

Dw - components of data warehouses

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Components of a Data Warehouse s Components of a Data Warehouse Data sources According to Kimball and Ross (2002), data sources refer to electronic repository that generates data that are directed towards the data warehouse either on a regular interval or on a real-time basis for transaction by transaction. Examples of sources systems include Excel files / MS Access, customer service system, cash management systems, flat files, and C-L system.

Data transformation

The second key component is data transformation or staging, where data is received from the sources. This component cleans, consolidate, standardize, reconcile, augment, and enrich data before it is transfers it to the data warehouse (Kimball and Ross, 2002).

Data warehouse

According to Kimball and Ross (2002), this is the third key component and it is designed to store information in a format compatible with other systems where data passes and makes it easily accessible for different users. Kimball and Ross (2002) further added that data warehouse provides security to data, monitor updates from different sources, and even checks the quality of data.

Reporting

This component mainly ensures that data is available for all the users from the central data warehouse.

Metadata

According to Kimball and Ross (2002), metadata or data about data is mainly designed to inform users about the status of the data warehouse and the

information that are stored in the data warehouse.

Operations

This component consists of the process of loading, manipulating, and retrieving data from the data warehouse. Operations also include data management and capacity management.

Complementary components

These complementary or optional components only exist in some data warehouses and they include dependent data marts and logical data marts.

Kimball and Ross (2002) stated that the dependent data mart is a physical database, which gets its information from the data warehouse. The dependent data mart could exist as part of the central database or on a separate hardware platform.

In regards to logical data mart, Kimball and Ross (2002) stated that it is a filtered view of the central data warehouse but it does not physically exist as separate data copy.

References

Kimball, R. and Ross, M. (2002). *The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling*. (2nd edition). U. S: Wiley Publishers