EMC ViewPoint for SAP
Contract Account Documents Module
Version 2.0

USER MANUAL

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EMC ViewPoint for SAP CFICA Module User Manual

Preface

As part of an effort to improve and enhance the performance and capabilities of its product line, EMC from time to time releases revisions of its hardware and software. Therefore, some functions described in this manual may not be supported by all revisions 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 manual, please contact your EMC representative.

ViewPoint Functionality
This document describes how to use the various components that make up EMC ViewPoint for SAP Contract Account Documents (CFICA) Module. EMC's technology allows you to effectively manage your application data by providing the ability to define the access, retention, and service level requirements for any business transaction at each point in its lifecycle.

Audience
This guide is part of the ViewPoint documentation set, and is intended for use by anyone using the ViewPoint for SAP CFICA Module. It is assumed that the installer has a working knowledge of SAP Basis, and has the appropriate levels of responsibilities to perform the tasks described.

Related Documentation

Be sure to review the *EMC ViewPoint for SAP Release Notes* for the most up-to-date information on product features.

The following list of related documents are available on the *EMC ViewPoint for SAP Documentation CD* that was delivered with your EMC ViewPoint SAP software CD.

Both the release notes and documentation CD can be found at:

    http://Powerlink.EMC.com

Introductory

- *EMC ViewPoint for SAP Documentation CD*

- *EMC ViewPoint for SAP Release Notes*

Installation

- *EMC ViewPoint for SAP Modules Installation Manual*

- *EMC ViewPoint for SAP Analyzer Plus Installation and User Manual*

- *EMC ViewPoint for SAP BW Analyzer Installation Manual*

- *EMC ViewPoint for SAP Construction and Maintenance Installation Manual*

- *EMC ViewPoint for SAP Fiscal Year Reporter Module Installation and User Manual*

Miscellaneous

- *EMC ViewPoint for SAP Material Master Data, Batches, Special Stocks, and BOMs Module Modification Manual*

Administrative

- *EMC ViewPoint for SAP Controlling Line Items Module Administration Manual*

- *EMC ViewPoint for SAP Financial Accounting and Material Documents Module Administration Manual*

- *EMC ViewPoint for SAP Purchasing Module Administration Manual*

- *EMC ViewPoint for SAP Sales and Distribution Module Administration Manual*

- *EMC ViewPoint for SAP Production Orders Module Administration Manual*

- *EMC ViewPoint for SAP Agency Business Module Administration Manual*

- *EMC ViewPoint for SAP Construction and Maintenance Module Administration Manual*

- *EMC ViewPoint for SAP Costing-Based Profitability Analysis Module Administration Manual*

- *EMC ViewPoint for SAP Master Data Changes Module Administration Manual*

- *EMC ViewPoint for SAP Data Retention Tool Module Administration Manual*

- *EMC ViewPoint for SAP Contract Account Documents Module Administration Manual*

- *EMC ViewPoint for SAP HR Archiving Objects Module Administration Manual*

- *EMC ViewPoint for SAP Material Ledger Documents Module Administration Manual*

- *EMC ViewPoint for SAP Material Master Data, Batches, Special Stocks, and BOMs Module Administration Manual*

- *EMC ViewPoint for SAP Controlling Orders Module Administration Manual*

- *EMC ViewPoint for SAP Profit Center Line Items Module Administration Manual*

- *EMC ViewPoint for SAP Plant Maintenance Module Administration Manual*

- *EMC ViewPoint for SAP Production Orders Module Administration Manual*

- *EMC ViewPoint for SAP Process Orders Module Administration Manual*

- *EMC ViewPoint for SAP Project Systems Module Administration Manual*

- *EMC ViewPoint for SAP Line Items Module Administration Manual*

- *EMC ViewPoint for SAP Special Ledger Module Administration Manual*

- *EMC ViewPoint for SAP Warehouse Management Module Administration Manual*

- *EMC ViewPoint for SAP Custom Module Administration Manual*

User
- *EMC ViewPoint for SAP Analyzer Plus Installation and User Manual*

- *EMC ViewPoint for SAP Analyzer Lite Installation and User Manual*

- *EMC ViewPoint for SAP Analyzer BW User Manual*
- *EMC ViewPoint for SAP Controlling Line Items Module User Manual*
- *EMC ViewPoint for SAP Financial Accounting and Material Documents Module User Manual*
- *EMC ViewPoint for SAP Purchasing Module User Manual*
- *EMC ViewPoint for SAP Sales and Distribution Module User Manual*
- *EMC ViewPoint for SAP Production Orders Module User Manual*
- *EMC ViewPoint for SAP Modules Utilities User Manual*
- *EMC ViewPoint for SAP Agency Business Module User Manual*
- *EMC ViewPoint for SAP Construction and Maintenance Module User Manual*
- *EMC ViewPoint for SAP Costing-Based Profitability Analysis Module User Manual*
- *EMC ViewPoint for SAP Master Data Changes Module User Manual*
- *EMC ViewPoint for SAP Contract Account Documents Module User Manual*
- *EMC ViewPoint for SAP HR Archiving Objects Module User Manual*
- *EMC ViewPoint for SAP Material Ledger Documents Module User Manual*
- *EMC ViewPoint for SAP Material Master Data, Batches, Special Stocks, and BOMs Module User Manual*
- *EMC ViewPoint for SAP Controlling Orders Module User Manual*
- *EMC ViewPoint for SAP Profit Center Line Items Module User Manual*
- *EMC ViewPoint for SAP Plant Maintenance Module User Manual*
- *EMC ViewPoint for SAP Production Orders Module User Manual*
- *EMC ViewPoint for SAP Process Orders Module User Manual*
- *EMC ViewPoint for SAP Project Systems Module User Manual*
- *EMC ViewPoint for SAP Special Ledger Module User Manual*
- *EMC ViewPoint for SAP Export Interface for Special Ledger Data User Manual*
- *EMC ViewPoint for SAP Warehouse Management Module User Manual*

◆ *EMC ViewPoint for SAP Fiscal Year Reporter Module Installation and User Manual*

Conventions Used in This Guide

EMC uses the following conventions for notes, cautions, warnings, and danger 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.

⚡ **WARNING**

A warning contains information essential to avoid a hazard that can cause severe personal injury, death, or substantial property damage if you ignore the warning.

⚡ **DANGER**

A danger notice contains information essential to avoid a hazard that will cause severe personal injury, death, or substantial property damage if you ignore the message.

Typographical Conventions

EMC uses the following type style conventions in this guide:

bold	• User actions (what the user clicks, presses, or selects)
	• Interface elements (button names, dialog box names)
	• Names of keys, commands, programs, scripts, applications, utilities, processes, notifications, system calls, services, applications, and utilities in text
italic	• Book titles
	• New terms in text
	• Emphasis in text
Courier	• Prompts
	• System output
	• Filenames
	• Pathnames
	• URLs
	• Syntax when shown in command line or other examples

Courier, bold	• User entry • Options in command-line syntax
Courier italic	• Arguments in examples of command-line syntax • Variables in examples of screen or file output • Variables in pathnames
<>	Angle brackets for parameter values (variables) supplied by user.
[]	Square brackets for optional values.
|	Vertical bar symbol for alternate selections. The bar means or.
...	Ellipsis for 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 WebSupport on Powerlink. To open a case on EMC WebSupport, you must be a WebSupport customer. Information about your site configuration and the circumstances under which the problem occurred is required.

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

Using the ViewPoint for SAP CFICA Module

This chapter includes these topics:

Introduction

The ViewPoint modules are constructed in modular form and cover the application modules FI, SD, MM, CO, etc. with a special program package for exactly this application. You can easily see from the name which ViewPoint module belongs to which SAP module: FI, SD, MM, CO, etc. All ViewPoint modules have in common that they can be easily installed in the SAP R/3 system via the SAP transport utilities "tp" and "SAINT". Installation details of the ViewPoint modules are in the *EMC ViewPoint for SAP Modules Installation Manual*.

This administration manual was written to make construction and administration of the ViewPoint CFICA Module as easy as possible. At first, data archiving with transaction SARA is discussed; the second topic is the ViewPoint index construction from the SAP archive files.

The *EMC ViewPoint for SAP Modules Utilities User Manual* contains additional module information.

Navigation in the ViewPoint CFICA Module

From the Easy Access Menu it is easy to navigate through the functions of the ViewPoint CFICA Module via the pushbutton 'User Menu'. To be able to do this, your system administrator must have added the ViewPoint menu to your user master as an activity group or role.

The menu /PBS/CFICA, as shown in Figure 1-1, "Navigation via the SAP Easy Access menu," comprises both the transactions for displaying contract account documents as well as the administration transactions for the ViewPoint indices of CFICA.

Figure 1-1   Navigation via the SAP Easy Access menu
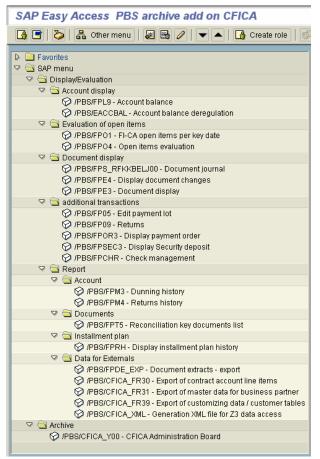
Display transactions

The transactions described in Table 1-1, "Display Transactions," which read both documents from the operational tables of the SAP system as well as documents from the ViewPoint archive, are available with Final Release 1. Generally, these functions can also be called via the ViewPoint navigation help described in Figure 1-1, "Navigation via the SAP Easy Access menu."

Table 1-1   Display Transactions

ViewPoint transaction	SAP transaction	Description
/PBS/FPE3	FPE3	Display document
/PBS/FPE4	FPE4	Display document changes
/PBS/FPL9	FPL9	Display account balance
/PBS/FPT5	FPT5	Display documents for reconciliation key
/PBS/FPO1	FPO1	FI-CA key-date based open item list
/PBS/FPO4	FPO4	Open item evaluation
/PBS/FPS_RFKKBELJ00	FPS_RFKKBELJ00	Document journal
/PBS/FPDE_EXP	FPDE_EXP	Document extracts - Export
/PBS/FP05	FP05	Process payment lot
/PBS/FP09	FP09	Returns
/PBS/FPRH	FPRH	Display installment plan histories
/PBS/FPOR3	FPOR3	Display payment order
/PBS/FPSEC3	FPSEC3	Display security deposit
/PBS/FPM3	FPM3	Display dunning history
/PBS/FPM4	FPM4	Display returns history
/PBS/ FPCHR	FPCHR	Check repository

Note: The ViewPoint transaction names are created from the corresponding SAP names and prefixed by the ViewPoint namespace "/PBS/". For example, SAP FPE3 becomes /PBS/FPE3.

Basically, the functionality of the transactions corresponds to the SAP standard transactions, as long as a comparable transaction exists. The detailed description of the transactions can be found in the SAP documentation. Variations to the standard and additional transactions are described in the following chapters.

In the transactions /PBS/FPE3 and /PBS/FPE4, the document that is being searched for is automatically read via the ViewPoint indices from the archive if it is no longer to be found in the database. For the remaining ViewPoint display transactions for which a document list is generated, the "ViewPoint archive parameter" (1,2,3 parameter) can be found on the selection screen. This parameter can be used to define whether the selection should only be performed from the database (2), only from the archive (3), or from both.

For the ViewPoint transactions, navigation between the transactions is also possible for archived documents, which is exactly the same for the database documents in the SAP transactions. This means that it is possible to branch from the list display to the display of the archived document, or within the document display to the document changes, as shown in Figure 1-2, "Navigation to document changes for archived document."

Figure 1-2   Navigation to document changes for archived document

Open item list

Basic information on transaction /PBS/FPO4

In transaction /PBS/FPO4, it is possible to delimit the selection in a number of ways via the business partner, the contract account, and the contract number. The options that are available here correspond to those of the SAP transaction FPO4. In addition to performing this delimitation directly, it is also possible to specify a preselection. Here in the ViewPoint transaction, the preselections or the predefined selections that were created using standard SAP means can be selected, as shown in Figure 1-3, "Selection screen "Open Item List"."

PBS: Open Item List

Maintain Predefined Selection | Maintain Layout

Selections | Output Control

Key Date
Key Date   01.01.2004

Master Data Selection
Predefined Selection   AUSWAHL_01   Detail
Business partner   1000000041   to   1000000100
Contract Account   to
Contract   to

Selection of Open Items
Predefined Selection   FORDERUNG   Detail
☐ Exclude Items from Selection
Company code   to
Business area   to
G/L Account   to
Only Dunned Items
Dunning level   to
Dunning procedure   to

Item Categories
☐ Inst. plan has prio.

Figure 1-3   Selection screen "Open Item List"

Index selection

With this transaction it is necessary to define manually before the start of the selection via which ViewPoint index the archive should be read, as shown in Figure 1-4, "Selection of the ViewPoint index."

Figure 1-4   Selection of the ViewPoint index

In the case of a large selection range such as a high number of business partners, it is recommended to use the index via the clearing data. Here, the ViewPoint indices are read sequentially from the relevant clearing date, which has the effect that the access time is relatively independent of the size of the selection.

However, if a relatively small number of, for example, business partners were selected, this results in a disproportionately high response time for an access using the clearing date index.

For this reason, the respective index for the ViewPoint access should be selected in cases where the selection is tightly restricted to just a few business partners or contract accounts receivable and payable.

Display of the ViewPoint archiving indicator

In order to display the ViewPoint archiving indicators (archive indicator) in the output list of transaction /PBS/FPO4, it is necessary to first carry out a small modification, as shown in Figure 1-5, "Open item list of the transaction /PBS/FPO4 with archive indicator."

FI-CA: Key Date-Based Open Item List

FI-CA: Open item list at key date 30.03.2004
Created on 26.07.2005 at 08:07:09 by user RITSCHER

BPartner	Doc. No.	Rep	Itm	Sub	Loc.curr.amount	Curr.	A
1000057177	2000006111	004	0001	000	3,64	EUR	
1000057177	3700101153	000	0002	000	21,00-	EUR	*
1000057177	3700101153	000	0001	000	18,64-	EUR	*
1000057177	3700101153	000	0003	000	21,00-	EUR	*
1000057177	3700101153	000	0004	000	17,36-	EUR	*
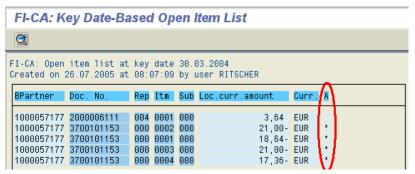
Figure 1-5   Open item list of the transaction /PBS/FPO4 with archive indicator

For this, the program "/PBS/CFICA_MOD_ARKZ" must be started. This program performs a small modification that is necessary in order to see the archiving indicator in the open item list.

This modification in the SAP coding affects the function module "FKK_SELP_OP_LINE_GET_DEF" and can be reversed at any time, as shown in Figure 1-6, "Initial screen of the program "/PBS/CFICA_MOD_ARKZ"."

PBS CFICA enhancement list layouts with PBS archive asterisk

PBS archive asterisk in field selection for open item list
○ Activate field
● Deactivate field

☑ Test run

/PBS/CFICA_MOD_ARKZ   sun04   INS

Figure 1-6   Initial screen of the program "/PBS/CFICA_MOD_ARKZ"

By executing the program, the functionality is either activated or deactivated, depending on the current status.

After you have performed this step, the ViewPoint archiving indicator can be inserted into the list layout. This is done by choosing "Output control" -> "List layout" -> "Details". In the following screen that is displayed, the field "ARKZ" can be inserted into the respective list layout, as shown in Figure 1-7, "Maintenance of the list layout for /PBS/FPO4."
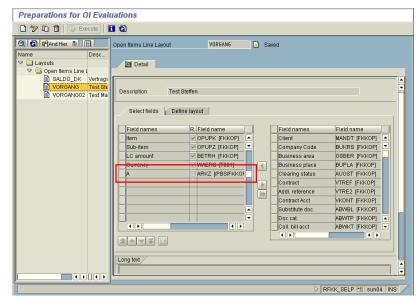
Figure 1-7   Maintenance of the list layout for /PBS/FPO4

No further steps are necessary in order to display the archive indicator in the output list of transaction /PBS/FPO1. Here, the ViewPoint archiving indicator is displayed as standard.

Transaction /PBS/FPO1

This transaction also involves a key-date based evaluation of open items.

To retrieve documents from the archive in this case (entry for the field "Data source": '1' or '3'), a selection must definitely be made for the business partner, as shown in Figure 1-8, "Initial screen of the transaction /PBS/FPO1."

Figure 1-8   Initial screen of the transaction /PBS/FPO1

Account balance /PBS/FPL9

The transaction /PBS/FPL9 for displaying the account balance principally works in the same way as the SAP standard transaction FPL9. The only difference is the selection option for the data source in the initial screen, as shown in Figure 1-9, "Selection screen /PBS/FPL9."

Figure 1-9   Selection screen /PBS/FPL9

To display the ViewPoint archiving indicator (archive indicator) in the output list, the layout structure line with "Line item display w. ViewPoint arch. ind." can be selected, as shown in Figure 1-10, "Archive indicator in the account balance display."

Figure 1-10   Archive indicator in the account balance display

To display the archive indicator in any layout structure variant, the field XARCH must be added to the fields of the variant.

To do this, you can get to the corresponding maintenance dialog by choosing **Settings** > **Display/Change** > **Layout structure** from within the list display, or directly by using transaction FQKPM.

There, you can maintain the layout structure concerned by double-clicking on "Field of a variant" and adding the field XARCH, as shown in Figure 1-11, "Fields of the layout structure for the account balance display."

Figure 1-11   Fields of the layout structure for the account balance display

Data for external users

Document extraction

The SAP standard provides the report "RFKK_DOC_EXTR_EXP" for the extraction of contract account documents. This report was adapted and enhanced to include the option to select the data source. In this way, archived documents from the FI-MKKDOC archive can be extracted using the ViewPoint indices, as shown in Figure 1-12, "Initial screen for data extraction."

Figure 1-12   Initial screen for data extraction

The report can be started via the transaction /PBS/FPDE_EXP. The functionality and handling corresponds to that of the SAP program. This means among other things, that the currently valid field catalog that was defined for the standard extractor is extracted.

General information on the variable export of transaction data

Tax regulations make it necessary for SAP data to be made available on external data carriers to the respective fiscal authorities. This requirement does not just exist in Germany (extension of the GDPdU, regulations regarding data access and how digital documents can be checked), but also in the North American region. Once the extract has

been created from the SAP system, the data is analyzed and evaluated using PC analysis programs (for example, IDEA developed by Audicon, or ACL developed by ACL Services). In addition to the document extraction option, as described in "Document extraction" on page 1-14, these requirements concerning accounting data with the ViewPoint CFICA Module can also be fulfilled via a very targeted extraction of document data. Using the tool that is described in "Variable ViewPoint line item statement" on page 1-17, the required document data can be selected from database and archive in an extremely focused manner (for example, by business partner/contract account).

Concept

The program "/PBS/CFICA_LIS_ITEM" is used as the basis for doing this. It selects the data both from the databases of the SAP system as well as from the archive using the ViewPoint indices and puts it directly into a sequential file in the Unix/Windows NT environment. It is possible to define which fields should be exported via the ABAP List Viewer (SAP-ALV). The file that is generated can be processed further after its transfer into the PC environment using a PC analysis program. The popular SAP standard AIS (Audit Information System) format was chosen as the data format, as shown in Figure 1-13, "Concept for exporting data."
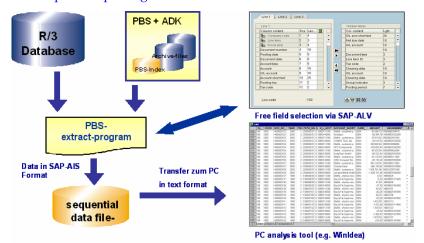
Figure 1-13   Concept for exporting data

Data format

The SAP AIS format has the structure listed in Table 1-2, "SAP AIS format."

Table 1-2   SAP AIS format

Line type	Number	Characteristic
Header line	1	Field name
	2	Description
	3	Field description
	4	Data type (C,N,P,I,D,T,F) C = Text, N = Numerical text with leading zeros, P = Packed (Number of digits = Field length x 2 - 1) This is the SAP internal type. In the data records, the format [-]Digits[,l.Digits] is used. For example, Type P Length 7 Decimal places results in -12345678901.23, I = Complete number, D = Date with format DD.MM.YYYY, T = Time with format HH:MM:SS, F = Floating point number.
	5	Field length
	6	Number of decimal places
	7	Currently or quantity indicator (F,W,M,E) A quantity unit field always follows a currency value field. A quantity unit field always follows a quantity field. F = Currency amount, W = Currency unit, M = Quantity, E = Quantity unit
	8	Special field types (R,C,P,M) R = Rank (Statistic), C = Counter (Statistic), P = Percentage (Statistic), M = Mean (Statistic)
Data row	9 ff.	Data records

Generally, the field separator is a TAB (Hexcode x'09').

The interface format is agreed upon by SAP AG with the following providers of auditing software for external and internal audits:

- A C L Services Ltd., Vancouver BC, Canada http://www.acl.com/en/default.asp

- AUDICON GmbH, 70565 Stuttgart http://www.audicon.net/

- (I D E A) http://www.caseware.com/home.asp

Security

When the export takes place, data leaves the SAP area. The SAP authorization concept is no longer effective in the file system of the:

- target computer (c:\...)
- application server (d:\usr\sap\...)

Protect the data from unauthorized accesses.

Variable ViewPoint line item statement

Description of the selection interface

Generally, the selection screen of the export programs that are made available by the reporting pool comprises three parts.

Selections to influence the scope of the selection
Here it is possible to restrict the document items that are to be selected. In the first block, it is necessary to perform a selection regarding the business partners or the contract account and/or the posting date. In the block "Further Selections" it is possible to restrict the selection further.

Selection of the list layout
A list layout contains all fields that are to be displayed from the selected data quantity. The list can be defined via the SAP ALV (ABAP List Viewer) within the export program and saved under a separate name. Several list variants are possible, so that different requirements can be met. In the ViewPoint standard, only one list definition is shipped.

Information about the general functionality of the SAP ALV can be found in the standard documentation, as shown in Figure 1-14, "ViewPoint standard list."
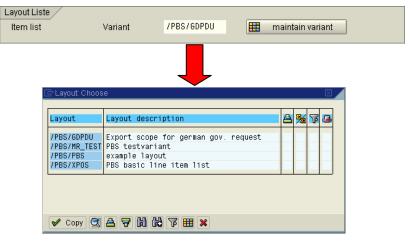
Figure 1-14   ViewPoint standard list

To create a list for the export program, the report must be executed online using the option 'Display/Print', as shown in Figure 1-14, "ViewPoint standard list." When doing this, the data stock to be selected should be kept as small as possible. The content of the list can then be defined via the menu option **Settings** > **Layout** > **Change**. The list variant can then be saved via **Settings** > **Layout** > **Save**. If the list is created in a test system and should then be copied to a productive environment, the layout can be copied into a transport order by choosing **Settings** > **Layout** > **Manage layouts** > **Layout** > **Transport**.

Note: Generally the width of a list is limited by the number of bytes or the number of columns. This means that usually not all fields can be selected when defining a list layout. For this reason it is absolutely necessary to perform a field selection.

Output option
In this selection screen you can generally decide whether the selected data stock should be displayed in ALV list form or whether it should be transferred into the specified export directory. If a large selection volume is anticipated, processing as a background job should be chosen.

During the data export, as shown in Figure 1-15, "Output options,"it is checked whether:

a) the specified directory exists.

b) the specified directory can be written to.

c) the specified file name already exists. If this is the case, the end user can decide whether the existing file should be replaced or whether to specify a new file name.

Output option	
Display/Print	●
Export to file (SAP-Audit)	○
Create BW extract	○
Export option	
filename	
Directory	/pbs/cfica_z3/

Figure 1-15   Output options

At the end of each export process an export statistic is displayed.

Size of the export file   The size of an export file depends on how many items are selected and how wide the selection list is. This information is obtained when displaying/changing a layout. Generally, the disk space can be determined as follows:

(Number of items x Line width of layout) + 2000 bytes SAP AIS header record

Program-internally, the file size is restricted to 600 MB to enable the transfer of the data to a CD. If the data volume to be selected is greater, follow-on files with the name extension Vxxxx (xxxx = sequential number) are created.

Tips for exporting data   **Definition of ALV layouts**
In the export program, the export structure contains the fields of several database tables: DFKKKO - Document header, DFKKOP - Business partner items and DFKKOPK - Items of the general ledger. This results in some fields being offered several times when defining the list layout because they are included in each individual database structure. However, in order to be able to differentiate between them, the technical field names of the document item tables have been enhanced to include a field extension indicator. These are: "_p" for fields from DFKKOP and "_k" for fields from table DFKKOPK. It is

possible to switch between the field names and the technical field description to the internal description using the right mouse button and by selecting the option 'Technical field names'.

One-line lists for export to PC
Multi-line lists can be created in the layout definition. If a list variant is to be used for the export of data, only single-line lists are allowed.

Default value file path
A default value can be created in the user master for the file path via the parameter ID '/PBS/CFICA_LIS_PATH'.

Termination of data export with message 'Variant was not found'
The specified layout, in which the fields to be extracted was defined, does not exist or it was forgotten to save this when creating the layout.

PC analysis program termination when importing SAP data with message 'SAP/AIS file is invalid'
During the transfer of the export file from the Unix/Windows NT environment to the PC environment, the transfer was inadvertently performed in ASCII mode instead of in BINARY mode, or ASCII conversion was not performed under AS400.

Termination during online processing with message 'MOVE_TO_LIT_NOTALLOWED_NODATA'
A field variant is used that either consists of more than 1020 bytes or more than 90 columns. Such variants are only permitted for the export of data and cannot be used in online processing.

Export of customizing data and customer tables

This functionality enables the extraction of any chosen SAP and customer specific tables as well as database views from the SAP system.

The data is stored in SAP AIS (Audit Information System) format and can be directly processed further in PC-based analysis programs (such as Microsoft Excel, Audicon IDEA or ACL), as shown in Figure 1-16, "Initial screen of data extraction customizing data."

Figure 1-16   Initial screen of data extraction customizing data

In addition to being able to export individual tables, a table pool that can complement the extract stocks for transaction and master data was created for financial, asset and inventory accounting. The export of a table pool should be performed as a background job. The file name is assigned automatically and consists of the table name, the date, and the time of the export. During export of a table pool, language-dependent entries are only done in the logon language. An export of the customizing tables from sales, cost accounting and

purchasing is only possible if the respective ViewPoint Modules are installed.

Particularity when exporting an individual table

If the data of an individual table is to be exported, the selection options can be freely configured via the button 'Fields for selection'. The maximum number of selection options is limited to 120. If more than 120 selection options are specified, they will be ignored during generation of the export program. In addition, it is possible to select data for this table from existing SAP archive files. To do this, you have to select an archiving object for the specified table using the value help. As the data can only be processed sequentially here, you should count on a corresponding runtime. Processing should be performed as a background job for this reason.

The function 'Store Individual Table Export for Reuse' can be used to copy the dynamically generated program into a fixed program. However, a prerequisite for this is that the user has a valid developer's license for creating ABAP/4 programs. During creation, it must be ensured that the include programs are copied at the same time from the dynamic program '/PBS/CFICA_LIS_REFERENCE', as shown in Figure 1-17, "Storage of export program for reuse."

Figure 1-17   Storage of export program for reuse

This is absolutely imperative for the programs that are selected in the diagram above. If this is not done, there is the danger that the program can no longer be executed if further tables are subsequently exported over the function described above.

Generation of the description standard in XML format

The export interface of the ViewPoint CFICA Module enables any SAP tables in AIS (Audit Information System) format to be exported and further processed using popular PC analysis programs such as IDEA. To simplify further processing, the description of the data to be exported can be done in an independent XML format. The tool can also be used for the extracted data of the SAP FICA standard interface, as long as the data was saved in AIS format.

Introduction

The "Regulations regarding data access and how digital documents can be checked (GDPdU)" of July 16 2001 (BStBl I Page 415) envisage that within the scope of an external audit by request of the financial authorities, the company that is to be audited must provide all necessary structure information in an electronic form that can be evaluated, in addition to the tax-relevant documents and records that are stored. This is, in principle, guaranteed by the extraction of the data in SAP AIS format for SAP data, without using a generally valid description standard. The structure description is integrated in the respective data stock.

Within the scope of an external audit, the PC analysis program 'IDEA for GDPdU', developed by the company Audicon, Düsseldorf, is used by the financial authorities. In cooperation with the software producers of salary, financial accounting and archiving systems, as well as the German sales department of the standard auditing software 'IDEA', the financial authorities have developed a standardized, technical tool for providing format and content description of tax-relevant data.

Because this interface guarantees a trouble free data transfer when the handover of data carriers is requested, its use is recommended on a voluntary basis for software manufacturers and companies that are under legal obligation to keep accounting records.

The data import interface for the automatic transfer of tax-relevant data defines the "description standard for the handover of data carriers" including the linkages that are necessary for the electronic evaluation.

XML-based description standard

In order to be able to process the different data structures, the company that is being audited makes available the tax-relevant data mainly in a "denormalized" form. In addition, it provides a description of the data, date formats and linkages that can be evaluated electronically in XML format. The file format for the tax-relevant data was defined based on standard formats. Both

tax-relevant data and description data are made available on one or more common data carriers.

XML is the "eXtensible Markup Language". XML only allows a generic set of speech elements, so that a separate language has to be defined depending on the use case. In each case, the newly verbalized language can be stored in a form that can be electronically evaluated using structure information and element definitions in a Document Type Definition (DTD). This enables an XML parser to check whether an XML document corresponds to the agreed language. It can therefore be differentiated between language description in the DTD and the contents in the XML instance.

No description data for the data carrier handover is therefore stored in the DTD itself, but instead in the XML file INDEX_PBS.XML. The DTD describes the structure of the INDEX_PBS.XML file.

General assumptions/ prerequisites for the DTD

In the DTD, it is assumed that the tax-relevant data is organized in files. Exactly one file is assumed per table, so that the organization coincides physically by file and table. The description data for the data carrier handover is stored in one INDEX_PBS.XML file. The DTD must be located in the same directory on the data carrier as the INDEX_PBS.XML file. The XML files generated by ViewPoint form the basis of the description standard "gdpdu-01-08-2002" of the company Audicon.

The current technical description can be requested from Audicon (www.audicon.net) free of charge. In particular, it contains the technical organization of the description standard and an explanation of the underlying DTD (Document Type Definition).

Generation of the description data for AIS data of the data export interface ViewPoint CFICA Module

The tax-relevant data is exported via the Data Export Interface and stored in the file system. Afterwards, the data description can be stored in an XML file for all tables that are located in the export directory of the file system using the ViewPoint XML Generator. The data is then copied to a data carrier that can be evaluated together with the tax-relevant data and the DTD file.

The data can then be imported easily via the SmartX interface of the PC analysis program IDEA, as shown in Figure 1-18, "Graphical representation of the ViewPoint XML generator."
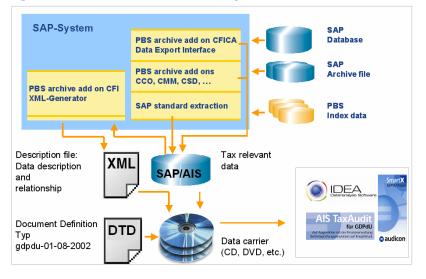
Figure 1-18   Graphical representation of the ViewPoint XML generator

ViewPoint XML generator   After all tax-relevant data in AIS format has been stored in an export directory, a descriptive XML file can be created for the data stock.

This can be done in the ViewPoint menu by selecting **CFICA** > **Report selection** > **Data for external users** > **Generation of XML file for Z3 data access**, or directly by calling transaction /PBS/CFICA_XML, as shown in Figure 1-19, "Menu entry for XML generator."
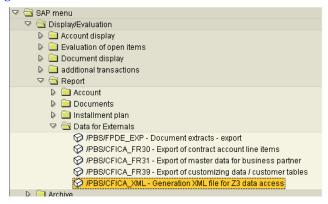
Figure 1-19   Menu entry for XML generator

Afterwards the following selection screen is displayed, as shown in Figure 1-20, "Selection interface for XML generator."

Figure 1-20   Selection interface for XML generator

In the block 'Description of income tax payer', the name and address of the company that are used to identify the data stock should be entered.

In the block 'Storage administration - Tax-relevant data' the path that contains the tax-relevant data should be specified. The XML file can be stored in the file system or on a local PC via the PC download option.

The generated XML file is only displayed on the screen for test purposes, as shown in Figure 1-21, "XML file for example table," if the option 'Test XML generation' is selected. The button should be deactivated if the XML file should actually be generated.

```
Generierung XML Beschreibungsdatei für Z3 Datenzugriff

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE DataSet SYSTEM "gdpdu-01-08-2002.dtd" >
<DataSet>
     <Version>1.0</Version>

     <DataSupplier>
          <Name>PBS m.IDES Daten</Name>
          <Location>Bensheim</Location>
          <Comment>SAP Data AIS Format</Comment>
     </DataSupplier>

     <Media>
          <Name>Disk 1</Name>
          <Table>
               <URL>T003T_20030603_120548.csv</URL>
               <Name>T003T_20030603_120548</Name>
               <Description>Belegartentexte</Description>
               <DecimalSymbol>.</DecimalSymbol>
               <DigitGroupingSymbol>,</DigitGroupingSymbol>
               <SkipNumBytes>00205</SkipNumBytes>
               <VariableLength>
                    <ColumnDelimiter>&#9;</ColumnDelimiter>

                    <VariableColumn>
                    <Name>T003T-MANDT</Name>
                    <Description>Mandant</Description>
                         <AlphaNumeric/>
                              <MaxLength>000003</MaxLength>
                    </VariableColumn>
```

```
                    <VariableColumn>
                    <Name>T006A-MSEHL</Name>
                    <Description>Masseinheitentext 1</Description>
                         <AlphaNumeric/>
                              <MaxLength>000030</MaxLength>
                    </VariableColumn>

               </VariableLength>
          </Table>

     </Media>
</DataSet>
```

Figure 1-21   XML file for example table

A couple of conditions should be observed to ensure successful further processing of the data, including the XML description:

◆ The files were exported in AIS format.

◆ If the data is not to be imported via the SmartX interface of the IDEA tool and an XML description file, the following points should be ignored. The data can be imported file for file using the import assistant of the IDEA tool. 'SAP/AIS' compatible should be selected as the file format.

◆ When further processing of the tax-relevant data is performed using an XML description file, this file should be created using the above-mentioned XML Generator. It should be ensured that no sub-directories are created in the directory of the tax-relevant data, which can otherwise result in unpredictable errors in the XML file. Apart from sub-directories, the directory should also not contain any files that are not in AIS format!

◆ The description can now be generated using the program /PBS/CFICA_LIS_GENERATE_XML. If possible, this can be stored in the directory of the tax-relevant data, or on the PC later if a PC download of the XML file is performed.

◆ The data including the XML file can now be copied from the operating system of the SAP system onto the PC. To be able to perform further processing in the IDEA tool, it is necessary that the AIS files are given the extension '.csv'. This is not automatically supported in today's version of the Data Export Interface. The renaming must therefore be performed at PC-level. Many PC file administration programs (Freeware programs) include a function that enables this change to be made across all files. It must be ensured that the extension is added in lower case.

◆ In addition to the tax-relevant data (data extension '.csv') the files 'index_pbs' (XML description data) and the file 'gdpdu-01-08-2002.dtd' (Document Type Definition) should also be stored on the data carrier. ViewPoint provides these on the installation CD in the directory 'DOCU'. The data carrier created according to this procedure can now be easily imported into the PC analysis program IDEA.

◆ In order to perform further processing via XML description, it should first be checked whether the installed IDEA version contains the import interface SmartX. To do this, the IDEA tool should be started. The option SmartX should appear under the menu option **Extras**, as shown in Figure 1-22, "SmartX option."

Figure 1-22   SmartX option

Afterwards, the data can be copied using the SmartX menu options, as shown in Figure 1-23, "SmartX menu option 1," and Figure 1-24, "SmartX menu option 2," on page 1-31.

Figure 1-23   SmartX menu option 1

Figure 1-24   SmartX menu option 2

Error analysis of data import in IDEA

Problem 1   The data is loaded into IDEA using the SmartX assistant. After selecting the tables, the import stops at the point shown in Figure 1-25, "Import stop window message."

GDPdU Import Prozess
Die ausgewählten Dateien werden importiert

XML Bitte warten Sie, während SmartX die INDEX.XML interpretiert und die Dateien importiert, die Verbindungen zwischen den Dateien anlegt und den HTML-Report erzeugt.

Datenträger wird importiert

Details

Importiere C:\xml_test\TSTCT_20030603_120700.imd

Figure 1-25   **Import stop window message**

Solution

Note the file that is named under Details. Cancel the import. Repeat the data import, and exclude the faulty table in the selection screen. If the error occurs again for other import files, these should also be excluded. After completing the import using the SmartX assistant, you should try to load the faulty files via the IDEA import assistant. In order for this to be performed correctly, the file extension "csv" must be removed from the files that still have to be loaded.

Problem 2 Files are imported using the IDEA import assistant. The error message in Figure 1-26, "Import assistance error message window," is displayed.

IDEA

FEHLER:
Es wurde ein Datensatz mit einer unüblichen Anzahl von Trennzeichen gefunden. Zum Beispiel
3,"ABC",1,2 ist ein korrekter Datensatz, während
3,"ABC,1,2 kein korrekter Datensatz ist
IDEA kann mit dem Import nicht fortfahren.

OK

Figure 1-26   **Import assistance error message window**

Analysis

There are fields in the files that are to be imported that only contain a quotation mark (") or that start with a quotation mark.

Solution

Commonly used PC editor programs can be used to search for the quotation marks and replace them with a space.

If errors still occur during the import, it may be the case that further invalid characters are present in the data stock. The SAP system can be used to analyze the problem. First, the file with the error must be made available in the file system of the SAP system. The program /PBS/CFICA_LIS_AIS_CHECK can then be used to search the file for invalid characters. The files that are found are first displayed in an overview. The analysis can be started by double-clicking on a file name.

ViewPoint activation for transaction EC20

In the SAP transaction EC20, it is possible to branch via the button "Customer account" to the account display (transaction FPL9), as shown in Figure 1-27, "Transaction EC20: navigation to account display."

Figure 1-27   Transaction EC20: navigation to account display

In order to branch to the ViewPoint account display here instead of to the SAP variant, two table entries must be changed as a modification in table SWOTLV.

This can be done easily using the program "/PBS/CFICA_SWOTLV" and can be reversed just as easily.

By executing the program, as shown in Figure 1-28, "Program "/PBS/CFICA_SWOTLV"," the ViewPoint functionality is either activated or deactivated, depending on the current status.

Figure 1-28   Program "/PBS/CFICA_SWOTLV"

ABAP/4 interface to ViewPoint CFICA Module

The following section describes methods and programs for enabling the access to archived data that was indexed using the ViewPoint CFICA Module.

Access via ABAP/4 routines

All important routines that are required for the access to archive data are saved in the ABAP reports /PBS/CFICAREAD.

A number of example programs are available as templates for programming, as listed in Table 1-3, "Example programs for archive accesses via ViewPoint indices." These show the access to the archive data via the various ViewPoint archive indices.

Table 1-3   **Example programs for archive accesses via ViewPoint indices**

Example program	Access via index
/PBS/CFICA_TSRD_A	Settlement date
/PBS/CFICA_TSRD_B	Settlement document
/PBS/CFICA_TSRD_D	Posting date
/PBS/CFICA_TSRD_E	Document number
/PBS/CFICA_TSRD_F	Reconciliation key
/PBS/CFICA_TSRD_G	Business partner
/PBS/CFICA_TSRD_K	Contract account
/PBS/CFICA_TSRD_N	Reference document number
/PBS/CFICA_TSRD_O	for open items (OPUPW and WHGRP; statistical items)
/PBS/CFICA_TSRD_U	Company code
/PBS/CFICA_TSRD_V	Contract number index