



BIRT Analytics Product Summary

Actuate Release 11 includes new BIRT-based analytics tools that simplify data analysis and provide users of varying skill levels with the ability and tools to analyze data for better decision making. These tools include new BIRT Data Objects and BIRT Data Analyzer.

BIRT Data Objects are in-memory datasets constructed from disparate enterprise data sources. These datasets can be used by BIRT Designer or Actuate BIRT business user tools such as BIRT Studio, BIRT 360 or BIRT Data Analyzer for a variety of self-service functions ranging from ad-hoc report creation to ad-hoc data analysis.

The BIRT Data Analyzer is a zero footprint, browser-based tool for analyzing personalized, multi-dimensional objects embedded in a BIRT design. The intuitive interface, combined with the easy distribution of a BIRT design, make it possible for organizations to deploy analytics to users at all levels in the organization.

An additional tool—BIRT 360 (analytic and operational dashboards)—also enables users to perform analyses on data; for more information about this product, please refer to the [BIRT 360 Product Summary](#).



Overview

Actuate Release 11 includes new BIRT-based analytics tools that simplify data analysis and provide users of varying skill levels with the ability and tools to analyze data for better decision making. These tools include new BIRT Data Objects and BIRT Data Analyzer.

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Easy customization and integration

Actuate provides a rich set of customization and integration APIs that allow organizations to:

- *Brand and embed BIRT-based analytic tools.*
- *Issue multi-dimensional queries to the BIRT engine and retrieve data via a comprehensive JavaScript API for the BIRT engine.*

These capabilities offer an ideal solution for organizations seeking highly differentiated applications for integrated and contextual analytics.

Applications built with ActuateOne provide users with **one user experience** regardless of task, tool or skill level; are supported by **one server** with a set of services to support any deployment and are built with **one design** using BIRT. ActuateOne provides organizations with agile, self-service access to any data source or document print stream, with a quick time to market and the ability to grow with success.



Features

This new, in-memory online analytical processing (OLAP) product line is the result of enhancements to the core BIRT engine, which supports the entire spectrum of rich data visualizations, interactivity and analysis. BIRT architecture provides multiple ways to embed and contextually deliver information to users to address their analytics needs while promoting efficiency and productivity through reuse. These products include BIRT Data Objects, BIRT Data Analyzer and BIRT 360 (for more information about this product, please refer to the BIRT 360 Product Summary).

BIRT Data Objects

BIRT Data Objects are in-memory datasets that are created with and can be used by BIRT Designer Pro. They are also available to other Actuate BIRT products such as BIRT Studio, BIRT 360 or BIRT Data Analyzer for a variety of self-service functions ranging from ad-hoc report creation to ad-hoc data analysis.

- *Agile data access* – Data can be sourced from multiple and disparate enterprise data sources using standard out-of-the-box BIRT data connectors and 3rd party BIRT ODA

(Open Data Access) connectors. Data can also be cleansed and transformed using standard Java functions.

- *Datasets can be combined to create higher level data sets that can provide a more comprehensive set of data; a BIRT Object can have many datasets.*
- *Flexible modeling* – Data can be modeled as one or more flat datasets or multi-dimensional structures. Multi-dimensional structures can share dimensions to enable simultaneous analysis of disparate measures. For example, a shared dimension such as “geography” will enable analysis of “product sales” as well as “customer loyalty” data simultaneously along the geography dimension to identify correlations. Additional properties for any dataset or dataset column can also be specified. In addition to formatting properties, a developer can link a given column of a dataset to other Actuate or third-party content.
- *Granular data security* – BIRT Data Objects be secured based on users and roles and on individual datasets, their columns, dimensions, dimension values and measures, providing granular data access and security. This can be set up in BIRT Designer Pro using an Access Control List (ACL).



- *In-memory data federation – In-memory datasets belonging to one or more BIRT Data Objects can be linked to enable in-memory data federation, providing broader data access.*
- *Links to operational data – In-memory datasets in a BIRT Data Object can be further linked to additional Actuate and non-Actuate content. This content, which is accessed on demand, gives access to data residing outside the BIRT Data Object.*
- *Cloud ready – BIRT Data Objects are cloud ready and cloud friendly, allowing users and developers to link data across reports, machines and in the cloud.*

BIRT Data Objects are created within BIRT Designer, and are data extracts that use the same infrastructure that BIRT Designer has used in the past.

BIRT Data Objects:

- *Access Information Objects*
- *Connect directly to data sources*
- *Can be used to create data sets, joins, etc.*
- *Provide multi-dimensional, analysis-ready data to users*
- *Use the Actuate BIRT infrastructure as follows:*

1. *Design –The BIRT Data Object is designed in BIRT Designer Pro as a 3D representation of data; it is virtual, not static, and it is not a flat file (table, etc.).*
2. *Publish – Data objects are published to and become available on the BIRT iServer. At this point, the developer can either schedule the creation of BIRT Data Object or allow it to be created on demand.*
3. *Run – When the object is run, the server retrieves the data and creates a BIRT Data Object, which is used to create designs, dashboards, etc. using other BIRT tools, including BIRT 360, BIRT Studio, and BIRT Data Analyzer*
4. *Analyze – run in 32 or 64-bit environments for efficient performance*
 - *In a 64-bit environment, there is no memory cap—everything runs in memory, for fast, efficient processing.*
 - *In a 32-bit environment, data is automatically, intelligently swapped between disc and available memory to speed processing and optimize available system resources.*



BIRT Data Analyzer

BIRT Data Analyzer is a zero footprint, browser-based OLAP tool created for business users. The product's highly intuitive analysis interface, combined with the scalable reach of BIRT technology, make it possible for organizations to deploy analysis capability to users at all levels in the organization.

With BIRT Data Analyzer, users can:

Create reports:

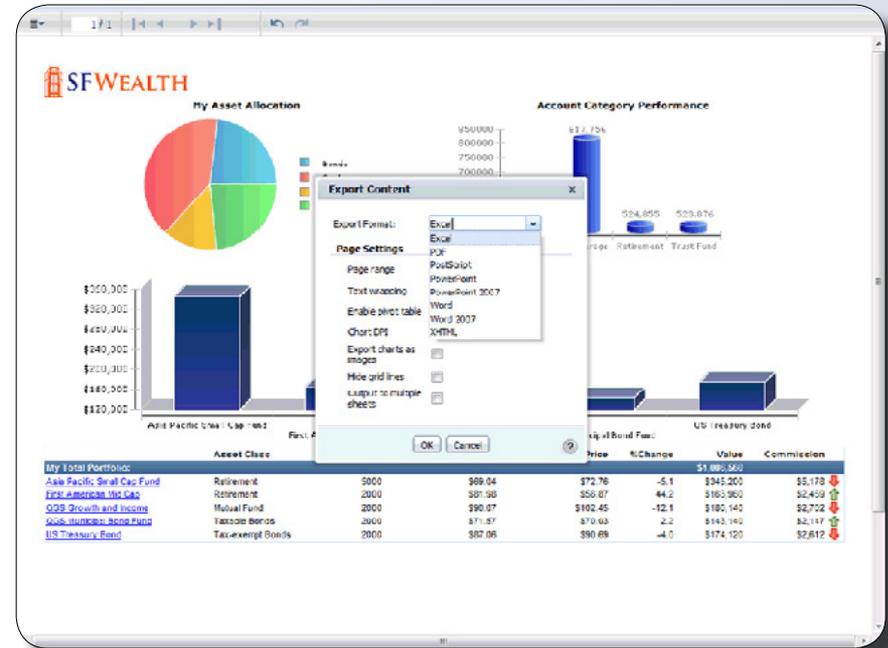
- Describe data in multiple dimensions – Input is not limited to flat files, tables, etc.
- Categorize information – Categorize and organize information for easier identification/use of specific report components
- Create comparative analysis reports with multiple dimensions – Choose from multiple datasets to analyze multi-dimensional objects in comparative reports
- Link to other Actuate and non-Actuate content – Link to BIRT reports and other data streams
- Change look and feel – Change and brand reports with full support for themes
- Access table-based analysis functions –
 - Create multiple dimensions on rows and columns
 - Create multiple measures
 - Sort
 - Filter
 - Compute measures
 - Swap rows and columns
 - Invoke summary functions
 - Apply conditional formatting
- Use charting functions – Automatically convert content between chart and tabular format
- Determine layout and formatting –
 - Use default or customizable themes
 - Choose fonts
 - Choose data formats

Analyze reports:

- Drill up and Drill down dimension levels – Access report detail
- Analyze data in BIRT Data Objects – Use intuitive, Pivot-table style interface with a drag-and-drop layout paradigm for fast report creation
- Identify trends in data by reviewing information as a chart or other visualization –give users immediate insight into complex data using at-a-glance visualizations
- Spot anomalies in data visually by looking for measures that dip, spike, etc. – Increase understanding of data by providing visual representations of multiple items in a variety of chart types
- Perform root cause analysis – Link analytic data to operational data
- Facilitate ad-hoc analytics – Create analytic reports on the Web and on the fly

Produce/export reports:

- Export content to Excel as Pivot tables – Use new Excel emitter to produces live Excel content from any BIRT report
- Export content as HTML, PDF, Microsoft Office, etc.
- Save analysis results as cube view files



BIRT Data Analyzer allows users to export report contents directly to live, fully functional Excel spreadsheets.

Benefits

BIRT Data Objects

BIRT Data Objects provide users with powerful, easy-to-use tools to create complex data objects that facilitate analytic functions:

- *Flexible* – BIRT Data Objects can be constructed with or without the presence of a data warehouse and with or without the use of a metadata layer.
- *Accessible* – users can drill down to details or drill through to other objects stored on the same or a different machine, or go directly to physical data stores and access additional data as needed.
- *Versatile* – the ability to join in-memory data across machines is a significant advantage, especially in cloud computing environments.
- *Economical* – BIRT Data Objects minimize the amount of data creation, movement and storage required by systems that cannot otherwise provide the capacity and functionality required to handle these activities.

The availability of data across applications and the reusability of BIRT Data Objects provide organizations with immediate return on investment—data sets do not have to be repeatedly created. The drag-and-drop interface makes this very powerful analytics tool available to users with minimal skills, decreasing the demand for IT-created reports and report maintenance.

BIRT Data Analyzer

BIRT Data Analyzer provides users with the tools required to access analytic features often available only in products that are difficult to learn and use. The BIRT Data Analyzer:

- *Makes analytics accessible* –
 - UI designed specifically for business users
 - Zero training required
 - Interface makes it easy to model new, analysis-ready datasets
 - Analyses can be embedded in existing business applications on web pages
 - Scalable architecture makes deployment possible to many users

The screenshot shows the BIRT Data Analyzer interface for SF WEALTH. The main area displays a pivot table with the following data:

	2009		2010		Grand Total
	Aug	Sep	Aug	Sep	
Automobile	\$268.44		\$785.23	\$950.77	\$1,604.44
Clothing and Personal	\$69.28	\$803.73	\$819.42	\$290.00	\$1,962.43
Discretionary		\$63.95			\$63.95
Electric			\$129.04		\$129.04
Entertainment	\$306.09	\$812.35	\$76.12	\$88.74	\$1,283.29
Fees			\$8.00	\$17.00	\$25.00
Groceries			\$147.59	\$174.52	\$322.11
Homes			\$127.45	\$49.44	\$176.89
Insurance			\$384.72		\$384.72
Misc	\$107.50	\$07.92	\$1,165.00	\$233.91	\$1,514.33
Phone			\$39.79	\$45.32	\$85.11
Restaurant	\$769.87	\$15.22	\$188.18	\$92.13	\$1,065.39
Water				\$70.07	\$70.07
Wireless	\$269.44	\$624.42			\$893.86
Grand Total	\$1,850.62	\$2,127.50	\$3,772.22	\$1,573.00	\$9,363.34

Familiar Excel-like pivot table-style interface makes it easy for business users to adopt BIRT Data Analyzer.



- *Allows multiple usage scenarios –*
 - *Analyze datasets available in the encyclopedia*
 - *Analyze datasets embedded in BIRT documents*
- *Produces results that can be shared among users and across apps and data sets –*
 - *Operationalize analysis results by sharing BIRT Data Objects with other users*
 - *Link analyses to operational data*
 - *In multi-dimensional analyses, users can share multiple data sets, dimensions, etc.*
- *Optimizes performance –*
 - *Support for both 32-bit and 64-bit modes*
 - *In-memory architecture speeds processing time while optimizing system performance*
 - *Support for reuse of datasets and reports across many users and applications*
- *Provides users with agile data access –*
 - *Build datasets from multiple enterprise data sources*
 - *Drill through to new operational datasets*
 - *Drill through to new in-memory datasets across machines*
 - *Drill through to new in-memory datasets across cloud implementations*
 - *Spot anomalies, trends, etc.*
 - *In multi-dimensional analyses, users can look at multiple data sets at the same time*

BIRT Data Analyzer brings powerful analytic tools to multiple users of varying skill levels, opening up data analysis to users who, in the past, have been unable or unwilling to learn more difficult data analysis tools. Full adoption becomes far more likely, offering a more satisfying user experience on an individual level and increasing return on investment at the corporate level.

The Progressive Design Process

BIRT Data Objects, BIRT Data Analyzer and BIRT 360 are the newest member of Actuate's progressive design architecture, which brings the principles of open source to information applications and encourages participation, iterative development and modularity. BIRT 360 drives business user self-service in collaborative reporting. The progressive design architecture includes:

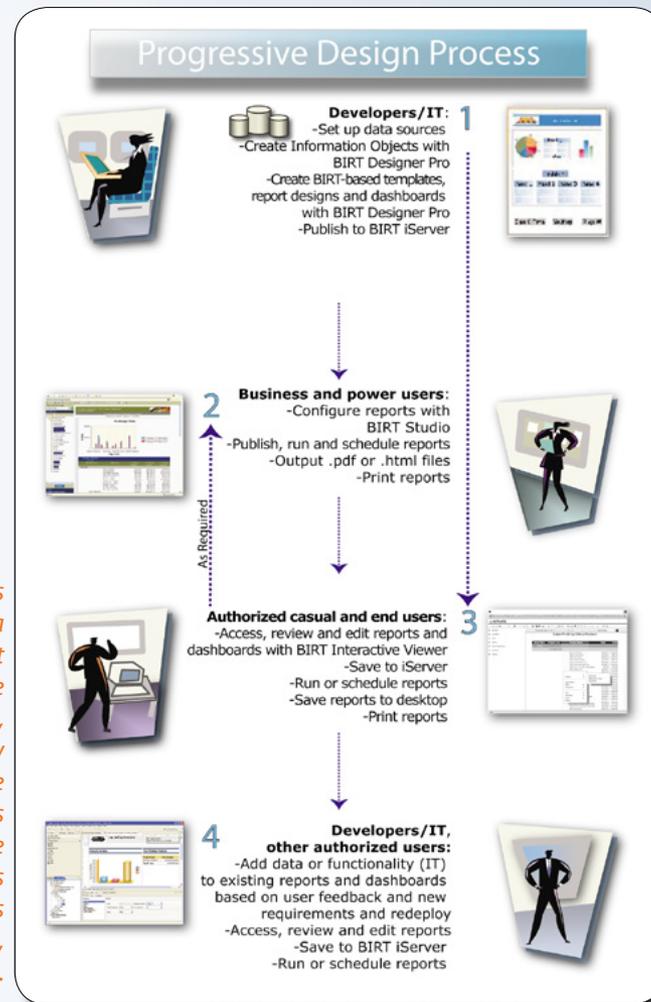
- **BIRT 360:** Operational and analytic user-created dashboards for a 360-degree view of the business in a true self-service environment.
- **BIRT Data Analyzer:** In-memory analytics application that helps business users uncover trends, identify anomalies and model scenarios.
- **BIRT Reports:** web reports based on open-source BIRT technology from the Eclipse project, available without charge from [BIRT Exchange](#).
- **BIRT Studio:** self-service, ad-hoc web report development within IT control
- **BIRT Interactive Viewer:** end user report viewing and customization
- **BIRT Mobile Viewer for iPhone:** allows users to mobilize and carry corporate information wherever they go.

- **BIRT iServer:** enables the use of [BIRT Information Objects](#), and includes scheduling, versioning, and archiving functions, allowing users to run both on-demand and scheduled reports without IT intervention but within IT-control. This highly scalable implementation of Actuate services provides multi-server, multi-project support; high-availability clustering, failover and load balancing; metadata caching; and enterprise management and tuning features
- **BIRT onDemand:** Actuate's Platform as a Service (PaaS) offering, which enables any user, anywhere, to access enterprise information via the Web, without downloading/installing Actuate BIRT desktop products.

These options provide an array of choices from which to create unique information applications that appeal to any user.

Within the progressive design architecture structure, BIRT designs can be shared among highly skilled developers, business users and consumers. This encourages participation and supports an iterative development environment, which speeds development and adoption of information applications.

BIRT Data Objects and BIRT Data Analyzer are part of the ActuateOne products line, which provides every user in the enterprise with the tools required to make sound business decisions based on current, available data.



Deployment Options

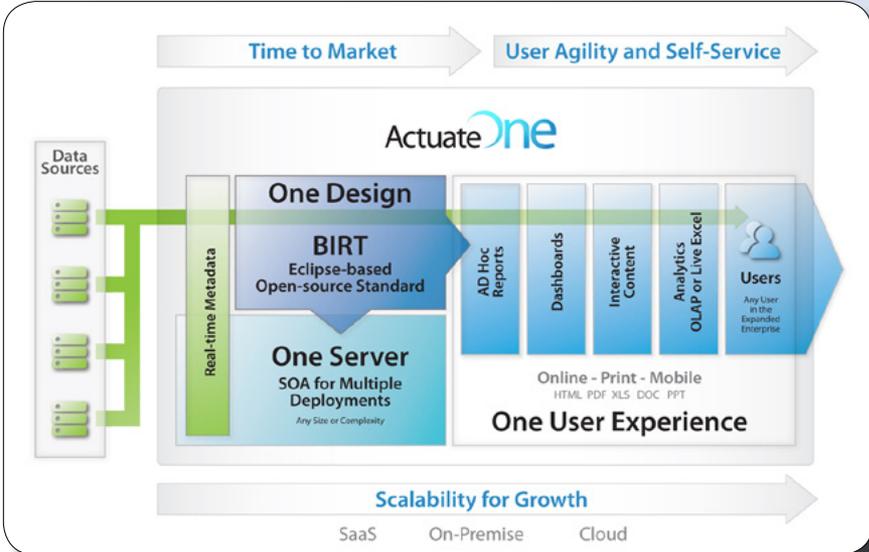
BIRT Data Objects and BIRT Data Analyzer are designed to be used with BIRT iServer. It effortlessly delivers personalized BIRT report content to all authorized users.

System Requirements

Overall system requirements vary with options chosen. For a system analysis based on your specific needs, please contact an Actuate expert at 1-800-914-2259 (US & Canada) or contact us by [email](#). You can also contact one of our [offices worldwide](#).

For More Information

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