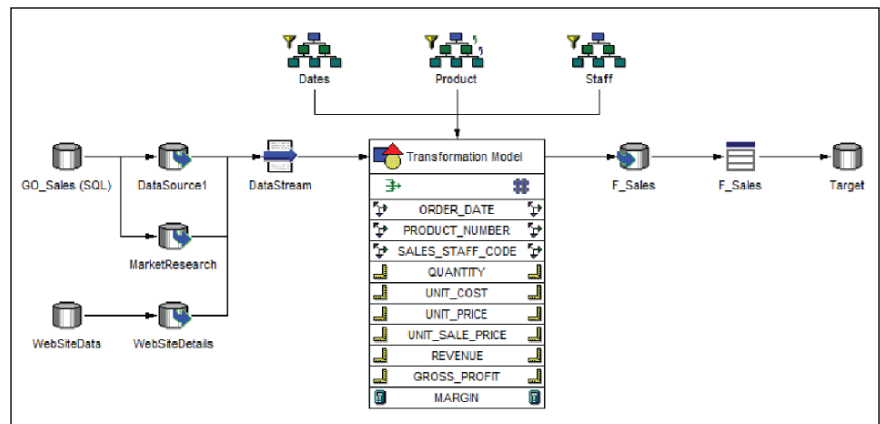# IBM Cognos 8 Data Manager

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Overview

The success of a business intelligence implementation is measured by how well business users understand the data. If data is presented in a consistent, intuitive way, if it is simple to understand and if it delivers on performance, you will gain widespread buy-in and acceptance of your BI platform.

The data integration design environment displays the data flow of a build

Technical Specifications

Automated dimensional management

IBM Cognos® 8 Data Manager provides dimensional extract, transform, load (ETL) capabilities including data merging, extraction, transformation and dimensional management to deliver a data warehouse optimized for high performance business intelligence.

Dimensional framework

Successful data warehousing projects are built on a dimensional framework. The use of shared (or conformed) dimensions across departmental, process and business boundaries means that distributed data sources can be integrated into a consistent, enterprise-wide view.

IBM Cognos 8 Data Manager delivers patented, automated dimensional management capabilities. Central to the data integration engine is a dimensional framework that builds and manages conformed subject matter data marts as part of a complete data warehouse. It ensures that each subject area is designed incrementally and integrated consistently with existing data warehouse subject matter.

Features and Benefits

The dimensional framework benefits your organization by

- Ensuring that data is structured according to specific business dimensions, such as customer, time, and location, to support the way business users think
- Enforcing a consistent view of your corporate information across the enterprise data warehouse by using a common dimensional structure
- Facilitating rapid and incremental development of a dimensional data warehouse

Leverage all of your data

IBM Cognos software simplifies the data integration process for IT and delivers the results in a variety of formats, including dimensional structures, relational tables, star schemas and snowflake schemas.

IBM Cognos 8 Data Manager can access all data that exist within the organization through the universal data access layer within the IBM Cognos 8 BI platform, providing access to data using published interfaces across relational sources like operational data stores and transactional systems like IBM, Oracle, Microsoft® SQL Server®, SQL Teradata, Sybase and ODBC as well as OLAP sources like IBM Cognos TM1, IBM Cognos PowerCube, SAP BW, Microsoft® SSAS®, ERP data like SAP R/3, PeopleSoft and Salesforce; modern and legacy sources like XML, IBM Cognos Now!, LDAP and mainframe.

Centralized metadata

IBM Cognos 8 Data Manager supports the common business model provided by IBM Cognos Framework Manager. With a centralized metadata model, you can apply consistent business rules, dimensions and calculations to your data, regardless of their source.

Analysis of relational data

IBM Cognos 8 Data Manager supports high performance analysis of relational data by creating aggregate tables at multiple levels within and across hierarchies in the dimension tables.

Full multilingual support

IBM Cognos 8 Data Manager provides multilingual support to enhance your data integration capabilities. Using Unicode standards, IBM Cognos 8 Data Manager interacts with data and metadata that contain characters from multiple locales at the same time. This allows you to quickly build a global data integration platform.
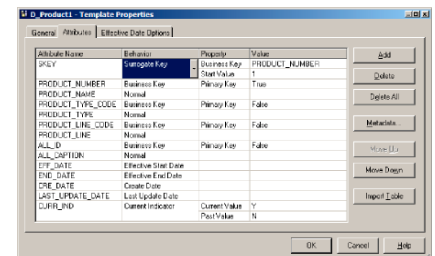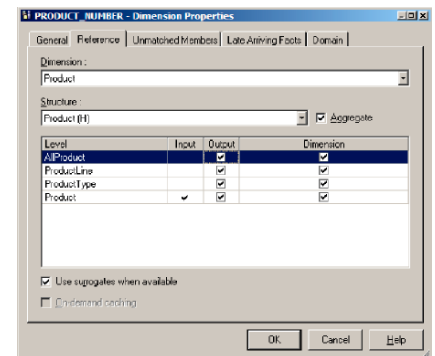
Feature Overview

Key features

IBM Cognos 8 Data Manager simplifies the creation of a dimensional warehouse. It gives IT a single interface – with live graphical displays of the dimensional framework – and tasks used to construct the data warehouse. This enables easy drill-through to display and modify properties. Automated wizards lead developers through the steps in creating dimensions or fact tables. IBM Cognos 8 Data Manager also fully supports aggregation and merging operations.
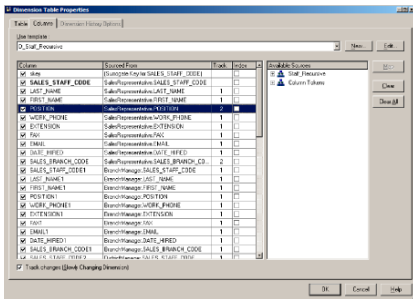
Automated tasks and processes

IBM Cognos 8 Data Manager automates many of the complex processes associated with warehouse dimension table creation and management, without the need for manual coding. Automated tasks or areas include:

- Generation of surrogate keys and management of surrogates both in dimension tables and fact tables.

Automated surrogate key management of dimensions and facts

- Implementation of slowly changing dimensions (SCD) to manage historical data. This includes management of late arriving facts associated with SCDs, allowing for the arrival of fact records that must have a surrogate assigned from an older dimension record.

Automated support for slowly changing dimensions

- Loading of dimensional history
- Balancing and flattening of hierarchies and recursive hierarchy support

Referential integrity validation

The IBM Cognos 8 Data Manager hierarchy explorer validates hierarchies within dimensions – such as parent child relationships, multiple parents and foster children – so issues can be resolved before data is loaded into the warehouse. By checking for referential data integrity, IBM Cognos 8 Data Manager ensures that dimensional information is built accurately and consistently.

Scalable Architecture

The IBM Cognos 8 Data Manager dimensional ETL provides flexible and responsive capabilities. An innovative dimensional reference model allows the coordination and management of data marts of all shapes and sizes and across many different platforms. In addition, IBM Cognos 8 Data Manager can perform high-scale data merging and aggregation in a fraction of the time possible with hand-coded solutions. The powerful transformation

engine works within existing data architectures to transform high volumes of transactional data into a data foundation for BI. The transformation engine provides the ability to read the data in a single pass, delivering multi-level aggregations, referential integrity and metadata components.

Sophisticated multi-developer environment

IBM Cognos 8 Data Manager enables multiple developers to share information. Integration with source control systems allows multiple developers concurrent access, while providing the capability for users to lock components as development occurs. Packages allow IBM Cognos 8 Data Manager components to be exported and imported, which enables developers to share components and for the efforts of several developers to be combined, as well as allowing for the distribution of components.

Crafting an event process

There are many events in the dimensional ETL phase of a project. These include the delivery of the dimensional framework and fact tables, calls to existing business rule modules, e-mail notices, and rebuilding the reporting indexes for the database. These events are all designed in a drag-and- drop visual palette to produce a coordinated task called a JobStream.

A JobStream can multi-task events and allow commands to be executed in a parallel or serial manner. Conditional events control the processing path

based on situations such as the existence of rejected records, a specific day of the week or errors encountered during the process.

The developed JobStreams can be published as Data Movement tasks into the IBM Cognos 8 BI production environment, where they can be added to jobs and be scheduled for execution. The DataMovement Service allows the dimensional ETL processes to be scheduled and managed within a single environment, providing end-to-end capabilities. For example, an event will call a Data Movement task, triggering updates to the warehouse and, upon successful completion, run the batch reports.

Prototyping and deployment

IBM Cognos 8 Data Manager's graphical design environment lets you prototype your warehousing solutions and deploy them quickly. It provides

- Visual reports for JobStream actions, build processes, source and target mappings and star joins of fact and dimension tables in a star schema
- A reference explorer for prototyping and validating business rules in the dimensional framework
- The ability to package components and easily move them from environment to environment and test functions and scripts as they are developed in the same environment

Better performance management

IBM Cognos 8 Data Manager is a key component within IBM Cognos 8 Business Intelligence. IBM Cognos 8 BI is the only solution that provides complete BI functionality in one product, on a single, proven architecture. It delivers seamless reporting, analysis, scorecarding, dashboards and event management. This simplifies your IT environment and the way everyone works with information. A variety of access modes let users interact with BI content using familiar applications or devices, such as a BlackBerry, search engine or Microsoft® Office® application. The result is high user adoption, better decisions and greater agility across the organization. IBM Cognos 8 BI is the clear choice for BI standardization and a cornerstone of better performance management.

- OS Platforms: IBM® AIX®, HP-UX (PA-RISC & Itanium), Sun Solaris (SPARC), Red Hat® Linux® (Intel® & IBM® System p®), and Microsoft® Windows®
- Database source/target support: IBM® DB2®, IBM® Informix®, Oracle, Microsoft SQL Server, Sybase ASE & IQ, Teradata, ODBC, and flat files
- Other source support: SAP R/3

About IBM Cognos BI and Performance Management:

IBM Cognos business intelligence (BI) and performance management solutions deliver world-leading enterprise planning, consolidation and BI software, support and services to help companies plan, understand and manage financial and operational performance. IBM Cognos solutions bring together technology, analytical applications, best practices, and a broad network of partners to give customers an open, adaptive and complete performance solution. Over 23,000 customers in more than 135 countries around the world choose IBM Cognos solutions.

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