

## NOTE MAY 2010

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### *Table control in SAP®*

The SAP® tables are defined in the repository, but not all of the defined tables can be found in the database. SAP® distinguishes between certain database and table categories.

*We have two different categories of databases:*

1. *Logical database*

A logical database provides a particular view of the database. The data structure is hierarchical, and certain tables are linked to each other through foreign key relationships. The corresponding tables are defined in the repository, and can be displayed e.g. via transaction **SE16** or **SE16N**.

2. *Physical database*

Tables physically exist in the database and are controlled by the SAP® data model. The data model does hereby not match the repository.

*We have three main categories of tables:*

1. *Transparent tables*

These tables are stored in database in the same way that they can actually be displayed in the Data Dictionary. That means the structure including data and fields are absolutely identical.

To get an overview of transparent tables, the transaction **SE16N** can be called. The table name **DD02L** [SAP table] is to be entered. In the selection screen, the *table category* is to be set to **TRANSP** to get all relevant entries.

Transparent tables are available via Open SQL [platform independent database access of tables that are declared in ABAP Dictionary] or Native SQL [direct access to database regardless of ABAP Dictionary integration] statements from within the database or even from outside. Manipulative access should not be granted in any production environment.

**NOTE:** These tables should be protected by authorization groups.

**General Table Display**

Background | Number of Entries | All Entries

Table: DD02L      SAP Tables

Text table:       No texts

Layout:       Maintain entries

Maximum no. of hits: 500

Selection Criteria						
Fld name	O	Fr. Value	To value	More	Output	Technical name
Table Name				→	<input checked="" type="checkbox"/>	TABNAME
Activation Status				→	<input checked="" type="checkbox"/>	AS4LOCAL
Version				→	<input checked="" type="checkbox"/>	AS4VERS
Table category		TRANSP		→	<input checked="" type="checkbox"/>	TABCLASS

## 2. Pool tables

A pool table is a physical database table [table pool] that consists of several logical tables [pool tables]. This category was created to reduce the database relations.

These tables can be accessed via Open SQL on the database level. The unique identifier in a table pool consists of the key [varkey] and the name of the pool table [tablename]. A data record that is created in a pool table is represented as one data record in the table pool. To get an overview of transparent tables, the transaction **SE16N** can be called. The table name **DD02L** [SAP table] is to be entered. In the selection screen, the *table category* is to be set to **POOL** to get all relevant entries.

**NOTE:** These tables should be protected by authorization groups.

## 3. Cluster tables

In this category multiple logical data records of different cluster tables can be stored as one physical record [tuple] in a table cluster. To achieve this, records with the same key from different cluster tables are stored in one key in the table cluster. This type of storage was designed to help reducing the number of database accesses.

To get an overview of transparent tables, the transaction **SE16N** can be called. The table name **DD02L** [SAP table] is to be entered. In the selection screen, the *table category* is to be set to **CLUSTER** to get all relevant entries. These tables can also be accessed via Open SQL on the database level.

**NOTE:** These tables should be protected by authorization groups.

Both - the cluster and the pool tables are encapsulated relations. This means that table joins of transparent tables and pool or cluster tables are only available within the SAP® application.

*Additional categories of Dictionary objects:*

4. *Structure*

A structure is a kind of internal table that actually has no data records on the database level, but consists of components with different levels of nesting depth [flat, nested, and deep]. The main purpose of structures is for data definitions at interface level.

To get an overview of structures, the transaction **SE16N** can be called. The table name **DD02L** [SAP table] is to be entered. In the selection screen, the *table category* is to be set to **INTTAB** to get all relevant entries.

5. *Database or projection view*

A database view is a logical view on one or multiple tables [with corresponding object in database] to gather application relevant information, whereas projection views are basically used to hide certain fields of a table [without corresponding object in database]. To get an overview of views, the transaction **SE16N** can be called. The table name **DD02L** [SAP table] is to be entered. In the selection screen, the *table category* is to be set to **VIEW** to get all relevant entries.

**NOTE:** Views should be protected by authorization groups

6. *Append structures*

An append structures is a structure that is assigned to exactly one table [whereas one table may have several append structures assigned] or structure and consists of one or multiple fields. The main purpose of these structures is to allow enhancements to the SAP® standard [transparent tables or structures by e.g. adding new fields, keys or search helps].

To get an overview of append structures, the transaction **SE16N** can be called. The table name **DD02L** [SAP table] is to be entered. In the selection screen, the *table category* is to be set to **APPEND** to get all relevant entries.