SAP MDM Content Consolidation

Purpose

Heterogeneous IT environments consisting of systems from different vendors are commonplace today. This means that important master data, required for cross-system business processes and analyses, is often stored redundantly in different systems and in incompatible formats. Companies are increasingly looking for solutions to integrate and consolidate their master data. They attempt to build on the infrastructure they have already invested in rather than have to replace it.

SAP Master Data Management (SAP MDM) enables you to consolidate your master data, harmonize it, and manage it centrally. The scenario SAP MDM Content Consolidation describes the process of consolidating master data from different systems. Identical master records from the individual systems in the IT landscape are identified, possibly cleaned up, and existing duplicates (that is, redundant master data records within one application system) are also identified.

The scenario SAP MDM Content Consolidation can be applied to the following master data objects:

- Business partners
- Products
- Technical assets
- Document links

For more information on the range of functions for the specific master data objects, see the SAP Help Portal under help.sap.com.

Information about identical master data records can be transferred to a Business Information Warehouse in order to achieve uniform key figures that are valid company-wide. Additionally, if identical master records are merged, the resulting records can also be used to form a consolidated catalog.

In the SAP MDM Content Consolidation scenario, however, no new MDM master data is created or generated. This occurs in the MDM scenarios Master Data Harmonization and Central Master Data Management that are based on the scenario described here.

The logic that SAP MDM is based on allows master data to be consolidated and provides information required for clean-up to the linked application systems.

Prerequisites

To run SAP MDM, the following prerequisites must be fulfilled:

- You have installed the SAP MDM software and hardware infrastructure as described in the SAP MDM Installation Guide.
- You have configured SAP MDM as described in the SAP MDM Content Consolidation Configuration Guide. During configuration, you also set up the messaging model that determines the relevant application systems for the master data transfer (data transfer from application system to SAP MDM).

SAP Enterprise Portal is the central user interface within SAP MDM scenarios and processes. The processing steps within the process diagram shown below are based on roles. There are special worksets for the roles Master Data Administrator, Master Data Manager, Master Data Specialist, and Local Master Data Manager. The additional role Master Data User is not
based exclusively on *SAP Enterprise Portal*. The roles in master data management are described separately.

For purposes of simplification, the following process flow diagram only includes the roles *Master Data Administrator* and *Master Data Manager*.

The delivery package for *SAP MDM* includes adaptors for the following application systems:

- SAP R/3 4.6C
- SAP R/3 Enterprise
- CRM 3.1 (for business partners only)
- CRM 4.0
- SRM 3.0

Adaptors for other application systems are to be implemented on a project basis.
Process Flow

Graphic: Content Consolidation

**Master Data Administrator**

- Content Consolidation
- You monitor data transfer & technical steps
- System imports schemas (category-hierarchies)
- System imports the data
- System starts the data consolidation (matching)
- System provides clearing list of possible identical objects
- System generates ID-mapping
- System provides ID-mapping data
- You merge any identical data records

**Master Data Manager**

- You create schema mappings if appropriate
- You determine identical objects from the list
- You recategorize the data if appropriate
- You run company-wide evaluations
- You set up a catalog

**SAP MDM**

**SAP BW**

**Catalog**

**MDC (SAP R/3 or other)**

- System provides master data
The graphic shows the general process flow in the MDM Content Consolidation scenario without taking specific master data objects into account. When applied to specific master data objects, some changes may occur in the process flow.

1. Provision and use of master data in the application system

The application systems designated for master data management, such as SAP R/3, CRM or non-SAP systems, use the master data objects independently of each other. The data models of the individual application systems are often heterogeneous. If the data models are the same, then the data quality is often different, or the data usage may differ.

2. Uploading existing master data from the application system to SAP MDM

Master data records are extracted from the application system and loaded into SAP MDM:
   o As an initial upload, if an application system is connected for the first time
   o On a periodical basis, to update SAP MDM if master data has been created or changed in the application system following the initial upload.

Within SAP MDM, the Master Data Administrator triggers the extraction of master data records using specific selection criteria and filters. When SAP MDM is implemented, the different application systems are defined as Master Data Clients (MDC). The technical routing and mapping of the different data models is carried out by way of the SAP Exchange Infrastructure (SAP XI). The extracted master data records are stored in SAP MDM based on the data model that exists in SAP MDM for the relevant master data object.

If the application systems use different category hierarchies (schemas) to categorize the product masters, you must load these schemas into SAP MDM. To enable a Global Spend Analysis in SAP Business Information Warehouse, you must map a schema to a standard reporting schema. Product master data is categorized by the system based on this schema mapping (manual recategorization is possible, see 4.) and the categorization is entered in the output evaluation.

3. Starting master data consolidation in SAP MDM

Within SAP MDM, the unaligned master data from the application systems can be further processed. The Master Data Manager is responsible for consolidating the existing data using the data model in SAP MDM.

SAP MDM starts an automatic matching job to identify potential identical master data records. For this purpose, SAP delivers templates with rules to identify identical objects. Rules like these usually use known identifying attributes such as the vendor part number for products or the address of a business partner. To get the best matching result, the delivered templates must be adapted to the given requirements on a project basis.

As a result of the matching job, the Master Data Manager receives a clearing list of possible identical records. Depending on the algorithm applied, the clearing list receives the matched objects as of a certain similarity level. Above this level, the Master Data Manager must decide from the context of the information whether or not these objects are in fact identical. Compared records that show a very high degree of similarity do not require manual confirmation. If the system detects duplicates (that is, redundant master data records in an application system), the Local Data Manager or Master Data Manager can call up this information with a search using the generated ID mapping data.

4. Providing consolidated master data

SAP MDM generates the knowledge basis on existing master data and dependencies between identical master data records dispersed over several systems (where the
original data is stored in the application systems). This information can be used for further processing.

You can recategorize product master data that has been assigned to different category hierarchies (schemas) in the application systems, or that has been assigned by SAP MDM to a standard reporting schema. This is a prerequisite for the Global Spend Analysis in SAP Business Information Warehouse. Further prerequisites, for example, schema upload and schema mapping, are described under 2. above.

**Result**

This accumulated knowledge of dependencies enables company-wide evaluations using mySAP Business Intelligence. For this purpose, the mapping data is transferred to SAP Business Information Warehouse (SAP BW). When this mapping data is added to the data that has already been extracted, you can run consolidated and company-wide evaluations.

Consolidated master data information is not only relevant for analyses. When consolidated master data records are merged, the resulting records can also be used, for example, to set up consolidated vendor catalogs.