Controlling integration with ECC Financial Accounting

Purpose

These documents deal with the integration of the CRM Service business process with the ECC Controlling in Financial Accounting.

Overview

SAP CRM Service offers several ECC integration options. One of these options is the controlling integration (planned versus actual costs/revenues).

You can use the integration of service and sales processes with Controlling in SAP Financials to transfer controlling-relevant data from CRM to an ECC system. In this way, you can analyze the entire value flow (including costs and expenses) for services and sales orders.

You can display and evaluate costs and revenue for services, for example, for each product category or service organization.

Services are billed using CRM Billing. Costs are either updated to the profitability segment or to the internal order. Sales orders are billed using CRM Billing or ECC Billing. Expenses are updated to the profitability segment. Costs are updated only for delivery-related billing.

The service confirmation updates the costs for the consumption of resources either to the profitability segment or to the internal order.

Processing Details

Integration between service transactions and ECC controlling enables you to analyze costs and revenues, for example, by product group or service organization, and to calculate work in process (WIP) for long-running transactions.

Controlling-relevant data is transferred from CRM to ECC. The posting of actual costs to the account assignment object in ECC is based on the following data from the service confirmations for a transaction:

- Activities
  Activities are automatically transferred to a time sheet. The sender cost center is determined from the personnel number of the service employee making the confirmation. The activity type is determined from Customizing. Time sheet data must be transferred to controlling from the time sheet (see Transfer to Controlling). Activity allocation from the service employee’s cost center to the account assignment object then takes place in controlling.

- Service parts
  Service parts automatically generate goods issues in MM, with a posting in accounting and to the account assignment object in controlling.

- Expense items
  Expense items are automatically posted in ECC as transfers: The cost center of the service employee making the confirmation is
credited with the entered expense amount, and the account assignment object is debited by that amount.

- **Tools**

Tool items are automatically posted in SAP ECC as internal activity allocations.

Activity allocations from the cost center to the account assignment object then take place in controlling.

Sales items are not confirmed; instead a sales order is created for the service item in SD. Goods issue for delivery in MM triggers the posting of costs in accounting and to the account assignment object.

## Controlling Types

In the Controlling integration there are 3 types of controlling possible:

- **Mass-Object Controlling**
- **Single-Object Controlling**
- **Controlling for Account Assignment Recipient**

The customer must make the settings for all transaction types in the Controlling Integration table.

The customer defines transactions types, organizational units and so on in the CRM System and must replicate these to SAP ECC. The customer then makes the following settings in Customizing:

### Business Scenario

- Technical settings that control the interaction between the application and ERP Controlling are defined using the business scenario.
- There is the business scenario for CRM Service and for CRM Sales.

## Mass-Object-Controlling

- Costs and revenues are assigned directly to a profitability segment.
- Analysis of goods sold and revenues in CO-Profitability Analysis (CO-PA) with original SAP CRM attributes, e.g.
A profitability segment is an object within Profitability Analysis (CO-PA) to which costs and revenues are assigned. It corresponds to a market segment. You can calculate the profitability of a profitability segment by comparing its sales revenues with its costs. A profitability segment in an operating concern is defined by a combination of characteristic values. All service transactions with the same CO-PA characteristics are assigned to the same profitability segment. In SAP BI you are able to evaluate the single service transaction even if you have chosen mass object controlling.

**Single Object Controlling**

- Controlling by service order or by service contract
- Cost and revenues are assigned to the internal order
- Overheads and process costs can be applied
- Results analysis
- If you use settlement of costs and revenues to CO-PA aggregated analysis on CRM attributes is possible
- Settlement of costs and revenues to CO-PA or other recipients
- Original CRM attributes are available on the internal order.

In SAP ECC, the single object controlling level is defined for each relevant transaction type, service unit, and responsible service unit.

For the controlling type *single object controlling*, you have to define a controlling scenario.

- The following parameters are defined by the controlling scenario:
  
  - Pricing procedure, Overhead key, Results analysis key
  - Settlement profile, Object class, Residence time 1 and 2 for the archiving
  - CO partner update.
The controlling relevant characteristics are replicated to SAP ECC.

- It is possible to differentiate the calculation of costs for the following:
  - Special qualifications, such as for a specialist or apprentice
  - Standard working time, overtime, driving hours, and so on.

- You differentiate the calculation of costs by doing the following:
– Replicating the item category, the service type, and the valuation type into ECC (based on the CRM customizing) and

– Defining some transformation in the Plug-In customizing.

**Additional Features for Single Object Controlling**

- Planned Costs and Revenues
  - Determination of planned costs including surcharges based on order planning for services, spare parts and expenses
  - Determination of planned revenues based on billable services, spare parts and expenses within a service order
  - Comparison of planned and actual values on an internal order representing a service order.

- Accounting Indicator
  - Confirmation of used resources with information about the reason e.g. warranty, good will
  - Differentiation of actual costs in addition to cost element
  - Determination of different settlement receivers based on accounting indicator via customizing
  - More accurate calculation of work in process possible.

- Cockpit for Controlling Integration (Tx..CRMSRVCOCP on ECC side)
  - Manages error messages that are only relevant for Controlling
    - The internal order for a service order can be created, the settlement rule can not be created. This is irrelevant for the CRM process, but is relevant for the Controlling process
    - Errors occurred during costing are only shown in the cockpit.
    - Supports the maintenance of master data and settlement rules for internal orders belonging to service orders or confirmations
    - Integrates reporting for the controlling of internal orders.

**Controlling for Account Assignment Object**
Controlling by service order or by service confirmation
Cost and revenues are assigned to the cost receiver
Supports the receiver types: internal order, WBS element, sales order item, network activity or customer defined cost receivers via business add-in
Additional controlling functions depending on receiver type.

This function provides controlling functionality for internal orders, WBS elements, and sales orders that already exist in SAP ECC. Costs and revenues are posted directly on these objects. No new account assignment objects are created.

You can enter the account assignment at the header or item level of the transaction. If you enter the account assignment at the header level, it is inherited by all items. All follow-up documents receive the account assignment of the preceding document. This account assignment cannot be changed. When you enter the account assignment, no check is made to determine whether the account assignment object exists and can be posted to.

When the service order is released, or when the service confirmation is entered, the account assignment information is transferred into SAP ECC. If you enter accounting indicators in the transaction, they are transferred into ECC as well.

How this information is evaluated, and therefore which functions are available, depends on the account assignment object.

Replication of CRM data to ERP:
- Transaction types
- Item categories
- Organizational units
- Service types
- Valuation types
- Product categories

Controlling Type and Level

Controlling Scenario
- For Single Object Controlling

Replication: You can replicate the characteristics of service processes (contracts, orders and confirmations) that you want to use for Controlling in ECC.

The Controlling Scenario is needed for single object controlling and defines how the internal orders that are created from CRM are described. The following parameters are defined by the controlling scenario: costing sheet, overhead key, results analysis key, settlement profile, object class, and functional area.

The Controlling Type and Controlling Level are defined for combinations consisting of a transaction type, a service organization, and a responsible service organization for a certain validity period. There are several options:

- No Controlling
- Mass-Object Controlling (profitability segment)
- Single-Object Controlling (internal order) on business transaction level
- Single-Object Controlling (internal order) on item level
- Controlling for Account Assignment

If you assigned single-object controlling to the Controlling type, you must also specify the Controlling Scenario.

For single-object controlling, the internal order is always created with the order type SAPS.
Integration with Business Transaction Categories and Item Categories

Integration is available for the following business transaction categories:

<table>
<thead>
<tr>
<th>Business Transaction</th>
<th>Business Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Contract</td>
<td>BUS2000112</td>
</tr>
<tr>
<td>Service Order</td>
<td>BUS2000116</td>
</tr>
<tr>
<td>Service Confirmation</td>
<td>BUS2000117</td>
</tr>
<tr>
<td>Complaint</td>
<td>BUS2000120</td>
</tr>
<tr>
<td>Billing Request</td>
<td>BUS2000240</td>
</tr>
</tbody>
</table>

In addition to the above transaction categories, you can also assign controlling data to a few transaction categories that are not relevant for controlling (listed below):

<table>
<thead>
<tr>
<th>Business Transaction</th>
<th>Business Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution Contract</td>
<td>BUS2000100</td>
</tr>
<tr>
<td>Opportunity</td>
<td>BUS2000111</td>
</tr>
<tr>
<td>Sales Order</td>
<td>BUS2000115</td>
</tr>
<tr>
<td>Incident/Service Request</td>
<td>BUS2000223</td>
</tr>
<tr>
<td>Provider Order</td>
<td>BUS2000265</td>
</tr>
</tbody>
</table>

Integration is also available for item categories with the following item object types:

<table>
<thead>
<tr>
<th>Item Types</th>
<th>Business Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution Contract Item</td>
<td>BUS2000143</td>
</tr>
<tr>
<td>Service Product Item</td>
<td>BUS2000140</td>
</tr>
<tr>
<td>Service Product Confirmation Item</td>
<td>BUS2000143</td>
</tr>
<tr>
<td>Service Expense Confirmation Item</td>
<td>BUS2000158</td>
</tr>
<tr>
<td>Service Part Item</td>
<td>BUS2000146</td>
</tr>
<tr>
<td>Service Tool Item</td>
<td>BUS2000153</td>
</tr>
<tr>
<td>Service Tool Confirmation Item</td>
<td>BUS2000154</td>
</tr>
<tr>
<td>Service Expense Item</td>
<td>BUS2000159</td>
</tr>
<tr>
<td>Service Part Confirmation Item</td>
<td>BUS2000142</td>
</tr>
<tr>
<td>Device Allocation Item</td>
<td>BUS2000186</td>
</tr>
<tr>
<td>Product Scrapping Item</td>
<td>BUS2000185</td>
</tr>
</tbody>
</table>

If you want to use controlling integration for item categories to which you have assigned one of the following item object types, you have to select the Service setting in the Assign BW/CO field:
Customizing:

Controlling integration is set up both in CRM and in ERP Customizing:

• CRM: SAP Implementation Guide  Customer Relationship Management Transactions  Settings for Service Transactions  Integration Set Up Time Sheet and Controlling Integration

• CRM: SAP Implementation Guide  Customer Relationship Management Transactions  Settings for Service Transactions  Integration Replicate Service Characteristics Relevant to Controlling

• CRM: Customer Relationship Management  Master Data Organizational Management  Cross-System Assignment of Organizational Units  Assign Cost Centers to Service Organizational Units

• ECC: SAP Customizing Implementation Guide  Integration with Other mySAP.com Components  Customer Relationship Management  Settings for Service Processing  Controlling Integration

• ECC: SAP Customizing Implementation Guide  Integration with Other mySAP.com Components  Customer Relationship Management  Settings for Service Processing  Time Sheet Integration  Define Derivation of Attendance Type, Activity Type and Cost Element.

Planning of Activity Types is done in SAP ECC using SAP Menu Accounting Controlling  Cost Center Accounting  Planning  Activity Output/Prices Change or via transaction code KP26.
Related Documents

See documentation in the SAP Help under the Link:

- Controlling Integration
- Mass-Object Controlling
- Single-Object Controlling
- Controlling for Account Assignment Objects

Related SAP Notes/KBAs

- SAP Note 664096 - FAQs: CRM Service Data Exchange
- SAP Note 813899 - Dependencies for interface of CRM service to R/3 or ERP
- SAP Note 1933795 - Object link not known in CO (IAOM 019) - IAOM 028 'Object not known in CO'
- SAP Note 2070361 - FAQ: COI: Controlling integration
- SAP Note 1021699 - CO object for service line item with higher-level item