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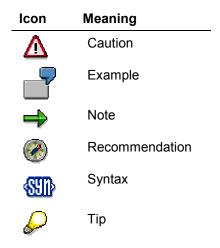
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Controlling (CO)

The following table shows the archiving objects provided:

Objects in Controlling	Archiving Object
Line items	CO_ITEM [Page 14]
Line items / Totals records from reconciliation ledger	CO CEL RCL [Page 33]
All data (cost center)	CO COSTCTR [Page 42]
Actual data (cost center)	CO CCTR ID [Page 44]
Plan data (cost center)	CO_CCTR_PL [Page 45]
Line items (cost center)	CO CCTR EP [Page 47]
Fully reversed documents	CO ALLO ST [Page 49]
Orders with transaction data	CO_ORDER [Page 56]
Business processes	CO_PROCESS [Page 64]
Settlement documents	CO_KABR [Page 27]
Material cost estimate data	CO COPC [Page 71]
Base planning object data	CO_BASEOBJ [Page 77]
Cost object data	CO_KSTRG [Page 81]
Material ledger data	CO ML DAT [Page 85]
Material ledger documents	CO ML BEL [Page 90]
Material ledger indexes	CO_ML_IDX [Page 95]
Transaction data for costing-based profitability analysis	COPA1 xxxx [Page 105]
Transaction data for account-based profitability analysis	COPA2 xxxx [Page 105]

Table COEP

Table COEP

Use

If the table COEP grows too quickly or you have quantity problems. The procedure described here provides an aid to dealing with the table COEP if it grows too quickly or if there are data quantity problems within the table.

Structure

Often CO objects are mentioned in connection with cost accounting data, whereby these could be any object that produces data in cost accounting (CO data). Examples of these are cost centers, internal orders, sales document items (items in sales orders), cost objects, production orders, and so on.

Central elements are the master record, totals records and line items.

The **master record** is stored in different tables, depending on the respective application. The master records concerned can be found in the following tables:

	Table	
Internal orders	AUFK	
sales document items	VBAP, VBAK	

The master records contain, for example, a short text to the object and organizational data, such as controlling area, company code and plant. The object currency is often also stored in the master record or is derived from information in the master record.

Totals records and **line items** in cost accounting are stored in the same tables for all applications. The totals for the primary costs, for example, are all stored in table COSP regardless of whether they belong to a cost center or a sales order.

Characteristics of an object

Orders, sales document items or cost centers can be described as object types.

The connection of an object to its CO data is given by the general object number (OBJNR field in the CO tables, such as COEP-OBJNR). This field provides you with information about the object type and, if needed, about the object key (such as the order number).

Integration

To analyze table COEP and determine the appropriate archiving object to use, proceed as follows:

- 1. Carry out a table analysis using the programs RARCCOA1 and RARCCOA2. For more information see table analysis using the programs RARCCOA1 and RARCCOA2 [Page 9].
- 2. Check the possibilities you have for avoiding data. Does a line item summarization come into question and/or can you deactivate the reconciliation objects? For more information, see data avoidance [Page 10].
- 3. Determine the appropriate archiving object that suits your requirements. To help you decide, ask yourself the following questions:
 - Which archiving objects are already being used or are planned?

Table COEP

• What is to be archived using the <u>archiving object CO_ITEM [Page 14]</u>?

• What can be archived using the <u>archiving object CO_ALLO_ST [Page 49]</u>?

For more information, see <u>determining archiving objects [Page 12]</u>.

Table Analysis Using the Programs RARCCOA1 and RARCCOA2

Table Analysis Using the Programs RARCCOA1 and RARCCOA2

Use

The programs RARCCOA1 and RARCCOA2 help you choose the archiving object to be used to remove certain CO data. These programs count the number of entries in the CO tables (COEP, COSP, ...) and assign them uniquely to an archiving object. A list is then displayed detailing the quantity of data that exists for each object type, controlling area and fiscal year.

Procedure

- 1. Check (for example using transaction SA38) whether the programs RARCOOA1 and RARCCOA2 exist in your system. If they are not in your system, you can import them as described in SAP note 138688.
- 2. Execute program RARCCOA1. On the CO Table Analysis Generate Data Extract selection screen, select at least the table COEP.

As the program looks at all the table entries, this can take some time. It could be advisable to schedule the program as a batch job. The program generates a data extract, it does not display a list. It is difficult to estimate how long the program can run. Experience has shown that it can run 5 hours for 80 million COEP entries.

If you have a test system that is an exact copy of your productive system, you should execute the program in the test system. It is of no matter if the data is not exactly up-to-date, as long as it is not more than two months old. More accurate statements can only be made on the basis of the productive system.



For ORACLE databases we recommend that you run the program at a time when as few postings as possible are being carried out, otherwise it might lead to error ORA-1555. If this error occurs, you should reschedule the program. The second time it generally runs without any errors.

3. Analyze the data using program RARCCOA2. Start this program in dialog. It reads the dataset generated by program RARCCOA1 and presents it correspondingly. This program has a runtime of only a few seconds.

Result

A list is displayed in which the archiving objects that **could** archive data from CO tables are listed with the number of entries contained in these tables. The archiving objects listed represent certain object types (or object category or applications). You should not use this list to decide which archiving object to use, as the system, for example, can not decide how long data is required. First carry out <u>data avoidance [Page 10]</u> and then <u>determine the archiving objects [Page 12]</u>.

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Data Avoidance

Data Avoidance

Use

It is usually far more efficient to avoid accumulating large amounts of data than to archive these large amounts of data.



For the COEP table you can use the line item summarization. This does not have an immediate effect on the dataset as it only affects future postings and old documents are not adjusted. For more information, see the SAP note 147766.



You can not use the line item summarization if you are using transfer prices.



Selected fields no longer appear in the line item report as a result of the line item summarization.

Prerequisites

Before you attempt data avoidance, you should carry out a <u>table analysis using the programs RARCCOA1 and RARCCOA2 [Page 9]</u>. For more information about which archiving object comes into question to meet your requirements, see table COEP [Page 7].

Procedure

To find out which summarization would have the greatest effect, proceed as follows:

Determine how many entries in the table COEP have the value "COIN" in the VRGANG field.
Only these line items can be summarized. If only a small percentage of the COEP entries are
COIN entries, a document summarization is not very useful.



In the COBK-SUMBZ field you can see how many lines each document has. The line item summarization reduces the number of document lines **not** the number of documents. We only recommend this you do this if the value in the COBK-SUMBZ field is very high.

- 2. In the table COBK, determine how many entries for each AWTYP field value. Ignore "AWTYP initial". Note the values in the AWTYP field for which there are the most entries. These entries are the interesting reference operations for the line item summarization.
- 3. Use the program RARCCOA2 to determine the object types for which there is the most data. You can adjust the list in such a way, that the data is totaled per object type and not per archiving object. (The object type comes under *Type* in the list). The two-character code for the object type (such as AO, OR, KS) is interesting for the line item summarization.
- 4. Read SAP note 147766 and enter the appropriate entries using transaction OKBI. If possible select all those fields that you do not really need in the CO line item report.

Data Avoidance



Ensure that you can branch to the source document from the CO line item report. You can access the complete information in the source document.

Result

You can use these analyses to go directly to <u>determining archiving objects [Page 12]</u>.

Determining Archiving Objects

Determining Archiving Objects

Use

Using the table analysis you can determine which archiving objects can be used to archive COEP entries.

Prerequisites

Before you continue with this procedure, you should first have carried out <u>data avoidance [Page 10]</u> and then the <u>table analysis using the programs RARCCOA1 and RARCCOA2 [Page 9]</u>. For more information about the whole process, see <u>table COEP [Page 7]</u>.

Procedure

- 1. Only examine those archiving objects that cover the largest part of the data. As a rule two or three archiving objects cover 90 per cent of the data.
- 2. If is possible that you already (regularly) use one of the objects that comes into question. If this is the case, proceed as follows:
 - a. Archive your data using this object and then repeat the table analysis. Execute program RARCCOA1 once again. The quantity of data that now appears in the list produced by RARCCOA2 should be considerably less.
 - b. If there is still as much data for this object in the RARCCOA2 list, you should try to extend archiving with this object. You can, for example, reduce the residence times or extend the selection criteria. You should, of course, consult the appropriate departments for this.
 - c. If the previous point is not successful and you no longer require the CO line items for the respective object type, you should designate the object type for CO_ITEM archiving. For more information, see archiving CO line items [Page 14].
- 3. You may be planning to carry out archiving for one of the objects (still) being examined. You should try to push this archiving with greater priority with a view to the dataset in table COEP. It would probably cost more time to use CO_ITEM as well.
- 4. If the archiving object CO_COSTCTR (with an amount of data worth mentioning) appears in the list, you should also consider the archiving object CO_ALLO_ST. Proceed as follows:
 - a. Start program RARCCOAA. You should execute this program in the background at a time when as few postings as possible are being carried out.
 - b. The program generates a list of entries in the tables COEP and COEJ that belong to allocation documents that have been completely reversed. If a number of entries worth mentioning is displayed, you should use the archiving object CO_ALLO_ST.

You can use CO_ALLO_ST in real-time without problems. The archived documents are reversed documents from cost accounting and are no longer of import. Such documents are created when assessments, distributions, and so on are repeated.

If a number of entries worth mentioning still appear in the RARCCOA2 list or you designated object types (see above) to be archived with CO_ITEM, you should now use the archiving object CO_ITEM.

Create a list of object types that are to be archived using CO_ITEM. You can use the

Determining Archiving Objects

RARCCOA2 list and cross out everything that has already been dealt with by other archiving objects.

Archiving CO Line Items (CO)

Archiving CO Line Items (CO)

Definition

Archiving object CO_ITEM for archiving cost accounting line items. Totals records cannot be archived.

Use

The SAP System automatically creates a CO line item for each business transaction involving an object in the CO application (such as an order or cost center). These line items are in addition to the documents for the Payroll or Financial Accounting components.

When you archive CO objects, the system also automatically archives the CO line items that belong to those objects. Consequently, it is normally not necessary to archive CO line items explicitly. However, you may have space problems (during long running orders) with the COEP or COBK tables. If so, you can use the CO_ITEM archiving object to also explicitly archive CO line items.

The table analysis of table COEP helps you choose a suitable archiving object to use. For more information, see <u>table COEP [Page 7]</u>.

Constraints

The system does not archive any CO line items that meet the following criteria:

- CO line items that are down payments (value type 12, 58, 59, 61, 63)
- CO line items for parked documents (value type 60)
- Investment measures that are stored as CO line items
- Actual CO line items in current or future period
- Plan CO line items in current or future fiscal year
- CO line items that were distributed using ALE

Line items distributed by ALE are not archived in the system in which you entered the document. You can delete these line items with the RKADELIT report. Choose Accounting \rightarrow Controlling \rightarrow Cost Element Accounting \rightarrow Environment \rightarrow ALE \rightarrow Delete ALE line items.

The system archives the copies in each receiving system



We recommend not archiving line items from the current fiscal year before the local currency changeover.

We recommend selecting CO objects whose line items should be archived instead of selecting CO_ITEM. CO_ITEM archives all CO line items in all CO applications. You can reduce the runtime of the local currency changeover to a minimum by selecting specific CO objects.

Archiving CO Line Items (CO)



If you only wish to archive cost centers and order line items, you can also use the CO_COSTCTR (all data for cost centers), CO_ORDER (overhead cost orders), PP_ORDER (production orders) and SD_VBAK (sales documents) instead of CO_ITEM. You can also use these objects to archive each line item.

Structure

You can use the following functions for CO ITEM:

Function/report assignment

Function	Report
Archive	RKCOITWR
Delete	RKCOITDL
Report	You can use all the actual CO line item reports to analyze the archive files for CO_ITEM.

When creating the archive, the system locks all the periods for which CO line items are to be archived. This prevents any more postings from being made in those periods.

To archive CO line items, choose Accounting \rightarrow Controlling \rightarrow Cost Element Accounting \rightarrow Environment \rightarrow Archiving \rightarrow CO line items.

Displaying Individual Objects Using SAP AS

A business view for the archiving object CO_ITEM is delivered as standard. The line item report KSB5 is called. To display individual objects for the archiving object CO_ITEM using SAP AS [Ext.] you require an information structure that has been created based on the standard field catalogs SAP_CO_ITEM_001 or SAP_CO_ITEM_002 delivered by SAP. The information structure must be activated and set up.

Recommendation

Use the information structure SAP CO ITEM 001 delivered as standard.

For more information about information structures, see also <u>using the archive information system</u> [Ext.].

You can find more information on the Archiving Information System (SAP AS) under <u>archiving information system (SAP AS) [Ext.]</u>.

Integration

To see which archiving objects can also archive CO line items, choose $Tools \rightarrow CCMS \rightarrow DB$ Administration $\rightarrow Data$ archiving and enter COEP in Objects for Table.

The Object Types

When archiving data from cost accounting tables (e.g. COEP), it is advisable to run an analysis of the object types used. You will find the object type coded in the first two characters of the object number. You will find the object number in the OBJNR field, the object type, for example, in COEP-OBJNR(2). You will find the translation of these two characters to a short text in table

Archiving CO Line Items (CO)

TBO01. Analysis programs, such as RARCCOA1 or RARCCOA2, compare the different object numbers with the number of corresponding entries.

In addition to the usual cost accounting object types, such as cost centers (CTR, CC) or orders (ORD, OR), the "reconciliation object" (REC, RO) often appears here. Often a considerable number of the table entries consist of such reconciliation objects. You can use the archiving object CO_ITEM to archive reconciliation object line items. To be able to decide whether these line items are to be archived you must first know how these reconciliation objects and their line items arise and what they are needed for.

The creation and use of reconciliation objects is different to that of reconciliation object types. You will find the latter in table ONRAO in the AOTYP field. There are four different reconciliation object types:

- 01: profitability analysis
- 02: operations planning
- 03: long-term planning
- 04: financial data (CO)

It is mostly the reconciliation objects of type 01 (profitability analysis) that contribute to the volumes of data (in table COEP). Types 02 (operations planning) and 03 (long-term planning) only contain plan data and thus do not contribute to the data volume in table COEP. Type 04 (financial data CO) is only of historical significance and does not carry data to any cost accounting tables.

Profitability Analysis (AOTYP 01)

Reconciliation objects of type 01 are always created when actually a profitability segment should be created but the account-based profitability analysis is not active. Thus there is either no profitability analysis active or only the costing-based profitability analysis is active.

An equivalent must exist in the Cost Accounting application component for every posting relevant to cost accounting; otherwise Cost Accounting would not be closed off. Postings relevant to cost accounting are all those made to G/L accounts that are revenue or cost elements, as well as postings to profitability analysis and to the profit center. An "equivalent in cost accounting" implies that an update must be made to a totals record (this is enough for plan postings) or a line item (for an actual posting) at least. This data is, however, always attached to a cost accounting object (CO object). This object exists anyway for "normal" cost accounting postings. Such an object would be, for example, a cost center or an order. Some postings do not have such an object; these then require a reconciliation object.

The following cases can occur:

Revenue postings to cost center

Cost centers can only be updated statistically with revenues. To post to a revenue account a CO object is required that may carry revenues. Such objects are, for example, orders with revenue or a profitability segment for account-based profitability analysis. Such an object cannot, however, be derived by the system. If the account-based profitability analysis is active, the revenue posting is generally made to a profitability segment (object type PSG, PS). If this is not the case there are no profitability segments (as CO object) and the posting is made to a reconciliation object (object type REC, RO).

Revenue postings to profit center

It is not sufficient to enter a profit center when posting, as this is not a real cost accounting posting. A real posting to a CO object must be generated here also. If you do not enter such

Archiving CO Line Items (CO)

an object explicitly and the account-based profitability analysis is not active, reconciliation objects are also updated here.

Postings to profitability analysis

If the costing-based, but not the account-based profitability analysis is active, an additional, reconciliation object is also posted to profitability analysis. This occurs particularly often through invoicing or settlements to profitability analysis (calculation of profits). Posting to a reconciliation object (instead of activating account-based profitability analysis) generates, as a rule, totals records with a greater degree of summarization. If this is not the case (the account-based profitability analysis is active) a profitability segment (object type PSG, PS) and not a reconciliation object is generated.

It is therefore not advisable to activate the account-based profitability analysis just to avoid generating reconciliation objects.

The Relationship between Reconciliation Ledger and Reconciliation Object

You can use the reconciliation ledger to check the reconciliation between the FI and CO application components. The reconciliation ledger stores its own data for this purpose. The reconciliation ledger data is **not** the reconciliation objects. Rather it is stored in tables similar to those of the Special Purpose Ledger (FI-SL) application component.

The reconciliation ledger can only be updated if there is also a posting to a CO object. This ledger also lists for which object type each posting has been made. This can then also be a "reconciliation object" (object type REC, RO).

In the reconciliation ledger reports you can (e.g. in the case of variances), double-click to branch to the corresponding cost accounting documents (line item report). From here you can navigate further to display, for example, the respective invoice. In this way you can analyze the origins of each of the variances determined. Without the reconciliation objects this would not be possible, as no CO line items would exist in this case for the postings described above (revenue postings to cost center, etc.).

You can carry out follow-up postings to the reconciliation ledger as long as a document exists for every posting relevant to cost accounting. You therefore also require reconciliation objects for the cases described above

The reconciliation ledger itself does not generate reconciliation objects it merely reads these. Reconciliation postings for cross-company code postings in cost accounting. Cost accounting itself is not affected. Cost accounting is already reconciled, as these postings always remain within one controlling area.

Operations Planning, Long-Term Planning (AOTYP 02, 03)

The transfer of plan data from SOP planning (logistics) to cost (center) accounting results in activity allocations in planning. Thus only plan data is generated. The postings of AOTYP 01 on the other hand are, as a rule, actual data.

The planning transferred is actually the cost center activity output (scheduling) planning to production orders. The production orders (actual data: the recipients that take on the activity) do not exist in this phase. Cost accounting therefore requires other objects that will take on the activity. The activity input is therefore posted to reconciliation objects on a plant and profit center level. ("100 machine hours for plant 0001, profit center 42).

Line items are only generated if the writing of plan line items has been activated. You will find the appropriate setting in the plan version.

Archiving CO Line Items (CO)

Sales Document Item Object Type (SDI)

For sales orders (object type SDI) you can use the report VBELN_SET_GENERATE to generate sets for the respective sales order number.

When archiving using the archiving object CO_ITEM you can enter a set to limit the amount of data to be archived. The report VBELN_SET_GENERATE generates a set for sales orders automatically. Once you have executed the program, you can use the new set in the *Group or set* field in the archiving CO line items function.

See also:

Dependencies (CO) [Page 22]

The Archiving Object [Ext.]

Define Linked Tables [Ext.]

Archiving Procedure [Ext.]

Runtimes (CO)

Runtimes (CO)

Tests were run which archived CO line items without deleting the data from the database. The following statistics were found:

Write to archive: 10 minutes for 50,000 CO line items

File size: 2.3 MB

This data should be regarded as an example. The test was carried out in a development system at a time of moderate system workload.

Variant Settings for Archiving (CO)

Variant Settings for Archiving (CO)

Use

You can enter selection criteria for the CO_ITEM archiving object in the archiving program variant. The system checks these criteria as well as those in customizing (see Application Customizing (CO) [Page 24]).

Features

If the values that you entered are different to those in customizing, the system takes the entries in customizing and those in the variant maintenance as selection criteria. If the criteria you entered exclude themselves, the system starts the archiving process but no data is archived.

You can choose from the following selection criteria:

- Controlling area
- To posting period
- To fiscal year
- Value types (all, plan only, all except plan)
- Object type
- Only for the "Order" object type: Sub-object type
- Group or Set

You can run the archiving program in the test mode, with archiving, or with archiving and deletion. You cannot run archiving programs in parallel.

If you select the *Log by document* indicator, you obtain an overview of all the archived documents.

See also:

Log (CO) [Page 21]

Log (CO)

Log (CO)

Use

In addition to the central overview of archive files, you can find additional important information about the archived line items in the log.

Function

The log contains the following information:

- Number of table entries per table and archive file
- If you selected Log by document:

A list of the archived documents sorted by objects (such as cost centers or orders)

Dependencies (CO)

Dependencies (CO)

When you use the CO_ITEM archiving object, you need to make various checks. You need to do this before specifying the residence times for the objects you wish to archive. You should also consider the interaction with other areas in the SAP R/3 system.

Line item reports

Drilldown to line item reports, and navigation to line item reports no longer function. You can, however, start line item reports explicitly.

Resource-related billing

If you use resource-related billing, you need to archive and delete the line items for sales orders. This is if the sales order itself is to be archived or if no resource-related billing documents need to be executed.

The following applies to the archived periods: After archiving CO actual line items, you can no longer execute any resource-related billing for the relevant period and object. This is because the line items are no longer in the database, just in the archive. However, you can process expenses incurred after archiving in the normal way.

You can no longer change billing documents and billing requests incurred by expenses in objects that are already archived.

Interest calculation



The following applies to interest calculation for totals records: Interest is usually calculated on the basis of the line items of the previous four periods. You therefore should not archive data unless it is older than four periods.

Do not archive any line items that may still require interest calculation. Note that the system cannot check whether you wish to execute an interest calculation at a later date.

For investment projects (WBS elements with investment profile), interest is calculated on the basis of CO line items. Consequently, you cannot archive the CO line items before you have archived the WBS element (in other words, not with CO_ITEM).

For all other projects or orders on projects, the system only needs all the CO line items for the first interest calculation run. Otherwise, it always requires you to have all the CO line items for the current fiscal year in your system.



You first posted data to an order for a project in period 12/1997. Note the following examples:

- In period 2/1998 you calculate interest for the first time. If you have already archived the CO line items from 12/1997, interest is only calculated for the periods after 1/1998. This leads to incorrect values.
- 1 If you already calculated interest in 12/1997, all the CO line items after 1/1998 need to stay in the system, as this is the start of a new fiscal year.

Dependencies (CO)

This is assuming that the fiscal year is set the same as the calendar year.

• Documents in Financial Accounting (FI)

CO line items are mainly created when you post documents in FI. The system ignores these FI documents when archiving and deleting the CO line items. If required, match the residence times of the FI documents to the residence time for CO line items.

Investment measures

You should not delete line items for investment measures with line item settlement before each object (in other words, not with CO_ITEM). The archiving program ensures that this cannot happen. Nevertheless, you should explicitly select the *Do not archive* indicator for the corresponding order types to improve performance. For more information, see Maintain Application Customizing (CO) [Page 25].

Overhead costing, cost center accruals

During archived periods, you cannot repeat or reverse the overhead costing or the cost center accrual for objects that you archive for CO line items.

You can no longer recalculate transaction-based overhead in an archived period.

Profit Center Accounting

It is no longer possible to display the original documents once these have been archived and deleted. Subsequent postings are also no longer possible. This is for the same reason as in the Special Purpose Ledger (see below).

Subsequent posting to special ledgers in Financial Accounting.

When you archive CO line items for a period, the system locks it. Subsequent posting is not a CO business transaction. Therefore the system does not lock the subsequent posting programs. This means that errors always arise if you try to post data subsequently to periods for which you already archived the CO line items.

Subsequent posting in the reconciliation ledger

In this case, the reconciliation ledger is the same as the Special Purpose Ledger (FI-SL). You especially require the line items for reconciliation objects (object number begins with AO) for subsequent posting of the Reconciliation Ledger. If you already completed archiving but executed subsequent postings for the corresponding periods, then the reconciliation ledger is not complete.

Periodic repostings, assessment, distribution, indirect activity allocation

When you repeat or reverse allocations, the system has to read the corresponding CO line items. If any are missing, the allocation program takes note of this to avoid errors. Reposting and reallocating line items is no longer possible once you have archived the CO line items.

Plan revaluation

You cannot repeat plan revaluation for periods that have already been archived.

Application Customizing (CO)

Application Customizing (CO)

Use

In addition to the basic Customizing for Archiving, you also have to specify the residence times for the write program.

Features

Residence Times for CO Line Item Archiving

The write program archives the CO line items for all objects for which you specify a residence time. It does not process CO line items for object types that you have explicitly excluded from archiving.

Activities

You can find the Customizing activities for archiving object CO_ITEM in the IMG under Controlling General \rightarrow Archiving \rightarrow Prepare archiving for CO line items.

See also:

Maintaining Application Customizing (CO) [Page 25]

Maintaining Application Customizing (CO)

Maintaining Application Customizing (CO)

Maintaining Residence Times for CO Line Items

- 1. Choose *New entries* to enter new residence times for CO line items, or change the existing entries.
- 2. Create at least one entry for each object type you want to archive. All entries are optional, except for the object type.
 - For orders (except for sales orders), you can specify the order type as a subobject type.
 - If you would like to distinguish between objects in different controlling areas, enter the desired controlling area in the COAr column.
 - If you would like to distinguish between plan and actual line items, enter the desired abbreviation in the Val. type cat. column.
- 3. To exclude individual lines from archiving, select the *Do not archive* column.



You want to archive CO line items for orders, but not for the order type "FERT". To achieve this, you need to make two entries:

Archive line items for orders except for order type "FERT"

Туре	SubObjType	COAr	Val. type cat.	Do not archive
ORD				
ORD	FERT			Х

4. Enter the number of residence periods for each line.

Each CO line item is archived once the corresponding number of residence periods has expired after the posting period. This does not include special periods. Documents posted in special periods are assigned to the last period of the fiscal year.



You specified a residence time of six periods for cost objects (COB). Archiving takes place in April 1998. For a fiscal year with 12 months as posting periods, the last posting period from which a document can be archived is September 1997.

The periods omitted are October, November and December 1997 as well as January, February and March 1998. Documents from October 1997 are not archived.



In the actual, you can archive CO line items by period, but only annually in the plan.

5. If you only want to archive entire fiscal years, select the *FYear complete* column.

Maintaining Application Customizing (CO)



For six residence periods, you can only archive a complete fiscal year six months after the fiscal year has ended. This means from period seven of the following fiscal year.

6. Save your entries.

For more information on Customizing, see the IMG under "Controlling: General" under <u>Prepare Archiving of Controlling Line Items. [Ext.]</u>

Archiving Settlement Documents (CO)

Archiving Settlement Documents (CO)

Definition

You can use the **CO_KABR** archiving object to archive settlement documents independently of the corresponding settlement senders. Settlement documents are created during settlement of orders, WBS elements, sales orders and cost objects as well as during settlement of assets under construction.

Structure

The system ensures that the settlement documents are archived and deleted by period, starting with the earliest settlement period. This means that you must archive **all or none** of the documents for a settlement sender and a settlement period. Note also that the settlement documents for a settlement period are only archived if the settlement documents for the previous periods have already been settled or are being settled in this run.

Plan settlement documents: The system archives all documents belonging to a settlement sender by fiscal year and not by period. The fiscal year replaces the settlement period. This means that either all or no settlement documents from a fiscal year for one settlement sender are archived.

Selection Criteria

You can use the following selection criteria for the CO_KABR archiving object.

- Controlling area
- Object type, settlement sender: Here, you can specify the object types for which you want to archive settlement documents.
- Latest posting date: Settlement documents with posting dates after this date are not archived.

In addition to the selection conditions that you specify, the system also checks each settlement document to ensure that its residence time has expired. For more information, see Checks (CO) [Page 30].

See also:

Concepts

Runtimes (CO) [Page 29]

Checks (CO) [Page 30]

Application Customizing (CO) [Page 31]

Log (CO) [Page 32]

How to Use Archiving

Create Archive Files [Ext.]

Call Archive Session Management [Ext.]

Archiving Settlement Documents (CO)

Runtimes (CO)

Runtimes (CO)

Archiving Object CO_KABR

1,000 total settlement documents in the AUAK, AUAB, AUAO, AUAS, and AUAV tables and 2000 entries in the AUAA and AUAI tables were archived in a test..

The test produced the following results:

Write to archive: 5 minutesDelete data: 8 minutes

• Size of database: c.1,063,000 bytes (uncompressed)

• File size: 1.1 MB

This data should be regarded as an example. The tests were conducted when the system was at its busiest.

Checks (CO)

Checks (CO)

Archiving Object CO_KABR

The system only archives settlement documents if their residence time has expired. You enter the residence time in the settlement profile. To do so, choose $Actual\ postings \rightarrow Settlement$ $\rightarrow Maintain\ settlement\ profile$ in customizing. You can find the settlement profile for a settlement sender in the settlement parameters for the settlement rule.

Note that the residence time only starts from the posting date. The posting date is usually the last day of the period that you are settling.

See also: CO - Settlement [Ext.]

Application Customizing (CO)

Application Customizing (CO)

Use

Note: when selecting the residence time, you can no longer reverse a settlement if the settlement documents created have been deleted.

Activities

In customizing for Overhead Cost Orders, enter the residence time for the settlement documents under $Actual\ postings\ o Settlement\ o Maintain\ settlement\ profile.$

Log (CO)

Log (CO)

If you have selected *Log per document* in the variant for archiving object CO_KABR, the R/3 System outputs all documents with their document numbers.

The log informs you which archived data objects have been deleted. This is because CO_KABR generally deletes all archived data.

Archiving Reconciliation Ledger Line Items/Totals Records (CO-CEL)

Archiving Reconciliation Ledger Line Items/Totals Records (CO-CEL)

Definition

The CO_CEL_RCL archiving object for archiving line items and totals records from the reconciliation ledger (cost and revenue element accounting component - CEL Cost Element Ledger).

Use

Archiving object CO_CEL_RCL lets you archive the reconciliation line items and totals records together. Separate archiving of line items is not possible.

You can use the reports provided to evaluate the archived data (see <u>Application Customizing</u> (<u>CO-CEL</u>) [Page 38]).

You can archive data from the following database tables using archiving object CO_CEL_RCL:

- COFIP Plan line items for the reconciliation ledger
- COFIS Actual line items for the reconciliation ledger
- COFIT Totals records for the reconciliation ledger

Displaying Individual Objects Using SAP AS

To display individual objects for the archiving object CO_CEL_RCL using <u>SAP AS [Ext.]</u> you require an information structure that has been created based on the standard field catalog SAP_CO_RCL_001 delivered by SAP. The information structure must be activated and set up.

Recommendation

• Use the information structure SAP_CO_RCL_001 delivered as standard.

You can find further information about the archive information system in the SAP Library under Cross-Application Components \rightarrow CA Application Data Archiving \rightarrow CA Cross-Application Functions \rightarrow Introduction \rightarrow Archive Information System (SAP AS).

For more information about information structures, see also <u>Using the Archive Information</u> <u>System [Ext.]</u>.

Variant Settings for Archiving (CO-CEL)

Variant Settings for Archiving (CO-CEL)

Use

You can enter selection criteria for the archiving object CO_CEL_RCL for the archiving run, which specify the data to be archived.

Features

You can use the following selection criteria to define selection variants for archiving line items and totals records for the reconciliation ledger:

- Company code (from to)
- Fiscal year (from to)

You can make the following flow control settings:

Combination list only

The system does not execute any archiving. It displays a list of the Customizing combinations, which are available under the current parametrization. Only the transaction data for these customizing combinations would be archived by the system if you executed an archiving run.

Test run

The system simulates archiving. It does not create an archive, nor does it delete any data from the database. The system displays statistics on the table entries that would be archived during an archiving run.

Archiving without database changes

The system creates an archive, but does not delete archived data from the database.

Archiving with database changes

The system creates an archive, and deletes the archived data from the database.



Before you start the archiving, you must maintain the following values for the archiving object in Customizing:

- · Size of the archive file
- Size in MB
- Maximum number of data objects
 - Archive System Link
- Document type
 - Deletion program settings
- Variants for the deletion program test run
- Variants for the deletion program productive run
- Commit counters

Variant Settings for Archiving (CO-CEL)

For more information on settings for object-specific archiving, see: <u>Archiving-Specific Customizing (CO-CEL) [Page 39]</u>.

Variant Settings for Reloading (CO-CEL)

Variant Settings for Reloading (CO-CEL)

Use

You can reload the archive contents into the system as often as you require. You can reload the following:

- Line items only
- Totals records only
- Line items and totals records

The R/3 system does **not** indicate whether the archive, or parts of it, have already been reloaded.

You also have read access to archived data, meaning that you can read plan or actual line items as well as the totals record files. You can go to the corresponding line items from the totals records.

Variant Settings for Evaluation (CO-CEL)

Variant Settings for Evaluation (CO-CEL)

Use

You can evaluate the archived totals records and line items from the reconciliation ledger in the background or online. The following read programs are available:

RGUCOFIP Plan line items for the reconciliation ledger

RGUCOFIS Actual line items for the reconciliation ledger

RGUCOFIT Totals records for the reconciliation ledger

For evaluation in the background, you can create variants, in which you select the data to be evaluated and the data sources. You can use existing archives or the database as data sources. The selection criteria include the general selection conditions (such as, ledger, version, company code, and fiscal year). They also include the restrictions for document characteristics (such as, by document number or reference document number).



You want to list all the archived data for the object type Cost center, object class Production and controlling area 0001 from the fiscal years 1990 to 1996.

Select the Archive data source and an archive file.

Enter the following selections:

Fiscal year
 Object type
 Object class
 Controlling area
 1990 to 1996
 CCT (cost center)
 Production
 0001

Application Customizing (CO-CEL)

Application Customizing (CO-CEL)

Use

You wish to assign report groups (RW/RP) that were already created, read transactions or reports (ABAP) to the archiving object for the reconciliation ledger (CO_CEL_RCL). This enables you to execute the read tools from the archiving environment directly.

Activities

You can find the customizing activities for the archiving object CO_CEL_RCL in the IMG, under Cost and Revenue Element Accounting \rightarrow Archiving \rightarrow Define report groups and read programs.

Archiving-Object-Specific Customizing (CO-CEL)

Archiving-Object-Specific Customizing (CO-CEL)

Use

Before you start the archiving program, you must maintain various settings, such as the size or the archive file, as well as variants for the test run and productive run of the deletion program.

Features

Archive Files

You must specify the size of the archive files in megabytes and the maximum number of data objects. SAP recommends a value of between 10 and 100 megabytes and between 10 and 100 data objects.

Variants for the Deletion Program

You have to enter variants for the test run and the production run of the deletion program.



Check that the *Test run* indicator is not active in the variants for the productive run. If Test run is active, the system does **not** delete the archived records from the database.

You must also ensure that *Test run* is active in the variants for the test run of the deletion program.

Commit Counters

The commit counter determines the number of data objects that are processed before the program sends a commit to the database. SAP recommends a value of between 10 and 100. This value has a direct effect on system performance.

Activities

To make customizing settings for the archiving object CO_CEL_RCL, choose $Environment \rightarrow Archiving \rightarrow Reconciliation ledger \rightarrow Create archive in Cost and Revenue Element Accounting.$

Choose *Customizing*. In the dialog box, choose *Technical settings* under *Arch.-object-specific Customizing* and enter the following technical settings:

- Size of the archive file
 - Size in MB
 - Maximum number of data objects
- Archive System Link
 - Document type
- Deletion program settings
 - Variants for the deletion program test run
 - Variants for the deletion program productive run
 - Commit counters

Archiving-Object-Specific Customizing (CO-CEL)

Archiving Cost Center Data (CO-OM-CCA)

Archiving Cost Center Data (CO-OM-CCA)

This section describes how to archive transaction data with the corresponding master data in Cost Center Accounting

Concepts

Archiving Overview (CO-OM-CCA) [Page 50]

The CO_COSTCTR (CO-OM-CCA) Archiving Object [Page 42]

The CO CCTR ID (CO-OM-CCA) Archiving Object [Page 44]

The CO_CCTR PL (CO-OM-CCA) Archiving Object [Page 45]

The CO CCTR EP (CO-OM-CCA) Archiving Object [Page 47]

The CO_ALLO ST (CO-OM-CCA) Archiving Object [Page 49]

Dependencies (CO-OM-CCA) [Page 53]

Log (CO-OM-CCA) [Page 54]

Technical Data (CO-OM-CCA) [Page 52]

How to Use Archiving

Creating Archive Files [Ext.]

Reloading Archived Data [Ext.]

Calling Up Archive Management [Ext.]

Other Archiving Objects

You can archive funds reservations with the **FM_FUNRES** archiving object. Choose *Environment* \rightarrow *Archiving* \rightarrow *Funds reservation* from Cost Center Accounting.

For more information, see

Archiving Earmarked Funds (FI-FM [Ext.]).

Archiving Cost Center - All Data (CO-OM-CCA)

Archiving Cost Center - All Data (CO-OM-CCA)

Definition

The CO_COSTCTR archiving object archives and deletes all Cost Center Accounting data.

You can make a further restriction on individual cost center groups.

Use

If all data for a cost center is deleted, the archiving fiscal year is removed from the cost center's validity interval (cost centers have time-dependent master data). After this, the cost center is no longer available in that fiscal year, either as an account assignment object or as a planning object.

You should only archive all of the cost center data, once you no longer require the cost centers and their data for either postings or analyses.

Note that you can no longer compare fiscal year data with archived fiscal year data in Reporting.



The number of cost center master records that you can archive can be greater than the number of objects. This is because there is an artificial master record for cost centers that the system writes to the SAP-ARCINF archive.

Selection Criteria

You can use the following selection criteria for the CO COSTCTR archiving object:

- Controlling area (must be entered)
- Fiscal year (must be entered)
- Cost center group (optional)

Read Program

You can define your own programs with the help of the CRK logical database to read archives.

You can use program **RKSRCC01** as an example program when defining your own evaluation programs.

Displaying Individual Objects Using SAP AS

To display individual objects for the archiving object CO_COSTCTR using <u>SAP AS [Ext.]</u> you require an information structure that has been created based on the standard field catalog SAP_COSTCTR_001 delivered by SAP. The information structure must be activated and set up.

Recommendation

Use the information structure SAP_COSTCTR_001 delivered as standard.

You can find further information about the archive information system in the SAP Library under Cross-Application Components \rightarrow CA Application Data Archiving \rightarrow CA Cross-Application Functions \rightarrow Introduction \rightarrow Archive Information System (SAP AS).

Archiving Cost Center - All Data (CO-OM-CCA)

For more information about information structures, see also $\underline{\text{Using the Archive Information}}$ $\underline{\text{System [Ext.]}}$.

Controlling (CO) ■ SAP AG

Archiving Cost Center - Actual Data (CO-OM-CCA)

Archiving Cost Center - Actual Data (CO-OM-CCA)

Definition

You can use the **CO_CCTR_ID** archiving object to archive and delete actual data for cost centers.

The following can be "actual" value types

03 Actual: Splitting to activity types

04 Actual

09 Actual: Correct CCtr internal business volume

11 Statistical actual

Use

The archiving object **CO_CCTR_ID** is soon to be replaced by **CO_COSTCTR** (cost center - all data), as archiving using the **CO_CCTR_ID** archiving object is only meaningful in a very few, exceptional cases. No more postings may be made to a cost center whose actual data has already been archived and this can only be achieved with the archiving object **CO_COSTCTR**.



If you use the archiving object CO_CCTR_ID, only the archived fiscal year is removed from the validity interval, the complete cost center master record is not deleted. We recommend that you switch from the archiving object CO_CCTR_ID to using the archiving object CO_COSTCTR. You can still use the archiving object CO_CCTR_ID if you wish. However, to do this you have to call the Archive Management function (transaction SARA) and enter the archiving object directly.

Selection Criteria

You can use the following selection criteria for the CO_CCTR_ID archiving object:

- Controlling area (must be entered)
- Fiscal year (must be entered)
- Cost center group (optional)

Further restrictions are not possible.

Read Program

You can define your own programs with the help of the CIK logical database to read archives.

You can use program **RKSRID01** as an example program when defining your own evaluation programs.

Archiving Cost Center - Plan Data (CO-OM-CCA)

Archiving Cost Center - Plan Data (CO-OM-CCA)

Definition

You can use the CO_CCTR_PL archiving object to archive and delete plan data for cost centers.

The following can be "plan" value types

- 01 Plan
- 02 Plan: Splitting to activity types
- 08 Plan: Correct CCtr internal business volume
- 10 Statistical plan.

Use

The archiving object is mainly aimed at archiving plan versions other than version 000 and that are no longer needed.

Version 000 may **not** be archived during the current fiscal year. This would make certain functions in actual and certain analyses no longer possible.



The number of cost center master records that you can archive can be greater than the number of objects. This is because there is an artificial master record for cost centers that the system writes to the SAP-ARCINF archive.

Selection Criteria

You can use the following selection criteria for the CO CCTR PL archiving object:

- Controlling area (must be entered)
- Fiscal year (must be entered)
- Version (optional)
- Cost center group (optional)

Read Program

You can define your own programs with the help of the CPK logical database to read archives.

You can use program **RKSRPL01** as an example program when defining your own evaluation programs.

Displaying Individual Objects Using SAP AS

To display individual objects for the archiving object CO_CCTR_PL using <u>SAP AS [Ext.]</u> you require an information structure that has been created based on the standard field catalog SAP CCTR PL 001 delivered by SAP. The information structure must be activated and set up.

Recommendation

Archiving Cost Center - Plan Data (CO-OM-CCA)

• Use the information structure SAP_CCTR_PL_001 delivered as standard.

You can find further information about the archive information system in the SAP Library under Cross-Application Components \rightarrow CA Application Data Archiving \rightarrow CA Cross-Application Functions \rightarrow Introduction \rightarrow Archive Information System (SAP AS).

For more information about information structures, see also <u>Using the Archive Information</u> <u>System [Ext.]</u>.

Archiving Cost Center - Line Items (CO-OM-CCA)

Archiving Cost Center - Line Items (CO-OM-CCA)

Definition

You can use the **CO_CCTR_EP** archiving object to archive and delete line items for cost centers. The system also archives the totals records to ensure that the object context is retained. However, it does not delete them.

Use

Note the following when archiving line items:

• Plan line items

The period values for the planned periods are stored for the whole fiscal year in the same data record in the database. Therefore, you must archive the entire record. The SAP System thus ignores any entered period selection during archiving of plan line items. This means that the system may archive more plan line items than you specified.

Defined and executed plan allocations (assessments, distributions, periodic repostings, and indirect activity allocations) as well as plan revaluations cannot be repeated after plan line items are archived.

Actual line items

Unlike plan line items, actual line items are stored for each period in individual records in the database. You can delimit them by periods (for example, only one period or one period interval).

Defined and executed actual allocations (assessments, distributions, periodic repostings, and indirect activity allocations) cannot be repeated for the archived periods.



The number of cost center master records that you can archive can be greater than the number of objects. This is because there is always an artificial master record for cost centers that the system writes to the archive using the SAP-ARCINF key.

Constraints

The system does not archive any CO line items that meet the following criteria:

CO line items for parked documents (value type 60)

Selection Criteria

You can use the following selection criteria for the CO_CCTR_EP archiving object:

- Controlling area (must be entered)
- Cost center group (optional)
- Period (optional)
- Fiscal year (must be entered)

Controlling (CO) ■ SAP AG

Archiving Cost Center - Line Items (CO-OM-CCA)

- Version (optional)
- Value type (optional)

Read Program

You can define your own programs with the help of the CEK logical database to read archives.

You can use program **RKSREP01** as an example program when defining your own evaluation programs. You can copy the example program and then modify the copy to suit your needs. Do not attempt to write your own program to reload archived data.

Displaying Individual Objects Using SAP AS

A business view for the archiving object CO_CCTR_EP is delivered as standard. To display individual objects for the archiving object CO_CCTR_EP using SAP AS [Ext.] you require an information structure that has been created based on the standard field catalogs SAP_CCTR_EP_001 or SAP_CCTR_EP_002 delivered by SAP. The information structure must be activated and set up.

Recommendation

Use the information structure SAP CCTR EP 001 delivered as standard.

You can find further information about the archive information system in the SAP Library under Cross-Application Components \rightarrow CA Application Data Archiving \rightarrow CA Cross-Application Functions \rightarrow Introduction \rightarrow Archive Information System (SAP AS).

For more information about information structures, see also <u>Using the Archive Information System [Ext.]</u>.

Archiving Fully Reversed Documents (CO-OM-CCA)

Archiving Fully Reversed Documents (CO-OM-CCA)

Definition

The **CO_ALLO_ST** archiving object archives and deletes all fully reversed allocations (assessments, distributions, periodic repostings, and indirect activity allocations).

Use

If the given allocations are repeated frequently, a large volume of data results. This is especially true for plan distribution. You can use the **CO_ALLO_ST** archiving object to clean out the data without harming the functions of the SAP System.

If a fully reversed document exists, the associated documents (original and reversal) and document items are removed from the database.

The selection can be delimited to a single cycle or multiple cycles.

The table analysis of table COEP helps you choose a suitable archiving object to use. For more information, see table COEP [Page 7].

Selection Criteria

You can use the following selection criteria for the CO_ALLO_ST archiving object:

- Controlling area (must be entered)
- Cycle (optional)
- Fiscal year (optional)

If you do not delimit by fiscal year and/or cycle, no further selection delimitation is made.

Structure

Displaying Individual Objects Using SAP AS

To display individual objects for the archiving object CO_ALLO_ST using <u>SAP AS [Ext.]</u> you require an information structure that has been created based on the standard field catalog SAP_ALLO_ST_001 delivered by SAP. The information structure must be activated and set up.

For more information about information structures, see also <u>using the archive information system</u> [Ext.].

You will find more information about the archive information system in the SAP Library under Cross-Application Components \rightarrow CA Application Data Archiving \rightarrow Introduction \rightarrow Archive Information System (SAP AS).

Special Features Relevant to Application(CO-OM-CCA)

Special Features Relevant to Application(CO-OM-CCA)

In Cost Center Accounting, you can archive transaction data along with the corresponding cost center master data.

Overview

You can use the following archiving objects for reorganizing data:

Archiving Objects in Cost Center Accounting

Description	Archiving Object
Cost centers (all)	CO_COSTCTR
Cost centers (actual data)	CO_CCTR_ID
Cost centers (plan data)	CO_CCTR_PL
Cost centers (line items)	CO_CCTR_EP
Completely reversed allocations - assessment, distribution, periodic reposting, and indirect activity allocation	CO_ALLO_ST

The following table shows which objects the system archives and deletes, only archives or neither archives nor deletes. (A = archived, D = deleted)

	Master data	Actual total	Actual line items	Plan total	Plan line items
CO_COSTCTR	A + D	A + D	A + D	A + D	A + D
CO_CCTR_ID	Α	A + D	A + D	-	-
CO_CCTR_PL	Α	-	-	A + D	A + D
CO_CCTR_EP	А	А	A + D	А	A + D

Archive Analysis

In the standard, you can display a list of the cost centers in the archive using the function described below. You get to this function with the archiving transaction SARA, or by starting the RKSARCS1 or RKSARCS2 reports.

Some of the summary and line item reports in the CCA information system can also read data from the archive.

You are provided with logical databases for cost centers (CO_COSTCTR, CO_ALLO_ST, CO_CCTR_EP, CO_CCTR_ID, CO_CCTR_PL) If you start a program that uses one of these logical databases, the system asks whether it should read from the archive or the database. The following is a list of the archiving objects and their corresponding logical database:

Archiving Object	Logical Database
CO_COSTCTR cost centers (total)	CRK
CO_CCTR_ID cost centers (actual data)	CIK
CO_CCTR_PL cost centers (plan data)	CPK
CO_CCTR_EP cost centers (line items)	CEK
CO_ALL_ST completely reversed allocations - assessment, distribution,	SAK
periodic reposting, and indirect activity allocation	

Special Features Relevant to Application(CO-OM-CCA)

The logical databases were developed especially for archiving. They provide you with narrowed down selection possibilities. Each archiving object indicates how to find the logical database.

The following example programs can be used to analyze cost center archives:

CO_COSTCTR	RKSRCC01
CO_ALLO_ST	RKSRSA01
CO_CCTR_EP	RKSREP01
CO_CCTR_ID	RKSRID01
CO_CCTR_PL	RKSRPL01

These example programs only provide you with the statistics that the archiving write program produces. If you wish to see the contents of the archived data records, you need to add appropriate WRITE statements at the corresponding GET times (ABAP skills required).

Further Notes

- The number range levels for the Controlling documents are not reset.
- Reloading data into the database is not supported at this time. Therefore, you should only archive data after you no longer need it.

Technical Data for Cost Center Accounting (CO-OM-CCA)

Technical Data for Cost Center Accounting (CO-OM-CCA)

It is impossible to estimate runtimes and the storage capacity required for archiving because the structure of the archiving objects is so complex.

The data record lengths of the individual logical database segments are found in the Data Dictionary. The number of records per segment in your system depends on various factors:

- Number of postings from external accounting (document sizes) to cost centers
- How many of the Cost Center Accounting functions you use
 If you do not activate all the functions, the associated function tables for the cost centers will be empty. In the same way, data volume for the individual functions can differ greatly. Plan distribution, for instance, generates more data than other functions.

It is more than likely that the cost centers themselves in many cases have just as many differences in data volume.

Archiving Dependencies (CO-OM-CCA)

Archiving Dependencies (CO-OM-CCA)

You can archive all data, actual data, plan data, line items, and completely cancelled Cost Center Accounting allocation data independently of other archiving programs.

If you use open items (commitments), note that the CO_COSTCTR archiving object checks to determine whether customer or purchase orders were organized. If not, the open item records are archived and deleted, but the cost center validity interval remains unchanged.

See also:

The Network Graphic [Ext.].

The Archiving Log in Cost Center Accounting (CO-OM-CCA)

The Archiving Log in Cost Center Accounting (CO-OM-CCA)

The R/3 System generates a standard log for each archive file generated during an archiving run.

The standard log includes the number of archived objects per archive file as well as the number of processed table entries for each participating table. If no entries were processed in a table, the table is not included in the log.

The log does not indicate whether or not the archived data was deleted.

Archiving Internal Orders (CO-OM-OPA)

Archiving Internal Orders (CO-OM-OPA)

You can use the **CO_ORDER** archiving object to archive and delete internal orders with the corresponding transaction data.

Concepts

Application Customizing (CO-OM-OPA) [Page 63]

Dependencies (CO-OM-OPA) [Page 62]

Authorizations for Internal Orders (CO-OM-OPA) [Page 60]

Archiving Log (CO-OM-OPA) [Page 61]

Checks for Internal Orders (CO-OM-OPA) [Page 59]

Runtimes for Internal Orders (CO-OM-OPA) [Page 58]

How to Use Archiving

Create Archive Files [Ext.]

Call Archive Session Management [Ext.]

Other Archiving Objects

You can archive production orders in production planning and production control with the archiving object PP_ORDER. Choose $Logistics \rightarrow Production \rightarrow Production control$ then $Tools \rightarrow Archiving \rightarrow Orders$.

See also: Archiving Production Orders (PP-SFC) [Ext.]

You can archive funds commitment with the **FM_FUNRES** archiving object. In the Internal Orders menu choose $Environment \rightarrow Archiving \rightarrow Funds commitment$

See also: Earmarked Fund Archiving (FI-FM [Ext.]).

Archiving Orders with Transaction Data (CO-OM-OPA)

Archiving Orders with Transaction Data (CO-OM-OPA)

For internal orders, use the **CO_ORDER** archiving object to archive and delete all master and transaction data that fulfill specified conditions.

Selection Criteria

The following selection criteria apply to the CO_ORDER archiving object:

- Controlling area
- Order type
- Order number

An order can only be archived if:

- It meets the selection criteria
- It has one of the following order categories:
 - 01 Internal order (Controlling)
 - 02 Accrual order (Controlling)
 - 03 Model order (Controlling)
 - 04 CO Production order
 - 05 Production cost collectors, repetitive manufacturing
 - 06 QM orders
- · Its deletion indicator is set
- Its residence time 2 is expired

For more information on deletion indicators and residence times, see <u>Checks for Internal Orders</u> (CO-OM-OPA) [Page 59].

Displaying Individual Objects Using SAP AS

A business view for the archiving object CO_ORDER is delivered as standard. To display individual objects for the archiving object CO_ORDER using SAP AS [Ext.] you require an information structure that has been created based on the standard field catalog SAP_CO_ORDER001 delivered by SAP. The information structure must be activated and set up.

Recommendation

Use the information structure SAP CO ORDER001 delivered as standard.

For more information about information structures, see also <u>Using the Archive Information</u> <u>System [Ext.]</u>.

You can find further information about the archive information system in the SAP Library under Cross-Application Components \rightarrow CA Application Data Archiving \rightarrow CA Cross-Application Functions \rightarrow Introduction \rightarrow Archive Information System (SAP AS).

Starting the Read Program (CO-OM-PA)

Starting the Read Program (CO-OM-PA)

Archiving object CO_ORDER

- To call the Archive Management initial screen choose Environment → Archiving →
 Orders. Here you can display the master data list for orders to be archived by choosing
 Analyze and then Execute. From this list, you can go to the master data display, to a
 summary report, and a line item report.
- Some of the summary and line item reports in the information system can also read data from the archive. The following are examples of summary reports:
 - List: Cost elements by orders
 - Orders: Actual/Plan/Variance
 - Orders: Breakdown by partner
 - Orders: Breakdown by period
 - List: Orders

The following are examples of line item reports:

- · Orders: Actual line items
- Controlling documents: Actual costs

In the SARA transaction, you can go to the master data list and the reports from the information system by choosing *Analyze*.

• You can use the ODK logical database to write your own reports.

Run Times for Internal Orders (CO-OM-OPA)

Run Times for Internal Orders (CO-OM-OPA)

• The CO_ORDER archiving object

1,000 total orders in the AUFK, CDHDR, CDPOS, COBRA, COBRB, COSP, COSPD, COSS, COEP, COBK tables were archived in a test..

The test produced the following results:

Write archive: 8.5 minutes

Delete archive: 8 minutes

Size of database: approx. 5,052,000 bytes (uncompressed)

File size: 1.4 MB

The data is only intended as an example. The tests were conducted when the system was at its busiest.

It is hard to estimate runtimes and storage requirements for archiving Internal Orders data because the structures are so complex. Runtimes depend on the settings in Customizing and the functions used in the application component. If, for example, you have the classification active with many characteristics, this will have consequences for runtimes and storage requirements.

The CO_KABR archiving object

1,000 total settlement documents in the AUAK, AUAB, AUAO, AUAS, and AUAV tables and 200 entries in table AUAA and AUAI were archived in a test..

The test produced the following results:

Write archive: 5 minutes

Delete archive: 8 minutes

Size of database: approx. 1,063,000 bytes (uncompressed)

File size: 1.1 MB

Checks for Internal Orders (CO-OM-OPA)

Checks for Internal Orders (CO-OM-OPA)

Because the create archive program only selects orders that can be deleted, the criteria for deleting data is the same as for archiving data.

Internal orders have a deletion flag and a deletion indicator. Both are set by task functions.

· Setting and deleting the deletion flag

You activate or reset the deletion flag for an internal order in the master data maintenance. If you set the deletion flag, the system checks whether the order can be deleted. Normally, you can only set the deletion flag if the order balance is zero. The following are exceptions:

- Statistical orders
- Orders for which the settlement profile is set up so that the actual costs are not to be settled or do not require settlement.
- Setting the deletion indicator

Before you can set the deletion indicator, you need to set the delete flag. Residence time one must also have expired. You cannot reverse the deletion indicator once it is set.

You can set both the deletion flag and the deletion indicator in mass processing. In the *Internal Orders* menu, choose $Tools \rightarrow Archiving \rightarrow Orders$ and then *Preparation*.

This process only archives orders for which the deletion indicator is set and for which residence time two has expired.

Both the residence times are part of the order type. You can change them in the implementation guide for internal orders by choosing *Order Master Data* \rightarrow *Define Order Types*.

Authorizations for Internal Orders (CO-OM-OPA)

Authorizations for Internal Orders (CO-OM-OPA)

To archive internal orders you require the authorizations described in <u>User Authorization Checks</u> [Ext.]

To access the archive evaluation, you also need the authorizations for displaying the master data and, where appropriate, for the information system.

Archiving Log (CO-OM-OPA)

Archiving Log (CO-OM-OPA)

Definition

Information about the archiving files produced during archiving.

Structure

For each archive file, the log shows the number of objects archived and the number of tables entries archived in the tables involved. If no entries from a particular table were archived, that table does not appear at all in the log.

The standard log does not contain information on whether the data objects archived were deleted, as CO ORDER or CO KABR delete virtually all data.

If you set the *Log per order* indicator in the variant for the CO_ORDER archiving object, the log also includes the orders numbers and descriptions.

If you set the *Log per document* indicator in the variant for the CO_KABR archiving object, the standard log also shows all documents with their document numbers.

Controlling (CO) ■ SAP AG

Dependencies (CO-OM-OPA)

Dependencies (CO-OM-OPA)

You can archive internal orders independently of other archiving programs.

Settlement documents for internal orders are automatically archived when you archive using the CO_ORDER archiving object. However, the system does not check the residence time for the settlement documents, as it does not process settlement documents without orders.



If you want to ensure that settlement documents are stored in separate archive files, you should choose the residence times for internal orders and settlement documents so that the total of order residence time 1 and 2 is greater than the residence time for the settlement documents. You should also archive the settlement documents before archiving the internal orders.

See also:

The Network Graphic [Ext.]

Application Customizing (CO-OM-OPA)

Application Customizing (CO-OM-OPA)

Use

For information on the general settings you must enter to be able to execute archiving runs, see Customizing: Overview [Ext.]. You must also maintain the residence periods for the objects to be archived. As you cannot reload the archived internal orders, you should take the following safety precautions.

Archiving object CO_ORDER

Set the residence period, so that the deletion flag can only be set when no more changes should be made to the orders and archiving is only to occur when you no longer need the orders.

Archiving object CO_KABR

Note that during the selection of the residence period, you can no longer reverse a settlement if the settlement documents created have been deleted.

Activities

Go to the implementation guide for overhead cost orders and enter the residence periods for:

- Internal orders under *Order master data* → *Define order types*.
- Settlement documents under Actual postings → Settlement → Maintain settlement profile.

Archiving Activity-Based Costing (CO-OM-ABC)

Archiving Activity-Based Costing (CO-OM-ABC)

Definition

Transaction data with its respective master data is archived and deleted with archiving object CO PROCESS.

A restriction for business process groups is possible.

Use

You may carry out the archiving only when the business processes and their data (for postings as well as for analysis) are no longer needed.



Keep in mind that (fiscal) yearly comparison between archived data and data in online inventory reporting are no longer possible.

If all data in a business process (which have time related master data) is deleted, then (from the valid interval) the fiscal years cut out are those starting with the fiscal year indicated until the one shown in the *To* box (inclusive). Afterwards, the business process for the "To" fiscal year and all previous years are available neither as account assignment objects nor as planning objects.



The system will not set the number range status for the CO-Receipts back.

The reloading of data into the databank is not provided for. Carry out the archiving ONLY when you no longer need the data.

Selection criteria

The following selection criteria correspond to archiving object CO_PROCESS:

- Entry of the controlling area is required.
- Entering the "to" date for the fiscal year means that all data is archived up to that date.
- The entry of the business process group is optional. If no entry is made, all business processes of the entered controlling area are processed.

Reading Data

You can read the archived data through the infosystem reports. Choose *Infosystem* → *Report selection* to call up a report. Finally, choose function *Data source* and mark *Read from archive*. In screen *Select data source*, enter the archiving object CO_PROCESS and choose *archive selection*. In screen *Archive Management: Choose Files to Read* mark the desired report and choose *Continue*. You return to screen *Select data source*; choose *Continue* and then *Execute* to see your report.

You should avoid writing your own retrieval program.

Displaying individual objects through SAP AS

A business view is standard in the R/3 for archiving object CO_PROCESS. To view individual objects for archiving object CO_PROCESS over <u>SAP AS [Ext.]</u> you need an information

Archiving Activity-Based Costing (CO-OM-ABC)

structure that is created in the basic SAP standard field catalog SAP_CO_PROCESS1. The information structure must be active and present.

Recommendation

• use the standard delivery information structure SAP_CO_PROCESS1.

For more on information structures, go to Using the Archive Information System [Ext.].

More information on the Archive Information System can be found in the SAP Library under Cross-Application Components \rightarrow CA – Archiving Application Data \rightarrow CA – Cross-Application Functions \rightarrow Introduction to Data Archiving \rightarrow Archiving Information System (SAP AS).

Technical Data (CO-OM-ABC)

Technical Data (CO-OM-ABC)

Estimates of running times and memory requirements are not possible due to the complex structure of the archiving objects.

The length of the individual archive objects are found in the Data Dictionary. The number of clauses per segment found in your system depends on the functional level of use in the Activity-Based Costing.



If specific functions are not used, then specific tables for the business process will remain empty. Likewise, the data volume for individual functions will be widely different.

Business processes are perhaps frequently themselves different from each other in relation to their data volume.

Dependencies (CO-OM-ABC)

Dependencies (CO-OM-ABC)

The archiving in Activity-Based Costing can carry on its work independent of other archiving programs.

See also:

The Network Graphic [Ext.].

Log (CO-OM-ABC)

Log (CO-OM-ABC)

When you set the indicator *Log per Business Process* in the variant to the archive object CO_PROCESS, then all business processes will carry your short text.

The log provides no information on whether the archived business process was deleted or not since CO_PROCESS actually deletes all archived data.

Archiving Material Cost Estimates

Use

Material cost estimates that you no longer need can be removed from the database and archived.

Integration

You can archive cost estimates independently of data in other archiving sessions.

Prerequisites

You define the technical data for archiving cost estimates (such as the name, path, and size of the archive file) in Archive Management under *Customizing*. For additional information, see:

- Customizing [Ext.]
- General Customizing [Ext.]
- Archiving-Object-Specific Customizing [Ext.]

Archiving material cost estimates does not require any additional settings in Customizing.

A material cost estimate to be archived cannot be marked, and it cannot be the currently released cost estimate. That is, it cannot be linked to the material master record. This ensures data consistency. You can only archive cost estimates that have a *Valid from* date in the past. This means you can archive cost estimates at any time during the year.

To archive material cost estimates, you need a general authorization for archiving as well as authorization for the K_KEKO archiving object with activity 06. For more information, refer to Authorization Check [Ext.].

Depending on the system environment and the amount of data, you can archive approximately 13,000 cost estimates per hour. A cost estimate requires approximately 5,000 bytes, depending on the amount of data.

Activities

You can call these functions from the menu as follows: $Accounting \rightarrow Controlling \rightarrow Product Cost$ $Controlling \rightarrow Product Cost Planning \rightarrow Tools \rightarrow Archiving \rightarrow Material Cost Estimate.$

The screen *Archive Management: Initial Screen* appears. In the *Object name* field, the archiving object <u>CO_COPC [Page 71]</u> is shown as a default. If you require further information, see <u>Archive Management [Ext.].</u>

The following table provides an overview of the functions available from this initial screen:

Function	Use this function to:
Archive	Generate archive files (archive material cost estimates)
■ Delete	Schedule and start the deletion program
Restore	Schedule and start the reload of an archive
## Analyze	Schedule and start an analysis program

Controlling (CO) ■ SAP AG

Archiving Material Cost Estimates

∠ Index	Construct or remove an index for existing archive files
A Management	View and change management information for archiving runs
語	Call up a <u>network graphic [Ext.]</u> to view the dependencies between archiving objects
Customizing	Check the Customizing settings
Job overview	View a list of all archiving jobs. You can then:
	Display the log for a specified job (Job log)
	Branch to detailed information for a specified job (4)
	Release a job (Release)
	Delete a job from the database ()
	Cancel an active job (
DB tables	List all archiving objects that are part of a table [Ext.]
Information system	Access the central Archive Information System (SAP AS) [Ext.]

See also:

- Introduction to Data Archiving [Ext.]
- Archive Selection [Ext.] and Archive Management [Ext.]
- The Archiving Procedure [Ext.] and Archiving Procedure [Ext.]
- Basic Archiving Terms [Ext.] and Background Information [Ext.]
- Archiving Features [Ext.]

Archiving Object CO_COPC

Archiving Object CO_COPC

Definition

Archiving object for a material cost estimate

Use

The archiving object CO_COPC contains the following objects (provided they were saved for the cost estimate):

- · General data for the cost estimate
- Cost component split
- Itemization and log



The itemization and the log only exist if they were saved when the object was costed. For more information, see <u>Saving Material Cost Estimates [Ext.]</u>.

When you **archive** material cost estimates, these objects are transferred from the database to the archive.

When you **reload** a material cost estimate from the archive back into the database, the above objects are transferred (except for the cost element itemization). The standard functions for analyzing a material cost estimate are available.

For more information, see:

- Analyzing the Results [Ext.]
- Archiving Material Cost Estimates [Page 69]
- Archiving Material Cost Estimates [Page 72]

See also:

The Archiving Object [Ext.]

Sample Data Description Used by the FI Document [Ext.]

The Data Object [Ext.]

Archiving Material Cost Estimates

Archiving Material Cost Estimates

Prerequisites

You are in the initial screen for the archiving of material cost estimates. You access this screen by choosing $Accounting \rightarrow Controlling \rightarrow Product Cost Controlling \rightarrow Product Cost Planning \rightarrow Environment \rightarrow Archiving \rightarrow Material Cost Estimate.$



To ensure consistency of your data, there must not be any link to the material master. The material cost estimate to be archived, therefore, must not be either marked or the one currently released. You can control the remaining check criterial when you define the variant.

Since you can only archive cost estimates whose *Valid from* date is in the past, archiving can be carried out at any time during the year.

Procedure

Creating Archive Files

- 1. Choose Archive.
- 2. Enter an existing variant or create a new one.

The variant enables you to select the cost estimates to be archived.

- a. If you want to use an existing variant, enter it in the *Variant* field. To check the settings of the variant, choose Amintain.
- b. To create a new variant, leave the *Variant* field blank and choose **A** *Maintain*.
 - Enter a name for the variant and choose Create. Enter the criteria to restrict the selection to those cost estimates to be archived, as follows:
 - Company code, plant, material number, costing variant, costing version, validity period
 - Type of material cost estimate (automatic and/or additive, with and/or without quantity structure)
 - Choose **Enter**. Enter a short text in the **Description** field.

If the variant is only to be processed in the background, set the *Only for background* processing flag.

- c. Choose 🖽 and then 🗘.
- 3. To define the start of the archiving session, choose

 Start date.

You can, for example, define that the archiving session is to be executed:

- Immediately
- Once a different job has finished processing or when a certain event occurs
- Periodically

Archiving Material Cost Estimates

For more information, refer to <u>Maintenance of the Start Date and Spool Parameters [Ext.]</u> and Maintaining the Start Date [Ext.].

4. To define the background print parameters, choose \$\bigsig \text{Spool params}\$.

For more information, refer to <u>Maintenance of the Start Date and Spool Parameters [Ext.]</u> and Maintaining the Spool Parameters [Ext.].

- 5. Choose 🕒
- 6. Choose Job overview.

In this case the job names are:

- ARCHIVE_CO_COPC_DEL (delete from the database)
- ARCHIVE_CO_COPC_WRI (write to archive)

For further information, see Creating Archive Files [Ext.].

To Delete an Archive

1. Choose Delete.

The screen Archive Management: Execute Deletion Program appears.

- 2. Enter the required data:
 - a. Archive selection (The Archive Selection [Ext.])
 - b. Start date (Maintaining the Start Date [Ext.])
 - c. Spool parameters (Maintaining the Spool Parameters [Ext.])
- 3. If you only want to simulate the deletion of the costing data, select the *Test run* indicator.
- 4. Choose .

For more information, see <u>Deleting Archived Data from the Database [Ext.]</u>.

To Reload an Archive

- 1. Choose PReload.
- 2. Enter an existing variant in the Variant field, or create a new one.

You use the variant to select the cost estimates that you want to reload.

- a. To create your own variant, choose 🖺 Maintain.
- b. Enter a description for the variant and choose Create.
- c. You can also restrict selection to just the cost estimates that you want to reload by entering the necessary criteria.
- 3. To select the required archive, choose ** Archive selection.
- 4. To define the start of the archiving session, choose 🖾 Start date.
- 5. To define the background print parameters, choose \$\frac{1}{4}\$ Spool params.

Archiving Material Cost Estimates

- 6. Choose .
- 7. Choose Job overview.

In this case, the job name is ARCHIVE CO COPC REL.

For more information, see:

- Reload Archive [Ext.]
- Accessing Archived Data [Ext.]

To Display Material Cost Estimates from the Archive

1. Choose Analyze.

The screen Archive Management: Execute Analysis Program appears.

2. Choose .

The screen Archiving: Display Multiple Cost Estimates in Archive appears.

- 3. In the group box *Selection criteria for cost estimates to be displayed*, restrict the cost estimates by entering the appropriate selection criteria (such as the company code, plant, material number, and costing variant).
- 4. Choose .

The screen Archive Management: Choose Files to Read appears, listing the archiving sessions for the <u>archiving object material cost estimate (CO_COPC) [Page 71]</u> containing the required data.

5. Select an archiving session and choose ♥.

The material cost estimates are displayed. For more information, see <u>Analyzing the Results [Ext.]</u>.

For more information, see Accessing Archived Data [Ext.].

To Construct or Remove an Index

Choose L Index.

The dialog box Construct/remove index appears.

- a. To construct an index, choose ** Construct index. For more information, see Creating Indexes [Ext.].
- b. To remove an index, choose Remove index. For more information, see Removing Indexes [Ext.].

To Manage an Archive

Choose A Management.

The screen Archive Management: Overview of Archiving Runs appears.

This lists all archiving runs for archiving object CO_COPC.

If you require further information, see <u>Call Archive Session Management [Ext.]</u>.

Archiving Base Planning Objects

Use

You can archive the costing results of base planning objects and delete them from the database.

Integration

Base planning objects can be archived independently of other archiving programs.

Prerequisites

There are no specific Customizing settings you need to make in order to archive base planning objects. You can, however, set general values for archiving, such as the name, the path, and the size of the archive file in Customizing.

For additional information, see:

- Customizing [Ext.]
- General Customizing [Ext.]
- Archiving-Object-Specific Customizing [Ext.]

Depending on the amount of data, each cost estimate (excluding costing items) requires approximately 2,200 bytes of storage space. Each item requires an additional 750 bytes. Long texts require additional space, depending on the length of the text.

To archive base planning objects, you need general authorization for archiving and authorization for the CO_BASEOBJ archiving object. For more information, see User Authorization Checks [Ext.].

Activities

You can call these functions from the menu as follows: Accounting → Controlling ### Product Cost Controlling ### Product Cost Planning ### Environment ### Archiving ### Base Planning Objects.

The screen *Archive Management: Initial Screen* appears. In the *Object name* field, the archiving object <u>CO_BASEOBJ [Page 77]</u> is shown as a default entry. If you require further information, see Archive Management [Ext.].

The following table provides an overview of the functions available from this initial screen:

Function	Use this function to:
Archive	Generate archive files (archive material cost estimates)
■ Delete	Schedule and start the deletion program
Analyze	Schedule and start an analysis program
2 Management	View and change management information for archiving runs
智	Call up a network graphic [Ext.] to view the dependencies between archiving objects

Archiving Base Planning Objects

Customizing	Check the Customizing settings
Job overview	View a list of all archiving jobs. You can then:
	Display the log for a specified job (Job log)
	Branch to detailed information for a specified job (4)
	Release a job (Release)
	Delete a job from the database ()
	Cancel an active job (
DB tables	List all archiving objects that are part of a table [Ext.]
Information system	Access the central Archive Information System (SAP AS) [Ext.]

See also:

- Introduction to Data Archiving [Ext.]
- Archive Selection [Ext.] and Archive Management [Ext.]
- The Archiving Procedure [Ext.] and Archiving Procedure [Ext.]
- Basic Archiving Terms [Ext.] and Background Information [Ext.]
- Archiving Features [Ext.]

Archiving Object CO_BASEOBJ

Archiving Object CO_BASEOBJ

Definition

Archiving object for a base planning object.

Structure

The archiving object for base planning objects (*CO_BASEOBJ*) contains the following objects (provided they were generated):

- Master data
- Cost estimate header
- Costing items
- All texts for these objects
 For more information, see <u>Reference and Simulation Costing [Ext.]</u>.

See also:

- The Archiving Object [Ext.]
- Sample Data Description Used by the FI Document [Ext.]
- The Data Object [Ext.]

Creating Archive Files for Base Planning Objects

Creating Archive Files for Base Planning Objects

Prerequisites

You cannot archive a base planning object until 30 days after the last change. You can see the date of the last change in the *History* of the individual cost estimate.

Before a base planning object can be archived, the *Deletion flag* indicator in the base planning object master data must be selected.



Before you archive a base planning object, you must check whether it is being used anywhere. To do this, you can use the where-used list for base planning objects [Ext.] report in the CO-PC Information System.

Procedure

To Create Archive Files

- 1. Choose Archive.
- 2. Enter an existing variant or create a new one.

The variant indicates:

- The base planning objects that are to be archived
- Whether the function is to be simulated (test run) or performed as an update run
- Whether the data should only be archived, or both archived and deleted
- a. To use an existing variant, enter it in the *Variant* field. To check the settings of the variant, choose Maintain.
- b. To create a new variant, leave the *Variant* field blank and choose **A** *Maintain*.
 - i. Enter a description for the variant and choose 🚨 Create.
 - ii. You can also restrict selection to just the cost estimates that you want to archive by entering the necessary criteria (controlling area and names of base planning objects).
 - iii. Specify whether a test run should be executed first, whether the data should be archived only, or whether the data should be both archived and deleted from the database.
 - iv. Choose V Continue.
 - v. Enter a short text in the *Description* field.
 - vi. If this variant is only to be processed in the background, select *Only for background processing*.
 - vii. To return to the *Archive Management: Create Archive Files* screen, choose **!** and then **!**.
- 3. To define the start date for the archiving session, choose 🛂 Start date.

Creating Archive Files for Base Planning Objects

You can, for example, define that the archiving session is to be executed:

- Immediately
- Once a different job has finished processing or when a certain event occurs
- Periodically

For more information, refer to <u>Maintenance of the Start Date and Spool Parameters [Ext.]</u> and Maintaining the Start Date [Ext.].

- 4. To save your entries, choose ...
- 5. To define the print parameters, choose \$\bigsilon\$ Spool params.

For more information, refer to <u>Maintenance of the Start Date and Spool Parameters [Ext.]</u> and Maintaining the Spool Parameters [Ext.].

6. Choose .

For further information, see Creating Archive Files [Ext.].

To Delete an Archive

1. Choose **Delete**.

The screen Archive Management: Execute Deletion Program appears.

- 3. Enter the required data:
 - d. Archive selection (The Archive Selection [Ext.])
 - e. Start date (Maintaining the Start Date [Ext.])
 - f. Spool parameters (Maintaining the Spool Parameters [Ext.])
- 5. If you only want to simulate the deletion of the base planning objects, select the *Test run* indicator.
- 6. Choose .

For more information, see <u>Deleting Archived Data from the Database [Ext.]</u>.

To Analyze an Archive

6. Choose Analyze.

The screen Archive Management: Execute Analysis Program appears.

7. Choose .

The screen Archive Management: Choose Files to Read appears.

3. Select an archive and choose ♥.

For more information, see Accessing Archived Data [Ext.].

To Manage an Archive

Choose A Management.

The screen Archive Management: Overview of Archiving Runs appears.

Creating Archive Files for Base Planning Objects

This lists all archiving runs for <u>archiving object CO_BASEOBJ [Page 77]</u>. If you require further information, see <u>Call Archive Session Management [Ext.]</u>.

Archiving in Cost Object Controlling (CO-PC-OBJ)

Archiving in Cost Object Controlling (CO-PC-OBJ)

Use

This section explains how to archive the following:

General cost objects together with their transaction data

General cost objects are used in the Costs for Intangible Goods and Services component.

Cost object hierarchies with their cost object nodes, together with their transaction data

Cost object hierarchies are used in the *Product Cost by Period* component.

You use the archiving object CO KSTRG to archive these business objects.



General cost objects and cost object nodes, including the highest cost object node of a cost object hierarchy designating the cost object hierarchy, are represented technically by cost object IDs.

This section will therefore use the term **cost object ID** to refer to both general cost objects and cost object nodes.

Features

You archive cost object IDs and their transaction data using the CO_KSTRG archiving object. You use the following programs to archive data:

Create archive

Copies the specified cost object IDs and their transaction data from the database into archive files, and then deletes this data from the database.

Manage archive

Displays general information on the cost objects that are being archived.

Evaluate archive

Displays a list of the cost object IDs processed in archiving runs.

You access the archiving programs for general cost objects by choosing $Accounting \rightarrow Controlling \rightarrow Cost Object Controlling \rightarrow Costs for Intangible Goods and Services \rightarrow Environment \rightarrow Archiving.$

You access the archiving programs for cost object hierarchies by choosing $Accounting \rightarrow Controlling \rightarrow Cost Object Controlling \rightarrow Product Cost by Period \rightarrow Environment \rightarrow Archiving.$

Technical Data

Technical Data

Object Definition

You archive cost object IDs using the CO_KSTRG archiving object. It contains the following objects (if they exist for the cost object):

- Cost object master record
- Texts for master record
- Settlement rule
- Totals records for the transaction data
- Line items for the transaction data

For the cost object hierarchy, the archiving object also contains:

- All cost objects below the specified cost object
- Relationships between the cost objects

Single objects (such as materials, run schedule headers, and process orders) assigned to the cost object hierarchy are **not** archived.

Archiving Dependencies

You can archive cost object IDs independently of other archiving programs.

Residence Time/Retention Period

There is no defined retention period for cost object IDs.

Presettings

You do not need to make any Customizing settings in order to archive cost object IDs.

You can, however, make general settings in Customizing for the archiving run, such as the name, the path, and the maximum size of the archive file.

Requirements for Archiving

To be able to archive a cost object, you must set both the deletion flag and the deletion indicator in the master data.

To set the deletion flag for a general cost object, choose Accounting → Controlling → Cost Object Controlling → Costs for Intangible Goods and Services → Environment → Archiving → Cost objects. Choose Preparation and select a variant. Choose Maintain. If applicable, confirm the screen Variant Assignment. The Maintain Variant: <report name> <variant name> screen appears. Set the relevant indicator and save your data.

Technical Data

You can only set the deletion flag if the actual cost balance of the general cost object is zero.
 If the balance is not zero, you must settle the costs to a profitability segment or a general ledger account before you can archive the general cost object.

You must set the deletion flag before you can set the deletion indicator.

- To set the deletion flag for a cost object in a cost object hierarchy, choose Accounting → Controlling → Cost Object Controlling → Costs for Intangible Goods and Services → Environment → Archiving → Cost Object Node. Choose Preparation and select a variant. Choose Maintain. If applicable, confirm the screen Variant Assignment. The Maintain Variant: <report name> <variant name> screen appears. Set the relevant indicator and save your data.
- You can only set the deletion flag if the actual cost balance for all the cost object nodes in the cost object hierarchy is zero. If the balance is not zero, you must:
 - Settle the actual costs to a price difference account or
 - Distribute the actual costs to the orders that are assigned to the cost object hierarchy

To archive, you must have assigned all the single objects (such as materials and run schedule headers) to another cost object hierarchy.

If you have calculated variances for the cost object hierarchy, then you must first settle these variances to a profitability segment.

You must set the deletion flag before you can set the deletion indicator.

Archiving Authorizations

To archive cost object IDs, you need general authorization for archiving and authorization for the K_CKPH archiving object.

See also:

Creating Archive Files for Cost Objects (CO-PC-OBJ) [Page 84]

Creating Archive Files for Cost Objects (CO-PC-OBJ)

Creating Archive Files for Cost Objects (CO-PC-OBJ)

To create archive files for general cost objects:

 Choose Accounting → Controlling → Cost Object Controlling → Costs for Intangible Goods and Services → Environment → Archiving. The screen Archive Management: Initial Screen appears. Choose Cost Object and then Archive. Enter a variant and choose Maintain. If applicable, confirm the screen Variant Assignment. Enter the necessary data, choose Archive and save the data.

To archive a cost object hierarchy, choose $Accounting \rightarrow Controlling \rightarrow Cost \ Object \ Controlling \rightarrow Product \ Cost \ by \ Period \rightarrow Environment \rightarrow Archive \ and \ proceed \ as \ described \ above.$

2. Enter a variant.

The variant contains selection criteria the system uses to determine which cost object ID to archive. The criteria are the controlling area, the cost object category, and the name of the cost object ID. You can also set the following indicators in the variant:

Test run

The system only simulates archiving. No archive file is produced. Data is archived and deleted from the database.

Archiving

The data is only archived; it is not deleted from the database.

Archiving and Deleting

Data is archived and deleted from the database.

To display a list of existing variants, choose Possible entries.

To create your own variant, choose *Maintain*.

- 3. Define the start date.
- 4. Define the spool parameters.
- 5. Select the menu options $Edit \rightarrow Create job$.
- 6. Choose Environment \rightarrow Job overview.

The system displays the status of the jobs.

In this case the job names are:

- ARCHIVE_CO_KSTRG_DEL (deleting from the data base)
- ARCHIVE CO KSTRG WRI (writing to the archive)
- 7. Place the cursor on the relevant job name and choose Job log.

Archiving Actual Costing/Material Ledger Period Data (CO-PC-ACT)

Archiving Actual Costing/Material Ledger Period Data (CO-PC-ACT)

Definition

The archiving object CO_ML_DAT archives the period data for the *Actual Costing/Material Ledger* component.

Use

Period data is transaction data that is used in single-level or multilevel material price determination. Data for closed periods that is no longer needed for reporting purposes can be archived, which deletes the data from the database.

Structure

Period data consists of the following:

- Material ledger period records
- CKMLPP
- CKMLCR
- Period records for activity types
- CKMLLACR
- Quantity structure (actual/plan/target)
- CKMLMV003
- CKMLMV004
- Summarization records from documents
- MLCD



Before archiving, you should make the Customizing settings for the archiving object CO_ML_DAT. This can be done directly from the application menu *Actual Costing/Material Ledger*.

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

Archiving is only useful for the following data:

- Data from closed periods of the past
- Data which is not used for material price determination or reporting purposes

You can control the selection of archiving data through the definition of variants.



You can not archive period data that originates from the following:

- The current period
- The previous period
- The period before the previous period
- The last period of the previous year



Material ledger period records for price determination control 3 can only be archived if a closing entry has been made for the material in the period.

Variant for Archiving (CO-PC-ACT)

Variant for Archiving (CO-PC-ACT)

Use

The variant contains criteria that the system uses to select the period data. These criteria are:

- Posting year / posting period
- Valuation area

You can also select more-detailed criteria:

- Material
- Valuation type

The following detailed criteria are available for use with valuated sales order stocks:

- Sales and distribution document
- Sales document item
- WBS element

The variant also controls whether processing is a test run or whether an archive file is actually generated.



When you reload period data from the database, you can use the usual reporting functions to analyze it (such as *material price analysis*).

Variant for Reloading (CO-PC-ACT)

Variant for Reloading (CO-PC-ACT)

Use

The variant also controls whether the reload is a test run or whether an archive file is actually reloaded.

Dependencies (CO-PC-ACT)

Dependencies (CO-PC-ACT)

Material ledger data can be archived independently of other archiving programs.

If you convert to the Euro, data that has already been archived is not included. Once the current database has been converted to the Euro, it is no longer possible to reload datasets that were archived before the conversion.

Archiving CO Material Ledger Documents (CO-PC-ACT)

Archiving CO Material Ledger Documents (CO-PC-ACT)

Definition

The archiving object CO_ML_BEL archives the material ledger documents/price change documents of the *Actual Costing/Material Ledger* component.

Use

Material ledger documents are data that is recorded during every valuation-relevant business transaction. You can delete documents for closed periods that are no longer required for material price determination and reporting purposes by archiving them.

Structure

The following types of material ledger documents are differentiated by transaction type:

- CL Material ledger closing entries
- UP Material ledger update
- PC Price changes
- ST Single-level price determination
- MS Multilevel price determination
- RE Material ledger data repairs

The following tables contain data that can appear in the material ledger documents:

Material ledger document: Header **MLHD** MLIT Material ledger document: Items **MLPP** Material ledger document: Posting periods and quantities **MLPPF** Material ledger document: Field groups (posting periods and quantities) **MLCR** Material ledger document: Currencies and values **MLCRF** Material ledger document: Field groups (currencies and values) **MLCRP** Material ledger document: Price change (currencies, prices) **MLMST** Material ledger document: Costing run header data

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

You should determine whether you are legally required to archive particular documents. Since such data is relevant to valuation, you should contact your accounting department.

Material ledger documents can only be archived when material price determination and the closing entry have been performed for the corresponding periods. The following items cannot be archived:

- The current period
- The previous period

You specify the selection conditions for the documents that you want to archive in the definition of the variant.



Note that evaluations on the basis of documents do not include the archived documents. You should archive documents in accordance with your information requirements.

Variant for Archiving (CO-PC-ACT)

Variant for Archiving (CO-PC-ACT)

Use

The variant contains criteria that the system uses to select documents. These criteria are:

- Valuation area
- Document date
- Material ledger transaction type
- Document number
- Year

The variant also controls whether processing is a test run or whether an archive file is actually generated.



When you reload documents from the database, you can use the usual reporting functions to analyze them again (such as *material price analysis*).

Variant for Reloading (CO-PC-ACT)

Variant for Reloading (CO-PC-ACT)

Use

The variant controls whether the program for reloading the documents is executed in a test run or actual run.

Dependencies (CO-PC-ACT)

Dependencies (CO-PC-ACT)

Before you use the archiving object CO_ML_BEL, make sure that the data is no longer necessary for the following:

- For material price determination
- For reporting purposes

Documents can be archived independently of other archiving programs.

If you convert to the Euro, data that has already been archived is not included. Once the current database has been converted to the Euro, it is no longer possible to reload datasets that were archived before the Euro-conversion.

Archiving Material Ledger Indexes (CO-PC-ACT)

Archiving Material Ledger Indexes (CO-PC-ACT)

Definition

The archiving object CO_ML_IDX archives the material ledger indexes for the *Actual Costing/Material Ledger* component.

Use

The archiving object contains entries that allow you to analyze the transactions for a material and display documents.

Structure

The contents of table CKMI1 are archived.

Integration

Material ledger indexes are updated even if you use *Materials Management* without *Actual Costing/Material Ledger*.

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)



You should archive indexes **as little as possible**, as they are used for repairs of faulty data in inventory management.

Variant for Archiving (CO-PC-ACT)

Variant for Archiving (CO-PC-ACT)

Use

The variant contains the following criteria that the system uses to select material ledger indexes:

- Posting year
- Posting period

All material ledger indexes are archived up to and including the period that you entered. The archiving process includes all valuation areas in the client.

The variant also controls whether the archiving run is a test run or whether an archive file is actually generated.



If you reload material ledger indexes from the archive, the normal reporting functions (for example, transaction history for a material) are available again.

Variant for Reloading (CO-PC-ACT)

Variant for Reloading (CO-PC-ACT)

Use

The variant also controls whether the reload is a test run or whether an archive file is actually reloaded.

Dependencies (CO-PC-ACT)

Dependencies (CO-PC-ACT)

Material ledger indexes (archiving object CO_ML_IDX) can be archived independently of other archiving programs.

If you convert to the Euro, data that has already been archived is not included. After conversion to the Euro, it is no longer possible to reload datasets that were archived before the Euro-conversion.

Archiving Data from Actual Cost Component Splits (CO-PC-ACT)

Archiving Data from Actual Cost Component Splits (CO-PC-ACT)

Definition

The archiving object CO_ML_SPL archives data from actual cost component splits in the *Actual Costing/Material Ledger* component.

Use

Data for actual cost component splits include all information on the split:

- · Prices with cost component split
- Information on the material at the level of procurement alternatives or consumption alternatives

Data for closed periods that is no longer needed for material price determination or reporting purposes can be archived. Archiving the data deletes it from the database.

Structure

Data on actual cost component splits consists of:

Cost component split data for material ledger data

CKMLKEPH

Cost component split data for prices

CKMLPRKEPH

Cost component split data for quantity information

CKMLPRKEKO

Material ledger header data (CKMLHD) and material ledger price data (CKMLPR) are archived when the material master is reorganized (archiving object MM_MATNR).

Before archiving, you should make the Customizing settings for the archiving object CO_ML_DAT. This can be done directly from the application menu of the component *Actual Costing/Material Ledger*.

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

Archiving Time Frame and Archiving Criteria (CO-PC-ACT)

Archiving is only useful for the following data:

- Data from closed periods of the past
- Data that is not used for reporting purposes

You can control the selection of archiving data through the definition of variants.



You can not archive actual cost component split data that originates from the following:

- The current period
- The previous period
- The period before the previous period
- The last period of the previous year

Variant for Archiving (CO-PC-ACT)

Variant for Archiving (CO-PC-ACT)

Use

The variant contains the following criteria with which the system selects the actual cost component split data.

- Posting year / posting period
- Valuation area

You can also select the following more specific criteria:

- Material
- Valuation type

If you are using valuated special stocks, the following more specific criteria are also possible:

- Sales document item
- Item in sales document
- WBS element

The variant also controls whether the archiving run is a test run or whether an archive file is actually generated.

If you reload actual cost component split data from the archive, the reporting functions of the actual cost component split are available.

Variant for Reloading (CO-PC-ACT)

Variant for Reloading (CO-PC-ACT)

Use

The variant also controls whether the reload is a test run or whether an archive file is actually reloaded.

Dependencies (CO-PC-ACT)

Dependencies (CO-PC-ACT)

When archiving material ledger data, you can also archive actual cost component split data. You have the possibility of archiving actual cost component split data independent of material ledger data.

If you convert to the Euro, data that has already been archived is not included. Once the current database has been converted to the Euro, it is no longer possible to reload datasets that were archived before the conversion.

Archiving Transaction Data (CO-PA)

Archiving Transaction Data (CO-PA)

Definition

When you generate an operating concern, the system automatically generates two archiving objects (COPA1_xxxx for **costing-based Profitability Analysis** and COPA2_xxxx for **account-based Profitability Analysis**, where xxxx is the name of the operating concern) and the corresponding write, delete, and reload programs.

Structure

You can archive the following data in costing-based Profitability Analysis (CO-PA):

- Actual line items Table(s) CE1xxxx
- Plan line items
 Table(s) CE2xxxx
- Segment level Table(s) CE3xxxx
- Realtime distribution (by transaction)
 Table CEALE01

Table CEAL01 can only be archived if you have distributed Profitability Analysis (ALE) active **and** are transferring data in realtime (by transaction) between systems. Table CEALE01 in the target system contains the references to the line items in the sender system.



You will find background information to the tables of costing-based profitability analysis in the section <u>Database Tables for CO-PA Transaction Data [Ext.]</u>.

In **account-based** Profitability Analysis, you can archive your Controlling line items (tables COEP, COEJ, and COBK) and summary record tables (tables COSS, COSP, and COKA).

You can archive your data using a number of selection parameters.

Integration

Archive Information System (SAP AS)

As the profitability analysis archiving objects depend on the operating concern (generated by the customer), and must also be generated, no appropriate information structures or field catalogs can be delivered as standard with the Archive Information System (SAP AS). You must create these yourself. An experienced system administrator should carry this out, as it requires detailed knowledge of the structure of archiving objects and also extensive ABAP knowledge. For more information on creating and changing field catalogs, see Field Catalogs [Ext.].



Archiving Transaction Data (CO-PA)

To display the archived data from table CE3xxxx you can, and should, use the information system in Profitability Analysis. Here you can define profitability reports to access archived data. When defining a profitability report (see Defining Profitability Reports [Ext.]), activate on the tab page Options the selection Use archived data also.

Creating Archive Files (CO-PA)

Creating Archive Files (CO-PA)

When you generate an operating concern, the system automatically generates two archiving objects (COPA1_xxxx for **costing-based Profitability Analysis** and COPA_xxxx for **account-based Profitability Analysis**, where xxxx is the name of the operating concern) and the corresponding write, delete, and reload programs.

The system archives the tables contained in Archiving Transaction Data (CO-PA) [Page 105].

Prerequisites

Before you archive data, be sure to update any reports or summarization levels that use that data.

Procedure

To archive your transaction data, proceed as follows:

- 1. On the initial screen of the archiving transaction, choose *Archive*. The system displays the *Archive Administration*: *Create Archive Files* screen.
- 2. Select the variant with which you want to execute the reload program. If no variants exist, you can create one by choosing the pushbutton *Maintain*. For more information about creating a variant, see the online documentation for the *Variant* field.

You can enter the following selection parameters for your variant:

- Fiscal year
- Period

From release 3.0 there are no limitations for archiving time intervals of less than one fiscal year in costing-based CO-PA.

If, however, you created your operating concern in release 2.2, archiving options will depend on the operating concern's blocking factor:

- For operating concerns with a blocking factor greater than 1, you can only archive time intervals of less than one fiscal year if you are archiving actual line items.
- For operating concerns with a blocking factor of 1, there are no limitations for archiving time intervals of less than one fiscal year.
- Plan/actual indicator
- Version
- Record type (only in costing-based CO-PA)

If you want the system to create an archive, select the *Create archive* field. Otherwise the system runs the program in the **test mode**. That means that it only selects the data and generates a log.

If you want to run the deletion program in the test mode, select the *Deletion program in test mode* field. This option is only relevant if the deletion program is started automatically (this can be configured under $Goto \rightarrow Customizing \rightarrow Technical settings)$.

If you only want to archive line items, select the *Archive line items only* field. In such cases, the system does not archive the segment level (the summarization records of the line items).

Creating Archive Files (CO-PA)



It does not make sense to archive the **segment level** for the current year, since the segment level is still being updated.

Similarly, you should only archive **line items** for previous periods, since these can still be posted in the current period.

- 3. Choose Start date to define when the program should run.
- 4. Choose *Spool parameters* to specify how the archiving log should be managed. If you want the archiving program to start the delete program automatically, these spool parameters apply for the log for the delete program as well.

For further details about spool management, see the section <u>Printing [Ext.]</u> in the documentation *Introduction to the R/3 System*.

- 5. Under *Environment* → *Customizing* → *Technical settings*, you can make other settings, such as
 - The size of an archive file
 - The logical file name
 - The connection to ArchiveLink
 - Automatic execution of the deletion program
- 6. Choose Execute to create the job with the settings you have made.

By choosing $Goto \rightarrow Job \ overview$, you can display a list of all the jobs that exist for this archiving program.

For more information about background jobs, see the documentation on the *Computing Center Management System*.



If the job is interrupted due to a power outage or similar, you can simply restart it.

Deleting Data (CO-PA)

Deleting Data (CO-PA)

Use

If you do not want the deletion program to be linked automatically to the archiving of your data records (see <u>Creating Archive Files (CO-PA) [Page 107]</u>), you can execute the deletion program in a separate step.

Procedure

To execute the deletion program, proceed as follows:

- 1. On the initial screen of the archiving transaction, choose *Delete*. The system displays the *Archive Administration: Deletion Program* screen.
- 2. Note that predefined variants exist for both the test and production runs. You can maintain these variants by choosing *Environment* → *Customizing*.
- 3. If you want to run the deletion program in the test mode, select the *Deletion program in test mode* field. In this case the system uses the variant that was defined in Customizing (*Environment* → *Customizing*) in the *Test run variant* field under Settings for the deletion program. In the test mode, no table entries are deleted. Otherwise the system uses the variant that was entered under *Prod. run variant*.
- 4. Choose Archive selection to determine which data should be deleted.
- 5. Choose Start date to determine when the job should run.
- 6. Choose Spool parameters to determine how the deletion log should be managed.
 - For further details about spool management, see the section <u>Printing [Ext.]</u> in the documentation *Introduction to the R/3 System*. You can find this documentation in the R/3 Library under *Working With the R/3 System*.
- 7. Choose *Create job* to create the job with the settings you have made.

By choosing $Goto \rightarrow Job\ overview$, you can display a list of all the jobs that exist for this archiving program.

For more information about background jobs, see the documentation *Computer Center Management System*.

If the job is interrupted due to a power outage or similar, you can simply restart it.

Reloading Archived Data (CO-PA)

Reloading Archived Data (CO-PA)

Usage

You can reload archive files back into the database. If you do so, however, SAP cannot ensure that your data will be entirely consistent.

Ensure that reports can be started directly on archived data without having to reload the data beforehand.

Requirements

You need to make sure no postings have been made since the last archiving transaction in the time interval that you want to reload. Inconsistencies between the line items and the segment level would otherwise arise as a consequence.

Furthermore, you may not execute the function *Reload archive* if the current numbers of the number range objects involved (COPA_IST and COPA_PLAN for **costing-based Profitability Analysis** and RK_BELEG for **account-based Profitability Analysis**) have been reset in the meantime.

Procedure

To reload an archive file, proceed as follows:

- 1. On the initial screen of the archiving transaction, choose *Reload*. The system displays the *Archive Management: Reload Archive* screen.
- 2. Choose *Possible entries* (F4) to select the variant with which you want to execute the reload program. If no variants exist, you can create one by choosing *Maintain*. (Instructions for this procedure are to be found in the field help (F1 help) for the field *Variant*).

If you wish to run the program in the test mode, select the *Test run* field. This means that no data will be inserted into the tables.

- 3. To determine which data should be reloaded, choose Archive selection.
- 4. To determine when the job should run, choose Start date.
- 5. To determine how the reload log should be managed, choose Spool parameters.

For further details about spool management, see the section <u>Printing from the SAP System [Ext.]</u> in the documentation *Getting Started*.

6. To create the job with the settings you have made, choose *Execute*.

You can display a list of all the jobs that exist for this archiving program by choosing $Goto \rightarrow Job$ overview. For more information about background jobs, see the online documentation on Computer Center Management System that you will find under Managing Background Processing [Ext.].

Reloading Archived Data (CO-PA)

Runtimes (CO-PA)

Runtimes (CO-PA)

No application-specific source code (such as validity checks) is executed when you run the archiving program. Consequently, the time required to archive the data depends entirely on the workload capacity of the database.