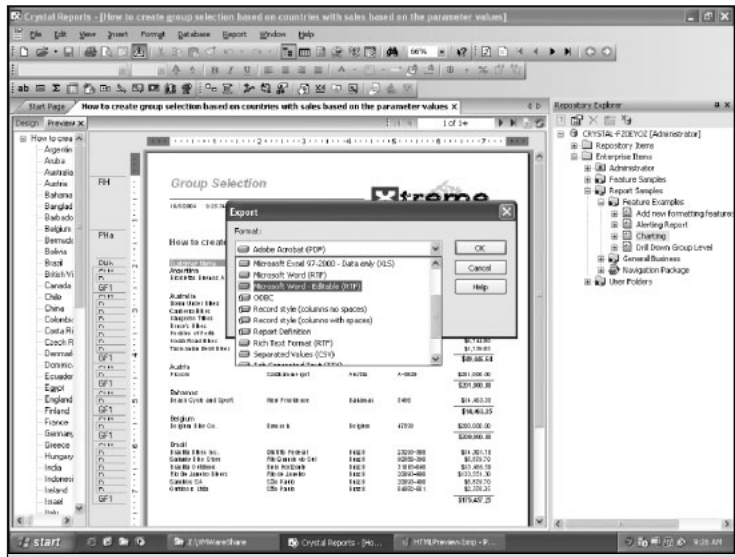
The dynamic and cascading prompts feature allows you to create a single report that can meet the information demands of multiple users.

Empower Users with Report Interactivity

Your users will be able to interact with and view data in familiar formats and environments. This will reduce reliance on IT and provide the basis for better decision-making. You can deploy out-of-the-box or you may choose to customize any of the Crystal Reports thin- and zero-client viewers to give end users report printing, exporting, refreshing, and searching capabilities at their fingertips. They will also be able to drill down on charts or between groups of data without any extra coding.

Crystal Reports supports a variety of industry-standard export formats including Excel, Word, and PDF. The new RTF exporting feature allows users to easily enhance and expand a report in a familiar word processing environment. For mobile users, an offline report viewer is also included so information can be viewed without connectivity to your network.

Crystal Reports includes alerting capabilities, making it easy to point out to users when certain data conditions or threshold levels have been breached. You can also set up links between reports and other objects to help guide them through related information—no custom coding required.



RTF exporting provides interactivity for end users in a word processing environment that is familiar to them.

Crystal Reports makes it easy to deliver feature-rich reports to the web, portals, print, email, and as part of custom applications. It includes flexible Java, .NET, and COM SDKs and powerful, cross-platform reporting services to support virtually any deployment scenario.

Crystal Reports Server

Crystal Reports Server offers a scalable web reporting solution that makes it easy and efficient for you to deliver reports to users. The report publishing wizard can upload any existing Crystal report to the web, while setting report scheduling and security options at the same time. Then you can provide your end users with a single URL for instant and secure access to a customizable portal for report viewing and interaction. Prebuilt portal integration kits are also available to help expedite customization into your existing portal interface.

You can take advantage of granular object, user, and data-level security. And you can specify user access down to the information and actions each user can perform within a particular report.

Crystal Reports Server includes flexible scheduling capabilities to ensure that information can be processed efficiently when and where you need it. Schedule reports based on events—such as a data warehouse update—or specific business calendars that reflect your company’s financial calendar. You can also grant end users the right to schedule reports at specific times such as nth day of the month or every Monday, in specific formats such as PDF and Excel, and to specific printers. Related reports can also be packaged together for simultaneous processing.

To support high-volume reporting, Crystal Reports Server uses a scalable central architecture, comprised of a set of report processing services for speed-of-thought information access. Innovative page-on-demand technology helps expedite processing by only serving up requested pages to end users and by presenting data, then images for the requested page. On-demand caching helps maintain fast performance levels by reusing common content requests to service multiple users.

Crystal Reports Server also includes a customizable, web-based administration console that makes it easy to set up, configure, and manage your reporting system remotely. Use it to set up users and group accounts with security. You can also configure individual reporting services and add new licenses.

Conclusion

Crystal Reports XI allows you to access your data, format it, and deliver it as information inside and outside of your organization. Your users will be able to interact with reports so they can self-serve the information they need—freeing up IT time. Reporting functionality can be tightly integrated into existing applications and deployed on Windows, UNIX, and Linux with minimal resources and maximum results.

With Crystal Reports XI, you can provide everyone with a single version of the truth and rest assured that the decisions they make are based on fact—not fiction.

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