Distributed Profitability Analysis (CO-PA)

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Distributed Profitability Analysis (CO-PA)

Use

It is possible to distribute Profitability Analysis (CO-PA) to different SAP Systems which are connected with one another by means of ALE (Application Link Enabling). Thus the systems are still integrated despite the distribution.

Profitability Analysis then runs concurrently on each system. In distributed Profitability Analysis, (new) line items posted in a sender system are also sent to a receiver system which centrally collates the data from the sender systems. Functions such as derivation and valuation occur exclusively in the sender systems.

For information on the general functions for ALE distribution, see the documentation ALE Integration Technology [Ext.].

Integration

Distributed Profitability Analysis is supported in both costing-based and account-based CO-PA.

Prerequisites

All profitability analyses that are connected by means of ALE must belong to the same operating concern. All operating concerns should therefore have the same name and the same characteristics in all of the systems. You can achieve this consistency most efficiently by maintaining operating concerns in a central system. Customizing can then be transported into the other systems from this central system.

Features

Costing-Based Profitability Analysis

Distributed profitability analysis supports the distinct handling of logistics and accounting. Sales functions occur in several local logistic systems. Line items and summarizations are posted when data is transferred from sales (SD) to CO-PA. Other applications that run locally and that are connected to CO-PA can post to the local system in CO-PA. This applies, for example, to the settlement of internal orders and to cost center cost assessment. Reports can be drawn up to enable local profitability analysis to occur in the local system. Costing can be distributed to local systems so that valuation can be performed with the material cost estimate in the local systems. Data is sent from the local SD systems that perform CO-PA locally to a central receiver system where the individual CO-PA data is collated centrally. Data transfers for applications running centrally, such as Cost Center Accounting or direct postings from Financial Accounting, occur in the central system Planning from the local systems can be combined in central planning.
Central Profitability Analysis

central overview (act./plan),
central planning, comparison
with planning in local
systems

All sales organizations

Local Profitability Analysis

local overview (act./plan)
local planning

Sales org. 0001

SD bill. docs

Local Profitability Analysis

local overview (act./plan)
local planning

Sales org. 0002

SD bill. docs

CCtr cost assessment

Assigned FI docs

Costing-based CO-PA can be implemented by using the message CPxxxx (xxxx = operating concern). You have to generate this message type in Customizing for CO-PA.

There are two methods that can be used for distributed Profitability Analysis in costing-based CO-PA:

- **Transaction-based distribution**
  For every CO-PA posting, an [IDoc [Ext.]] in the sender system is sent to the receiver system together with the line item.
  For more information, see [Transaction-Based Distribution [Page 8]].

- **Periodic rollup**
  The data is only copied to the receiver system when the rollup function is initiated in the application.
  For more information, see [Periodic Rollup [Page 10]].

Only one of the methods can be activated in a system infrastructure. You should not change method during productive operations since this could create inconsistencies in the data.

**Account-Based Profitability Analysis**

Transaction data in account-based Profitability Analysis is stored as individual CO documents. As in other CO applications, these documents are distributed via message type CODCMT (CO document). The receiver system is always the controlling area system. The
functions of the local sender systems are limited to those required for creating the CO documents. This means that total figures are not updated in the local sender systems and it is not possible to create reports.

**Activities**

You can set up distributed Profitability Analysis in CO-PA Customizing by choosing *Tools → Data Transfers Between CO-PA and Other Systems → Distributed Profitability Analysis (ALE) [Ext.]*.
Transaction-Based Distribution

Use

In transaction-based distribution, an IDoc in the sender system is sent for every CO-PA posting to the receiver system together with the line item. New line items from the sender system are posted in the receiver system as copies.

In costing-based Profitability Analysis, the sender and receiver roles of the systems involved are very flexible. Not only can a sender system send data to several receivers, but senders and receivers can also swap roles. Hence system A can send data to system B and B can also send data to A simultaneously.

The basic scenario has thus been enhanced in the following ways (see the section Distributed Profitability Analysis [Ext.]):

- Actual data posted for the first time in the central system can be sent to one or more local systems. This means that cost center assessments, for example, can be sent to local profitability reports.
- Profit planning can occur in the form of competitive planning between the central and local organizations within the company. In particular, a centrally-planned plan version can also be sent to the local systems. Competitive planning between the central system and the local systems can then take place as a result of using different plan versions.

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<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>In the receiver system, information remains current and is available at the greatest level of detail.</td>
<td>System workload is made greater since each line item is sent.</td>
</tr>
<tr>
<td>In cases where discrepancies occur between the sender and receiver systems, you can use the synchronization function (see below) to determine exactly which line items in the sender system were sent to the receiver system.</td>
<td></td>
</tr>
</tbody>
</table>

Integration

In account-based Profitability Analysis, distribution is always transaction-based. In costing-based Profitability Analysis, you have the alternative of performing a Periodic Rollup [Page 10].

Activities

You can activate transaction-based distribution in CO-PA Customizing by choosing Tools → Data Transfers Between CO-PA and Other Systems → Distributed Profitability Analysis (ALE) → Activate Distributed Profitability Analysis [Ext.].

Data Synchronization

To ensure that all the data actually arrived in the central system, you can synchronize the data in your local and central systems. This function is for control purposes only and should not be used to synchronize all your CO-PA data. You perform this function in the CO-PA application menu by choosing Tools → Distribution → Synchronization.
If you suspect that data has not been transferred correctly to the central system, you should first try to locate any differences by calling up the same report in both the local and central systems. Then carry out the same steps in both systems. First, drill down in the report to zoom in on the time period and characteristics for which differences occurred. This may require going all the way down to the line item level.

Once you have done this, you can use the synchronization function to determine the cause of the discrepancy. Examine the cause closely.

Always check the ALE buffer before performing the synchronization function. Buffered data that has not yet been distributed can lead to differences between the systems.
Periodic Rollup

Use

With the periodic rollup, data is only copied to the receiver system when the rollup function is initiated in the application. This can take place on a daily, weekly or monthly basis. The sender system selects the line items, summarizes them if desired, and sends them to the receiver system. The different ways in which senders and receivers can be related are more restricted than in transaction-based distribution [Page 8] because a sender can only send to one specific receiver. Moreover, data transfer can only take place in one direction. Hence, if a rollup occurs from system A to system B, then system B cannot send any data to system A.

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Disadvantage</th>
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<tbody>
<tr>
<td>Improved performance with the summarization option in the sender system</td>
<td>Loss of information: It is no longer possible to find out which line items were sent to the receiver system.</td>
</tr>
</tbody>
</table>

Integration

This function is only relevant for costing-based Profitability Analysis. Account-based Profitability Analysis always uses transaction-based distribution.

Activities

You can activate the rollup function in CO-PA Customizing by choosing Tools → Data Transfers Between CO-PA and Other Systems → Distributed Profitability Analysis (ALE) → Activate Distributed Profitability Analysis [Ext.].

You can determine the type of summarization in CO-PA Customizing by choosing Tools → Data Transfers Between CO-PA and Other Systems → Distributed Profitability Analysis (ALE) → Define Segment-Level Characteristics for Distributed CO-PA [Ext.].

To perform the rollup in the CO-PA application menu, choose Tools → Distribution → Rollup.