

NOTE SEPTEMBER 2007

Logging of table changes

SAP® is a table controlled system. Tables can be understood as externalized program parts, and with this they represent a legal component of the procedural documentation e.g..

There are two different categories of tables:


1. Client-specific tables

Client-specific tables contain data that are only used for one client, like e.g. the user logon data in USR02.

2. Cross-client or client-independent tables

Cross-client tables contain data that are valid for all clients of the system, like e.g. the table T000.

This characteristic can be reviewed for every table in the table **DD02L** with the help of transaction **SE16N**.

Table to be searched	DD02L		SAP tables					
Number of hits	2							
Runtime	0	Maximum no. of hits	500					
								
Tab...	Ac	Vers	Tab.cat.	P/C	MinEntries	MaxEntries	No.entries	Client-specific
T000	A		TRANSP					
T001	A		TRANSP					X

SAP® offers the option to log table changes.

The logging allows to evaluate which user has changed, added or deleted data records of the tables at which time. The system is preconfigured to log changes of tables that contain data on which the financially reporting is based upon.

In SAP® 4.7 approx. 15.500 tables, in 4.6C approx. 11.000, and in 4.6B approx. 9.900 are adjusted to allow the logging of changes.

The logging is required to fulfill corresponding local accounting regulations. The retention period depends on legal regulations as well [e.g. Germany §257 HGB, §147 AO, SOX]. SAP has established two methods to fulfill the legal requirements.

1. Table logging
2. Change documents

1. Table logging

There are two technical requirements that need to be fulfilled to make sure that changes of a table can be logged. The general logging has to be activated, and the technical setting of the table needs to be adjusted to “Log data changes”. The records that are written for these changes are stored in the table **DBTABLOG** [former DBTABPRT], for which the archiving object BC_DBLOGS can be used.

a. General logging

Table changes are not logged per default. The corresponding setting needs to be activated for the selected clients. The activation is realized through the system parameter **rec/client**. This parameter can have the following entries:

OFF = With this the logging is deactivated.

All = With this the logging is activated for all clients of the system

<Client number>, (...)= The clients with the number that are entered here will be logged

This parameter only covers the table changes that result from changes within the system directly.

Changes that result from transports [as imports] are not covered by this parameter [for this, see c. logging through transports].

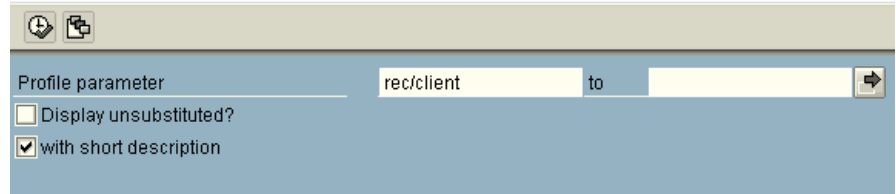
It is recommended for a production system, that changes in all clients should be logged (rec/client = ALL).

The minimum requirement is the productive client, of course.

For a development and / or quality system, the client 000 and any clients from which transports result into production should be logged.

This setting can be checked with the help of the report **RSPFPAR** through transaction **SE38** or **SA38**:

Display Profile Parameter



The screenshot shows a dialog box titled "Display Profile Parameter". At the top, there are two icons: a magnifying glass and a document. Below that, there is a search field labeled "Profile parameter" containing the text "rec/client", followed by a "to" label and an empty search field. Below the search fields, there are two checkboxes: "Display unsubstituted?" which is unchecked, and "with short description" which is checked.

b. The table logging

The table logging is controlled by a corresponding setting in the technical adjustments of a table.

This can be individually displayed through transaction **SE13**.

This option is limited to tables which

- maximum no. of signs of key fields does not exceed 250,
- maximum no. of signs of data fields does not exceed 3.500.

Dictionary: Display Technical Settings

Revised<->active

Name: T000 Transparent Table
 Short text: Clients
 Last changed: SAP 17.04.2002
 Status: Active Saved

Logical storage parameters
 Data class: APPL2 Organization and customizing
 Size category: 0 Data records expected: 0 to 2.800

Buffering
 Buffering not allowed
 Buffering allowed but switched off
 Buffering switched on

Buffering type
 Single records buff.
 Generic area buffered No. of key fields: 0
 Fully buffered

Log data changes
 Maintain as transparent table

Note:

Aside from the SAP® standard tables the company specific tables [namespace Y*, Z*] need to be considered as well.

Logging is required for company specific tables that contain

- master data,
- transaction data,
- customizing data,
- system control data.

In case of doubt concerning the data quality, the logging should be activated.

To check the logging status of customer specific tables, the table **DD09L** can be called via transaction **SE16N**.

Select according to the screenshot below and press **F8**.

To get an overview of all tables that are logged, the table **DD09L** can be called with transaction **SE16N** e.g.

Select the condition **Log = X**, and press **F8**.

General Table Display

Background | Number of Entries | All Entries

Table: DD09L DD: Technical settings of tables
 Text table: No texts
 Layout: Maintain entries
 Maximum no. of hits: 500

Field name	Fr. Value	To value	More	Output	Technical name
TABLE NAME	Y*	Z*		<input checked="" type="checkbox"/>	TABNAME
ACTIVATION STATUS				<input checked="" type="checkbox"/>	AS4LOCAL
VERSION				<input checked="" type="checkbox"/>	AS4VERS
SIZE CATEGORY				<input checked="" type="checkbox"/>	TABKAT
DATA CLASS				<input checked="" type="checkbox"/>	TABART
BUFFERING TYPE				<input checked="" type="checkbox"/>	PUFFERUNG
NOKEYFIELDS				<input checked="" type="checkbox"/>	SCHFELDANZ
LOG				<input checked="" type="checkbox"/>	PROTOKOLL
STORTYPEBUFFER				<input checked="" type="checkbox"/>	SPEICHPUFF

Number of Entries Found: 15.531

General Table Display

Background | Number of Entries | All Entries

Table: DD09L DD: Technical settings of tables
 Text table: No texts
 Layout: Maintain entries
 Maximum no. of hits: 500

Field name	Fr. Value	To value	More	Output	Technical name
Table Name	Y*	Z*		<input checked="" type="checkbox"/>	TABNAME
Activation status				<input checked="" type="checkbox"/>	AS4LOCAL
Version				<input checked="" type="checkbox"/>	AS4VERS
Size category				<input checked="" type="checkbox"/>	TABKAT
Data class				<input checked="" type="checkbox"/>	TABART
Buffering type				<input checked="" type="checkbox"/>	PUFFERUNG
NoKeyFields				<input checked="" type="checkbox"/>	SCHFELDANZ
Log				<input checked="" type="checkbox"/>	PROTOKOLL

c. Logging through transports

To log changes that result from transports a corresponding transport parameter needs to be adjusted accordingly.

The parameter can be activated in the TMS [Transport Management System] via transaction **STMS**.

In the tab *Transport tool*, the parameter **RECCLIENT** with the desired value needs to be entered.

All = With this the logging is activated for all clients of the system

<Client number>, (...)= The clients with the number that are entered here will be logged

The setting can be reviewed with the help of the report **RSTMS_SYSTEM_OVERVIEW** via transaction **SE38/SA38**, or transaction **STMS_DOM** e.g.

Select the system you want to check in the following screen via doubleclick.

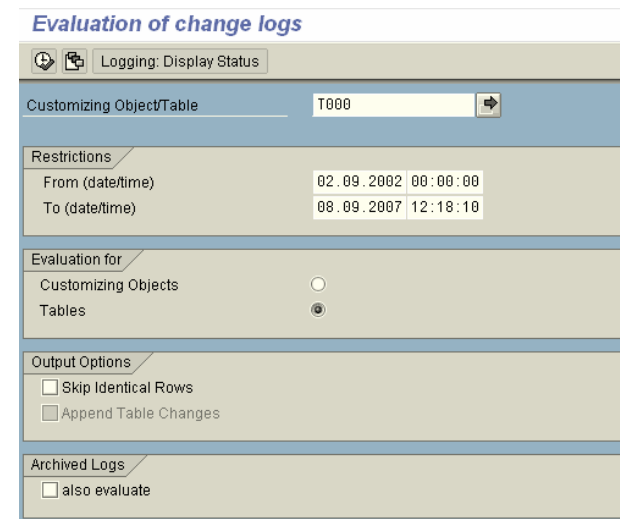
Select the tab *Transport tool*, and look for the parameter **RECCLIENT**.

The report **RSTMSTPP** via transaction **SE38 /SA38** is another option.

d. The evaluation of log history

To evaluate the changes of tables that are logged the transaction report **RSTBHIST** can be called via **SE38 /SA38**.

The table name needs to be entered together with the evaluation period. The radio button for table needs to be activated as well.



Evaluation of change logs

Logging: Display Status

Customizing Object/Table: T000

Restrictions

From (date/time)	02.09.2002 00:00:00
To (date/time)	08.09.2007 12:18:10

Evaluation for

Customizing Objects

Tables

Output Options

Skip Identical Rows

Append Table Changes

Archived Logs

also evaluate

To review the current logging status the button *Logging: Display Status* can be activated.

The evaluation can be started via F8.

2. Change documents

The logging of master and transaction data is realized through change documents. They are created, when master or transaction data are changed, to which change document objects exist [only change – not create]. In SAP® all changes to master and transaction data in the financial accountancy are automatically logged.

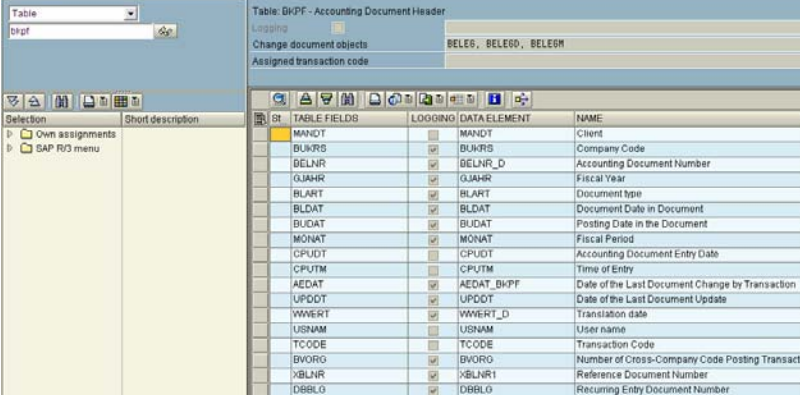
The underlying structure is a change document object. With the help of the transaction **SCDO** these objects are controlled. The maintained information are stored in the table **TCDOB** [Objects for change document creation]. The reference of the object to the tables is saved here e.g.. Usually only selected table fields are logged. This is maintained via transaction **SE11**. For evaluation the transaction **AUT01** can be recommended.

In this transaction the configuration related to logging can be reviewed.

A selection according to *Transaction, Change document object, Table or data element* is possible.

The table fields that are logged are listed for the individual tables together with the change document object.

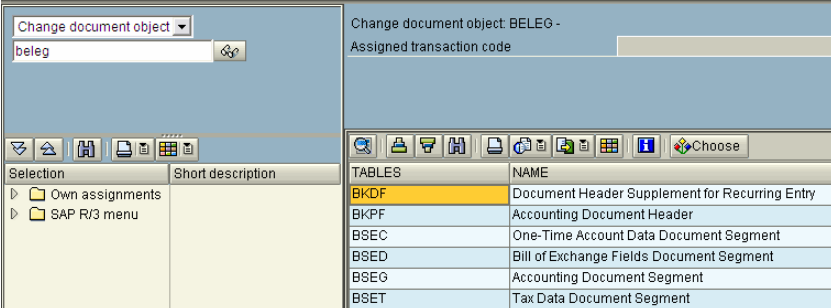
Configuration for Logging: From BKPF Display



ST	TABLE FIELDS	LOGGING	DATA ELEMENT	NAME
	MANDT	<input type="checkbox"/>	MANDT	Client
	BUKRS	<input checked="" type="checkbox"/>	BUKRS	Company Code
	BELNR	<input checked="" type="checkbox"/>	BELNR_D	Accounting Document Number
	GJAHR	<input checked="" type="checkbox"/>	GJAHR	Fiscal Year
	BLART	<input checked="" type="checkbox"/>	BLART	Document type
	BLDAT	<input checked="" type="checkbox"/>	BLDAT	Document Date in Document
	BUDAT	<input checked="" type="checkbox"/>	BUDAT	Posting Date in the Document
	MONAT	<input checked="" type="checkbox"/>	MONAT	Fiscal Period
	CPUDT	<input checked="" type="checkbox"/>	CPUDT	Accounting Document Entry Date
	CPUTM	<input checked="" type="checkbox"/>	CPUTM	Time of Entry
	AEDAT	<input checked="" type="checkbox"/>	AEDAT_BKPF	Date of the Last Document Change by Transaction
	UPDAT	<input checked="" type="checkbox"/>	UPDAT	Date of the Last Document Update
	WART_D	<input checked="" type="checkbox"/>	WART_D	Transaction date
	USNAM	<input checked="" type="checkbox"/>	USNAM	User name
	TCODE	<input type="checkbox"/>	TCODE	Transaction Code
	BVORG	<input checked="" type="checkbox"/>	BVORG	Number of Cross-Company Code Posting Transact
	BLNR1	<input checked="" type="checkbox"/>	BLNR1	Reference Document Number
	DBLLO	<input checked="" type="checkbox"/>	DBLLO	Recurring Entry Document Number

For every change document object the tables that are related to that are displayed as well.

Configuration for Logging: From BELEG Display



TABLES	NAME
BKDF	Document Header Supplement for Recurring Entry
BKPF	Accounting Document Header
BSEC	One-Time Account Data Document Segment
BSED	Bill of Exchange Fields Document Segment
BSEG	Accounting Document Segment
BSET	Tax Data Document Segment

Relevant OSS notes:

1916, 112388, 84052