

BW Quick Guide

Overview

At the most basic level, BW can be broken into following main components:

1. Data Sources extract data from a source system for BW to pull
2. Data is organized in BW for flexible reporting
3. Reports and Dashboards are built on the data in BW

Source System Extractors

BW can load data from SAP and non-SAP sources. This document focuses on extracting data from SAP systems like ECC, CRM, Solman etc. High level concepts apply across all of SAP products. These are:

1. SAP supplies ready to use data sources called Business Content
2. Business Content has to be activated before it can be used
3. Additional data fields can be added to the SAP supplied datasources using the SAP supplied enhancement points / user exits
4. New data sources can be created from scratch. These are referred to as generic data sources. Generic data sources can be based on a table/view or function modules.
5. Data sources are comprised of an extract structure and some program / logic to populate the data in the extract structure. Following are important things to know about the data sources:
 - a. Some of the data sources are delta enabled. In this case there is logic to identify what data has already been transferred to BW and what should be sent the next time data source is executed. There are different delta modes that should be understood. Data sources that are not enabled are called full load data sources. A pseudo delta can be configured using selection parameters
 - b. Data sources are different based on the type of data being extracted. Following are the different types: Transactional, Master Data attributes, text load and hierarchy loads
6. Delta enabled data sources create delta queues on ECC side that can be used for BW administration
7. Logistics cockpit datasources refer to a subset of SAP supplied Business content that have additional configuration and setting for activation and enhancement. These ensure serial transmission of data to BW for specific business processes such as inventory management.
8. CRM systems contain an additional framework called CRM BW Adapter

Data Modelling in BW

This section assumes that you have created a datasource, either in an SAP transactional system like ECC or CRM and replicated to BW, or in BW to load from a file or another database.

Key topics covered in this section are:

1. InfoAreas are used to group all BW modelling objects for management purposes

2. InfoObject is the basic building block. An infoObject can be:
 - a. Characteristic – Some Characteristic infoObjects can have one or all of the following
 - i. Master Data attributes
 - ii. Text
 - iii. Hierarchies
 - b. Key Figure – Quantity, Amount or Date
 - c. InfoObject Catalogs are used to group InfoObjects for management purpose only. Key figures and Characteristics have different InfoObject Catalogs.
3. DataStore Objects (DSOs) are used to store detail transactional data and behave like a database tables. They have some key InfoObjects and some data field InfoObjects. For example you may have a DSO to store purchase order data with purchase order number and line number as the key infoobjects. On the database, a DSO converts to 3 database tables.
4. InfoCubes are multi-dimensional objects that are used to organize related data in a certain functional area for reporting and analysis.
 - a. Typically it is at a higher level of aggregation than data at document level in SAP, or the data stored in DSOs.
 - b. An InfoCube contains key figures and characteristics. Related Characteristics are grouped into dimensions (max 16)
5. Data Target is a term used to refer to all objects that can store data: DSO, InfoCubes and InfoObjects
6. Multi-Providers and InfoSets are logical joins or combinations of various data targets
7. InfoProvider is a term used to refer to objects which can be used to create queries and includes InfoObjects with master data, DSO, InfoCubes, Multi-providers and InfoSets
8. Data is loaded to Data targets from a datasource using data flow objects. There is a mixture of BW 3.x and BW 7.x data flow in the system today.
 - a. BW 3.x data flow typically looks like: Source -> Transfer Rules -> InfoSource -> Update Rules -> Data Target(DSO) -> Update Rules -> Data target(InfoCube)
 - b. BW 7.0 data flow typically looks like: Source -> Transformation -> Data Target where a
 - i. Source can be DataSource(PSA), InfoSource, DSO, InfoCube
 - ii. Data Target can be InfoSource, DSO, InfoCube
9. InfoPackages and Data Transfer Package (DTP) are used to execute a data flow process. Process chains allow you to sequence the data flows and automate multiple loads to run in a co-ordinated manner.
10. Business Content - SAP delivers a large number of ready to use modelled scenarios, complete with InfoObjects, Data targets, data flow objects, queries and more. Business Content has to be activated before it can be used. All sap delivered objects start with "0".

BW Administration

This section covers the key tasks of a BW Administrator. The following topics will be covered:

1. Creating process chains to automate loads

2. Monitoring data loads
3. Maintaining Aggregates
4. Managing an InfoCube – Performance, Rollup, Collapse, Reconstruction
5. PSA Deletion
6. DSO Changelog deletion

Miscellaneous topics

1. BI Content Activation
2. Transport connection
3. Metadata Repository
4. Master Data change run
5. Integrated Planning