EMC® ViewPoint for SAP Modules Utilities

Version 2.1

User Manual

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Preface

As part of an effort to improve and enhance the performance and capabilities of its product lines, EMC periodically releases revisions of its hardware and software. Therefore, some functions described in this document may not be supported by all versions of the software or hardware currently in use. For the most up-to-date information on product features, refer to your product release notes.

If a product does not function properly or does not function as described in this document, please contact your EMC representative.

Audience

This document is part of the ViewPoint for SAP documentation set, and is intended for use by the ViewPoint for SAP modules utilities administrator.

Readers of this document are expected to be familiar with the following topics:

- ViewPoint for SAP modules installation and usage
- SAP generic installation tools and programs

Related Documentation

Related documents include:

Introductory

- *EMC ViewPoint for SAP Release Notes*

Installation

- *EMC ViewPoint for SAP Software Suite Installation Manual*

Administrative

- *EMC ViewPoint for SAP Modules Administration Manual*

User

- *EMC ViewPoint for SAP Modules Utilities User Manual*

Conventions Used in This Guide

EMC uses the following conventions for special notices.

Note: A note presents information that is important, but not hazard-related.

CAUTION

A caution contains information essential to avoid data loss or damage to the system or equipment. The caution may apply to hardware or software.

IMPORTANT

An important notice contains information essential to operation of the software. The important notice applies only to software.

Typographical Conventions

EMC uses the following type style conventions in this guide:

Normal	Used in running (nonprocedural) text for: • Names of interface elements (such as names of windows, dialog boxes, buttons, fields, and menus) • Names of resources, attributes, pools, Boolean expressions, buttons, DQL statements, keywords, clauses, environment variables, filenames, functions, utilities • URLs, pathnames, filenames, directory names, computer names, links, groups, service keys, file systems, notifications
Bold:	Used in running (nonprocedural) text for: • Names of commands, daemons, options, programs, processes, services, applications, utilities, kernels, notifications, system call, man pages Used in procedures for: • Names of interface elements (such as names of windows, dialog boxes, buttons, fields, and menus) • What user specifically selects, clicks, presses, or types
Italic:	Used in all text (including procedures) for: • Full titles of publications referenced in text • Emphasis (for example a new term) • Variables
`Courier:`	Used for: • System output, such as an error message or script • URLs, complete paths, filenames, prompts, and syntax when shown outside of running text.
`Courier bold:`	Used for: • Specific user input (such as commands)
`Courier italic:`	Used in procedures for: • Variables on command line • User input variables
< >	Angle brackets enclose parameter or variable values supplied by the user
[ ]	Square brackets enclose optional values
|	Vertical bar indicates alternate selections - the bar means “or”
{ }	Braces indicate content that you must specify (that is, x or y or z)
...	Ellipses indicate nonessential information omitted from the example

Where to Get Help

EMC support, product, and licensing information can be obtained as follows.

Product information — For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Powerlink website (registration required) at:

http://Powerlink.EMC.com

Technical support — For technical support, go to EMC Customer Service on Powerlink. To open a service request through Powerlink, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.

Your Comments

Your suggestions will help us continue to improve the accuracy, organization, and overall quality of the user publications. Please send your opinion of this guide to:

techpub_comments@EMC.com

1 ViewPoint for SAP Utilities

This chapter introduces the ViewPoint for SAP utilities and includes this topic:

Overview

The ViewPoint for SAP utilities can be grouped into three categories:

- "Installation utilities"
- "Compliance and auditing utilities" on page 13
- "Database growth monitoring utility" on page 13

The latest ViewPoint for SAP transport version information is in the *EMC ViewPoint for SAP Release Notes*.

Complete ViewPoint for SAP transport installation information is in the *EMC ViewPoint for SAP Software Suite Installation Manual*.

The latest ViewPoint for SAP documentation is on EMC Powerlink.

Installation utilities

This section describes the ViewPoint for SAP utilities used during installation.

Initial installation

The following utilities are supplied as a single transport installed during the initial installation of ViewPoint for SAP.

Archive Browser

Archive Browser is a utility that displays table entries, and the corresponding table and text field values.

Conversion Tool

Conversion Tool is a utility used to adjust simple ABAP/4 programs to archiving purposes.

Translation Tool

Translation Tool is a utility that translates standard SAP objects' text elements and dynpros into the user's native language for use by ViewPoint for SAP to display corresponding objects' text elements and dynpros.

Check ADK

Check ADK is a utility that is an error analysis tool used in case of access problems to ViewPoint for SAP index files or SAP archive files.

Class Order

Class Order is supplied as a separate transport and is a utility that helps manage the installation of technically-related archive modules.

Compliance and auditing utilities

This section describes the ViewPoint for SAP utilities useful for compliance and auditing purposes.

Fiscal Year Reporter

Fiscal Year Reporter is supplied as a separate transport and is a utility that helps manage the numerous fiscal year tasks that have to be carried out in the area of financial accounting at years' end.

Data Retention Tool

Data Retention Tool (CDART) is supplied as a separate transport and is a utility that helps create datasets from active and archived data, in SAP certified format, for external auditing purposes.

Database growth monitoring utility

This section describes the ViewPoint for SAP utility used to monitor database size and health.

Analyzer Plus

Analyzer Plus is supplied as a separate transport and is a utility that analyses archiving tables capacity, analyzes the distribution of documents, and executes an archiving check.

2

Archive Browser

This chapter covers the ViewPoint for SAP Archive Browser and includes these topics:

Overview

The ViewPoint for SAP Archive Browser is the EMC counterpart of the SAP Data Browser which uses transaction SE16. The ViewPoint for SAP Archive Browser displays table entries, table field values, and text field values using the database, archive, or both as a data source.

The Archive Browser displays tables from these ViewPoint for SAP modules:

- Financial Accounting and Material Documents (CFI)
- Sales and Distribution (CSD)
- Purchasing (CMM)
- Material Master Data, Batches/Special Stocks and BOMs (CMT)
- Controlling Line Items (CCO)
- Profit Center Line Items (CPCA)
- Plant Maintenance (CPM)
- Production Orders (CPP)
- Process Orders (CPR)
- Project Systems (CPS)
- Warehouse Management (CWM)
- Special Ledger (CSL)
- Custom [(IDK) CUSTOM]

Objects

Table 1 lists the SAP R/3 objects included in the Archive Browser utility with a description of each object.

Table 1 Archive Browser object descriptions

Object	Rel. 3.x	Rel. 4.x	Description
PROG	ZZCSBROW	/PBS/UTIL_ARCHIVEBROWS	Archive Browser
FUGR	Z007	/PBS/C007	Function group for Conversion objects
FUGR	ZZSB	/PBS/SETB	Function group Archive Browser (AB)

Table 1 Archive Browser object descriptions (continued)

Object	Rel. 3.x	Rel. 4.x	Description
FUGR	N/A	/PBS/TAB_ARCHDEF	Function group for DB table where all available ViewPoint for SAP modules (transaction /PBS/SE16), their tables and indexes have been stored.
PROG	ZZABHELP	/PBS/AB_HELPRQ	Help Request for AB
PROG	ZZABCODE	N/A	Code generation for AB
PROG	N/A	/PBS/TAB_ARCHDEF	Delete table entries of /PBS/TAB_ARCHDEF with TAB_TYPE EQ SPACE
TABL	N/A	/PBS/TAB_ARCHDEF	DB table where all available ViewPoint for SAP modules (transaction /PBS/SE16), their tables and indexes have been stored
TABU	N/A	/PBS/TAB_ARCHDEF	Entries for ViewPoint for modules, their tables and indexes
TRAN	ZZ16	/PBS/SE16	Start transaction

Starting Archive Browser

Follow this procedure to start ViewPoint Archive Browser.

1. Execute transaction:

   /PBS/SE16 (release 4.0 and later),

   or ZZ16 (release 3.x and prior),

   or navigate through the ViewPoint menu via /PBS/EMC (release 4.0 and later),

   or YPBS (release 3.x and prior)

2. In the ViewPoint for SAP menu, select **Utilities** > **General tools** > **Archive Browser**.

   The utilities menu screen appears, as shown in Figure 1 or Figure 2 on page 19.

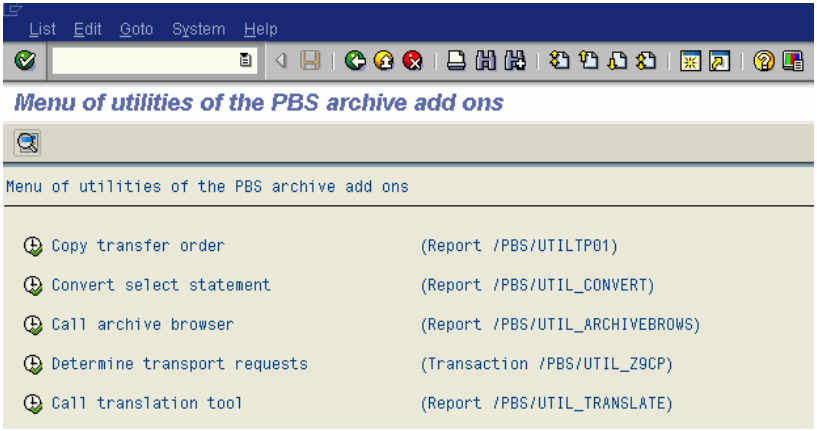


Figure 1 ViewPoint for SAP utilities releases 4.0 and 4.5

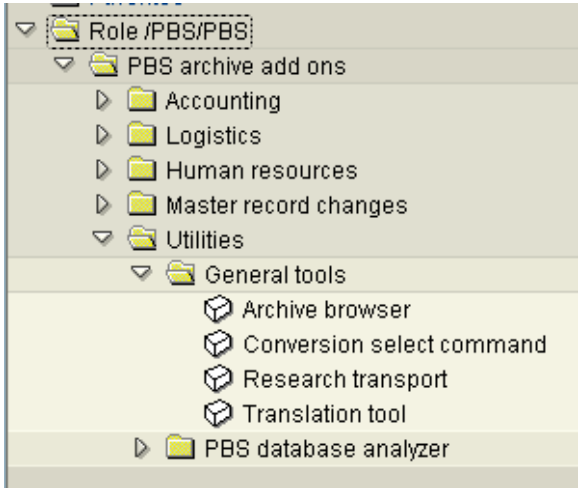


Figure 2 **ViewPoint for SAP utilities release 4.6**

Displaying Archiver Browser accessible tables

To display the list of Archive Browser accessible tables for use with transaction /PBS/SE16, place the cursor in the table name field of the initial screen of the Archive Browser and press **F4** or click **Enter** .

The list of available tables appears, as shown in Figure 3.

Table	Description	multiple
A016	Contract Item	X
A019	Contract Header	X
A068	Outline Agreement Item: Plant-Dependent	X
A081	Contract Conditions at Plant Level	X
A082	Contract Conditions without Plant	X
ADRC	Addresses (central address admin.)	
AFFL	Work order sequence	
AFFLD	Order: Dialog table for order sequences (AFFL)	
AFFW	Goods movements with errors from confirmations	
AFKO	Order header data PP orders	
AFPO	Order item	X
AFPOD	Order item dialog structure	X
AFRU	Order completion confirmations	
AFRUD	Dialog table for completion confirmations	
AFVC	Operation within an order	
AFVGD	Order: Dialog table for Table AFVG (order operation)	
AFVU	DB structure of the user fields of the operation	
AFVV	DB structure of the quantities/dates/values in the operation	
AUFK	Order master data	
BKPF	Accounting Document Header	X
BSAD	Accounting: Secondary Index for Customers (Cleared Items)	
BSAK	Accounting: Secondary Index for Vendors (Cleared Items)	
BSAS	Accounting: Secondary Index for G/L Accounts (Cleared Items)	
BSEG	Accounting Document Segment	X
BSIS	Accounting: Secondary Index for G/L Accounts	
CAUFV	Generated Table for View CAUFV	X
CAUFVD	Dialog structure for order headers and items	X
CDHDR	Change document header	X
CDPOS	Change document items	X
COBK	CO Object: Document header	X
COBRA	Settlement Rule for Order Settlement	
COBRB	Distribution Rules Settlement Rule Order Settlement	
COEP	CO Object: Line Items (by Period)	X
COVP	Table Generated for View COVP	X
DOST	Document to BOM Link	
EIKP	Foreign Trade: Export/Import Header Data	X
EIPO	Foreign Trade: Export/Import: Item Data	X
EKAB	Release Documentation	X
EKAN	Vendor Address: Purchasing Document	
EKBE	History per Purchasing Document	
EKBZ	History per Purchasing Document: Delivery Costs	
EKES	Vendor Confirmations	
EKET	Scheduling Agreement Schedule Lines	
EKKN	Account Assignment in Purchasing Document	
EKKO	Purchasing Document Header	X
EKPA	Partner Roles in Purchasing	

Figure 3 Archive Browser accessible tables

Selecting tables

Follow this procedure to select ViewPoint for SAP module tables using Archive Browser.

1. Make entries in the Archive Browser initial screen fields, as shown in Figure 4 and defined in Table 2.
2. Click **Enter** .

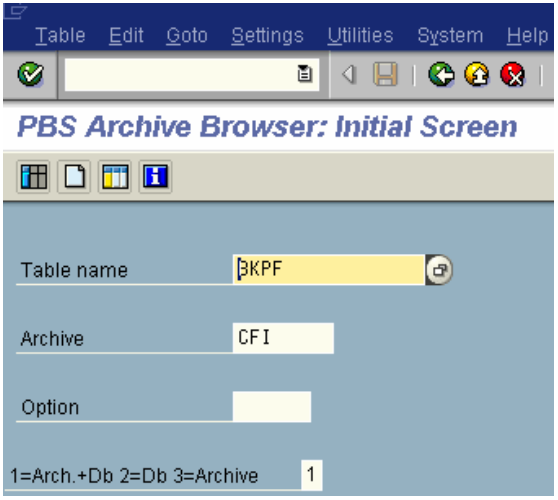


Figure 4 **Archive Browser initial screen**

Table 2 **Archive Browser screen field definitions**

Field	Definition
Table name	Enter the table name. **Note:** This procedure uses table BKPF from the Financial Accounting and Material Documents (CFI) module as an example.

Table 2 Archive Browser screen field definitions (continued)

Field	Definition
Archive	Enter the name of the ViewPoint for SAP module if the table exists in several ViewPoint for SAP modules.
Option	This field is used to query CSD module tables for orders, delivery notes, invoices, etc.
1=Arch.+Db 2=Db 3=Archive	Enter whether the tables should be displayed from the: • Database and archives (1) • Database only (2) (calls SAP Data Browser transaction SE16) • Archives only (3) (of the previously selected table) **Note:** If a table is available in the different module archives, you have to delimit exactly. For example the table CDHDR is available in the CFI, CMM, and CSD modules.

The table (BKPF) index screen appears, as shown in Figure 5.

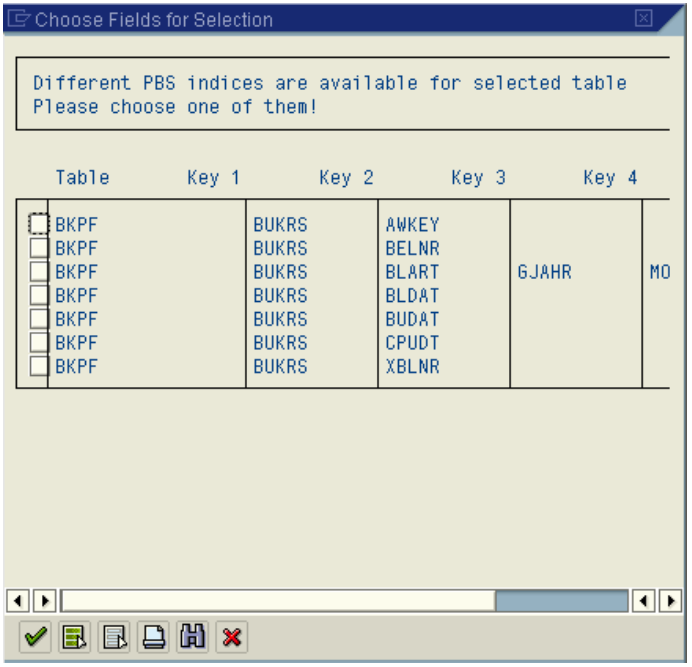


Figure 5 Table BKPF index screen

3. Select an index combination.

   Include as many fields as possible for later selection and index sequential data reading, thereby shortening query run time.

   Note: When there is only one index for a table within the selection of a ViewPoint for SAP module, the field selection list displays.

   For example, selecting the indexes BUKRS and BELNR generates a display in which both index fields are marked and can't be deselected. However, you can select additional search fields, as shown in Figure 6.

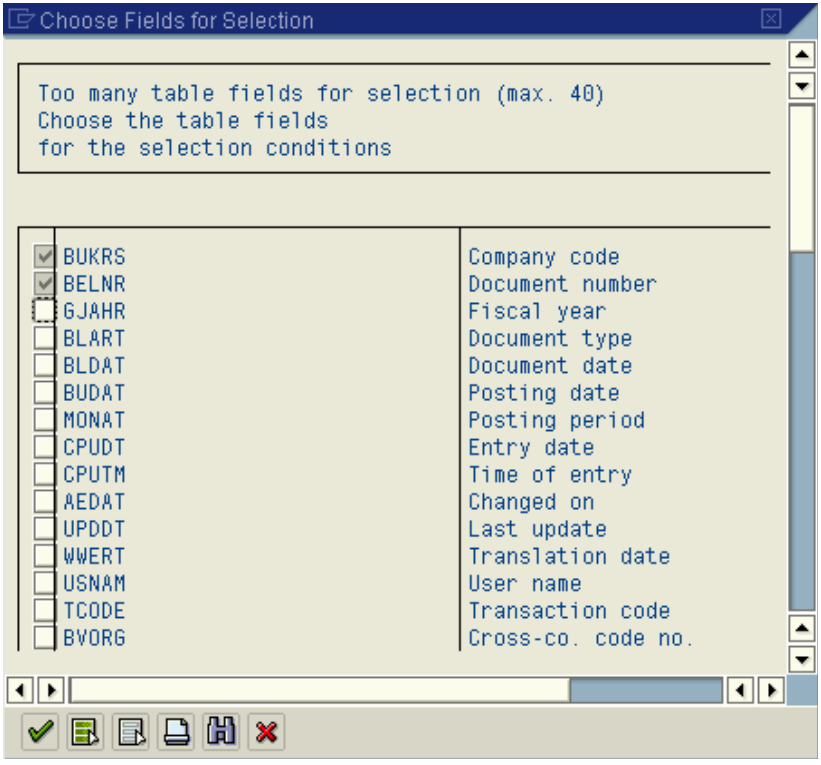


Figure 6 **Example of selected and potential index field combinations**

4. Click **Enter** to confirm the entries.

The selection screen with the selected indexes appears, as shown in Figure 7. The index fields and possible additional fields for this table are displayed in this selection screen.

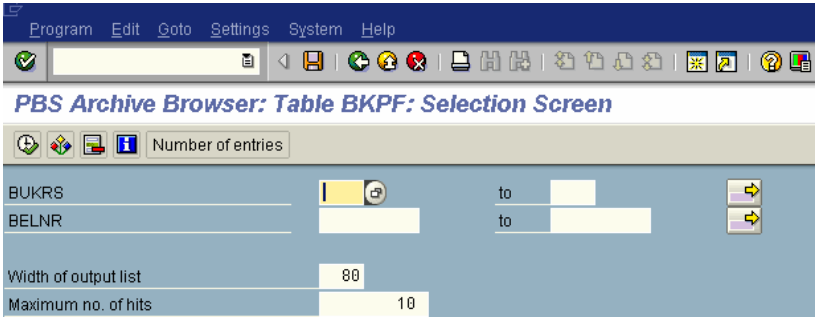


Figure 7 Selection screen for table BKPF

5. Enter the field delimiters.

   Enter delimiters for the index fields, and for the primary index in particular. Without entries the query runs through all data records resulting in long run time (depending on data volume). If the primary index is not delimited and error message appears, as shown in Figure 8.

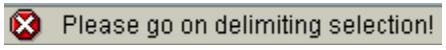


Figure 8 Error message for primary key with no delimitation

The index fields with delimiters appears, as shown in Figure 9.

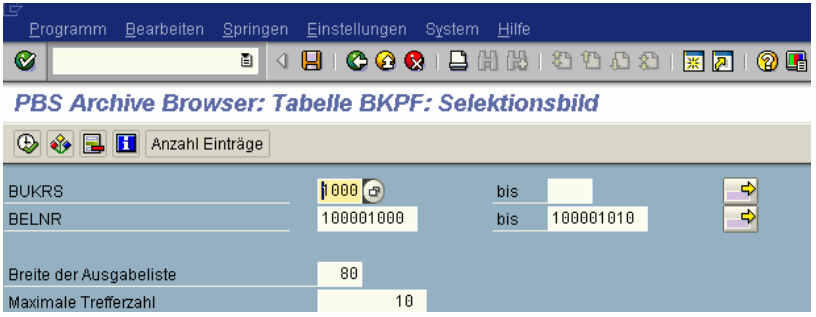


Figure 9 Table BKPF delimiters

6. Click **Enter**.

The query results for the example delimiters displays, as shown in Figure 10.

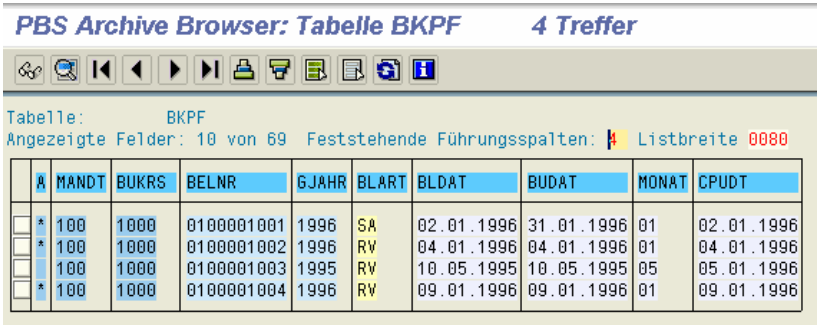


Figure 10 **Query results with delimiters**

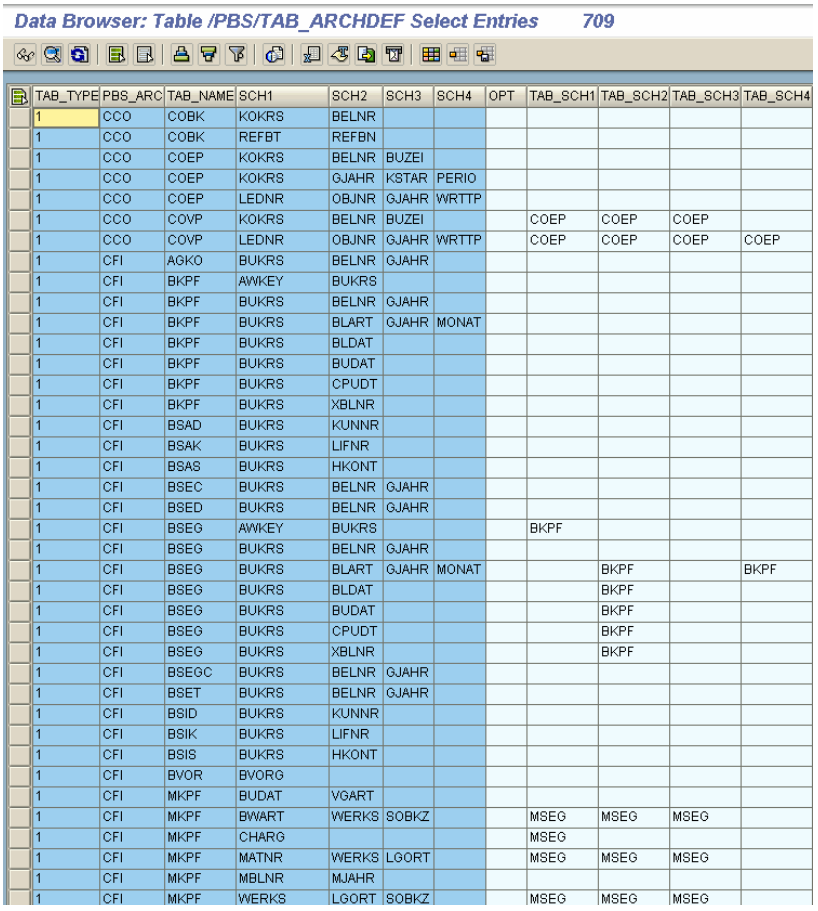
Column A is marked with an asterisk (*) for archived documents and is empty for documents still available in the database.

Note: To view the data in the ALV display, first display the data using SE16 and then switch to the ALV display.

Database table /PBS/TAB_ARCHDEF

The Archive Browser displays tables and their contents accessible with the function module /PBS/SELECT_INTO_TABLE when created in the database table /PBS/TAB_ARCHDEF.

This table (structure) and contents are delivered as objects of the Archive Browser transport, as shown in Figure 11.



Data Browser: Table /PBS/TAB_ARCHDEF Select Entries 709

TAB_TYPE	PBS_ARC	TAB_NAME	SCH1	SCH2	SCH3	SCH4	OPT	TAB_SCH1	TAB_SCH2	TAB_SCH3	TAB_SCH4
1	CCO	COBK	KOKRS	BELNR							
1	CCO	COBK	REFBT	REFBN							
1	CCO	COEP	KOKRS	BELNR	BUZEI						
1	CCO	COEP	KOKRS	GJAHR	KSTAR	PERIO					
1	CCO	COEP	LEDNR	OBJNR	GJAHR	WRTTP					
1	CCO	COVP	KOKRS	BELNR	BUZEI			COEP	COEP	COEP	
1	CCO	COVP	LEDNR	OBJNR	GJAHR	WRTTP		COEP	COEP	COEP	COEP
1	CFI	AGKO	BUKRS	BELNR	GJAHR						
1	CFI	BKPF	AWKEY	BUKRS							
1	CFI	BKPF	BUKRS	BELNR	GJAHR						
1	CFI	BKPF	BUKRS	BLART	GJAHR	MONAT					
1	CFI	BKPF	BUKRS	BLDAT							
1	CFI	BKPF	BUKRS	BUDAT							
1	CFI	BKPF	BUKRS	CPUDT							
1	CFI	BKPF	BUKRS	XBLNR							
1	CFI	BSAD	BUKRS	KUNNR							
1	CFI	BSAK	BUKRS	LIFNR							
1	CFI	BSAS	BUKRS	HKONT							
1	CFI	BSEC	BUKRS	BELNR	GJAHR						
1	CFI	BSED	BUKRS	BELNR	GJAHR						
1	CFI	BSEG	AWKEY	BUKRS				BKPF			
1	CFI	BSEG	BUKRS	BELNR	GJAHR						
1	CFI	BSEG	BUKRS	BLART	GJAHR	MONAT			BKPF		BKPF
1	CFI	BSEG	BUKRS	BLDAT					BKPF		
1	CFI	BSEG	BUKRS	BUDAT					BKPF		
1	CFI	BSEG	BUKRS	CPUDT					BKPF		
1	CFI	BSEG	BUKRS	XBLNR					BKPF		
1	CFI	BSEGC	BUKRS	BELNR	GJAHR						
1	CFI	BSET	BUKRS	BELNR	GJAHR						
1	CFI	BSID	BUKRS	KUNNR							
1	CFI	BSIK	BUKRS	LIFNR							
1	CFI	BSIS	BUKRS	HKONT							
1	CFI	BVOR	BVORG								
1	CFI	MKPF	BUDAT	VGART							
1	CFI	MKPF	BWART	WERKS	SOBKZ			MSEG	MSEG	MSEG	
1	CFI	MKPF	CHARG					MSEG			
1	CFI	MKPF	MATNR	WERKS	LGORT			MSEG	MSEG	MSEG	
1	CFI	MKPF	MBLNR	MJAHR							
1	CFI	MKPF	WERKS	LGORT	SOBKZ			MSEG	MSEG	MSEG	

Figure 11 Extract of table /PBS/TAB_ARCHDEF contents

The field TAB_TYPE defines if the table is:

- delivered from SAP (TAB_TYPE = 1)
- customer-specific (TAB_TYPE = 2)

Preselected tables

Some tables, for example table EIKP in the ViewPoint for SAP MM module, can be accessed with index fields that are not in the table structure, as shown in Figure 12.

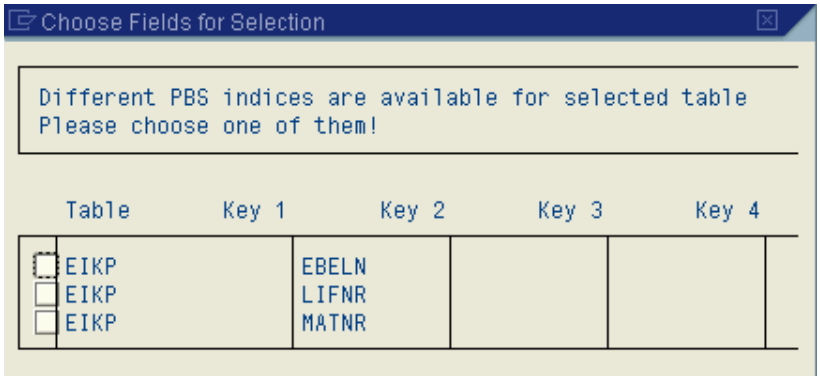


Figure 12 **Table EIKP index fields**

None of the indicated index fields - in this example EBELN, LIFNR, and MATNR of table EIKP - is a field in this table structure.

Selecting the document number as an index field for a selection adds it to the table structure, as shown in Figure 13.

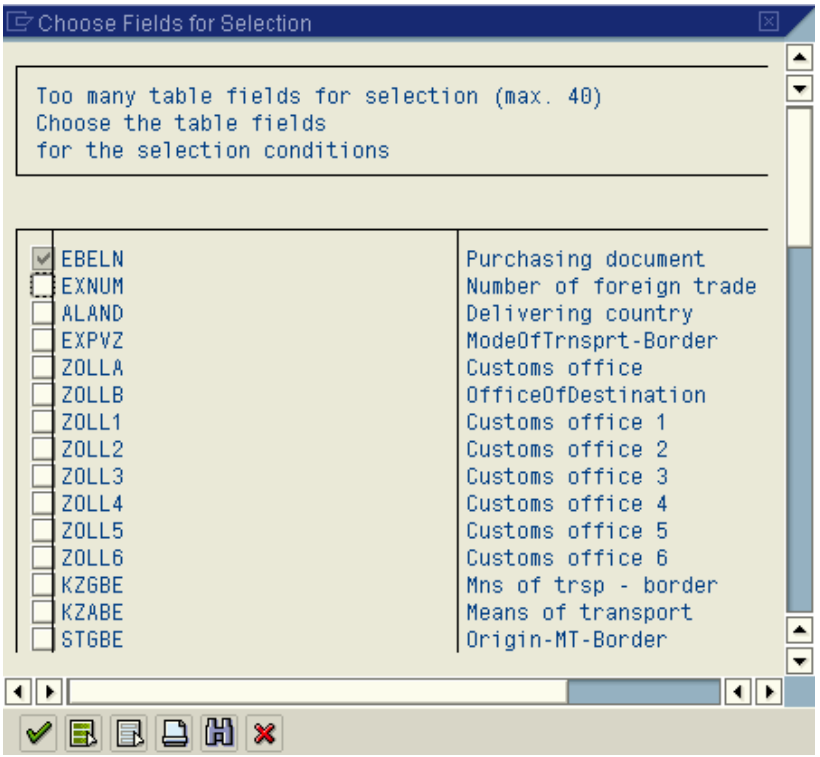


Figure 13 **Table EIKP selection fields list**

The checkbox for the selected index field EBELN is marked automatically because the selection has to be made for at least one or more index fields.

Note: Option 1 (access to archive and database data) cannot be used for tables that include index fields that were added automatically. You can access only the database or the archive data for these tables, or the Option 1 (parameter) error message appears, as shown in Figure 14.

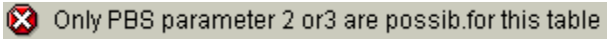


Figure 14 **Option 1 error message**

Selecting a table shared by ViewPoint for SAP modules reveals other index possibilities. For example, only one index for table EIKP can be selected with the ViewPoint for SAP CSD module displaying table EIKP, as shown in Figure 15.

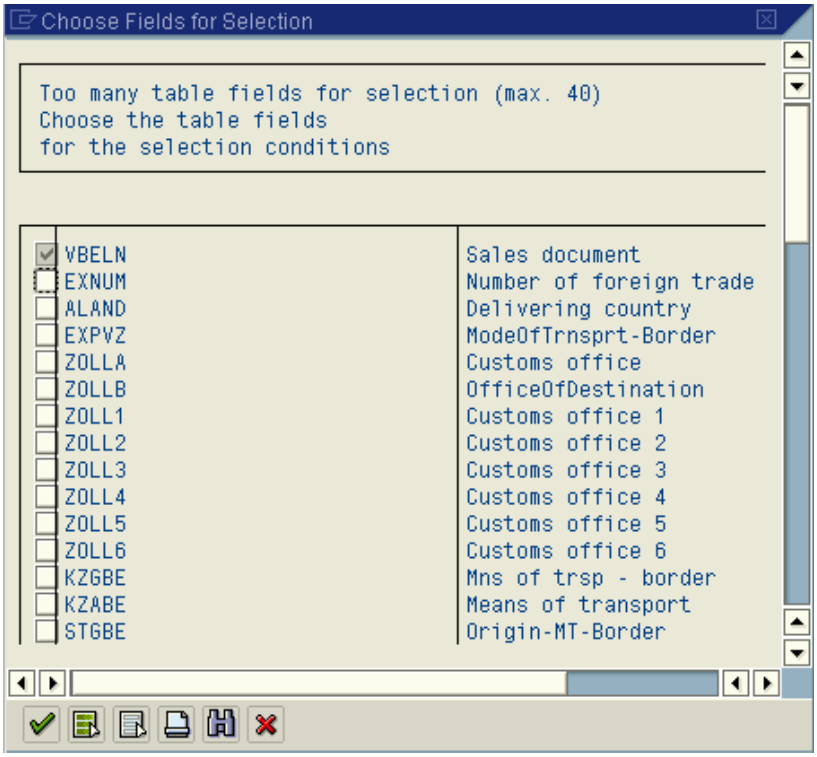
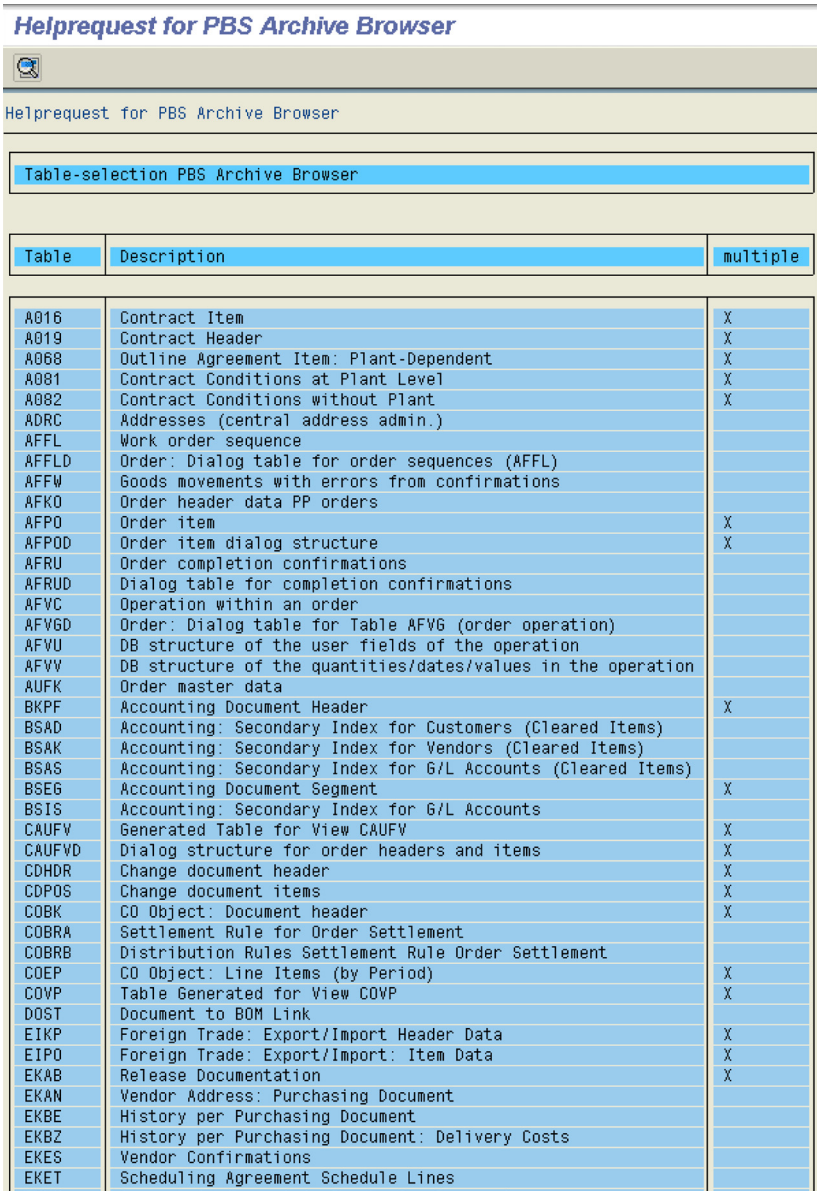


Figure 15 **Selection fields list for CSD table EIKP**

List of tables

Place the cursor in the **table name** field and press **F4,** or click **selection**, to view the tables that archived data is accessible. The selection of available tables appears, as shown in Figure 16.



Helprequest for PBS Archive Browser

Helprequest for PBS Archive Browser

Table-selection PBS Archive Browser

Table	Description	multiple
A016	Contract Item	X
A019	Contract Header	X
A068	Outline Agreement Item: Plant-Dependent	X
A081	Contract Conditions at Plant Level	X
A082	Contract Conditions without Plant	X
ADRC	Addresses (central address admin.)	
AFFL	Work order sequence	
AFFLD	Order: Dialog table for order sequences (AFFL)	
AFFW	Goods movements with errors from confirmations	
AFKO	Order header data PP orders	
AFPO	Order item	X
AFPOD	Order item dialog structure	X
AFRU	Order completion confirmations	
AFRUD	Dialog table for completion confirmations	
AFVC	Operation within an order	
AFVGD	Order: Dialog table for Table AFVG (order operation)	
AFVU	DB structure of the user fields of the operation	
AFVV	DB structure of the quantities/dates/values in the operation	
AUFK	Order master data	
BKPF	Accounting Document Header	X
BSAD	Accounting: Secondary Index for Customers (Cleared Items)	
BSAK	Accounting: Secondary Index for Vendors (Cleared Items)	
BSAS	Accounting: Secondary Index for G/L Accounts (Cleared Items)	
BSEG	Accounting Document Segment	X
BSIS	Accounting: Secondary Index for G/L Accounts	
CAUFV	Generated Table for View CAUFV	X
CAUFVD	Dialog structure for order headers and items	X
CDHDR	Change document header	X
CDPOS	Change document items	X
COBK	CO Object: Document header	X
COBRA	Settlement Rule for Order Settlement	
COBRB	Distribution Rules Settlement Rule Order Settlement	
COEP	CO Object: Line Items (by Period)	X
COVP	Table Generated for View COVP	X
DOST	Document to BOM Link	
EIKP	Foreign Trade: Export/Import Header Data	X
EIPO	Foreign Trade: Export/Import: Item Data	X
EKAB	Release Documentation	X
EKAN	Vendor Address: Purchasing Document	
EKBE	History per Purchasing Document	
EKBZ	History per Purchasing Document: Delivery Costs	
EKES	Vendor Confirmations	
EKET	Scheduling Agreement Schedule Lines	

Figure 16 **List of available database tables**

2

Conversion Tool

This chapter addresses the administrative adjustment of ViewPoint for SAP modules using the ViewPoint for SAP Conversion Tool. The Conversion Tool is supplied as part of the ViewPoint for SAP modules utilities.

This chapter includes these topics:

Overview

The ViewPoint for SAP Conversion Tool adjusts ABAP/4 programs by searching for Select commands using a ViewPoint for SAP module.

The ViewPoint for SAP Conversion Tool converts Select command structures into a Loop structure.

Note: Check converted Select and Loop commands during and after the conversion. You cannot adjust each Select command for each archive module.

The ViewPoint for SAP Conversion Tool works with the following ViewPoint for SAP modules:

- Controlling Line Items (CCO)
- Financial Accounting and Material Documents (CFI)
- Purchasing (CMM)
- Sales and Distribution (CSD)

Table 3 lists the Conversion Tool objects.

Table 3 ViewPoint for SAP Conversion Tool object descriptions

Object	ViewPoint for SAP 4.x	ViewPoint for SAP 3.x	Description
PROG	/PBS/UTIL_CONVERT	SAPMYCON	Conversion Tool
PROG	/PBS/UTIL_CONV_DUMMY	ZZZDUMMY	Dummy program
FUGR	/PBS/UTIL_CONVERT	ZARC	Function group for archive access
TRAN	/PBS/UTIL_CONVERT	YCON	Start transaction

Running the Conversion Tool

Follow the procedures in this section to convert an ABAP/4 program for use with a ViewPoint for SAP module.

Note: The procedures in this section use YYCONV02 as an example program to help explain the conversion done by the Conversion Tool.

Starting the conversion

Follow this procedure to start the conversion.

1. Start the ViewPoint for SAP Conversion Tool with transaction:

   /PBS/UTIL_CONVERT (version 4.x)

   or YCON (version 3.x)

   or from the ViewPoint for SAP main menu using **Utilities** > **General tools** > **Conversion Select Command**

   The Conversion Tool window appears, as shown in Figure 17.

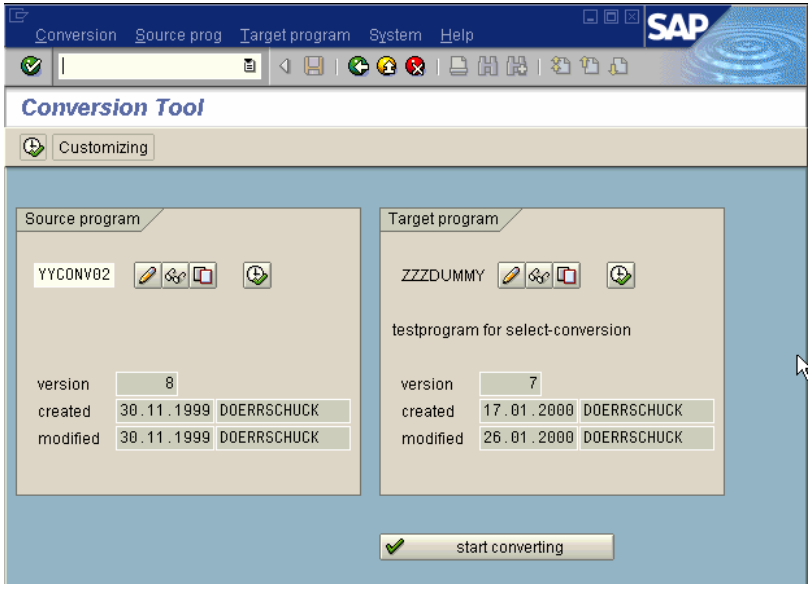


Figure 17 **Conversion Tool window**

2. Indicate Source and Target program.

Note: The default Target program is ZZZDUMMY.

You can **Change**, **Display**, **Copy**, and **Execute** the Source and Target programs.

Use **Copy** to convert a Source program into a Target program other than ZZZDUMMY. During the copy process change the default Target program name ZZZDUMMY to the desired program name.

3. Start the conversion by clicking **start converting**, as shown in Figure 18.

Figure 18 **Start converting**

The coding lines of the program (YYCONV02 in this example) are converted for the ViewPoint for SAP modules and can be stored in the program ZZZDUMMY, by default.

4. Cut and paste, or use PC Download, to enter the coding into the desired program.

Viewing conversion results

An example of conversion results appears in table form with a table line entered for each Select command found during the conversion, as shown in Figure 19.

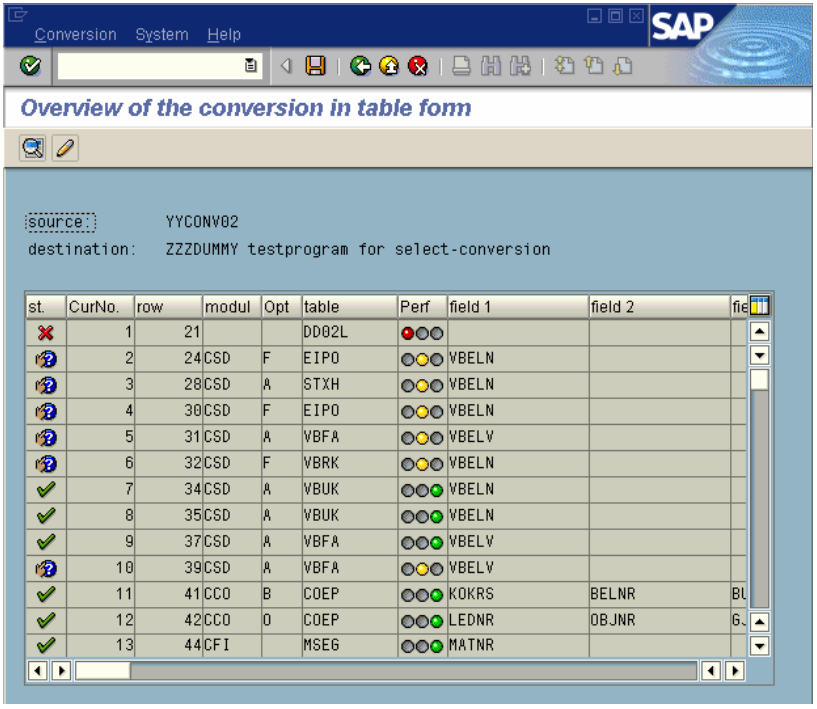


Figure 19 **Conversion results**

The columns contain information on the conversion of the Select command.

Status of the conversion (St.)

Table 4 lists definitions for the status symbols shown in the first column.

Table 4 Status table column definition

Symbol	Definition
	The Select was converted automatically and the Conversion Tool found all the necessary information for the conversion.
	The Select could not be converted because the table is not supported by ViewPoint for SAP. The table is either a system table or a master records table.
	The conversion has later modifications.
	An external program call was found in the source program (Include, Perform, or Call).
	Single Select lines excluded from the conversion display this symbol.
	Manual editing is necessary because, during the conversion, no key field was found for access to the ViewPoint for SAP module, or the database table can exist in several ViewPoint for SAP archives.

Sequential number (CurNo.)

The sequential number assigned to each **Select** command.

Line (Row)

The line number of the **Select** command in the Source program.

Module

The name of the ViewPoint for SAP module addressed by the **Select** command.

Option

The option required for access to some ViewPoint for SAP modules. For example, in the ViewPoint for SAP CSD module, this option is used to determine if the access is to be made to orders (A), delivery notes (L) or invoices (F). The ViewPoint for SAP CFI and CMM modules have no options.

Table
The dictionary table addressed by the **Select** command (FROM statement).

Performance
The performance of access to the ViewPoint for SAP module. Table 5 lists performance symbol definitions.

Table 5 Performance symbol definitions

Symbol	Definition
	Red displays when there is no access to the ViewPoint for SAP module.
	Yellow displays when trying to access the ViewPoint for SAP archive with an unsupported key field.
	Green display when there is optimal access to the ViewPoint for SAP module.

Field 1, Field 2, Field 3, Field 4
Displays the name of the key field used to access the ViewPoint for SAP archive.

Definition of the function keys
F2 — compares the source and the target program.

F6 — allows the manual editing of the conversion.

F11 — saves the result of the conversion under the name of the target program.

Editing conversion

Each conversion can be edited manually to change the ViewPoint for SAP module option.

For the key fields 1 to 4 type the field name, the from/to values, and select option, as shown in Figure 20.

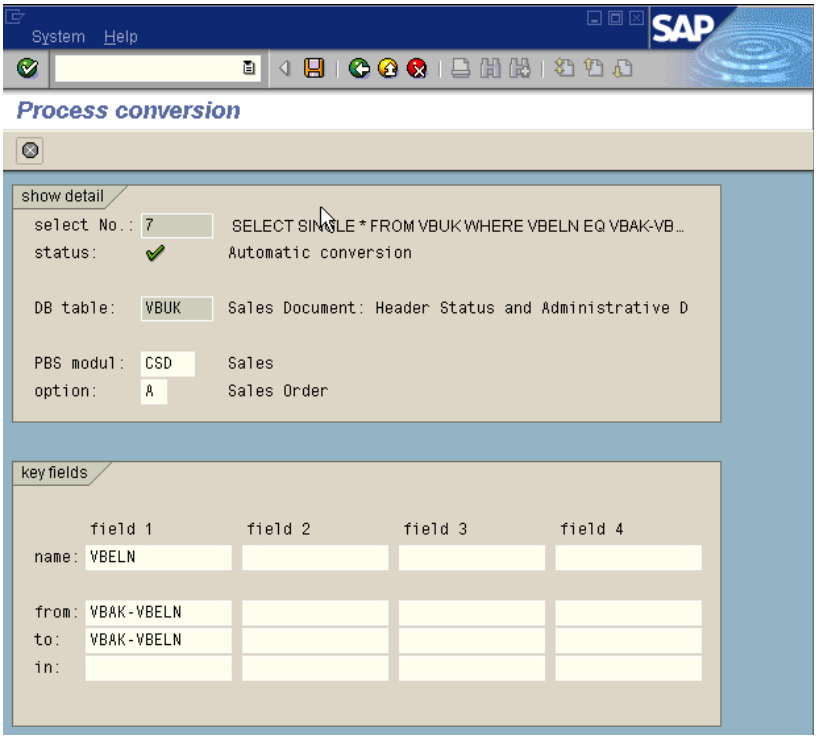


Figure 20 **Process conversion**

Press **F11** to save the changes. In the table overview, the Select line is now marked with the status *Modified conversion*. The performance display is not changed.

Press **Shift+F7** to prevent the select line from being converted. The status symbol *No conversion* appears.

Display Source and Target program

The Source and the Target programs both have current line numbers of the **Select** command, as shown in Figure 21.

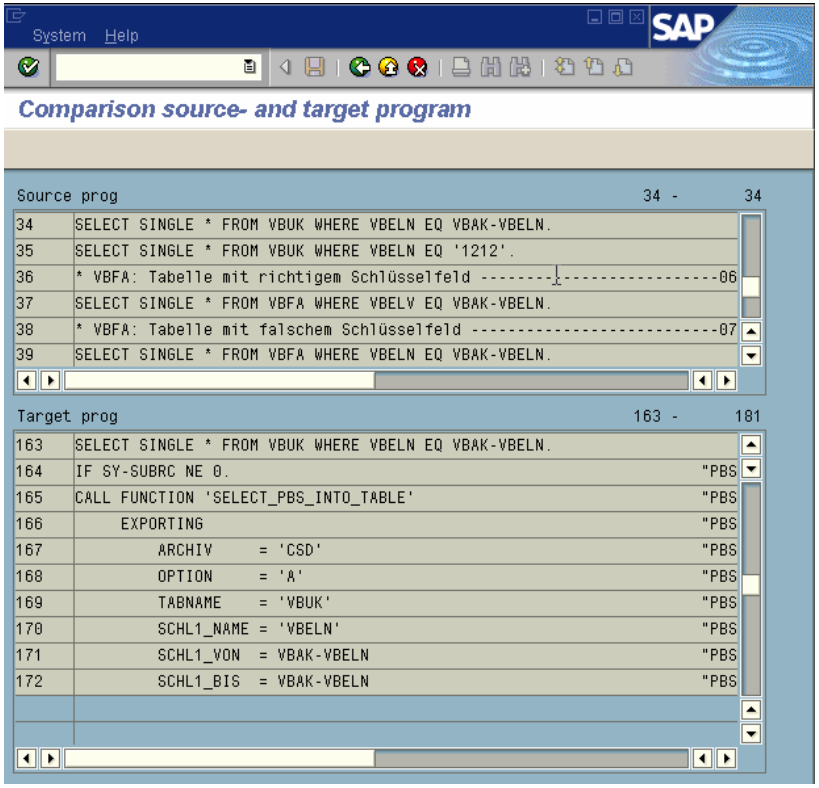


Figure 21 **Comparing Source and Target programs**

Customizing definitions

Use the Customizing sequence to access the ViewPoint for SAP modules (ranking) definition, as shown in Figure 22.

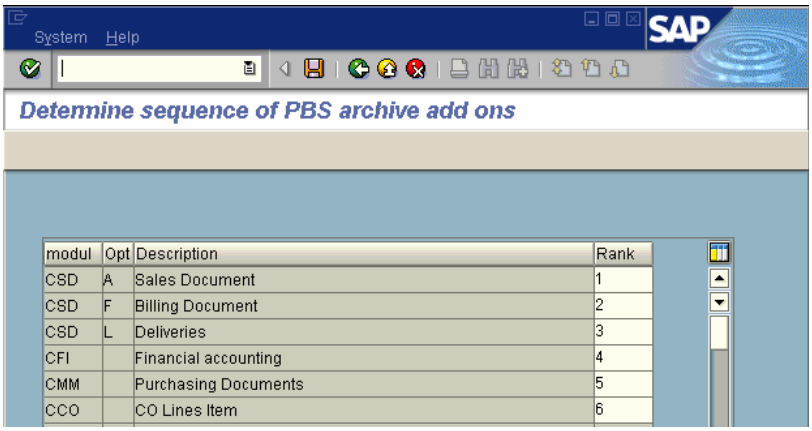


Figure 22 Determine module sequence

This definition is always valid when a database table used in a **Select** command is contained in several ViewPoint for SAP modules.

If the Source program contains, for example, the **Select** command ...

```
SELECT * FROM EIPO
```

... the Source program is converted for access to the invoices of the ViewPoint for SAP SD Module. However, the table EIPO can (in addition to the invoices) also exist in delivery notes and purchasing (MM) documents.

When converting a program for purchasing documents, modify this sequence in a way so that the module MM receives ranking #1 with the rest having a lower ranking. Tables STXH, CDHDR require checking and defining sequential order.

Tables contained in multiple ViewPoint for SAP modules always have a status of *Manual editing necessary.*

Special features

This section explains why Select statements have not been converted or whose conversion was partly wrong.

Client specified

Access to ViewPoint for SAP modules always depends on the client. Remove this clause.

Package Size n

The Conversion Tool is immediately cancelled with the error message:

```
Source program not checkfree or unknown SQL statement in line 40
```

Remove the clause "Package size n" and the corresponding ENDSELECT command from the source program.

Up to n rows

Not supported — target program is not checkfree.

Group by

Not supported — target program is not checkfree.

Aggregate functions

Aggregate functions like MAX, MIN, SUM, COUNT, AVG are not supported.

Like

The program is not checkfree because loop does not support the statement `Like`.

Distinct

The Select clause Distinct is supported by the Conversion Tool by deleting from the created internal table all multiple entries with the instruction.

Delete Adjacent Duplicated from iTAB

Ensure that the table is sorted and that duplicate deletion always relates to the internal table primary key.

Bypassing Buffer

Not considered.

Sy-Subrc

The correction of the system variables `SY-SUBRC` is only integrated into the target program in case of a `SELECT-INTO-TABLE`.

Transfer of key values or select options

If in the WHERE statement of the SELECT command a direct value entry and a select option are found, the SELECT option is transferred. The direct value entry is then checked with the loop.

Sample programs

The sample programs, as shown in Figure 23, are meant for Conversion Tool testing purposes only.

Report name	Description
YYCONV01	Test program for INTO Statement ********** 01 into WA 02 into corresponding fields of wa 03 (f1, ... fn) into (g1, ... gn) 04 (f1, ... fn) into wa 05 in dbwa 06 into table itab 07 into corresponding ... table itab 08 (f1, ... fn) into table itab 09 (f1, ... fn) appending table itab 10 (f1, ... fn) into corresponding ... table itab 11 appending table itab 12 appending corresponding fields of table itab 13 in dbwa 14 in zvbak 15 (f1, ... fn) into itab 16 (f1, ... fn) into (g1, ... gn)
YYCONV02	Tables in different modules or options 01 no PBS table 02 EIPO: different modules and key fields 03 STXH: different modules and key fields 04 without WHERE, archiving allocation via ranking 05 VBUK: different options, one clear module 06 VBFA: table with correct key field 07 VBFA: table with wrong key field 08 COEP: access via different key fields 09 MSEG: access via different key fields
YYCONV03	Cannot by converted: 01 CLIENT SPECIFIED 02 GROUP-BY 03 INCLUDE 04 PACKAGE SIZE n 05 EXTERNER PERFORM 06 SUM, COUNT, AVG 07 CALL FUNCTION x 08 UP TO n ROWS 09 LIKE xxx
YYCONV04	Distinct, Order clause 01 VAKPA WHERE KUNNR IN DD_SEL AND VBELN IN DD_BEL. 02 SINGLE from KNA1 03 from VBAP
YYCONV05	Performance test
	01 GRÜN: IN 02 GRÜN: BETWEEN 03 GRÜN: EQ 04 GELB: no key field 05 GELB: no Where clause 06 ROT: no table
YYCONV10	Read order items via orders to the customer VAKPA 01 VAKPA WHERE KUNNR IN DD_SEL AND VBELN IN DD_BEL. 02 SINGLE from KNA1 03 from VBAP
YYCONV11	Example program of customer Include, Perform and Call Function
YYCONV12	Example program of customer SELECT FOR ALL ENTRIES ORDER BY Coding partly in small letters
YYCONV13	Test program for SY-SUBRC
YYCONV14	Example from customer:
RMCBNEUA	LIS: new constr. infostr. From material movements
RMCBNERP	LIS: new constr. infostr. From invoice check/revaluation

Figure 23 Conversion Tool testing programs

Archive access tutorial (SAP version 4.6c)

Manual ABAP/4 programs with ViewPoint for SAP archive access are provided if an automatic adjustment cannot be made with the ViewPoint for SAP Conversion Tool.

From SAP version 4.6c, ViewPoint for SAP has archive access tutorials which enable application developers to provide customer-specific programs with ViewPoint for SAP archive access. Executable example programs are provided for each installed ViewPoint for SAP module. Their coding can be processed and executed with the ABAP workbench.

Call the function under **General tools**, as shown in Figure 24.

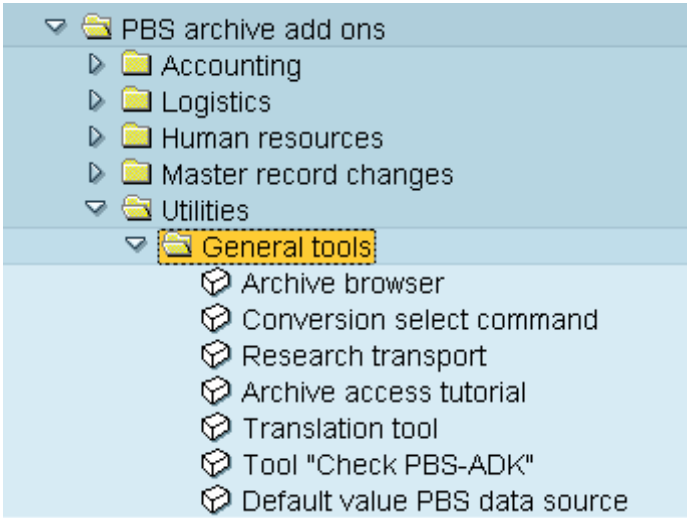


Figure 24 **General tools functions**

Or use transaction: /PBS/UTIL_ACCESS_ARC.

ABAP Editor Click **ABAP Editor** to start the editor and display sample programs. Breakpoints can be set to execute the programs or the relevant coding can be marked to transfer it into the customer program.

Execute The sample program is started and the selected archive data is displayed in a list.

3 Translation Tool

The ViewPoint for SAP Translation Tool is supplied as part of the ViewPoint for SAP modules utilities.

This chapter includes these topics:

Overview

The ViewPoint for SAP Translation Tool translates text elements and dynpros of SAP standard objects to the text elements and dynpros of the corresponding ViewPoint for SAP object in any language, maintaining the texts of reports, function groups, logical databases and transactions program elements.

Note: The Translation Tool translates SAP texts in the chosen language only. Texts in other languages will not be affected.

Be sure of the program elements selected for translation because existing text in the chosen language is overwritten.

Contact EMC Support for more information.

Delivery

Table 6 lists the Translation Tool objects.

Table 6 ViewPoint for SAP Translation Tool object descriptions

Object	ViewPoint for SASP 3.x	ViewPoint for SAP 4.x	Description
PROG	ZZTRANSL	/PBS/UTIL_TRANSLATE	Translation Tool
TRAN	ZTRA	/PBS/UTIL_TRANSL	Start transaction
TABL	ZZUTILTRAN	/PBS/UTIL_TRANSL	Table

Running the Translation Tool

Follow this procedure to translate text elements for use with a ViewPoint for SAP module.

1. Start the ViewPoint for SAP Conversion Tool with transaction:

   /PBS/UTIL_TRANSL (version 4.0 and after)

   or ZTRA (version 3.1 and prior)

   The Translation Tool window appears, as shown in Figure 25.

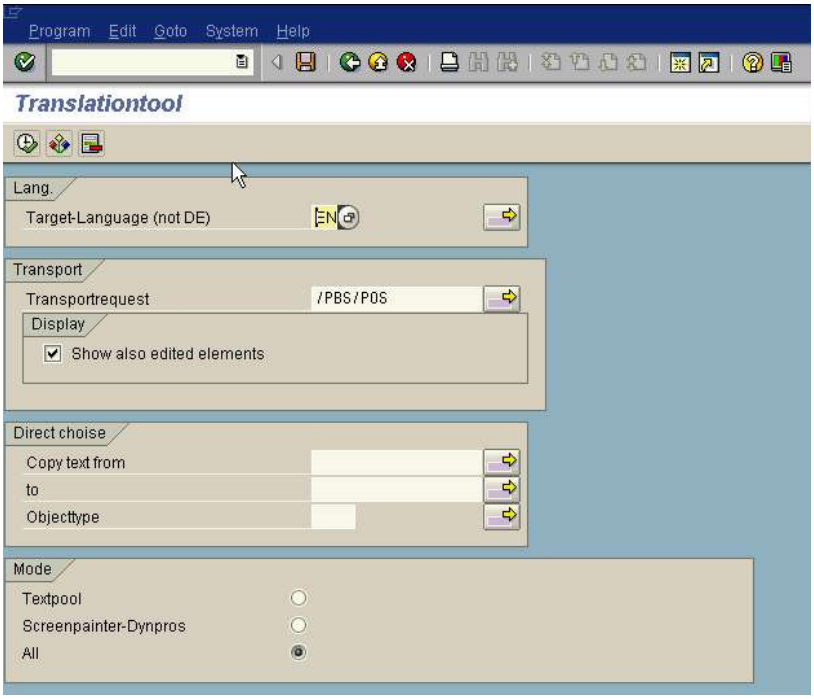


Figure 25 Translation Tool window

Table 7 lists the initial screen fields definitions.

Table 7 Translation Tool initial screen fields

Field	Definition
Target language	Select the language(s) into which you want to translate.
Enter transport request (optional when using Direct choose of objects)	Enter the desired transport request to translate all existing programs (PROG), function groups (FUGR), logical databases (LDBA) and transactions (TRAN) of the transport. The Translation Tool attempts to find the original name of the program element with the given ViewPoint for SAP program name. Selecting multiple transport requests could impede performance of the Translation Tool.
Already translated objects also	Select to overwrite existing text elements of the selected objects already in the target language.
Direct choose of objects (optional when entering a transport request)	Enter the original program name matching a ViewPoint for SAP program when there are few elements to edit or no original program name can be found, as shown in Figure 26. Be sure of the order of the select options when selecting several objects.
Mode (select one)	• Text elements Text elements of the selected objects will be processed. • Screen painter-Dynpros Screen painter-Dynpros of the selected objects will be processed. • All Both text elements and screen painter-Dynpros of the selected objects will be processed.

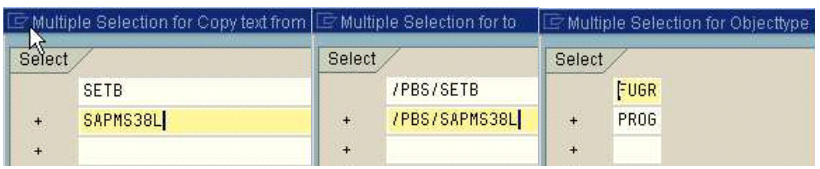


Figure 26 Direct choice of objects

2. Press **Execute** in the initial screen.

   A list displays three types of objects:

   - objects the tool has found an original name
   - objects where no original name was found
   - objects where no clear original name was found

3. Double-click the objects for which an original name has been found, as shown in Figure 27, or select them using the checkbox.

   You can also select and deselect all found objects using **Shift+F1** and **Shift+F2**.

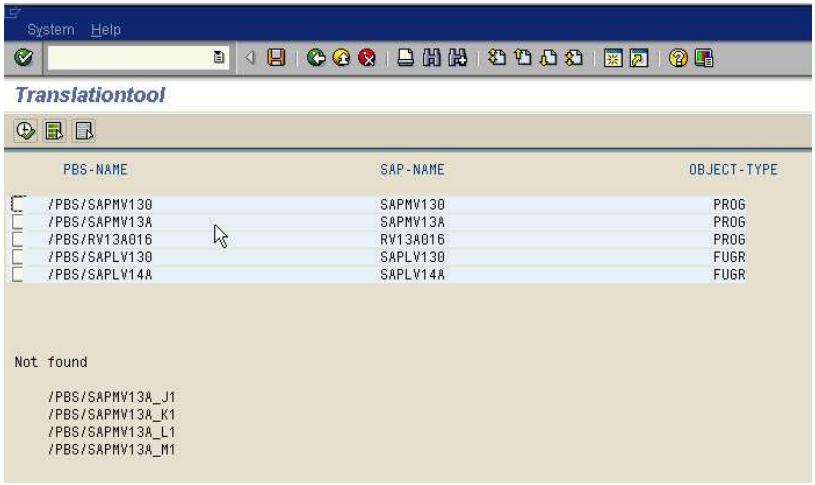


Figure 27 **Selection of objects**

4. Press **Execute**.

   All selected text elements are copied from the original program to the ViewPoint for SAP program and a report of changes displays.

4

Check ADK

The ViewPoint for SAP Check ADK utility is supplied as part of the ViewPoint for SAP modules utilities and does not need any other ViewPoint for SAP transports to be previously imported.

The Check ADK runs with the basis programs of SAP AG, D-69190 Walldorf/Baden, system R/3, releases 4.0, 4.5, 4.6, R/3 Enterprise correction levels a to c.

This chapter includes these topics:

Overview

The ViewPoint for SAP Check ADK utility serves as an error analysis tool in case of access problems to ViewPoint for SAP index files or SAP archive files. The Check ADK transport does not require another ViewPoint for SAP transport and can be run independently of any type and number of installed ViewPoint for SAP modules.

The Check ADK Utility checks the following ViewPoint for SAP modules:

- Production Orders (CPP)
- Controlling Line Items (CCO)
- Plant Maintenance (CPM)
- Material Master Data, Batches/Special Stocks and BOMs (CMT)
- Process Orders (CPR)
- Costing-Based Profitability Analysis (CCOPA)
- Master Data Changes (CCU)
- Purchasing (CMM)
- CO Orders (COO)
- CO Line Items (CPCA)
- Project Systems (CPS)
- Line Items in FI-SL (CSL)
- Warehouse Management (CWM)
- HR Archiving Objects (CHR)
- Financial Accounting and Material Documents (CFI)
- Sales and Distribution (CSD)

Table 8 lists the Check ADK objects.

Table 8 Check ADK objects

Object	ViewPoint for SAP 4.x	Description
PROG	/PBS/UTIL_CHECK_PBS_ADK	Report ViewPoint Check ADK utility
DEVC	/PBS/UTIL	Development Class /PBS/UTIL
TRAN	/PBS/CHECK_PBS_ADK	Transaction ViewPoint Check ADK utility

Running Check ADK

Follow this procedure to use the Check ADK utility.

1. Start the Check ADK utility with transaction /PBS/CHECK_PBS_ADK, as shown in Figure 28.

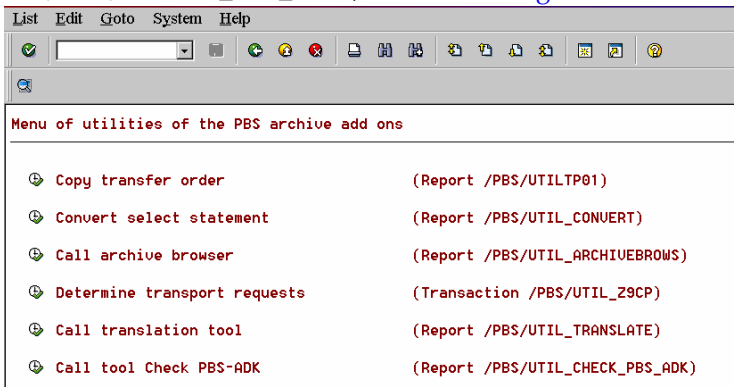


Figure 28 ViewPoint for SAP utilities releases 4.0 and 4.5

Or from the ViewPoint for SAP main menu using **Utilities** > **General tools** > **Tool Check ViewPoint ADK,** as shown in Figure 29.

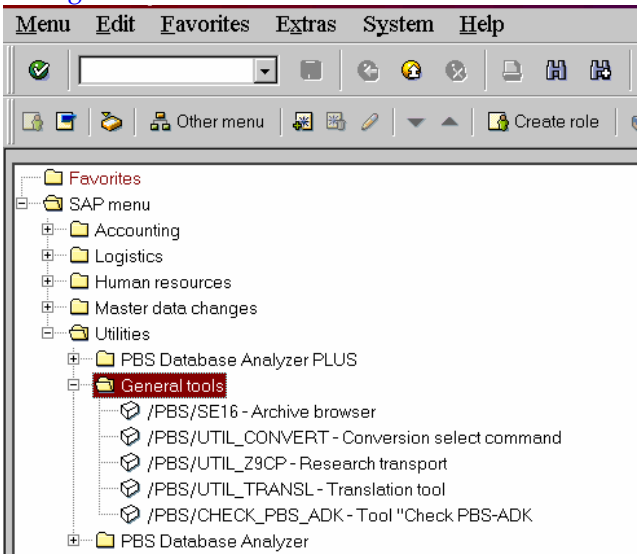


Figure 29 ViewPoint for SAP utilities menu release 4.6

The Check ADK initial screen appears.

2. Select one or more ViewPoint for SAP modules, as shown in Figure 30.

   Also choose between:

   - **only errors** for a quick ADK check
   - **all messages** for a complete ADK check

   Note: For information on selecting **SAP - Object to Test**, proceed to "Using SAP - Object to Test" on page 56.

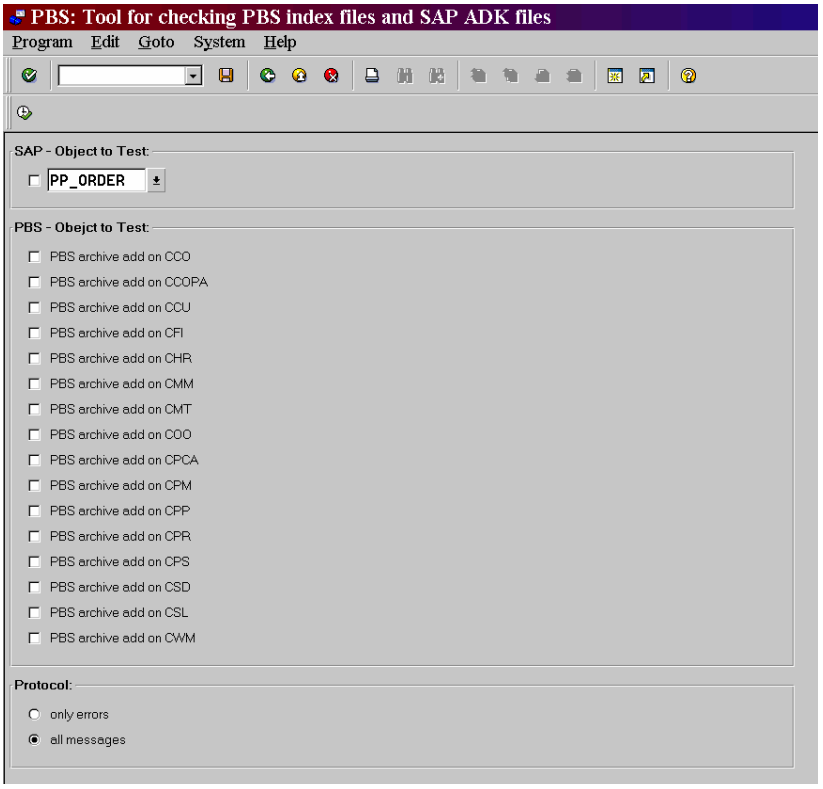


Figure 30 Check ADK initial screen

3. Select **Execute** to confirm your selections.

A sample results screen appears, as shown in Figure 31.

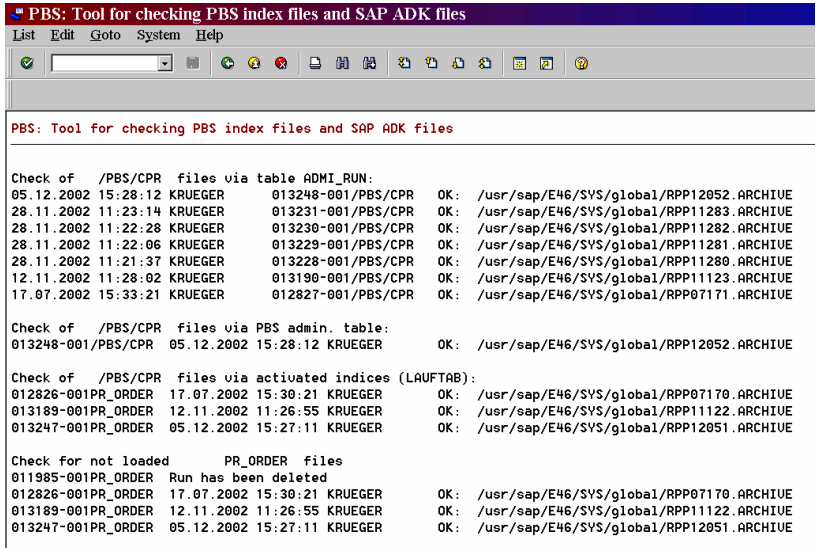


Figure 31 **Results screen for the ViewPoint for SAP CPR module**

Table 9 lists the results definitions, which are divided into several parts, depending on the ViewPoint for SAP module.

Note: FAIL displays if an ADK file cannot be accessed.

Table 9 **Results screen definitions**

Screen area	Definition
Check of the ViewPoint ADK files with table ADMI_RUN	All available ViewPoint for SAP index files for one module are checked.
Check of the ViewPoint ADK files with PBS-ADMIN table	All activated ViewPoint for SAP index files for one module are checked (Load. Admin.table)
Check of the ViewPoint ADK files with the COMMENTS entry (CPP and CHR Modules)	Comments entered in the SAP original ADK files are checked if a ViewPoint for SAP index exists.
Check of the SAP-ADK files for activated indices (LAUFTAB) (remaining modules)	SAP-ADK files processed in individual load runs are checked.
Check for not loaded ADK files	All remaining ADK files are checked.

Using SAP - Object to Test

Use this procedure to check SAP-ADK files exclusively using Check ADK.

1. Select **SAP - Object to Test** in the Check ADK initial screen, as shown in Figure 30 on page 54.
2. Enter one archiving object.

   A sample results screen appears, as shown in Figure 32.

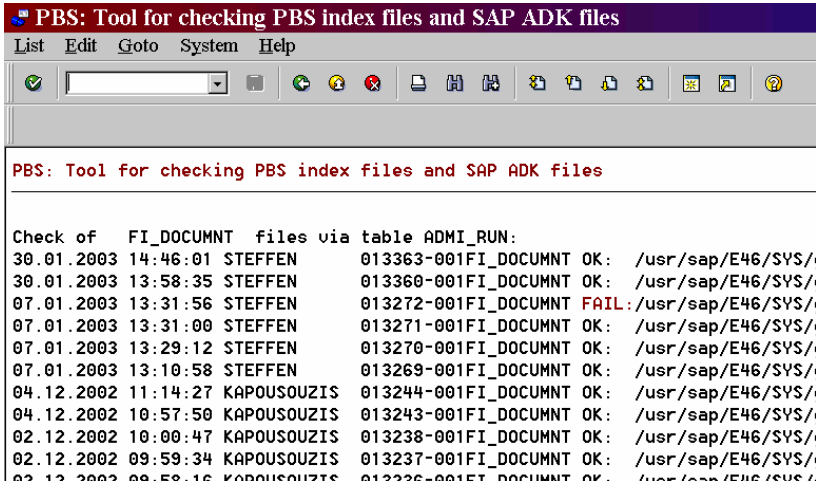


Figure 32 Results screen for SAP object FI_DOCUMNT

5

Class Order

ViewPoint for SAP Class Order is an administrative tool for use with Development Class /PBS/ORDER.

This chapter includes these topics:

Overview

ViewPoint for SAP Class Order applies to the following ViewPoint for SAP modules:

- Project Systems (CPS)
- Production Orders (CPP)
- Plant Maintenance (CPM)
- Process Orders (CPR)

As these modules' functionalities are closely related, there is also a close relationship between program sources. The ViewPoint for SAP Class Order module was created to handle any version management issues.

Development Class /PBS/ORDER

Class Order addresses rare situations where installing different modules with partly overlapping objects may cause an older transport to overwrite newer objects in a related transport by combining those objects into one module transport. These objects are integrated in the Development Class /PBS/ORDER.

The development class /PBS/ORDER is not a full ViewPoint for SAP module. It is a part of the ViewPoint for SAP modules CPP, CPM, CPR, and CPS. Import of the development class /PBS/ORDER when using one these modules.

When using more than one of these modules, import the development class /PBS/ORDER only once.

Since the Development Class /PBS/ORDER corrects any potential overlapping and overwriting object issues, import the ViewPoint for SAP module transports and the Development Class /PBS/ORDER transport in any order.

6

Fiscal Year Reporter

This chapter includes these topics:

Overview

At the end of a fiscal year numerous financial accounting tasks must be completed, such as reconciliation and documenting posting material.

With Fiscal Year Reporter such tasks are carried out independently of the everyday business of the SAP system. As soon as the fiscal year is completed, all documents and transaction figures for the fiscal period, including the corresponding master data information, are saved outside the SAP tables. Document information is saved in ADK format under a user defined archiving object while the master record information is stored in compressed form in a SAP cluster table. During the generation process of the fiscal year stock, the transaction figures are reconciled with the transactions of the period on company code level.

The predefined, year end closing programs of the Fiscal Year Reporter has a process flow, as shown in Figure 33.

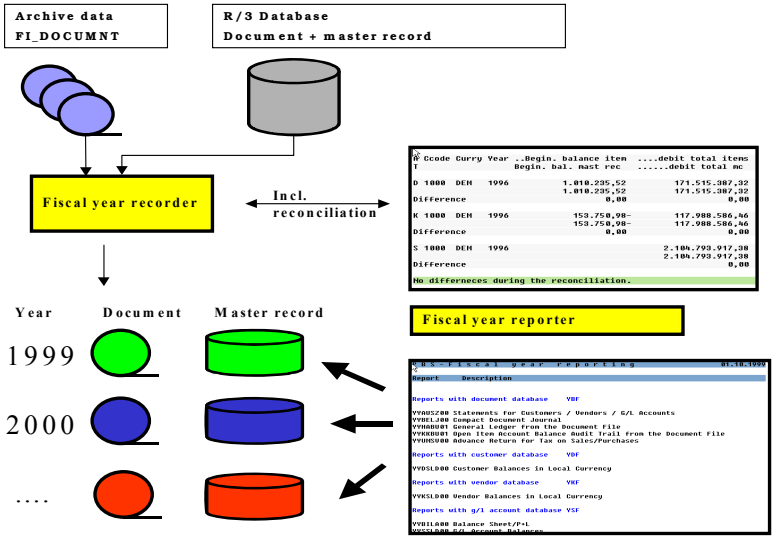


Figure 33 Fiscal Year Reporter process flow

The Fiscal Year Reporter provides the following advantages for the SAP financial accounting business processes:

- Freezing actual status of movement and master data at the end of the fiscal year
- Evaluation of fiscal year data after conversion of local currency values
- Complete independence from the development of the operative SAP tables
- Balances audit trail programs and quantity problems with sort volumes
- Easily integrates customer/SAP programs with the Fiscal Year Reporter

Using Fiscal Year Reporter

There are two Fiscal Year Reporter menus:

- User — transaction YEAR (/PBS/YEAR/)
- Administrative — transaction YEAM (/PBS/YEAM)

Note: Transaction YEAM contains administrative functions that should be made available to administrative personnel only.

The fiscal year reporter menu displays using transaction YEAR or YEAM, as shown in Figure 34.

Figure 34 Start menu YEAR/YEAM

For SAP versions 4.6 and later, create a user and administrator activity group integrating the range menus /PBS/YEAM and /PBS/YEAR. SAP standard documentation contains more details on creating activity groups.

Enter the activity group in the user master record, as shown in Figure 35.

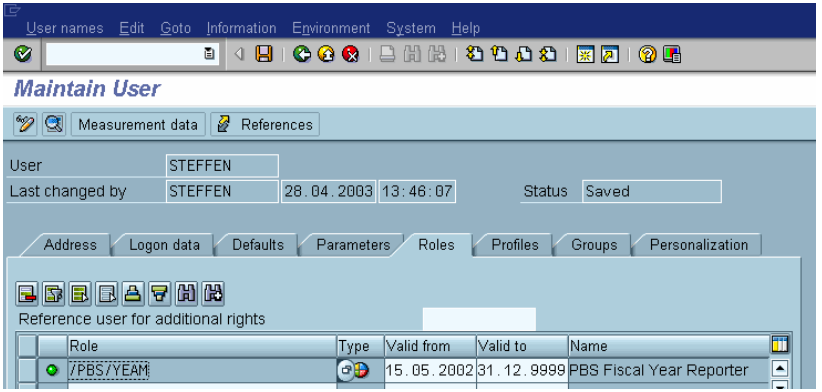


Figure 35 Activity group user master record

Extracting fiscal year closing transaction data

ViewPoint for SAP FYR uses archiving object YY_YR_yyyy (where yyyy is fiscal year) to copy all transactions belonging to a fiscal year, regardless of status (e.g., open or cleared), to an SAP ADK file. The archiving object is generated during run time if it does not yet exist. This allows the complete display of all the posting material for any time, such as a balance audit trail.

Note: The creation of an ADK archive stock with object YY_YR_yyyy is separate from the archiving process for the archiving object FI_DOCUMNT. YY_YR_yyyy does not archive or delete database documents.

Use **YEAM** > **Transaction data** > **Save** to create the transaction data stock at the end of the fiscal year, as shown in Figure 36.

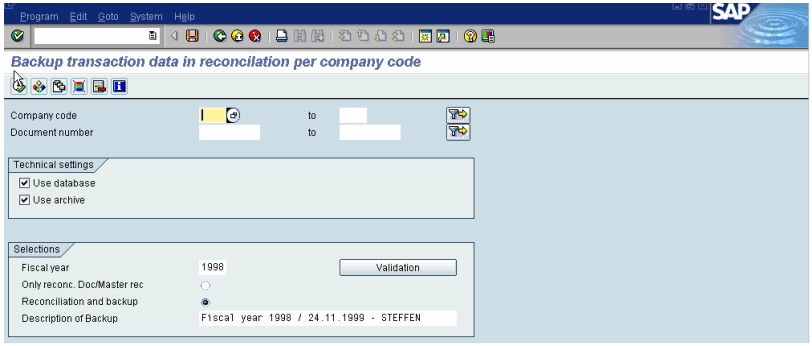


Figure 36 **Selection screen to save transaction data**

Note: A fiscal year stock can only be created if the posting periods of the fiscal year are marked closed.

Multiple stocks can be created for a fiscal year if each extract stock is given a unique name for reporting purposes.

Run the Fiscal Year Recorder in the background unless the run is for testing purposes.

At the end of each extract run, the delimitations and the reconciliation results are printed in detail, as shown in Figure 37.

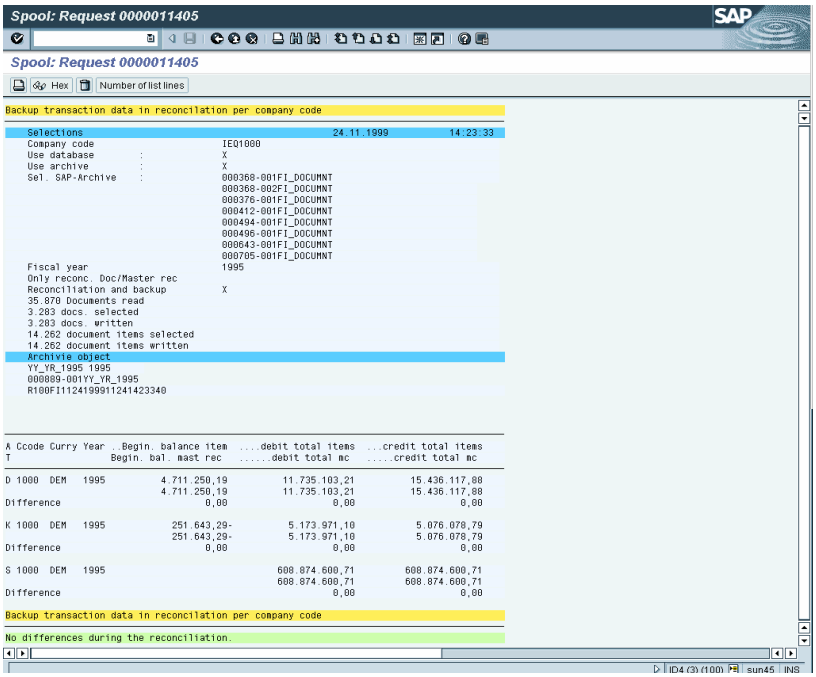


Figure 37 Reconciliation results for saved transaction data

Use **YEAM** > **Transaction data** > **Delete** to delete erroneous extract stock.

Note: If transaction data is deleted after conversion from local currency to Euro, data is lost.

Extract master data at fiscal year closing

Master data, such as customers, vendors, and GA/L account information, can also be extracted with transaction data using **YEAM** > **Master data** > **Save**, as shown in Figure 38.

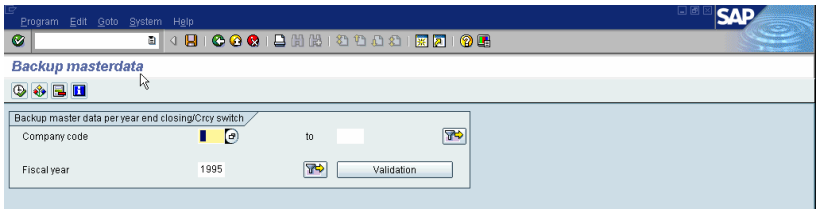


Figure 38 **Selection screen to save master data**

Master data is stored in compressed form in the cluster file YVKZ (or /PBS/YVKZ for version 4.x and later). Make the first data backup covering several fiscal years. Subsequent data backups should be done after the closing of each fiscal year.

Yearly backups result in a long term archive. Use **Validation** to check if selected company codes and fiscal years are valid.

Fiscal years can only be saved once unless the existing fiscal year is deleted from the backup file YVKZ (or /PBS/YVKZ for version 4.x and later).

Note: If transaction data is deleted after conversion from local currency to Euro data is lost.

Run the Fiscal Year Recorder in the background unless the run is for testing purposes.

Table 10, Table 11 on page 68, Table 12 on page 68, and Table 13 on page 69 list the backup tables created.

Table 10 **Customers**

Table name	Description
KNA1	Customer master general
KNAS	EC taxes
KNKA	Credit limit

Table 10 Customers (continued)

Table name	Description
KNBK	Customer master bank data
KNB1	Customer master company code
KNB4	Behavior in payment
KNB5	Dunning data
KNKK	Credit control area
KNC1	Customers monthly debits and credits
KNC3	Customers special general ledger monthly debits and credits

Table 11 Vendors

Table name	Description
LFA1	Vendor master general
LFAS	EC taxes
LFB1	Vendor master company code
LFBK	Vendor master bank data
LFB5	Dunning data
LFC1	Vendor monthly debits and credits
LFC3	Vendor special general ledger monthly debits and credits

Table 12 G/L accounts

Table name	Description
SKA1	G/L account master general
SKB1	G/L account master company code
SKAT	G/L account master name
GLT0	G/L accounts monthly debits and credits

Table 13 Miscellaneous

Table name	Description
T001	Company code table

At the end of the backup process a detailed selection statistic is displayed, as shown in Figure 39.

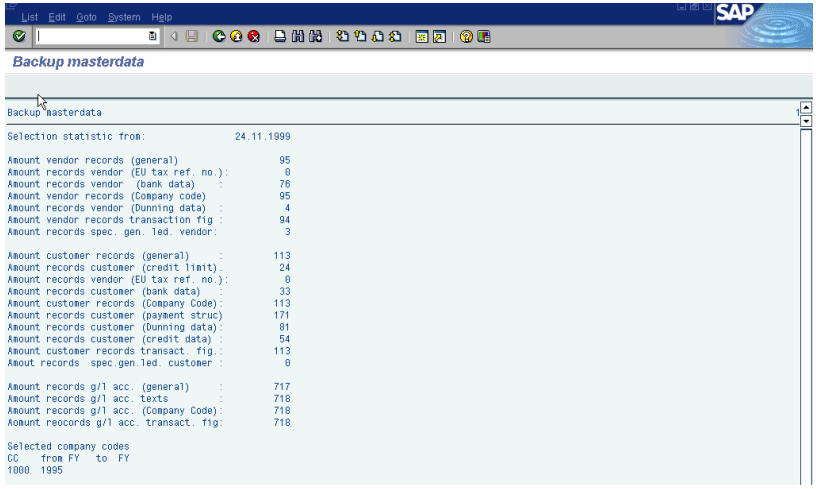


Figure 39 Selection result for saved master data

Fiscal Year Reporting

Direct accesses to saved master data in logical databases can be done as follows:

- vendors = YKF
- customers = YDF
- G/L accounts = YSF

ViewPoint for SAP predefined fiscal year closing programs are called using transaction **YEAR** > **Reporting**, as shown in Figure 40.

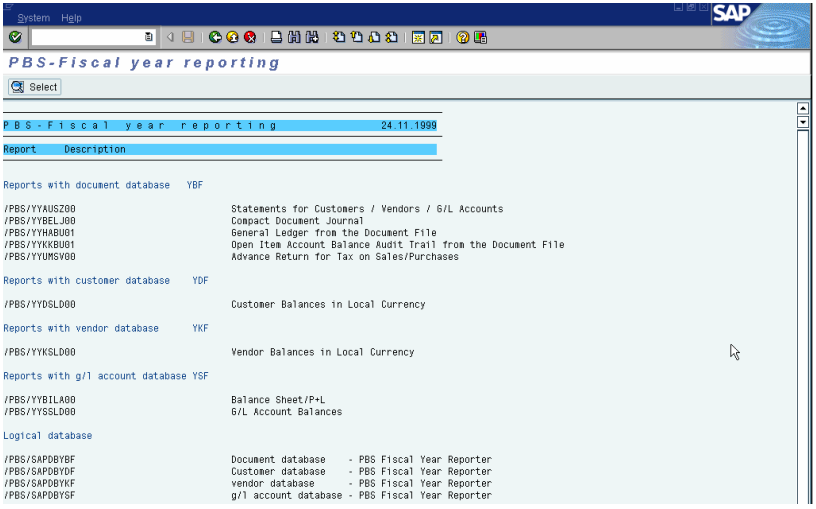


Figure 40 **Fiscal Year Reporting selection screen**

The balance audit trail programs YYHABU01 and YYKKBU01, available up to release 4.6, have an improved sort technique.

Note: Programs YYKKBU01 and YYHABU01 use the same temporary sort path. Do not run them simultaneously as background processes.

Fiscal Year Reporter audit access

ViewPoint for SAP FYR provides the following audit access types.

Access 1 (Z1) indirect data access — Allows a tax authority read-only access to stored data for the audit period, including the master data and links (data), excluding remote queries (online access). The read-only access covers reading, filtering and sorting data using the evaluation functionality of the data processing system.

Access 2 (Z2) direct data access — Allows the tax authority to request the taxpayer or a third party to execute read-only access (indirect access) and evaluate the data using the evaluation functionality of the data processing system.

Access 3 (Z3) data by transferring data on data carriers — Allows the tax authority to request a data extract of business records which is returned to the taxpayer, or deleted, after the external audit is complete. Access is limited to data for financial accounting, asset accounting, and payroll accounting.

Relevant data in other areas of the data processing system is qualified by the taxpayer for sales, purchase order, material, and invoice verification documents.

Audit access strategies

R/3 audit requirements are met using Z1 and Z2 access. To support Z3 audit access (data extraction) use DART (Data Retention Tool) explained in Chapter 7, "Data Retention Tool".

Table 14 lists details for each audit access strategy.

Table 14 ViewPoint for SAP access types

Access type	ViewPoint for SAP module support	Features
Z1	Modules CCO, CCU, CFI, CHR, CMM, CMT, CPCA, CPM, CPP, CPR, CSD, CSL, CWM	Data access to archive and DB Dialog transactions FI standard reporting Customer-specific reporting ViewPoint long term archiving concept
Z2	Fiscal Year Reporter	Data access to archive and DB DB Dialog transactions FI standard reporting Customer-specific reporting ViewPoint long term archiving concept
Z3	ViewPoint for SAP CDART CFI Module and Fiscal Year Reporter	DART extracts from archive and DB ADK files without DB reloading process Data export via variable ABAP extract

Access types Z1 and Z2

Delimit the selection for each field from the document header (table BKPF), the document item (table BSEG) and the tax line (table BSET). For a tax check, the documents to be checked can be selected and evaluated, as shown in Figure 41.

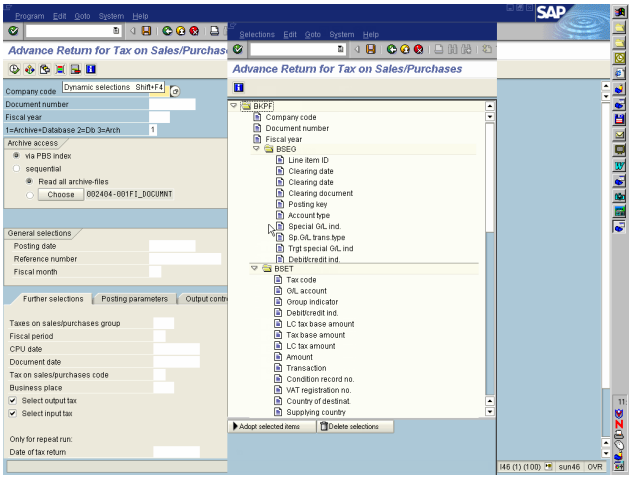


Figure 41 Access types Z1 and Z2 delimitations

Data format

Table 15 lists the SAP AIS format structure.

Table 15 SAP AIS format

Line type	Number	Characteristic value
Header	1	Field name
	2	Description
	3	Field description
	4	Data type (C,N,P,I,D,T,F) C = text, N = numeric text on the left filled with zero, P = packed (number digits = field length * 2 - 1) This is the SAP internal type. The format [-]digits[,|.digits] is used in the data records. Example: Type P length 7 decimal places 2 leads to the output -12345678901.23, I = integer, D = date with format DD.MM.YYYY, T = time with format HH:MM:SS, F = floating point number.
	5	Field length
	6	Number decimal places
	7	Currency code or quantity indicator (F,W,M,E) A currency unit field always comes after a currency field. A unit of measure field always comes after a quantity field. F = currency, W = currency unit, M = quantity, E = unit of measure
	8	Special field types (R,C,P,M) R = rank (statistics), C = counter (statistics), P = percentage (statistics), M = mean value (statistics)
Data line	9	Data records

Safety

After the export the data leaves the SAP environment and SAP authorization no longer works:

- In the file system of the target computer (c:\...)
- In the file system of the application server (d:\usr\sap\...)

Protect exported data against unauthorized access.

Export programs

Table 16 lists those programs which support the export of data from the SAP system using ViewPoint for SAP FYR. Asset accounting data is not selected with the ViewPoint for SAP archive but using SAP.

Table 16 Export programs

Program name /PBS/FYR_LIS	Description Variable	Logical Database	Table	F [a]	Description
ITEM	item list	/PBS/YBF	BKPF	_K	document header
			BSEG	_G	document item
			BSET	_T	tax line
			BSED	_D	bill of exchange line
			BSEC	_C	CPD line
ITEM_ASSET	asset item list	ADA	ANEK	_K	document header
			ANEPV		document item
VENDOR	vendor list	/PBS/YKF	LFA1	_A	vendor master in general
	master data		LFAS	_T	EU taxes
			LFB1	_B	vendor master company code
			LFB5	_M	reminder data
			LFC1	_1	transaction figures
			LFC3	_3	special general ledger transactions
CUSTOMER	customer list	/PBS/YDF	KNA1	_A	customer master in general
	master data		KNAS	_T	EU taxes
			KNKA	_L	credit limit
			KNB1	_B	customer master company code
			KNB4	_Z	payment history
			KNB5	_M	reminder data
			KNC1	_1	transaction figures
			KNC3	_3	special general ledger transactions

Table 16 Export programs (continued)

Program name /PBS/FYR_LIS	Description Variable	Logical Database	Table	F [a]	Description
GLACC	G/L account list	/PBS/YSF	SKA1	_A	G/L account master in general
	master data		SKB1	_B	G/L account master company code
			SKAT	_T	G/L account text
			SKC1A	_1	transaction figures local currency
			SKC1C	_3	transaction figures foreign currency
ASSET	asset list	ADA	ANLAV	_A	asset in general
	master data		ANLV	_V	insurance data
			ANLZ	_Z	value-dated asset assignments
			ANLB	_B	depreciation parameter
			ANLCV	_C	assets value fields
REFERENCE	general table contents				

a. Field extension indicator

The reports can be generated using **Fiscal Year Reporter** > **Reporting** > **Data export**, as shown in Figure 42.

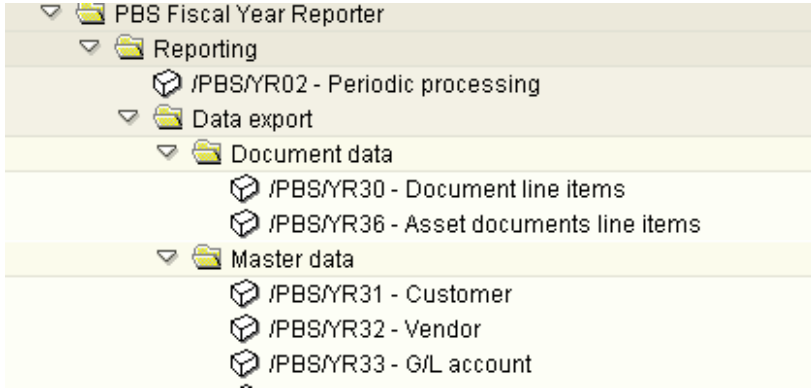


Figure 42 Fiscal Year Reporter data export menu

Note: For SAP releases 4.0 and 4.5, generate the export structures using /PBS/FYR_LIS_GENERATE each time the database tables change.

Export selection screen

The export selection screen for export programs consists of three parts:

- "Delimitations to influence the scope of selection"
- "Selection of list layouts"
- "Output option" on page 77

Delimitations to influence the scope of selection

Delimits the logical database selection for each report.

Selection of list layouts

Contains all fields displayed from the selected data volume. Defined with SAP-ALV (ABAP-List-Viewer) within an export program and stored under an own name, several list variants are possible per export program in order to meet different requirements, as shown in Figure 43.

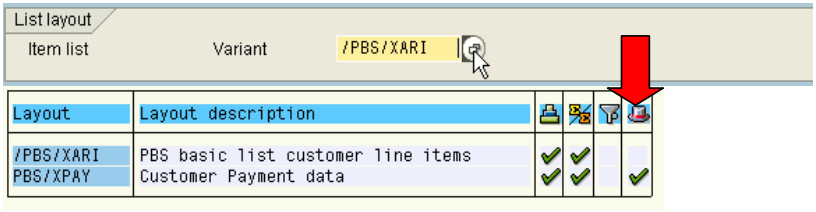


Figure 43 **List layout selection screen**

Follow this procedure to create a list for an export program.

1. Click **Display/Print** to generate the desired report.

   Keep the selected data volume small for performance reasons.
2. Select **Options** > **Layout** > **change** to define the scope of the list.
3. Select **Options** > **Layout** > **store** to store the list variant.

Note: Select **Options** > **Layout** > **Layout administration** > **Layout** > **Transport** to transfer the list from a test system into the production system.

Output option

Use the selection screen to display the dataset as an ALV list or to transfer the list to an export directory, as shown in Figure 44.

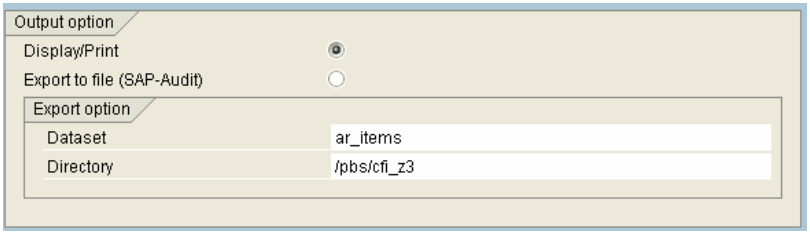


Figure 44 **Output option**

Note: Process large selection volumes in the background.

Before the data export executes the system checks whether:

- The indicated directory exists and can be written to
- The indicated file name already exists.

  If the file already exists, choose whether to overwrite the existing file, or select another file name.

At the end of each export transaction an export statistic is exported and displayed, as shown in Figure 45.

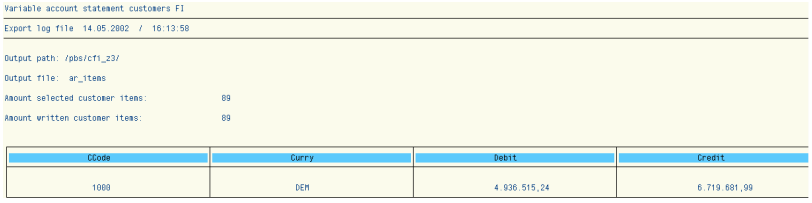


Figure 45 **Export statistic**

Export file size

The size of an export file depends on the number of items selected and the number of criteria on the selection list, which displays the list layout changes. Determine disk space as follows:

(number items x line width of the layout)
+ 2000 bytes header record SAP-AIS

Authorization concept

Authorization is required:

- To execute reports

- Use the ViewPoint menu for transactions beginning with /PBS/YR
- View accounts, company code, business areas, etc.
- Use transaction SE16 (Display table contents)

Transfer files to PC

When extract stock is creation is complete, files can be transferred from the UNIX or Windows NT server to a PC using ASCII mode (ftp > bin).

Using PC analysis programs

Extract stocks can be processed by indicating a file format in an analysis program such as IEDA, as shown in Figure 46.

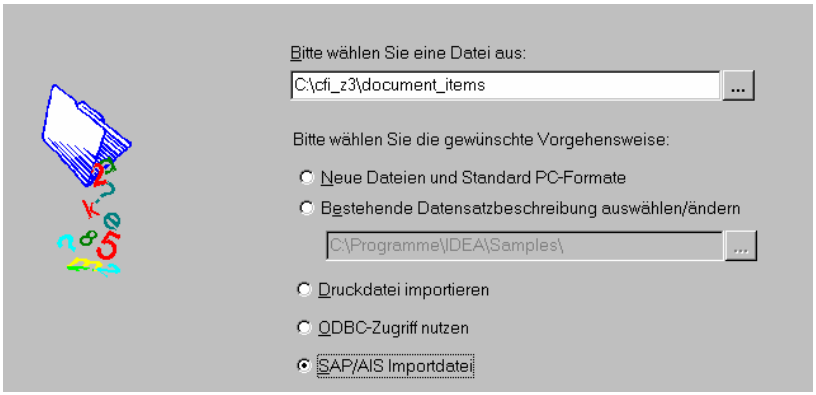


Figure 46 File format definition using IDEA

Use a PC analysis program to check the extracted data factual consistency, as shown in Figure 47.

a.IMD

	CL_	COCD	DOC_NO_	YEAR	ITM	PSTG_DA	A	G_L_ACCT	ACCOUNT_SHORT	CURR_	AMOUNT	ASSIGNMENT	A
105	100	1000	1400000152	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	63.384,79	0000006338479	
106	100	1000	1400000152	2000	2	2000/05/31	D	0000140000	Amadeus	DEM	-63.384,79	14000001522000	
107	100	1000	1400000153	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	23.515,52	0000002351552	
108	100	1000	1400000153	2000	2	2000/05/31	D	0000140000	COMPU Tech. AG	DEM	-23.515,52	14000001532000	
109	100	1000	1400000154	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	353.682,84	0000035368284	
110	100	1000	1400000154	2000	2	2000/05/31	D	0000140000	HTG Komponente ...	DEM	-353.682,84	14000001542000	
111	100	1000	1400000155	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	85.322,64	0000008532264	
112	100	1000	1400000155	2000	2	2000/05/31	D	0000140000	SudaTech GmbH	DEM	-85.322,64	14000001552000	
113	100	1000	1400000156	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	53.116,40	0000005311640	
114	100	1000	1400000156	2000	2	2000/05/31	D	0000140000	CBD Computer Ba...	DEM	-53.116,40	14000001562000	
115	100	1000	1400000157	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	562.120,92	0000056212092	
116	100	1000	1400000157	2000	2	2000/05/31	D	0000140000	Christal Clear	DEM	-562.120,92	14000001572000	
117	100	1000	1400000158	2000	1	2000/05/31	S	0000113109	DteBk - customer p.	DEM	1.026.751,96	0000102675196	
118	100	1000	1400000158	2000	2	2000/05/31	D	0000140000	Lampen-Markt GmbH	DEM	-1.026.751,96	14000001582000	
119	100	1000	1400000137	1995	1	1995/06/25	S	0000113108	DteBk - checks recv	DEM	6,33	19950625	*
120	100	1000	1400000137	1995	2	1995/06/25	D	0000140000	Buy & Fly Superma...	DEM	-6,33	14000001371995	*
121	100	1000	1400000138	1995	1	1995/06/26	S	0000113108	DteBk - checks recv	DEM	57,50	19950626	*
122	100	1000	1400000138	1995	2	1995/06/26	D	0000140000	Buy & Fly Superma...	DEM	-57,50	14000001381995	*
123	100	1000	1400000139	1995	1	1995/07/01	S	0000113108	DteBk - checks recv	DEM	63,25	19950701	*
124	100	1000	1400000139	1995	2	1995/07/01	D	0000140000	Buy & Fly Superma...	DEM	-63,25	14000001391995	*

Figure 47 Data display in IDEA

Extracting data

The following ViewPoint for SAP reports can help meet legal requirements for extracted data. The default ViewPoint for SAP selection can be extended if required. The overview of the export programs lists the database tables from which the data can be extracted.

Financial accounting

T003—Document type

T003T—Document type name

T007A—Tax key

T007S—Tax code name

T001—Company code

TGSBT—Business area name

TBSL—Posting key

TBSLT—Posting key name

Asset accounting

TABW—Transaction types of the asset accounting

TABWA—Transaction types / Depreciation areas

TABWG—Transaction types groups

TABWH—Name asset transaction type groups

TABWK—AM transaction types for posting of proportional values and depreciation

TABWR—Name of asset history sheet group

TABWT—Transaction type texts of asset accounting

TABWU—special treatment of retirement

TAPRFT—Text table for investment profile

TAPRF—Investment measure profile for asset under construction and depreciation simulation

Use the ViewPoint for SAP menu **General table data** to access these tables.

Generate the export program using **Export of general table data** by indicating the table name, as shown in Figure 48.

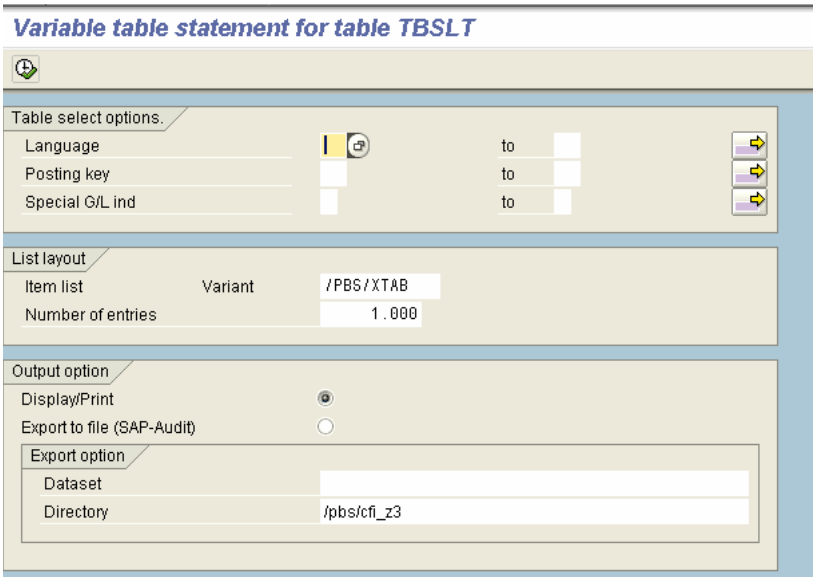


Figure 48 Generate table export

Create the layout list for export, as shown in Figure 49.

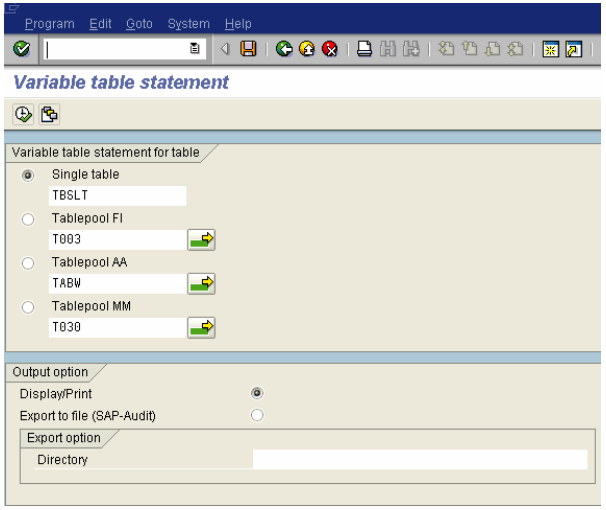


Figure 49 Generate table extract

ALV layout definitions

Right-click technical field names to switch between the field name and technical field name if selection fields display several times when defining a list layout.

Single line lists

When using one list variant for the data export, only a single line is listed.

File path default

Define a default value in the user master for the file path with the parameter **ID** > **/PBS/FYR_LIS_PATH**.

Data export terminates

The data export terminates with the message **Variant was not found** if the layout in which the fields to be extracted were not defined, do not exist, or were not stored when the layout was created.

PC analysis program terminates

PC analysis programs terminate with the message **SAP/AIS file is invalid** during the transfer of export files from UNIX/Windows NT to PC if the transfer was executed in BINARY instead of ASCII mode.

List output contains wildcard characters

For SAP version 4.0/4.5, regenerate the export structures with the program /PBS/FYR_LIS_GENERATE to eliminate wildcard characters if the export structures do not fit to the data table structures.

Administration

Use the menu transaction YEAM or YEAR for administrative tasks.

Note: These tasks should be available to administrative personnel only.

Table 17 lists the transactions to add to the user profile for the user department and the administrator.

Table 17 YEAR

Release	Administrator	User department
3.x	Y*	YEAR, YR02,YR06,YR07, YR11
4.x	/PBS/Y*	/PBS/YEAR, /PBS/YR02, /PBS/YR06, /PBS/YR07, /PBS/YR11

The transaction YEAM should be made available to administrators only to modify data material.

To delete master data use transaction **S_ARCHIVE-authorization** for object **FI_DOCUMNT** with **01= create**.

Delete transaction data

Use **Delete transaction data** to delete fiscal year ADK files and all corresponding administration entries. Single stocks can be deleted if several stocks exist for a fiscal year because of splitting by company code.

Delete master data

Use **Delete master data** to delete fiscal year and company code compressed master data from the table YVKZ (for SAP version 4.x /PBS/YVKZ).

Activate reporting

Use **Activate reporting** to copy SAP programs using logical database BRF to the Fiscal Year Reporter database YBF.

Balance audit trail cancelled during processing

Use **Balance audit trail** > **Delete sortfile** to delete the sortfiles created in the temporary sort directory if the balance audit trail tools YYHABU01 or YYKKBU01 are cancelled during processing. This re-initializes the path for the temporary sortfiles.

Master data

For each fiscal year a Master data list appears, showing those company codes for which a data backup has been carried out using Fiscal Year Reporter.

Transaction data

For each fiscal year a Transaction data list appears, showing which backup runs have completed. A fiscal year is listed several times if a backup was run for each company code. Click **Protocol** to display all delimitations used for the backup run.

Logical database

Choose one of these logical databases to access the data stock of the Fiscal Year Reporter.

SAPDBYBF document database

SAPDBYBF reads sequential versions of saved Fiscal Year Reporter documents and master data. To use an own program to select the transactions of a fiscal year according to the posting period and all items cleared in this fiscal year, change the logical database from BRF to YBF. Add to the own program the following statement after START-OF-SELECTION to deactivate the check on the posting period in the logical database:

```
GJ_ONLY = space
```

ViewPoint for SAP reads sequential versions of master data similar to SAP.

SAPDBYDF customer database

Use this database to process only master data with no documents selected as there is no secondary index link between the customer and the ADK file YY_YR_yyyy. This database does not correspond to the SAP standard database DDF because customer master data of Fiscal Year Reporter only is processed.

ViewPoint for SAP Fiscal Year Reporter database

Use this database to process only master data with no documents selected as there is no secondary index link between the vendor and the ADK file YY_YR_yyyy. This database does not correspond to the SAP standard database KDF as only the vendor master data of the Fiscal Year Reporter are processed.

SAPDBYSF G/L accounts database

Use this database to process only master data with no documents selected as there is no secondary index link between G/L and the ADK file YY_YR_yyyy. This database does not correspond to the SAP standard database SDF, as only the G/L account master data of the Fiscal Year Reporter is processed.

Master data direct access

Use transaction **YEAR/YEAM** > **Tools** > **Tutorial** > **Read master data** to start the tool YYCFVKZ4 (version 4.x /PBS/YYCFVKZ4) to directly access Fiscal Year Reporter master data.

Alternately, use an external call to program YYCFVKZ3 (version 4.x /PBS/YYCFVKZ3) to directly access Fiscal Year Reporter master data.

Change extract stock description

Use transaction SARA to display the created backup stock after entering the archiving object YY_YR_yyyy (yyyy = fiscal year). Double-click the management line to change the description of the extract stock with function key F5.

Display reconciliation differences

Use transaction **YEAR/YEAM** > **Transaction data** > **Manage** to display the run protocol stored in a management table for each extract run of the Fiscal Year Reporter. Select a management line and press **F5**. The last line in an entry shows if there were differences in the reconciliation.

Clear archive file name

If logical file names are not clear, existing archive stocks of the Fiscal Year Reporter are overtyped. Create clear names by entering the variable <TIME> into the file name. For example, use the definition of the logical file name ARCHIVE_DATA_FILE1.

A logical file name exists for each fiscal year archiving object yy_yr_xxxx (where xxxx = fiscal year). View this logical file name with transaction SARA or AOBJ. Use transaction **File** > **Definition logical file name independent of client** to view how the logical file name is composed.

Note: Be sure to update previously created stocks while changing logical/physical file names.

Manually create an archiving object

Use program YYCFOBJC (version 4.0 /PBS/YYCFOBJC) to manually create an archiving object without having to wait until the archiving object is automatically created after transaction data is stored for one fiscal year.

7 Data Retention Tool

This chapter includes these topics:

Overview

The SAP Data Retention Tool (DART), or SAP Z3 scenario, facilitates compliance with tax authority requests for data extraction of business records.

SAP DART data flow

The SAP DART is an alternative solution to SAP BW, SAP queries, and ABAP reports in the SAP environment following the SAP DART data flow, as shown in Figure 50.

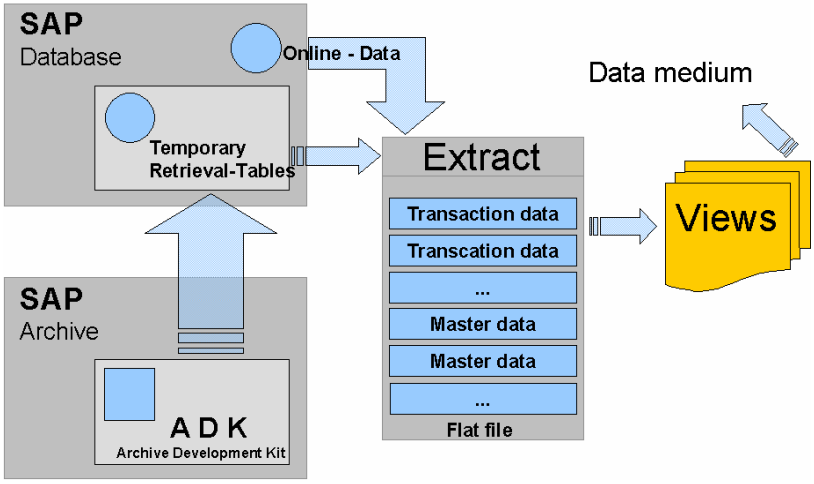


Figure 50 SAP DART data flow

SAP DART is included in the SAP standard installation and enables data extraction from a predefined volume. That data is then stored in external data media or on a file server for compliance purposes. Data views can be made available to the tax authority in the event of an audit.

ViewPoint for SAP CDART data flow

The ViewPoint for SAP CDART module extends the SAP DART functionality so that the SAP ADK files DART extract runs are integrated, avoiding temporary reloading of archive data into the database. The data access is executed through indices generated with the CDART Tool.

Database performance improves since permanent storage capacity is not provided for extract stocks until they are used.

The stocks are created *on demand*, following the ViewPoint for SAP CDART module data flow, as shown in Figure 51.

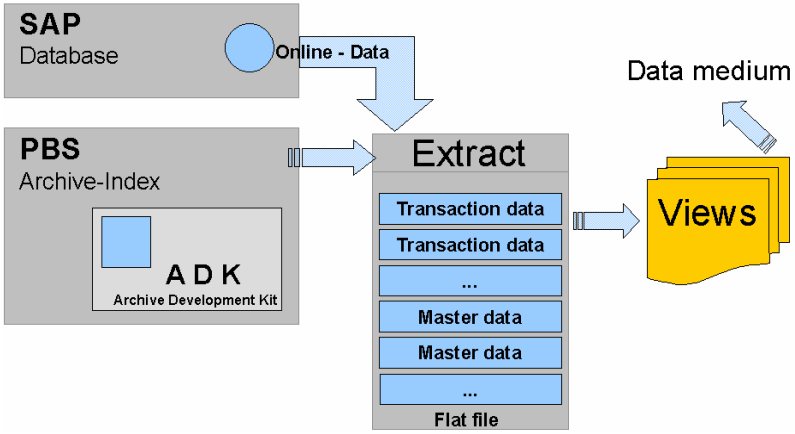


Figure 51 **ViewPoint for SAP CDART module data flow**

CDART transaction data

Table 18 gives an overview of transaction data affected by archiving and extracted from the archive using CDART. All other segments have master data, transaction figures, or are not affected by archiving.

Table 18 **CDART transaction data**

Original	Segment structure DART	Description
ANEK	TXW_AD_HD	Asset document header
ANEP	TXW_AD_POS	Asset document item
AFRU	TXW_AFRU	Order confirmation
AFVC	TXW_AFVC	Order operation
ANLE	TXW_ANLE	Asset origin from line items
ANLK	TXW_ANLK	Asset origin from cost element
ANLP	TXW_ANLP	Asset periodic sizes
ANEA	TXW_ANEA	Shared values of attachment document
		Items
VBRK	TXW_BI_HD	Billing document header

Table 18 CDART transaction data (continued)

Original	Segment structure DART	Description
VBRP	TXW_BI_POS	Billing document item
BSET	TXW_BSET	Document segment tax data
KONV	TXW_CONDPR	Pricing conditions (billing documents)
COSP	TXW_CO_COST_TOTALS	Controlling object: total cost
COSS	TXW_CO_COST_TOTOLS	Controlling object: total cost
COBK	TXW_CO_HD	CO document header
COEP	TXW_CO_POS	CO document item
COBK	TXW_CO_SHD	CO document header
		Secondary posting
COEP	TXW_CO_SPOS	CO document item
		Secondary posting
LIKP	TXW_DL_HD	Delivery document header
LIPS	TXW_DL_POS	Delivery document item
EIKP	TXW_EIKP	Export/Import header data
EIPO	TXW_EIPO	Export/Import item data
BKPF	TXW_FI_HD	FI document header
BSIK	TXW_FI_OP	Open item FI
BSIS	TXW_FI_OP	Open item FI
BSID	TXW_FI_OP	Open item FI
BSEG	TXW_FI_POS	FI document item
MKPF	TXW_MM_HD	MM document header
EKKO	TXW_MM_POH	MM order header
EKPO	TXW_MM_POP	MM purchase order item
MSEG	TXW_MM_POS	MM document item
COFIS	TXW_RC_POS	FI/CO settlement item

Table 18 CDART transaction data (continued)

Original	Segment structure DART	Description
VBAK	TXW_SD_HD	Sales document header
VBAP	TXW_SD_POS	Sales document item
VBPA	TXW_SD_PRT	SD Partner
VBKD	TXW_VBKD	Sales document: sales data

Using CDART

ViewPoint for SAP CDART module provides the necessary definitions to archive data.

Creating the CDART Easy Access menu

Follow this procedure to create an SAP Easy Access menu for CDART.

1. From the ViewPoint for SAP CDART module area menu /PBS/DART generate:
   - an activity group (4.6B)
   - a role (4.6C)

   as shown in Figure 52.

Figure 52 **Create a role**

2. Choose the name of the activity group or role from within the ViewPoint namespace. For example:

   /PBS/DART

3. Click **Transfer menus from area menus** to transfer the ViewPoint for SAP CDART module range menu.
4. Indicate the corresponding ViewPoint for SAP menu name. For example:

   /PBS/DART

5. Click **Yes** to the system query for the resolution of the range menu.
6. Integrate the role/activity group into the user master (transaction SU01).

The Easy Access menu displays within the user menu, as shown in Figure 53.

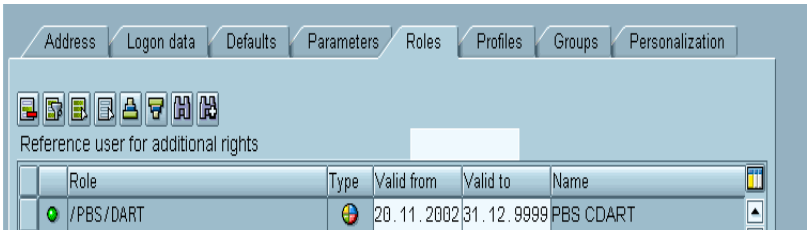


Figure 53 **Role /PBS/DART**

The CDART menu is essentially the same as the SAP DART menu, as shown in Figure 54. The ViewPoint for SAP specific transactions are **Extract data**, **Generate index archive data**, and **Check FI control totals**. All other menu options call the original SAP DART programs.

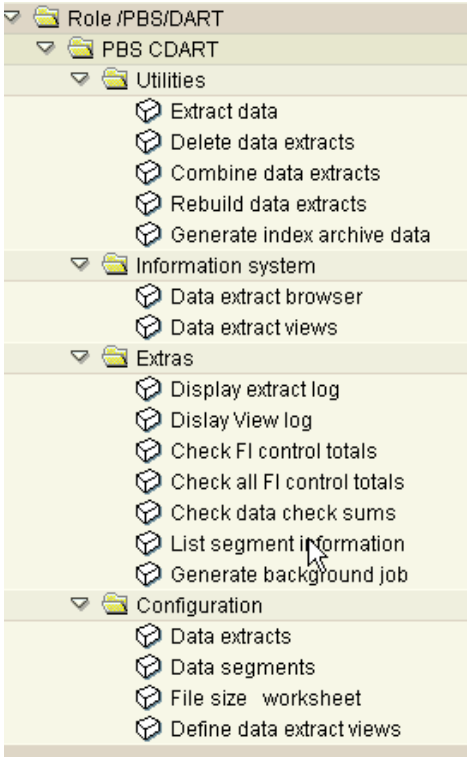


Figure 54 **CDART menu**

Customer-specific fields

The list of extraction fields is user-definable and is updated in the data dictionary. SAP original type extraction fields automatically transfer to the ViewPoint for SAP CDART module. Other fields, such as amounts, are transferred using /PBS/DART_EXIT_SAPLTXW2_001 and /PBS/DART_EXIT_SAPLTXW2_002.

All customer modifications in SAP DART can be transferred to ViewPoint for SAP. Update customer modifications when updating ViewPoint for SAP, if necessary.

Data source

Use the menu option **generate index archive data** > **customizing - data source** to set the archive data imported using the existing ViewPoint for SAP modules or using the CDART archive indices, as shown in Figure 55.

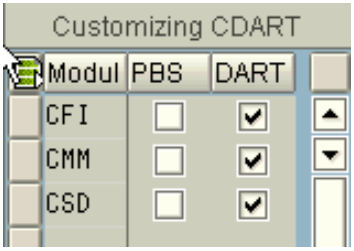


Figure 55 CDART data source selection

Table 19 lists the module indices that can be used with CDART to extract document types.

Table 19 CDART extracted document types

Module	Module name	Type
CFI	Financial accounting documents	FI_DOCUMNT
CFI	Material documents	MM_MATBEL
CSD	Sales documents	SD_VBAK
CSD	Deliveries	RV_LIKP
CSD	Billing documents	SD_VBRK
CMM	Orders	MM_EKKO

Indices must be built directly in the CDART to extract other document types.

Note: Indices for all archiving objects must be built in CDART to extract other document types, such as CO cost totals.

Archiving object /PBS/DART

Indices are stored through the archiving object /PBS/DART. Transaction SARA assigns a logical file name with **Customizing** > **archiving object specific customizing**. ARCHIVE_DATA_FILE is set during the ViewPoint installation, the value for which must be changed so that the path is created in the file system and read/write authorization exists at the operating system level.

Archiving ViewPoint for SAP modules data

An index must be created for each ViewPoint for SAP module used before executing the CDART extraction. This index points to the location of the archive data.

Follow this procedure to generate the module index for CDART.

1. Start the index generation using:

   menu option **Utilities** > **Generate index archive data**, or

   transaction /PBS/DART_SETUP.

   The index generation menu displays, as shown in Figure 56.

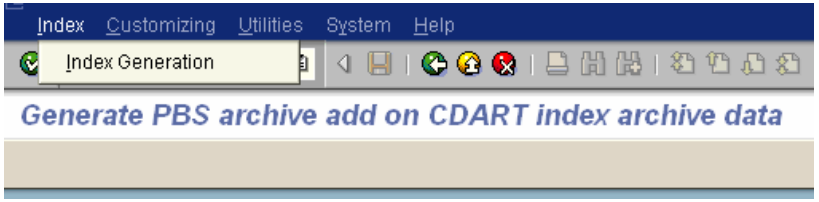


Figure 56 **Index generation menu**

   The indices are stored in the archiving object /PBS/DART.

   Note: The path assigned to the archiving object must be stored in the file system and there must be enough disk space to write the indices to disk, as described in "Archiving object /PBS/DART" on page 93.

   Each indexed SAP ADK file requires an additional 5 percent of disk space more than needed by the physical ADK file.

2. Select menu option **Index** > **Index Generation**.

The Index Construction screen appears, as shown in Figure 57.

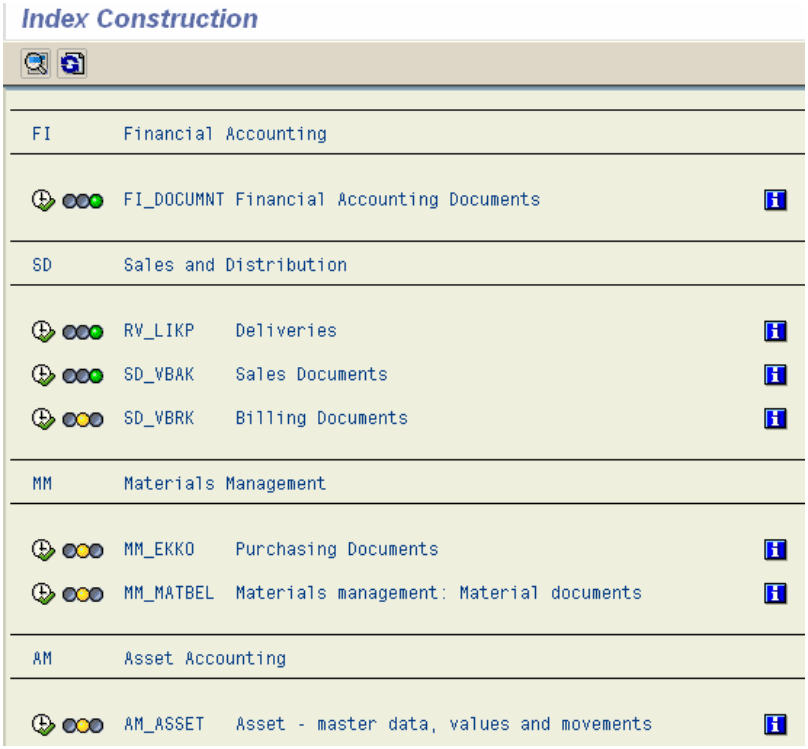


Figure 57 **Index Construction screen**

Table 20 lists the traffic light definitions that help determine whether it is necessary to generate indices for each corresponding archiving object.

Table 20 **Traffic light status definitions**

Color	Definition
Red	The archiving object is not archived.
Yellow	Index generation is incomplete and must be generated for objects.
Green	All existing archive data is indexed.

3. Click on a line with a yellow status.

The index generation screen displays so the missing index generation can be completed resulting in the color definition changing to green.

Note: CDART data extraction should only be carried out when all traffic lights are green or red.

4. Click the **i** function key for additional index information.

   A popup displays the table fields for that archiving object.

5. Use transaction SE16 and enter the table /PBS/DART_INDEX to display all available indices.

Manual entry

Use the menu item **Utilities** > **generate index directly** to manually enter the archiving object.

The manual index construction screen displays, as shown in Figure 58, without the traffic lights to show indices status.

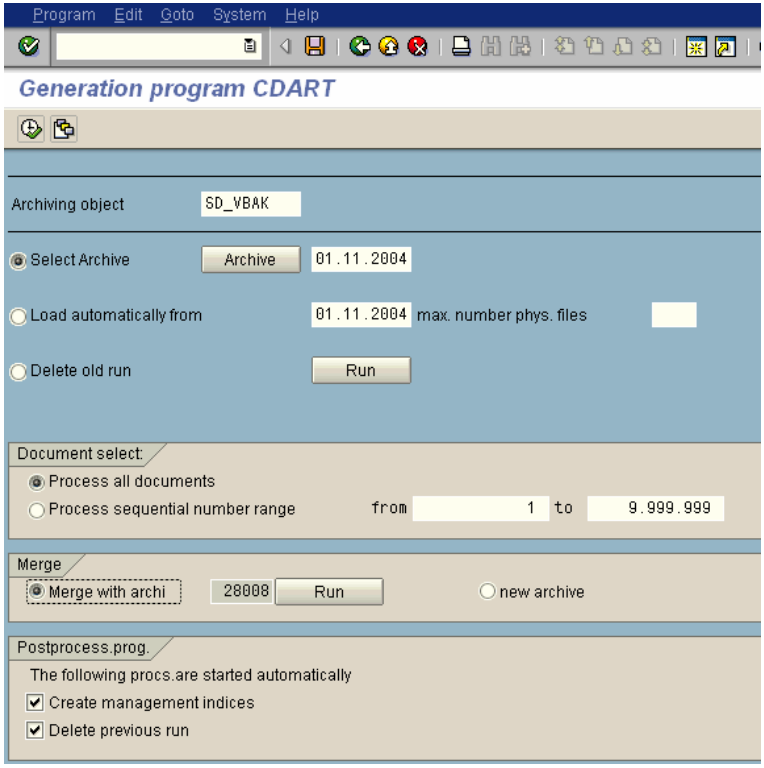


Figure 58 **Manual index construction screen**

Select archive — Allows manual selection of archiving runs created with transaction SARA for SAP archive objects. Click SAP to archive the corresponding SAP archiving runs displayed, which were created from the entered date.

Selecting the requested SAP archiving runs allows the system to check if the run was loaded into the ViewPoint for SAP archive, as shown in Figure 59.

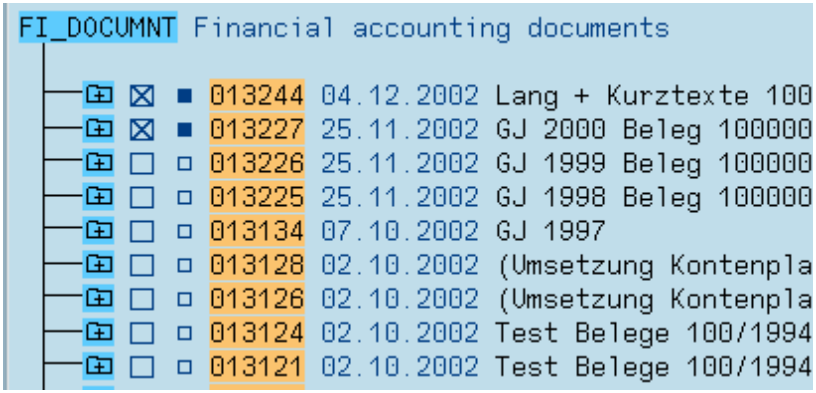


Figure 59 **System messages**

Load automatically from — Processes all documents from the selected date without individually selecting each SAP archive. SAP archives already completed are not indexed to the ViewPoint for SAP archive a second time. This function automates the load runs and can be scheduled as a background job by using a selection variant.

Delete old run — Select **Run** to display a list of previous load runs for selection and deletion, or delete all SAP archiving runs for the selected ViewPoint for SAP module.

Process all documents — Selecting ensures that all documents in the SAP archiving run are indexed.

Process sequential number range — Specify the range of documents to be processed. Executing several runs with a limited number of documents allows for best processing time and job handling.

Note: For SAP release 4.6 and prior, extend the paging area in the system profile for the sorting of indexes if the process run terminates with the error message SYSTEM_NO_MORE_PAGING.
For SAP releases after 4.6, a directory is assigned for sorting with the system parameter DIR_SORTTMP that can be extended in a 32-bit operating system to avoid any sorting problems.
Archives already processed are neither automatically recognized nor is a check carried out if intervals overlap.

Merge — In CDART the index is kept in ADK files, which requires a new ADK number for each run of the index generation program. **New archive** is active for each new index compilation and **Merge with archive** is active, with the previous ADK run number, for the subsequent merge, as shown in Figure 60.

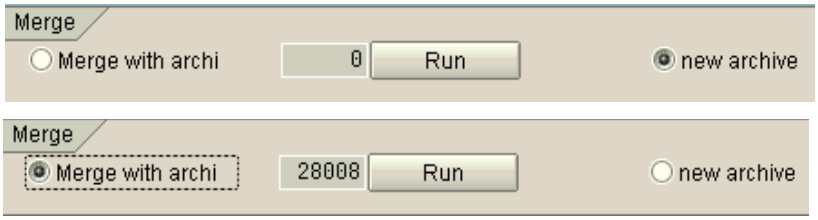


Figure 60 **Above: Before the 1st run; Below: Proposal for merge run**

To reduce runtimes use **new archive** to create a second index stock that is not merged with the first. The CDART reading routines read several index stocks in parallel. For example, start a new index stock once a year.

Postprocessing programs

The index generation program starts two post-processing programs, both of which can be started manually from the **Utilities** menu.

Create management indices — Writes control records into the database needed for generated indices access.

Delete previous run — Deletes ADK files not containing current index sets.

Archive tool

Use **Utilities** > **Archive Tool** to view the index after the index generation run with its post-processing programs completes.

The data is now available for CDART extraction, as shown in Figure 61.

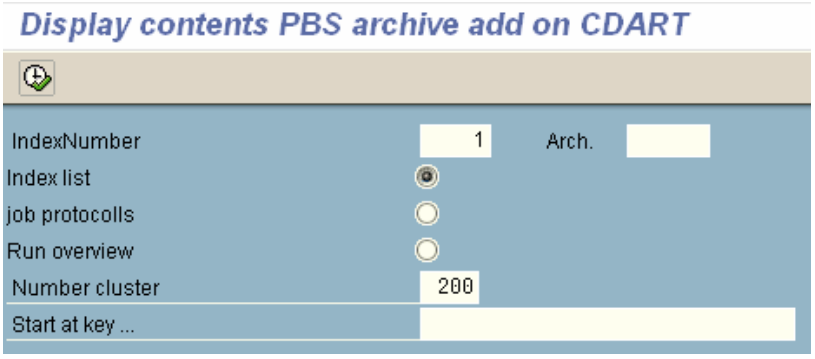


Figure 61 Archive tool selection screen.

Index Number — Choose the index. Press **F4** to get the index number description.

Index list — Choose the desired index from a list.

Job protocols — Displays the job logs.

Start at key — Enter the index key to start from higher index numbers.

Deletion tool

Use **Utilities** > **Delete index** to delete index records, as shown in Figure 62.

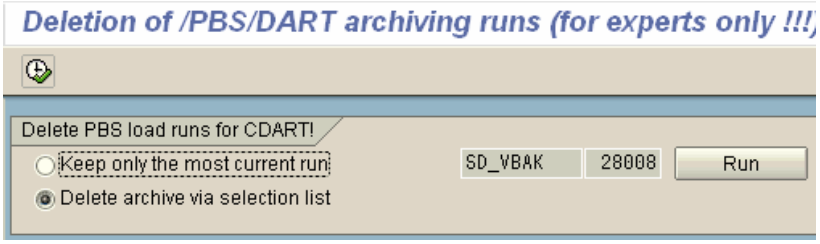


Figure 62 Deletion tool selection screen

Keep only the most current run — Select to delete all runs selected with **Run**. This is automatic if during index generation post-processing **Delete initial run** was activated.

Delete archive via selection list — Select to display an overview of all generated index runs and delete load runs from this list. This is useful when recreating indices.

Note: Index records are physically deleted. Once deleted, generation runs for the archiving object must be repeated.

Extract

Disk space requirement

The extraction program executes only one archive access for each document for performance reasons, temporarily storing additional tables for later processing and deletion. The DART path, used in the extraction program, has to have enough disk space.

Disk space size can be determined using the ViewPoint for SAP **Configuration** > **File size** worksheet. Since disk space for temporary files has to be added during the extraction from the archive, take twice the value defined using the worksheet to provide for the generation of the extract stock. The full capacity is not required, but represents an upper limit.

DART version

The ViewPoint for SAP CDART module version must match the SAP DART version or there might be dictionary objects missing.

Use transaction SE11 to verify the SAP DART version.

Settings

Use **settings for data extracts** to set extract setting such as file name, file size, and document types taken into account during the extract. Document types are displayed for selection in the extract program after settings are selected.

For CDART use **transaction data** > **additional transaction data** > **data reloaded from archives** to set **extract archive data via ViewPoint**.

Create an extract

After all DART definitions are complete, the extracts can be created using **Utilities** > **Extract data**. Select **Extract archive data via ViewPoint** to automatically select the archive data in the index of ViewPoint for SAP module, and transfer it to the extract stock.

Further processing of the extract

Use **Information system** to start the DART extract browser to view and check extracted data, as shown in Figure 63.

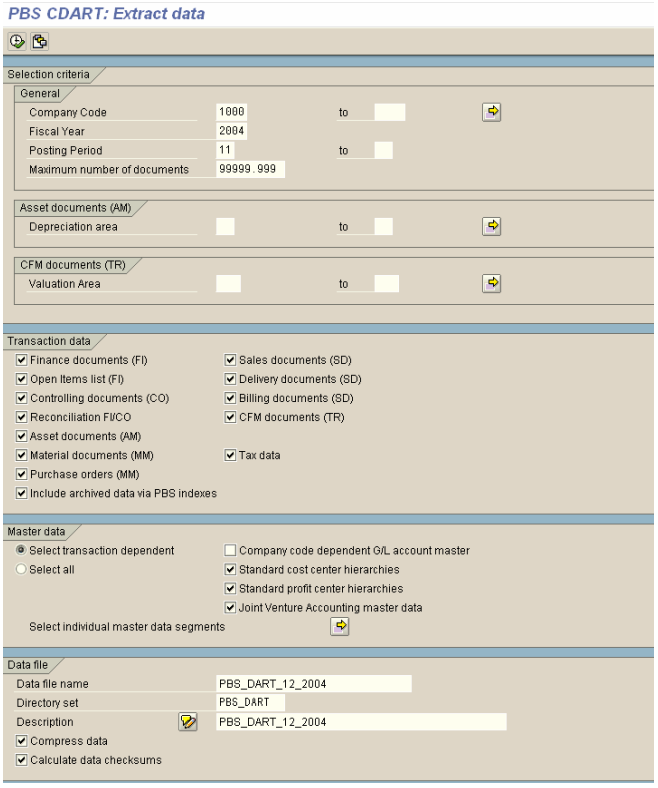


Figure 63 Data extract browser

Export view data from the extracts for auditing using Z3 access.

To evaluate CDART extracts outside the SAP system on a PC, refer to the ViewPoint for SAP IDA module (Independent DART Access), a separate module.

8

Analyzer Plus

This chapter includes these topics:

Overview

Use ViewPoint for SAP Database Analyzer Plus to examine an SAP R/3 system to determine:

- How much disk space is occupied by each module
- Which module requires the most disk space
- How much the SAP R/3 database increases monthly and yearly
- Size of the financial accounting monthly document volume
- Those archiving objects for which archiving is useful
- Average size of a purchasing document
- What table is archived with what archiving object
- What ViewPoint for SAP archiving modules are needed

Database Analyzer Plus consists of three essential functions:

- Analyze the capacity occupied by database tables
- Analyze the distribution of documents for selected SAP modules
- Execute an archiving check for selected SAP modules

Capacity analysis

The capacity analysis executes an analysis of the tables used by the archiving objects and stores the results for evaluation in the database. Optionally, a detailed analysis of CO tables, such as COEP, COSS, and COSP can be done, depending on if archiving was done with or without the archiving object CO_ITEM. If CO_ITEM was used for archiving, a detailed evaluation is not necessary since the corresponding tables are included in this object.

The ViewPoint for SAP module for each archiving object checked can be displayed in the evaluation, revealing which ViewPoint for SAP modules are relevant.

Single tables can be added for analysis during the next capacity run. The results are displayed separately in the analysis and the archiving objects belonging to that table can be displayed.

Document distribution analysis

Document distribution analysis provides information on the temporal distribution of the entered documents defined by any selection and grouping criteria. The client and period are available as grouping criteria with other module-dependent features available,

such as company code and document type in the ViewPoint for SAP FI module.

A distribution analysis assigns documents, according to the time they were entered, by determining the number of existing documents by period. Combined with the archiving check, the distribution analysis also ensures successful archiving for selected SAP modules.

Archiving check

The archiving check determines if documents can be archived. After the document distribution analysis check documents of a certain period, the archiving check examines existing documents for archivability or displays the reason the document is not ready for archive. This analysis is also available for selected SAP modules.

Capacity analysis

Table 21 lists the two ABAP/4 programs used to perform the capacity analysis of archiving objects.

Table 21 Capacity analysis ABAP/4 programs

ABAP/4 program	Description
/PBS/ANA_AUFBAU	Starts the analysis and stores the results in the database table /PBS/ANA_AR_LFN. Within the capacity run the disk space occupancy of the tables allocated to the archiving objects is determined.
/PBS/ANA_KAPAZITAET	Evaluates and displays the results by archiving object.

Initialization

Before starting the first capacity analysis the ViewPoint for SAP Database Analyzer Plus database tables must be reconstructed in the SAP R/3 system by starting the ABAP /PBS/ANA_ERSTAUFBAU by copying the entries of the database table /PBS/ANA_AR_DEF into the table /PBS/ANA_AR_OBJ, and supplementing it with the table names of the SQL database.

ABAP /PBS/ANA_ERSTAUFBAU is also used to delete all existing analyses.

Before starting an analysis for an AS/400 database, refer to "AS/400 database" on page 108.

Capacity analysis

Use this procedure to run the capacity analysis.

1. Start the ABAP /PBS/ANA_AUFBAU.

   Note: Run the ABAP /PBS/ANA_ AUFBAU as a background process checking the progress of the run with the protocol entries of the own jobs.

   Depending on the database system, ABAP /PBS/ANA_AUFBAU starts a corresponding ABAP for the construction of the capacity analysis.

For example, in an ORACLE database system, the ABAP /PBS/ANA_ORACLE starts, as shown in Figure 64.

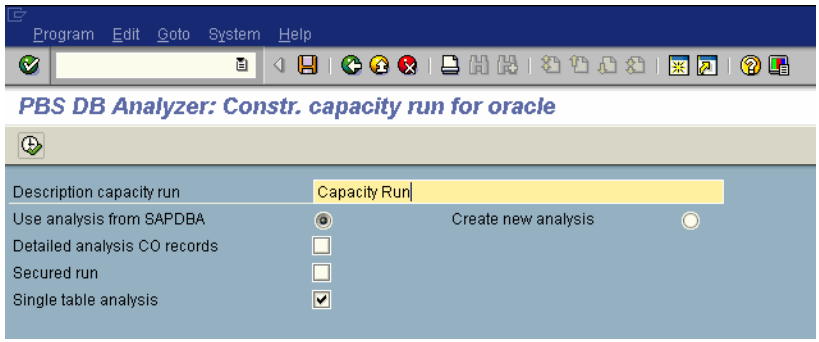


Figure 64 **Selection mask for Oracle capacity construction**

2. Enter information for the following fields.

Description capacity run — Descriptive title for the analysis run.

Use analysis from SAPDBA — Option for Oracle database system. Details can be found in "Oracle database" on page 108.

Create new analysis — Option for Oracle database system. Details can be found in "Oracle database" on page 108.

Detailed analysis of CO records — Carries out an exact analysis of the CO records when allocating CO tables, such as COEP and COSS, to the corresponding archiving objects. Requires a long run time. Not needed with archiving object CO_ITEM. If unselected, the corresponding CO tables are distributed to the archiving objects CO_COSTCTR and CO_ORDER.

Secured run — In a production system, prevents an ABAP from getting into an endless loop when a SELECT-COUNT command to a cluster table (CDCLS) is carried out. The database tables for the document changes (CDHDR and CDPOS) are not split and appear in the evaluation with the size 0. If unselected, after several hours the ABAP will eventually cancel with the error message *SQL error 1555 at access ...*

Single table analysis — Activates the analysis of single tables as described in "Single table analysis" on page 108. The data is stored in the database tables /PBS/ANA_AR_LFN and /PBS/ANA_AR_TXT under a sequential number (run no.) and can be evaluated with the program /PBS/ANA_KAPAZITAET described in "Single table analysis" on page 108).

Oracle database

From SAP release 4.0, choose one of the following:

Use analysis from SAPDBA — The size of the database table is taken from the last analysis run with SAPDBA.

Create analysis again — The size of the database tables is determined again. Tables marked in the system table DBSTATC (trans. DB21) in field Active with "R" or "N" cannot be analyzed. These tables are displayed in the job protocol during the analysis construction. To integrate these tables in the analysis, the value entered in field KAP_MAX is used in table /PBS/ANA_AR_OBJ.

Informix database

In an Informix database, it is not possible to determine the exact tables size as the fill level of the different pages is not known. Two different types of analysis are offered:

Number of lines * line size — Provides nearly exact table size without compression.

Used pages — Indicates the size of pages used of each table on the database server.

AS/400 database

Before starting the analysis in an AS/400 environment with the ABAP /PBS/ANA_AS400 the database table DBSTATTDB4 must be updated with transaction DB02 and the initialization started with "Refresh data" (update data statistic).

Note: An SAP correction order must be imported if the program cancels.

Correction of capacity commitment (SAP 4.0)

Program /PBS/ANA_RARCCOA1 corrects the distribution of CO records, when an analysis is constructed by SAP program RARCCOA1, and stores the result under the next higher run number allowing determination of the description of the run.

Single table analysis

The single table analysis enables you to analyze tables independent from an archiving object when updating table /PBS/ANA_TAB_DEF with transaction SE11.

Enter the name of the table in field TABLENAME, leaving field SQLTAB empty, as shown in Figure 65.

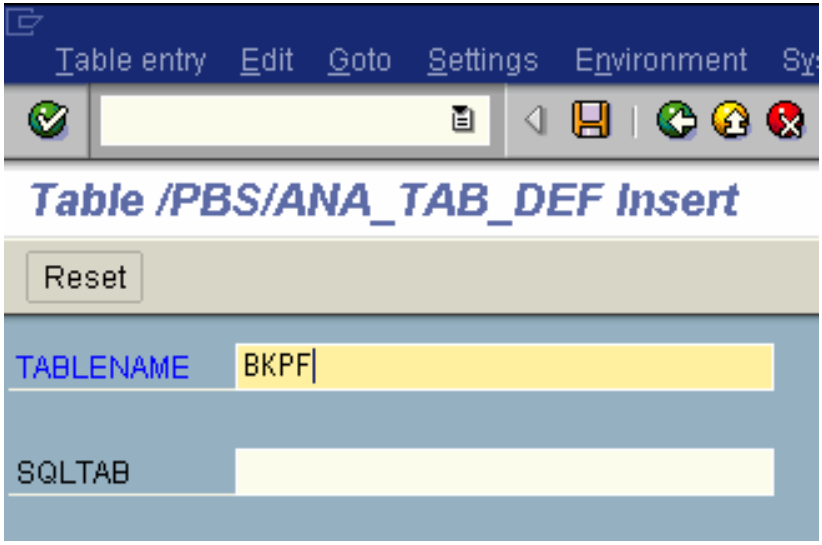


Figure 65 Update of table with transaction SE11

Execute a new initialization with ABAP /PBS/ANA_ERSTAUFBAU. Selecting **...and keep previous analyses** keeps the previous analysis.

During the next capacity run, the implemented tables are also analyzed, as shown in Figure 66.

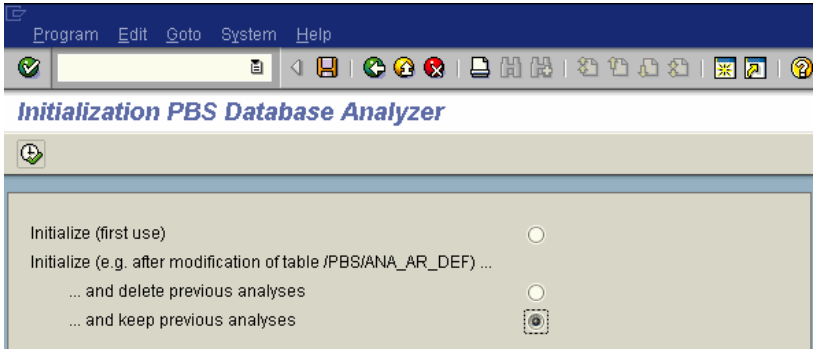


Figure 66 Implementation table analysis

Database analysis evaluation

Evaluate an analysis run with the ABAP /PBS/ANA_KAPAZITAET. The database analysis for archiving object FI_DOCUMNT is shown in Figure 67.

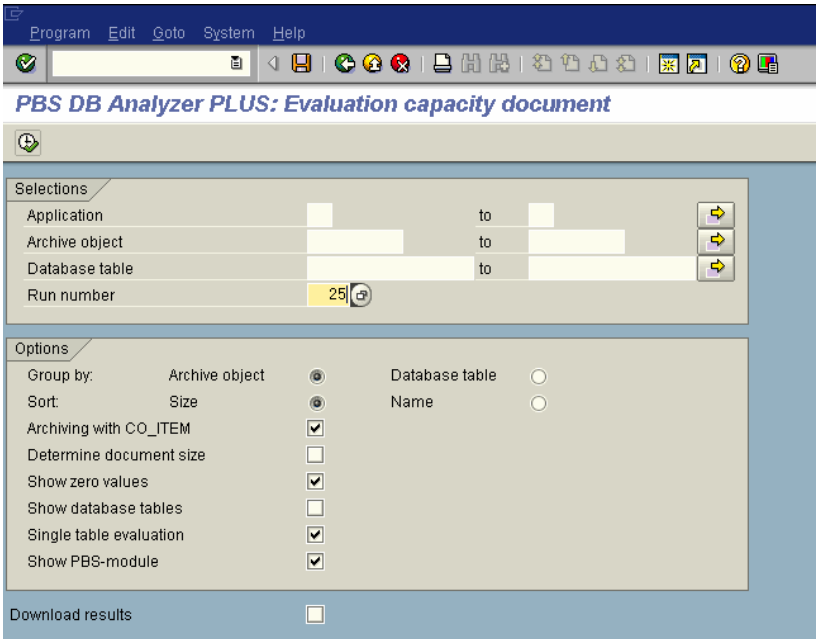


Figure 67 Evaluation screen

Selections

Enter data selection criteria and output layout in the Selections area of the Evaluation screen.

Application — Enter the application name(s), such as SD, FI, MM, PP.

Archiving object — Enter the archiving object name(s), such as MM_EKKO, FI_DOCUMNT, RV_LIKP.

Database table — Enter the database table name(s), such as EKKO, BKPF, VBRK, LIKP.

Run number — Enter the run number.

Options

Enter selections in the Options section of the Evaluation screen.

Group by — Select to create a list grouped by **Archiving object** or **Database table**.

Sort — Select to sort the grouping by **Size** or **Name**.

Archiving with CO_ITEM — Determines if archiving object CO_ITEM is included in the analysis if the capacity analysis was started with the option **Detailed analysis of the CO records** explained on page 107. Left unselected, the CO tables of archiving object CO_ITEM are distributed to the corresponding archiving objects, especially when using the ViewPoint for SAP CCO module.

Determine document size — Determines the average size for certain documents.

Show zero values — Select to display zero values.

Show database tables — Select to display details of database tables.

Single table evaluation — Displays the capacity of single tables.

Show VPT module — Select to display the ViewPoint for SAP module.

Download results — Download the results locally.

The result after the selection of program /PBS/ANA_KAPAZITAET appear, as shown in Figure 68.

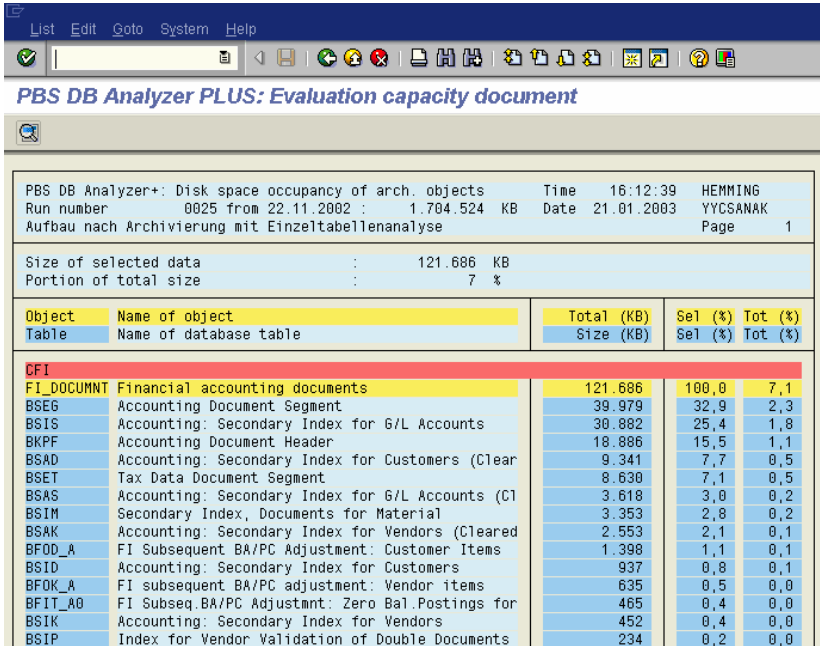


Figure 68 Result of the capacity analysis

Analysis details appear at the top of the screen, as shown in Figure 69.

```
PBS DB Analyzerr: Disk space occupancy of arch. objects
Run number         0002 from 29.03.2000 :     3.097.306  KB
Kapazitaetslauf oh. CO-Details
```

Figure 69 Capacity run details

The disk occupancies values originated from capacity run 0002 from 29.03.2000 created with program /PBS/ANA_AUFBAU with a total capacity of 3,097,306 KB and stored under the description Capacity analysis ID4 with CO details.

The evaluation of the analysis started on 07.04.2000 at 14:57:15 by user DOERRSCHUCK, as shown in Figure 70.

```
 Time     14:57:15   DOERRSCHUCK
 Date   07.04.2000   YYCSANAK
                     Page      1
```

Figure 70 Analysis evaluation

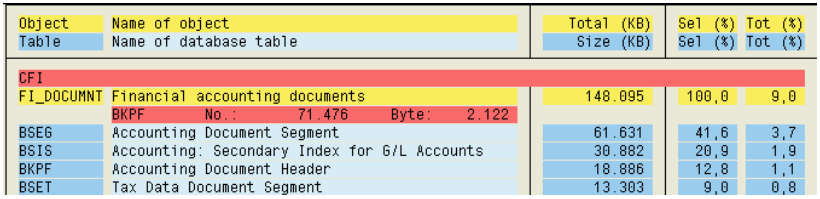
A total of 452,126 KB was selected, which is 15% of the total capacity of 3,097,306 KB of run 0001, as shown in Figure 71.

```
Size of selected data                :       452.126  KB
Portion of total size                :            15  %
```

Figure 71 Evaluation

Archiving object FI_DOCUMNT has a total of 71,476 documents (entries in table BKPF) with a total size of 148,095 KB in the system. The size of a document is 2,122 bytes. The archiving object has a 100% portion in the selection and a 9% portion in the total capacity.

The size of table BSEG is 61,631 KB, which is 41.6% of the selected data and 3.7% of the total capacity, as shown in Figure 72.

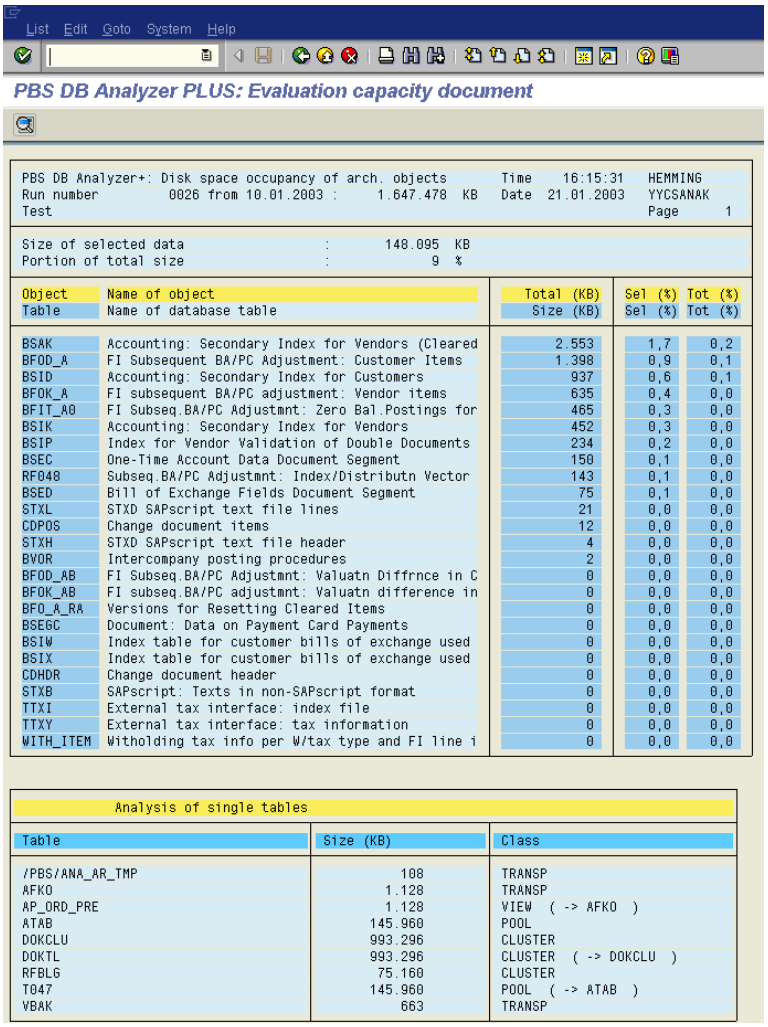


Object / Table	Name of object / Name of database table	Total (KB) / Size (KB)	Sel (%) / Sel (%)	Tot (%) / Tot (%)
CFI				
FI_DOCUMNT	Financial accounting documents	148.095	100,0	9,0
	BKPF No.: 71.476 Byte: 2.122			
BSEG	Accounting Document Segment	61.631	41,6	3,7
BSIS	Accounting: Secondary Index for G/L Accounts	30.882	20,9	1,9
BKPF	Accounting Document Header	18.886	12,8	1,1
BSET	Tax Data Document Segment	13.303	9,0	0,8

Figure 72 **Object archiving**

Note: If the size of a table is displayed in brackets the table could not be assigned to an archiving object. The size of the table for the first archiving object displays. The remaining archiving object values appear in brackets for which the table is available and whose value is not added to the total size of the object.

An overview of analyzed tables displays if **Single table evaluation** was selected, as shown in Figure 73.



List Edit Goto System Help

PBS DB Analyzer PLUS: Evaluation capacity document

PBS DB Analyzer+: Disk space occupancy of arch. objects Time 16:15:31 HEMMING
Run number 0026 from 10.01.2003 : 1.647.478 KB Date 21.01.2003 YYCSANAK
Test Page 1

Size of selected data : 148.095 KB
Portion of total size : 9 %

Object	Name of object	Total (KB)	Sel (%)	Tot (%)
Table	Name of database table	Size (KB)	Sel (%)	Tot (%)
BSAK	Accounting: Secondary Index for Vendors (Cleared	2.553	1,7	0,2
BFOD_A	FI Subsequent BA/PC Adjustment: Customer Items	1.398	0,9	0,1
BSID	Accounting: Secondary Index for Customers	937	0,6	0,1
BFOK_A	FI subsequent BA/PC adjustment: Vendor items	635	0,4	0,0
BFIT_A0	FI Subseq.BA/PC Adjustmnt: Zero Bal.Postings for	465	0,3	0,0
BSIK	Accounting: Secondary Index for Vendors	452	0,3	0,0
BSIP	Index for Vendor Validation of Double Documents	234	0,2	0,0
BSEC	One-Time Account Data Document Segment	150	0,1	0,0
RF048	Subseq.BA/PC Adjustmnt: Index/Distributn Vector	143	0,1	0,0
BSED	Bill of Exchange Fields Document Segment	75	0,1	0,0
STXL	STXD SAPscript text file lines	21	0,0	0,0
CDPOS	Change document items	12	0,0	0,0
STXH	STXD SAPscript text file header	4	0,0	0,0
BVOR	Intercompany posting procedures	2	0,0	0,0
BFOD_AB	FI Subseq.BA/PC Adjustmnt: Valuatn Diffrnce in C	0	0,0	0,0
BFOK_AB	FI subseq.BA/PC adjustmnt: Valuatn difference in	0	0,0	0,0
BFO_A_RA	Versions for Resetting Cleared Items	0	0,0	0,0
BSEGC	Document: Data on Payment Card Payments	0	0,0	0,0
BSIW	Index table for customer bills of exchange used	0	0,0	0,0
BSIX	Index table for customer bills of exchange used	0	0,0	0,0
CDHDR	Change document header	0	0,0	0,0
STXB	SAPscript: Texts in non-SAPscript format	0	0,0	0,0
TTXI	External tax interface: index file	0	0,0	0,0
TTXY	External tax interface: tax information	0	0,0	0,0
WITH_ITEM	Witholding tax info per W/tax type and FI line i	0	0,0	0,0

Analysis of single tables

Table	Size (KB)	Class
/PBS/ANA_AR_TMP	108	TRANSP
AFKO	1.128	TRANSP
AP_ORD_PRE	1.128	VIEW (-> AFKO)
ATAB	145.960	POOL
DOKCLU	993.296	CLUSTER
DOKTL	993.296	CLUSTER (-> DOKCLU)
RFBLG	75.160	CLUSTER
T047	145.960	POOL (-> ATAB)
VBAK	663	TRANSP

Figure 73 Table analysis overview

This alphabetical list displays table class. For example, the table AP_ORD_PRE is a view which is assigned to table AFKO. The sizes of both tables are the same.

Double-click on a table to show the corresponding archiving objects. For example, the entry VBAK shows that the table is assigned to the archiving object SD_VBAK, as shown in Figure 74.

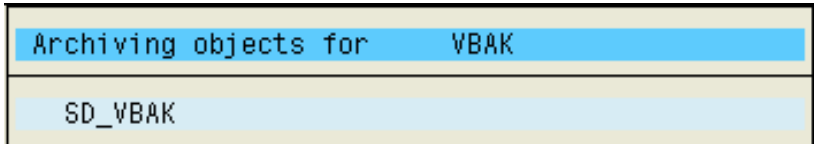


Figure 74 **Table archiving assignation**

The result of a capacity analysis without details is appears, as shown in Figure 75.

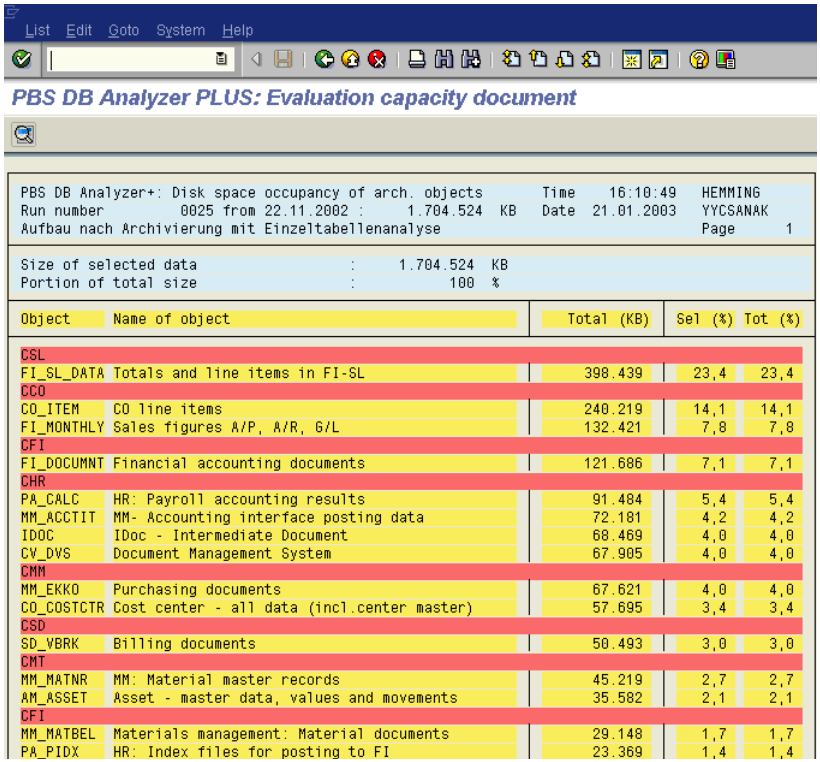


Figure 75 **Capacity analysis without details**

ViewPoint for SAP modules are marked in red with the names of the archiving object for which they can be used displayed in the line below. ViewPoint for SAP modules used with multiple archiving objects display multiple times.

Note: ViewPoint for SAP module names are associated with the object on the line directly below. Objects without a ViewPoint for SAP module displayed directly above are not assigned to any ViewPoint for SAP module.

Comparison analysis

Use the ABAP /PBS/ANA_KAPAZITAET_VGL to compare two analysis runs, such as comparing data increase within a period of time or data decrease after archiving.

"Database analysis evaluation" on page 110 has information about **Selections** fields and **Options** for creating a second analysis for comparison purposes.

The result of a comparison analysis appears, as shown in Figure 76. An increase in capacity means a loss of disk space and is displayed as a negative value highlighted in blue.

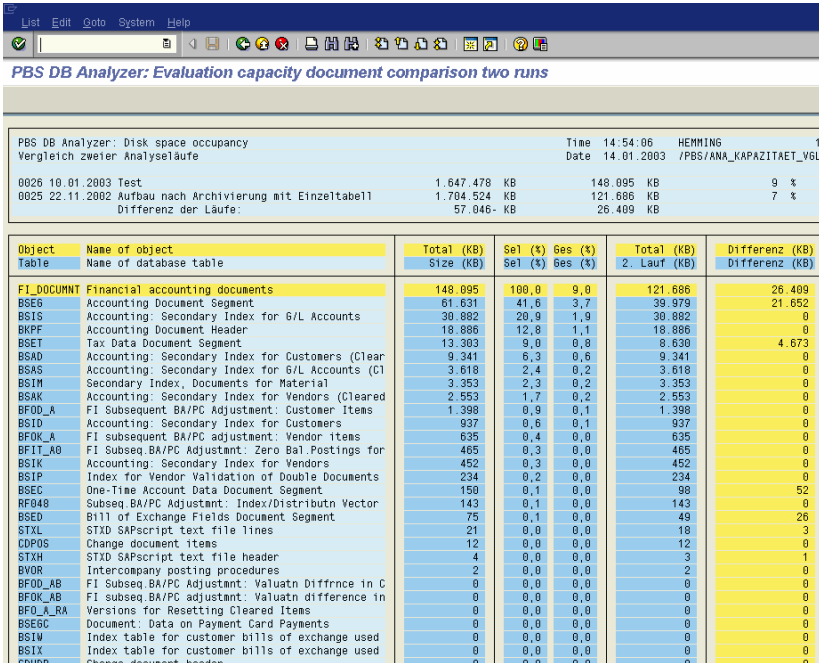


Figure 76 Comparison analysis results

Capacity analysis display

The displayed total capacity is the sum of all archivable tables. An index created on the database level is not analyzed, unless it is a Microsoft SQL database index table. Otherwise, index table size is about 50% of the total capacity.

Movement data and master data not allocated to an archiving object is not included in the capacity analysis.

Document distribution analysis

This section describes how to analyze document distribution using the ABAP/4 program /PBS/ANA_VERTEILUNG.

Initialization

Before starting the first document distribution analysis the ViewPoint for SAP Database Analyzer Plus database tables must be reconstructed in the SAP R/3 system by starting the ABAP /PBS/ANA_ERSTAUFBAU by copying the entries of the database table /PBS/ANA_AR_DEF into the table /PBS/ANA_AR_OBJ, and supplementing it with the table names of the SQL database.

ABAP /PBS/ANA_ERSTAUFBAU is also used to delete all existing analyses.

Database analysis

Use this procedure to run the document distribution analysis.

1. Start the ABAP /PBS/ANA_VERTEILUNG.

   Note: Run the ABAP /PBS/ANA_VERTEILUNG as a background process checking the progress of the run with the protocol entries of the own jobs.

   Depending on the database system, ABAP /PBS/ANA_VERTEILUNG starts a corresponding ABAP for the construction of the capacity analysis.

The document distribution selection screen appears, as shown in Figure 77.

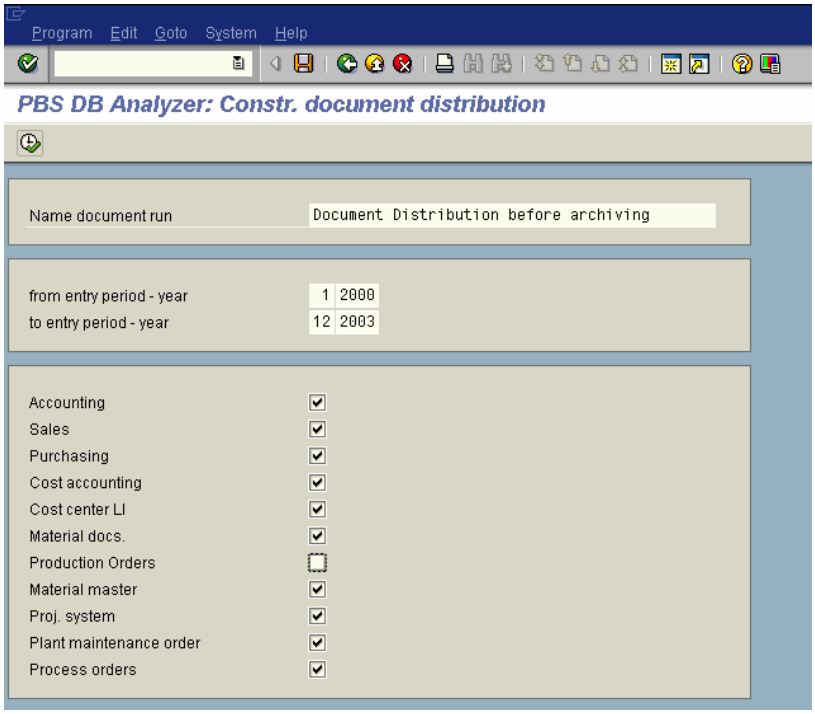


Figure 77 **Document distribution selection screen**

2. Enter information for the following fields.

Name document run — Descriptive title for the analysis run.

From entry period - year — Enter the beginning month and year for analysis.

To entry period - year — Enter the ending month and year for analysis.

Module list area — Select the modules to be included in the analysis run.

The analysis data is stored in database tables /PBS/ANA_BE_LFN and /PBS/ANA_BE_TXT under a sequential run number and can be analyzed as described next in "Analyze document distribution" on page 120.

Analyze document distribution

Table 22 lists the ABAP/4 programs used for the document distribution analysis.

Table 22 ABAP/4 area analysis

Program	Area
/PBS/ANA_BKPF	Document distribution financial accounting – BKPF
/PBS/ANA_VBUK	Document distribution sales – VBUK
/PBS/ANA_EKKO	Document distribution purchasing – EKKO
/PBS/ANA_COBK	Document distribution cost accounting – COBK
/PBS/ANA_COEP	Document distribution COEP
/PBS/ANA_AUFK	Document distribution order
/PBS/ANA_MKPF	Document distribution material document
/PBS/ANA_MARA	Document distribution material record

The following example follows the document distribution analysis for financial accounting with the program /PBS/ANA_BKPF.

Starting /PBS/ANA_BKPF displays the financial accounting selection screen, as shown in Figure 78.

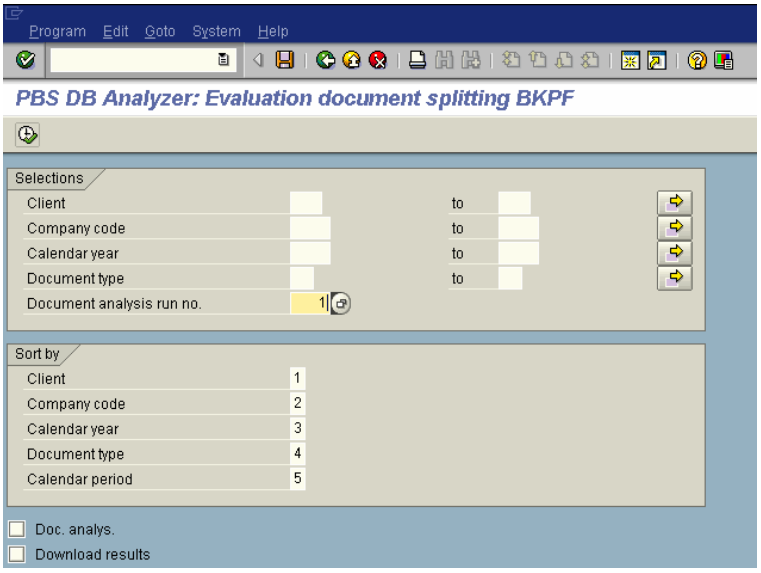


Figure 78 **Financial accounting document distribution selection screen**

Selections

Client — Enter the beginning and ending client number.

Company code — Enter the beginning and ending company code.

Calendar year — Enter the beginning and ending year.

Document type — Enter the beginning and ending document type number.

Document analysis run number — Enter the sequential document analysis run number.

Sort by

Assign a number from 1 to 5 to each sort criteria. To suppress a sort criterion leave that field blank. Ensure entered numbers are sequential and start with 1.

Doc. analys. — Enables later archivability analysis for BKPF, VBUK, EKKO, COBK, and COEP.

Download results — Downloads analysis results locally.

A document distribution for financial accounting documents appears, as shown in Figure 79.

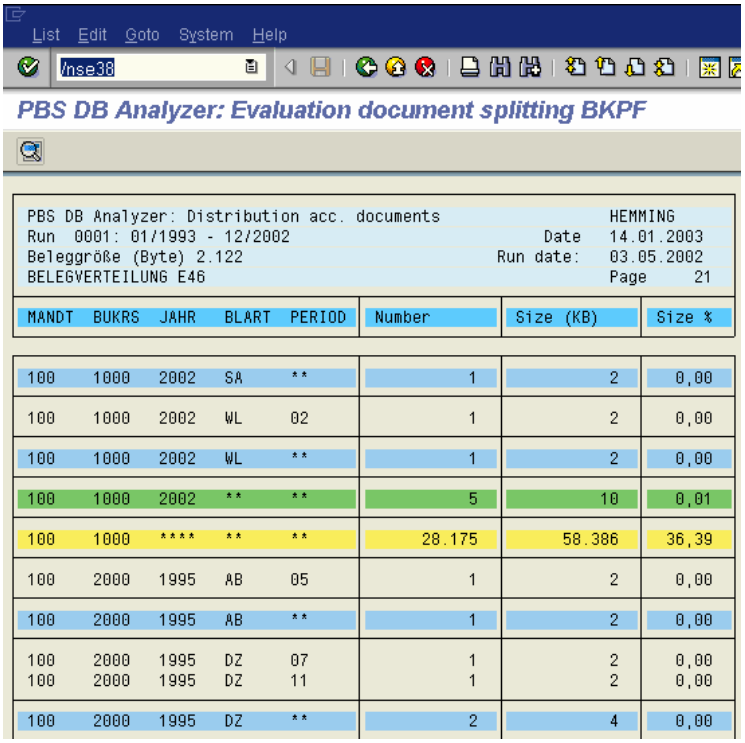


Figure 79 Document distribution financial accounting

Financial accounting document distribution values appear, as shown in Figure 80.

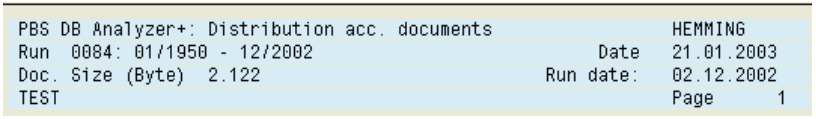


Figure 80 Financial accounting document distribution values

These document distribution values originate from capacity run number 0084 created with program /PBS/ANA_VERTEILUNG, and was constructed from period 01, year 1950 to period 12, year 2002. The average size of a document is 2,122 bytes which originated from the last capacity analysis. The run was stored with description TEST.

Client 100 and company code 1000 contain a total of 2,8175 financial accounting documents, occupying a capacity of 58,386 KB, as shown in Figure 81.

100	1000	2002	WL	**	1	2	0,00
100	1000	2002	**	**	5	10	0,01
100	1000	****	**	**	28.175	58.386	36,39

Figure 81 **Client/company code details**

Branching to the archivability check

It is possible to check the archivability of documents in a certain period from within the distribution analysis by double-clicking the desired line of data if option **Document analysis** was selected, as shown in Figure 82.

100	S300	1999	AB	07	2	4	0,00
100	S300	1999	AB	08	2	4	0,00
100	S300	1999	AB	**	4	8	0,01

Figure 82 **Document analysis**

Only documents belonging to the current client can be analyzed for archivability. The result of the check displays information, as shown in Figure 83.

Detail log <<<Test run>>>

Posti	FisYr	Posting date	Document no.	Log text
S300	1999	27.08.1999	100000002	Document can be archived
S300	1999	27.08.1999	100000003	Document still has open items

Figure 83 **Archive detail log**

For the documents of client 100, company code S300, year 1999, document type AB of period 08, the archivability check shows that one of the associated documents has open items and cannot be archived.

Comments on the document distribution

The distribution of documents according to period and year uses entry date of the corresponding database table, except for the distribution of COEP records. This table does not contain an entry date and uses the fields year and period instead.

Sales documents using /PBS/ANA_VBUK

Table 23 lists the selection criteria for sales document objects.

Table 23 Sales document selection criteria

Selection Criteria	Application
A	Orders
L	Delivery notes
F	Invoices

Cost center line items using /PBS/ANA_COEP

The the first two digits of field COEP-OBJNR are an important criterion for archiving cost center line items with CO_ITEM. Depending on the language used these two digits are substituted with a three-digit abbreviation. This allocation is defined in dictionary table TBO01.

Table 24 lists the two digits definitions.

Table 24 Cost Center Line Items selection criteria

Selection Criteria	Object type
AO	Reconciliation object
BP	Business process
EO	Result object
HP	Cost object
IA, IB, IC, IG, IM, IV	Real estate management
KL	Cost center/activity type
KS	Cost center
NP	Net plan
NV	Network activity
OP	Order item
OR	Order

Table 24 Cost Center Line Items selection criteria (continued)

Selection Criteria	Object type
OV	Operation
PR	PSP element
VB	Sales document item

Archivability check

The archivability check utility checks the archived status for archiving objects FI_DOCUMNT (financial accounting documents), SD_VBAK (orders), RV_LIKP (delivery notes), SD_VBRK (invoices), and MM_EKKO (purchase orders), and provides information about documents not archived.

Checking archivability

The archiving check of archiving objects FI_DOCUMNT, SD_VBAK, SD_VBRK, RV_LIKP, and MM_EKKO provides information about the transaction data in the SAP system and if that data fulfills the criteria for an archiving run after all business-related procedures are complete.

Financial accounting documents

The ABAP /PBS/ANA_ARCHIVE_FI_DOCUMNT provides an overview of all financial accounting documents for the delimited period and displays the reason if a document cannot be archived. Double-click a document for more details of an accounting document, as shown in Figure 84.

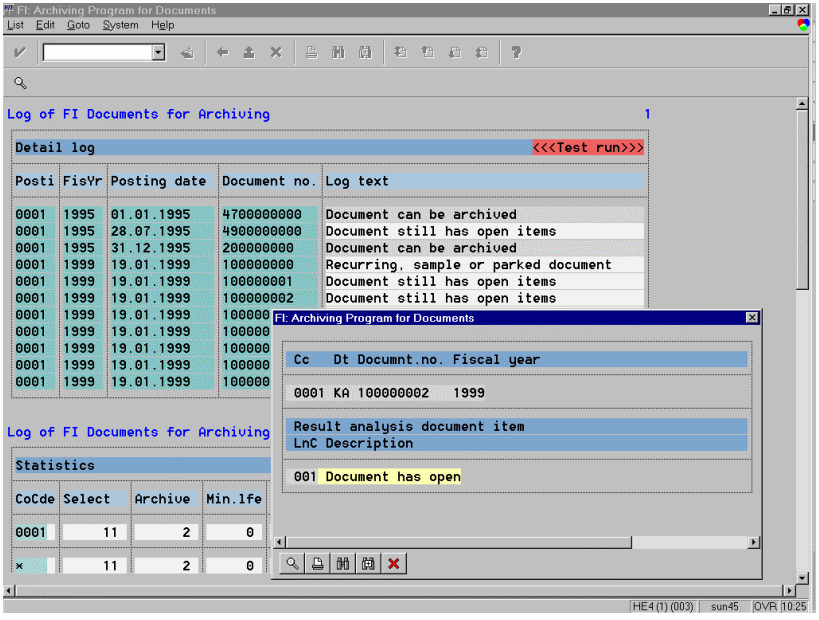


Figure 84 FI document selection results

Sales documents

Sales documents are analyzed and listed according to archiving objects for orders, invoices and delivery notes, displaying results for each document, as shown in Figure 85. Double-click a document for more details for a sales document.

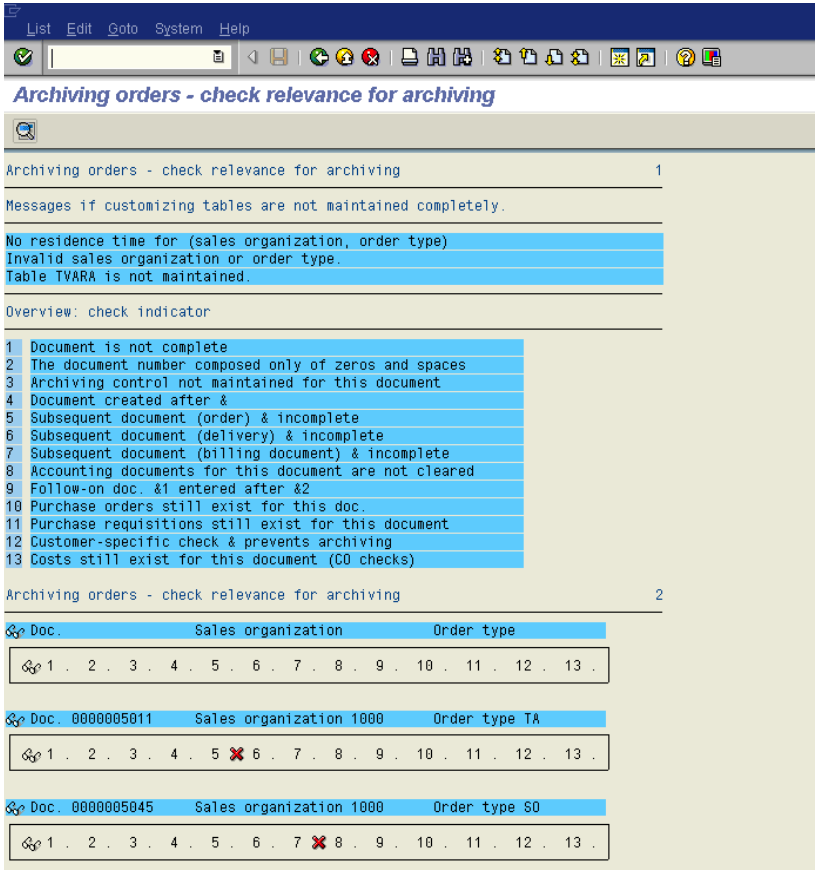


Figure 85 **Sales orders selection results**

The archivability checks carried out match the SAP archiving checks for orders, invoices, delivery notes as follows:

- orders — /PBS/ANA_ARCHIVE_SD_VBAK
- invoices — /PBS/ANA_ARCHIVE_SD_VBRK
- delivery notes — /PBS/ANA_ARCHIVE_RV_LIKP

Purchasing documents

The archivability check for purchase orders matches checks carried out by SAP displaying results for each document, as shown in Figure 86. Double-click a document for additional document details.

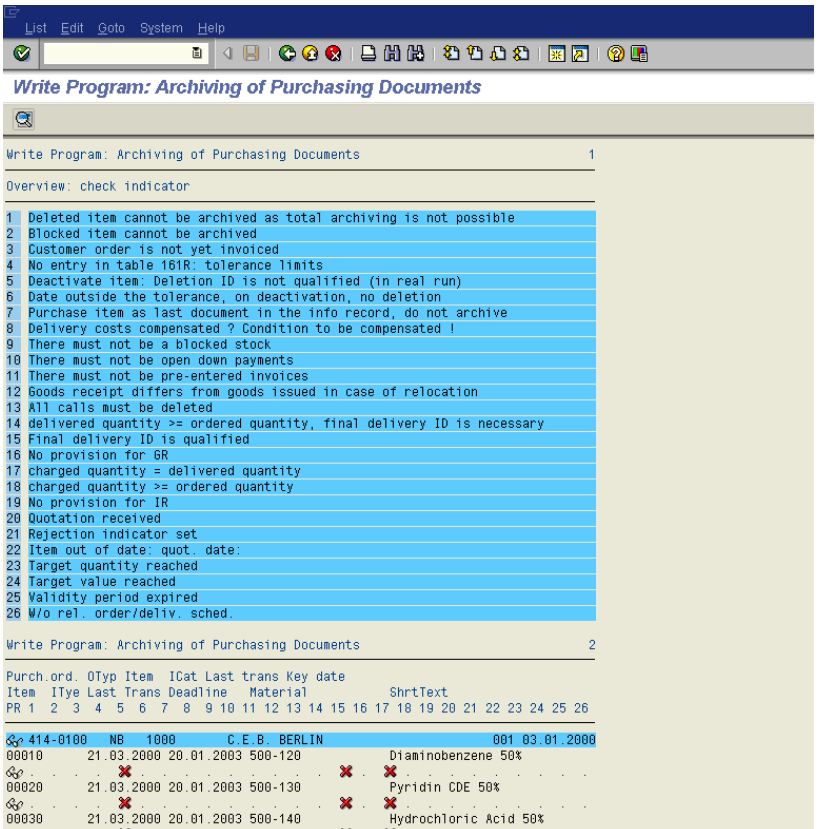


Figure 86 Purchasing document selection results

The ABAP for purchase orders is /PBS/ANA_ARCHIVE_MM_EKKO.

Forecast

ViewPoint for SAP Analyzer Plus analyzes five archiving objects.

For more information contact EMC support.

Capacity analysis examples

The output of all archiving objects belonging to the sales module appears using the following selection criteria, as shown in Figure 87:

- Selection — Application SD
- Formation of Pool — Archiving object
- Sorting — Size
- Options — Details

```
PBS DB ANALYZER: PLATTENPLATZBELEGUNG VON ARCHIVOBJEKTEN Zeit    16:06:26   DOERRSCHUCK
Kapazität Lauf-Nr. 0001 vom 19.02.1998 :     1.086.618  KB    Datum 20.02.1998
Kapazitätsanalyse IDES, vor Archivierung                                 Seite     1

Kapazität der selektierten Daten       :       113.586  KB
Anteil Selektion am Lauf               :            10  %

Objekt     Objektbezeichnung                                  Summe (KB) | Sel (%) Ges (%)
Tabelle    Tabellenname                                       Größe (KB) | Sel (%) Ges (%)
-------------------------------------------------------------------------------------------
SD_VBAK    Verkaufsbelege                                         60.027 |   52,8     5,5
VBAP       Verkaufsbeleg: Positionsdaten                           7.729 |    6,8     0,7
CKIS       Positionen Einzelkalkulation/Einzelnachweis Erz.        6.922 |    6,1     0,6
KEKO       Erzeugniskalkulation - Kopf                             6.762 |    6,0     0,6
VBEP       Verkaufsbeleg: Einteilungsdaten                         4.666 |    4,1     0,4
VBAK       Verkaufsbeleg: Kopfdaten                                4.017 |    3,5     0,4
VBPA       Vertriebsbeleg: Partner                                 3.993 |    3,5     0,4
KONV       Konditionen (Vorgangsdaten)                             3.466 |    3,1     0,3
VBFA       Vertriebsbelegfluß                                      3.211 |    2,8     0,3
CDPOS      Änderungsbelegpositionen                                2.468 |    2,2     0,2
NAST       Nachrichtenstatus                                       2.405 |    2,1     0,2
STXH       STXD SAPscript Text-Datei Header                        1.853 |    1,6     0,2
CKIT       Texte zu CKIS                                           1.812 |    1,6     0,2
CMFP       Speicherstruktur für die gesammelten Fehler             1.512 |    1,3     0,1
VBKD       Verkaufsbeleg: Kaufmännische Daten                      1.509 |    1,3     0,1
VAPMA      Vertriebsindex: Auftragspositionen zu Material          1.368 |    1,2     0,1
VBUK       Vertriebsbeleg: Kopfstatus und Verwaltungsdaten         1.364 |    1,2     0,1
KEPH       Herstellkostenelemente der Erzeugniskalkulation         1.257 |    1,1     0,1
VAKPA      Vertriebsindex: Aufträge zu Partnerrollen               1.167 |    1,0     0,1
VBUP       Vertriebsbeleg: Positionsstatus                         1.022 |    0,9     0,1
CDHDR      Änderungsbelegkopf                                        393 |    0,3     0,0
.
.
.
SD_COND    Konditionssätze der Preisfindung                            7 |    0,0     0,0
KONM       Konditionen (Mengenstaffel 1-dimensional)                   5 |    0,0     0,0
KONW       Konditionen (Wertstaffel 1-dimensional)                     2 |    0,0     0,0
```

Figure 87 Sales module example

The output of all archiving objects appears using the following sort according to size criteria, as shown in Figure 88:

- Formation of Pool — Archiving object
- Sorting — Size

```
PBS DB ANALYZER: PLATTENPLATZBELEGUNG VON ARCHIVOBJEKTEN      Zeit    16:10:23   DOERRSCHUCK
Kapazität Lauf-Nr. 0001 vom 19.02.1998 :     1.086.618  KB    Datum 20.02.1998
Kapazitätsanalyse IDES, vor Archivierung                                Seite     1
Kapazität der selektierten Daten       :     1.086.618  KB
Anteil Selektion am Lauf               :           100  %
Objekt     Objektbezeichnung                                  Summe (KB)  Sel (%) Ges (%)
FI_DOCUMNT Finanzbuchhaltungsbelege                             144.641     13,3    13,3
CO_ORDER   Aufträge mit Bewegungsdaten                          138.780     12,8    12,8
CO_ALLO_ST Vollständig stornierte Belege Umlage, Vert., ...     118.075     10,9    10,9
PCA_OBJECT Summensätze und Einzelposten im EC-PCA                94.101      8,7     8,7
IDOC       Intermediate Document                                 87.755      8,1     8,1
SD_VBAK    Verkaufsbelege                                        60.027      5,5     5,5
CO_COSTCTR Kostenstelle - alle Daten (incl.Stellenstamm)         43.488      4,0     4,0
GLX-OBJEKT Summensätze und Einzelposten im FI-SL                 41.440      3,8     3,8
CV_DRAW    Summensätze und Einzelposten im FI-SL                 39.173      3,6     3,6
FLC_OBJECT Summensätze und Einzelposten im FI-LC                 36.007      3,3     3,3
PM_QMEL    PM-Meldungen                                          31.288      2,9     2,9
SD_VBRK    Fakturen                                              31.074      2,9     2,9
MM_EKKO    Einkaufsbelege                                        30.484      2,8     2,8
FI_ACCOUNT Sachkontenstammdaten                                  29.956      2,8     2,8
RV_LIKP    Lieferungen                                           22.430      2,1     2,1
MM_MATBEL  Materialwirtschaft: Materialbelege                    20.437      1,9     1,9
MM_MATNR   MM: Materialstamm                                     17.588      1,6     1,6
AM_ASSET   Anlage - Stammdaten, Werte und Bewegungen             15.960      1,5     1,5
CATPROARCH CATT - Protokoll/Vorgang                              12.306      1,1     1,1
CO_KSTRG   Kostenträger: Stammdaten und Bewegungsdaten           12.201      1,1     1,1
CO_CCTR_EP Kostenstelle - Einzelposten                           11.042      1,0     1,0
PM_EQUI    Equipmentstammdaten                                   10.931      1,0     1,0
CO_COPC    Archivierung Erzeugniskalkulationsdaten                8.648      0,8     0,8
PP_WKC     Arbeitsplätze                                          5.947      0,5     0,5
MM_EINA    Einkaufsinfosätze                                      5.585      0,5     0,5
FI_ACCRECV Debitorenstammdaten                                    3.102      0,3     0,3
QM_CONTROL Bewegungsdaten der Q-Prüfung                           2.450      0,2     0,2
FI_MONTHLY Verkehrszahlen von Debitor/Kreditor/Sachkonten         2.106      0,2     0,2
CO_BASEOBJ COPC: Bauteil                                          1.814      0,2     0,2
PM_ORDER   PM-Auftrag                                             1.488      0,1     0,1
PS_PROJECT Projektsystem: Operative Strukturen                      871      0,1     0,1
FI_ACCPAYB Kreditorstammdaten                                       828      0,1     0,1
PM_IFLOT   Technischer Platz Stammdaten                             696      0,1     0,1
PP_ORDER   Technischer Platz Stammdaten                             683      0,1     0,1
FI_SCHECK  Vornumerierte Schecks                                    545      0,1     0,1
MM_REBEL   Materialwirtschaft: Rechnungsbelege                      494      0,0     0,0
MM_SPSTOCK MM: Sonderbestände                                       428      0,0     0,0
MM_ASMD    Leistungsstamm                                           405      0,0     0,0
QM_QMEL    Qualitätsmeldung                                         339      0,0     0,0
RL_TA      MM-WM Lagerverwaltung: Transportaufträge                 156      0,0     0,0
MC_SELVS   LIS: Gespeicherte Selektionsversionen                    142      0,0     0,0
QM_CHARACT QM-Stammprüfmerkmale                                     134      0,0     0,0
PR_ORDER   Prozeßauftrag                                            133      0,0     0,0
CO_ML_ML1  Periodensätze des Material Ledger (CKML1)                 84      0,0     0,0
BC_ARCHIVE Archivierung der Archivadministrationsdaten               78      0,0     0,0
EXAMPLE    Beispielobjekt                                            62      0,0     0,0
SD_VBKA    Kontakte                                                  39      0,0     0,0
FILENAME   Beispielobjekt für die Archivierung                       32      0,0     0,0
FI_BANKS   Bankstammdaten                                            29      0,0     0,0
RL_TB      MM-WM Lagerverwaltung: Transportbedarfe                   28      0,0     0,0
PPPI_ARCH  Prozeßauftrag: DB-Archivieren                             18      0,0     0,0
CO_ML_IDX  Indexeinträge Belege zum Material: Material Ledg          17      0,0     0,0
CA_KBLX    Interne RW-Belege (Mittelreserv./Festpreise/...)          13      0,0     0,0
PS_TEXT    Projektsystem: PS-Texte                                   10      0,0     0,0
SD_VTTK    SD Transporte                                             10      0,0     0,0
PI_PLAN    Planungsrezept                                             3      0,0     0,0
PP_PLAN    Arbeitspläne                                               1      0,0     0,0
```

Figure 88 Archiving objects example

The output using the size of the archive table NAST appears with the distribution of the archiving objects, as shown in Figure 89.

- Selection — Archive table: NAST
- Formation of Pos — None
- Sorting — Size
- Options — Zero values, details

```
PBS DB ANALYZER: PLATTENPLATZBELEGUNG VON ARCHIVOBJEKTEN      Zeit    16:11:55   DOERRSCHUCK
Kapazität Lauf-Nr. 0001 vom 19.02.1998 :     1.086.618  KB    Datum 20.02.1998
Kapazitätsanalyse IDES, vor Archivierung                                  Seite     1

Kapazität der selektierten Daten       :         8.841  KB
Anteil Selektion am Lauf               :             1  %

| Tabelle    Object     Bezeichnung                          |    Größe (KB) | Sel (%) Ges (%) |
|-------------------------------------------------------------|---------------|-----------------|
| NAST       SD_VBRK    Nachrichtenstatus                    |         2.433 |    27,5     0,2 |
| NAST       SD_VBAK    Nachrichtenstatus                    |         2.405 |    27,2     0,2 |
| NAST       MM_EKKO    Nachrichtenstatus                    |         2.316 |    26,2     0,2 |
| NAST       RV_LIKP    Nachrichtenstatus                    |         1.683 |    19,0     0,2 |
| NAST       SD_VBKA    Nachrichtenstatus                    |             3 |     0,0     0,0 |
| NAST       SD_VTTK    Nachrichtenstatus                    |             2 |     0,0     0,0 |
```

Figure 89 Archive table example

The determination of the document size for the archiving objects appears from the applications SD, MM, and FI using the following criteria, as shown in Figure 90:

Selection — Application: SD, MM, FI

Formation of Pool — Archiving object

Sorting — Size

Options — Determine document size, zero values

```
------------------------------------------------------------------------------------------------
   ------------------
| PBS DB ANALYZER: PLATTENPLATZBELEGUNG VON ARCHIVOBJEKTEN      Zeit    16:13:49   DOERRSCHUCK  |
| Kapazität Lauf-Nr. 0001 vom 19.02.1998 :     1.086.618  KB   Datum 20.02.1998                 |
| Kapazitätsanalyse IDES, vor Archivierung                                        Seite     1  |
-----------------------------------------------------------------------------------------------
| Kapazität der selektierten Daten       :        402.483  KB                                  |
| Anteil Selektion am Lauf               :             37  %                                   |
-----------------------------------------------------------------------------------------------
| Objekt     Objektbezeichnung                                   |    Summe (KB) | Sel (%) Ges (%) |
-----------------------------------------------------------------------------------------------
| FI_DOCUMNT Finanzbuchhaltungsbelege                            |       144.641 |   35,9    13,3  |
|            BKPF        Anz.:        90.074      Byte:     1.644 |               |                 |
| SD_VBAK    Verkaufsbelege                                      |        60.027 |   14,9     5,5  |
|            VBAK        Anz.:        10.041      Byte:     6.122 |               |                 |
| FLC_OBJECT Summensätze und Einzelposten im FI-LC               |        36.007 |    8,9     3,3  |
| SD_VBRK    Fakturen                                            |        31.074 |    7,7     2,9  |
|            VBRK        Anz.:        10.155      Byte:     3.133 |               |                 |
| MM_EKKO    Einkaufsbelege                                      |        30.484 |    7,6     2,8  |
|            EKKO        Anz.:         9.669      Byte:     3.228 |               |                 |
| FI_ACCOUNT Sachkontenstammdaten                                |        29.956 |    7,4     2,8  |
|            SKA1        Anz.:        47.149      Byte:       651 |               |                 |
| RV_LIKP    Lieferungen                                         |        22.430 |    5,6     2,1  |
|            LIKP        Anz.:         7.024      Byte:     3.270 |               |                 |
| MM_MATBEL  Materialwirtschaft: Materialbelege                  |        20.437 |    5,1     1,9  |
| MM_MATNR   MM: Materialstamm                                   |        17.588 |    4,4     1,6  |
|            MARA        Anz.:         2.810      Byte:     6.409 |               |                 |
| MM_EINA    Einkaufsinfosätze                                   |         5.585 |    1,4     0,5  |
|            EINA        Anz.:         2.217      Byte:     2.579 |               |                 |
.
.
.
| SD_VBKA    Kontakte                                            |            39 |    0,0     0,0  |
|            VBKA        Anz.:            12      Byte:     3.287 |               |                 |
| FI_BANKS   Bankstammdaten                                      |            29 |    0,0     0,0  |
| RL_TB      MM-WM Lagerverwaltung: Transportbedarfe             |            28 |    0,0     0,0  |
| SD_VTTK    SD Transporte                                       |            10 |    0,0     0,0  |
|            VTTK        Anz.:             8      Byte:     1.243 |               |                 |
| SD_COND    Konditionssätze der Preisfindung                    |             7 |    0,0     0,0  |
|            KONH        Anz.:        13.726      Byte:         1 |               |                 |
| RL_LINV    MM-WM Lagerverwaltung: Inventurzählsätze Histori    |             6 |    0,0     0,0  |
| MM_INVBEL  Materialwirtschaft: Inventurbelege                  |             4 |    0,0     0,0  |
| FM_BELEG   Obligo/Ist Einzelposten - Finanzbudgetmanagement    |             0 |    0,0     0,0  |
| FM_BEL_CA  Obligo/Ist Einzelposten - Finanzmittelrechnung      |             0 |    0,0     0,0  |
| RL_LINKP   MM-WM Lagerverwaltung: Inventuraufnahmebelege       |             0 |    0,0     0,0  |
| RL_LUBU    MM-WM Lagerverwaltung: Umbuchungsanweisungen        |             0 |    0,0     0,0  |
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Figure 90 Document size example

Document distribution analysis examples

An overview of the number of posted documents for each period appears using company code client 800, as shown in Figure 91.

Selection — Client 800, entry year 1995

Formation of Pool — 1. Client, 2. Company code, 3. Posting period

PBS DB ANALYZER: VERTEILUNG BUCHHALTUNGSBELEGE DOERRSCHUCK
Lauf 0001: 01/1990 - 12/1998 Datum 23.02.1998 /PBS/ANA_BKPF
Beleggröße (Byte) 1.644
BELEGVERTEILUNG IDES Seite 1

MANDT	BUKRS	PERIOD	Anzahl	Größe (KB)	Größe %
800	0001	06	1	2	0,02
800	**0001**	**	**1**	**2**	**0,02**
800	1000	01	162	260	3,84
800	1000	02	106	170	2,51
800	1000	03	47	75	1,11
800	1000	04	50	80	1,18
800	1000	05	557	894	13,20
800	1000	06	776	1.246	18,39
800	1000	07	351	564	8,32
800	1000	08	181	291	4,29
800	1000	09	206	331	4,88
800	1000	10	137	220	3,25
800	1000	11	119	191	2,82
800	1000	12	246	395	5,83
800	**1000**	**	**2.938**	**4.717**	**69,62**
800	2000	01	3	5	0,07
800	2000	02	2	3	0,05
.					
.					
800	3000	10	99	159	2,35
800	3000	11	231	371	5,47
800	3000	12	61	98	1,45
800	**3000**	**	**841**	**1.350**	**19,93**
800	4000	05	1	2	0,02
800	4000	10	68	109	1,61
800	4000	11	39	63	0,92
800	**4000**	**	**108**	**173**	**2,56**
800	4200	05	1	2	0,02
800	**4200**	**	**1**	**2**	**0,02**
800	US01	11	128	206	3,03
800	**US01**	**	**128**	**206**	**3,03**
800	********	**	**4.220**	**6.775**	**100,00**
*******	********	**	**4.220**	**6.775**	**100,00**

Figure 91 Posted documents example

Document volume periods from 1995 to 1996 appears with corresponding company codes for all clients, as shown in Figure 92.

Selection — Entry year 1995 - 1996

Formation of Pool — 1. Posting year, 2. Posting period, 3. Company code

PBS DB ANALYZER: VERTEILUNG BUCHHALTUNGSBELEGE DOERRSCHUCK
Lauf 0001: 01/1990 - 12/1998 Datum 23.02.1998 /PBS/ANA_BKPF
Beleggröße (Byte) 1.644
BELEGVERTEILUNG IDES Seite 1

JAHR	PERIOD	BUKRS	Anzahl	Größe (KB)	Größe %
1995	01	1000	324	520	0,51
1995	01	2000	6	10	0,01
1995	01	3000	722	1.159	1,13
1995	**01**	********	**1.052**	**1.689**	**1,64**
1995	02	1000	212	340	0,33
1995	02	2000	4	6	0,01
1995	02	3000	42	67	0,07
1995	**02**	********	**258**	**414**	**0,40**
1995	03	1000	94	151	0,15
1995	03	3000	36	58	0,06
1995	**03**	********	**130**	**209**	**0,20**
1995	04	1000	100	161	0,16
1995	04	2000	2	3	0,00
1995	04	3000	22	35	0,03
1995	**04**	********	**124**	**199**	**0,19**
1995	05	1000	1.114	1.788	1,74
1995	05	2000	288	462	0,45
1995	05	3000	56	90	0,09
1995	05	4000	2	3	0,00
1995	05	4200	2	3	0,00
1995	**05**	********	**1.462**	**2.347**	**2,28**
1996	10	3000	152	244	0,24
1996	**10**	********	**3.902**	**6.265**	**6,09**
1996	11	1000	3.744	6.011	5,85
1996	11	2000	274	440	0,43
1996	11	3000	294	472	0,46
1996	**11**	********	**4.312**	**6.923**	**6,73**
1996	12	1000	3.240	5.202	5,06
1996	12	2000	272	437	0,42
1996	12	3000	170	273	0,27
1996	12	4000	4	6	0,01
1996	**12**	********	**3.686**	**5.918**	**5,76**
1996	******	********	**55.535**	**89.160**	**86,72**
********	******	********	**64.043**	**102.819**	**100,00**

Figure 92 Document volume example

The number of posted documents by document type and year for client 800 appears, as shown in Figure 93.

Selection — Client 800

Formation of Pool — 1. Document type, 2. Posting year

PBS DB ANALYZER: VERTEILUNG BUCHHALTUNGSBELEGE DOERRSCHUCK
Lauf 0001: 01/1990 - 12/1998 Datum 23.02.1998 /PBS/ANA_BKPF
Beleggröße (Byte) 1.644
BELEGVERTEILUNG IDES Seite 1

BLART	JAHR	Anzahl	Größe (KB)	Größe %
AA	1994	130	209	0,29
AA	1995	166	267	0,37
AA	1996	24	39	0,05
AA	1997	182	292	0,40
AA	****	**502**	**806**	**1,12**
AB	1994	13	21	0,03
AB	1995	267	429	0,59
AB	1996	108	173	0,24
AB	1997	25	40	0,06
AB	****	**413**	**663**	**0,92**
AF	1994	339	544	0,75
AF	1995	722	1.159	1,60
AF	1996	1.363	2.188	3,03
AF	1997	172	276	0,38
AF	****	**2.596**	**4.168**	**5,77**
AN	1994	1	2	0,00
AN	1995	1	2	0,00
AN	****	**2**	**3**	**0,00**
DA	1995	1	2	0,00
DA	1996	2	3	0,00
DA	****	**3**	**5**	**0,01**
DG	1996	2	3	0,00
DG	****	**2**	**3**	**0,00**
DR	1994	6.093	9.782	13,54
DR	1995	298	478	0,66
KA	1995	51	82	0,11
.				
.				
.				
WL	1997	221	355	0,49
WL	****	**3.354**	**5.385**	**7,46**
ZP	1994	21	34	0,05
ZP	1995	96	154	0,21
ZP	1996	117	188	0,26
ZP	1997	74	119	0,16
ZP	****	**308**	**494**	**0,68**
**	****	**44.987**	**72.225**	**100,00**

Figure 93 Posted documents by type example

The document volume of company codes in different clients appears, as shown in Figure 94.

Selection — Entry year 1995 - 1996

Formation of Pool — 1. Posting year, 2. Posting period, 3. Company code

PBS DB ANALYZER: VERTEILUNG BUCHHALTUNGSBELEGE DOERRSCHUCK
Lauf 0001: 01/1990 - 12/1998 Datum 23.02.1998 /PBS/ANA_BKPF
Beleggröße (Byte) 1.644
BELEGVERTEILUNG IDES Seite 1

MANDT	BUKRS	Anzahl	Größe (KB)	Größe %
100	0001	1	2	0,00
100	1000	32.231	51.746	35,78
100	2000	2.597	4.169	2,88
100	2100	32	51	0,04
100	2200	4	6	0,00
100	3000	9.648	15.490	10,71
100	4000	229	368	0,25
100	4200	1	2	0,00
100	6000	48	77	0,05
100	US01	200	321	0,22
100	****	**44.991**	**72.232**	**49,95**
800	0001	1	2	0,00
800	1000	32.227	51.739	35,78
800	2000	2.597	4.169	2,88
800	2100	32	51	0,04
800	2200	4	6	0,00
800	3000	9.648	15.490	10,71
800	4000	229	368	0,25
800	4200	1	2	0,00
800	6000	48	77	0,05
800	US01	200	321	0,22
800	****	**44.987**	**72.225**	**49,95**
810	1000	24	39	0,03
810	****	**24**	**39**	**0,03**
811	2100	71	114	0,08
811	****	**71**	**114**	**0,08**
***	****	**90.073**	**144.609**	**100,00**

Figure 94 Document volume by type example