

# IBM Cognos Analytics

*Mix and match your data with automated data preparation*



## Highlights

- Use intelligent capabilities to automate the process of preparing data.
- Connect multiple data sources in different formats, then use natural language smart search to quickly find relevant data.
- Create customized, reusable data modules for use in dashboards and reports.

IBM® Cognos® Analytics is a smart business intelligence solution designed to guide users in the creation of a wide array of reports, dashboards and models. What makes Cognos Analytics unique is its breadth of functionality—almost any user, from the novice to the expert, can use its graduated interactive interface and smart search to find the data they need and harness its built-in intelligence to quickly visualize their data.

This automated intelligence is crucial for success. Typically 40 to 60 percent of a business analyst's time is spent searching for or preparing data. With automated preparation, intent-based preparation and direct reporting from data sources, Cognos Analytics makes it much easier to both find the data you need and quickly prepare it for use in analysis and models. Virtually any user can upload and prepare their own data, whether governed or personal, from multiple sources.

Once imported, data sources may be modified, cleansed and merged together to create a custom and reusable data module for use in dashboards and reports. With data modules, insights are much easier to share with users throughout the organization.



Cognos Analytics provides web-based self-service capabilities to help business users find and prepare data; filter, merge and join data sources; and quickly verify the resulting data module. You can think of module-based data modeling as the culmination of a four-step data analysis process:

### **1. Connect to the data sources you need**

Access structured and personal data sources, including so-called “dark data,” which refers to unstructured data that companies have but fail to use and analyze. This full breadth of data access—governed, external, personal, on cloud or on premises—means that the analytics tools can work with meaningful data sets.

You can quickly access, manipulate and combine virtually any data, with no IT dependency or complex scripting required. This automates and streamlines manual data preparation tasks, reducing the burden on IT and leaving more time for your data analysis.

### **2. Use natural language smart search**

Using search to find the data you are looking for, the system can automatically create a module based on the data you select. Describe what you’re looking for in your own words. Cognos Analytics analyzes available data sources and searches for the most relevant tables. Smart search proposes tables to include in the module based on matches between the terms you supply and metadata in the underlying sources.

### **3. Create a fast, efficient, shareable data module and diagram**

A data module allows a business user to shape, merge, join and customize data into a small, efficient module that can then be used to create visualizations, dashboards and reports. You can save data modules so that you and other users can access them. The module is represented via an interactive module diagram.

You can create a data module through search, as in step 2, or by fusing together many sources of data such as relational databases, Hadoop-based technologies, Microsoft Excel spreadsheets, text files and more.

The initial data module that is created may need to be modified so that it contains all of the data that meets your reporting requirements. A module can be customized so that it presents information in a manner easily understood by certain business groups. For example, you could create an HR Benefits module that uses the terms, data groupings, metadata and formatting that are relevant to HR users.

You can apply the following modifications to refine your data module:

- Add or delete tables.
- Edit or create new relationships between tables.
- Change column properties (for example default aggregation and sorting).
- Use gestures for commonly used calculations or use an expression editor to create custom calculations.
- Define filters.
- Group data.
- Clean the data (for example to remove white space).

The module diagram is a graphical representation of table relationships in a data module. You can use the diagram to examine the relationships, edit the data module and view the cardinality information for the relationships.

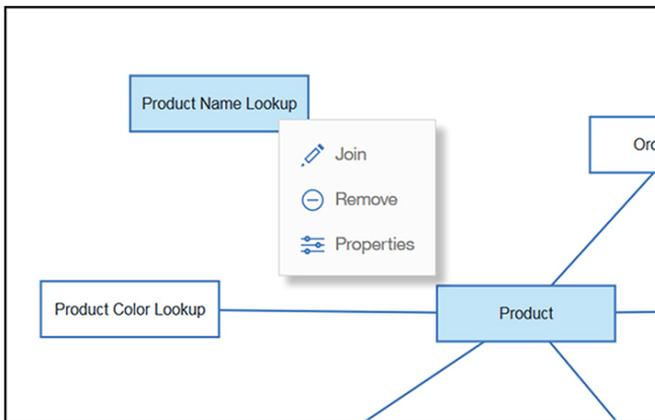


Figure 1: Interactions via the module diagram.

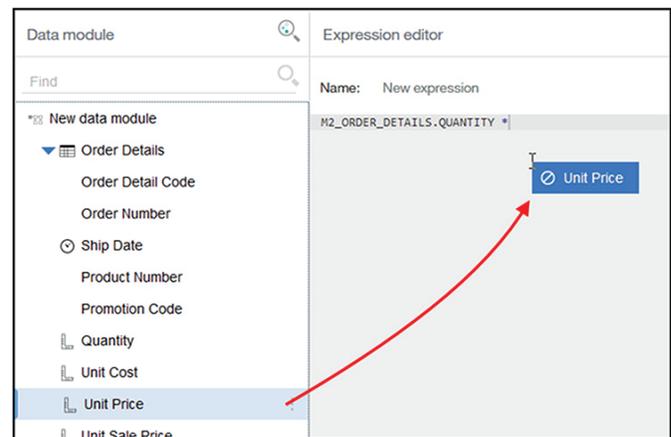


Figure 2: Drag-and-drop expression editor.

#### 4. Test and verify for confident results

Cognos Analytics has built-in validation tools to help you verify the correct operation and performance of your data module before you use it to create a report or dashboard. These tools can help you to validate and test queries sent to the database to help ensure the correct results are being generated.

#### For more information

To try Cognos Analytics, visit:  
[ibm.biz/cognosanlyticstrial](http://ibm.biz/cognosanlyticstrial)



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Route 100  
Somers, NY 10589

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