

# Sales and Distribution (SD) Workflow Scenarios



HELP.BCBMTWFMSD

Release 4.6C



## Copyright

© Copyright 2001 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft<sup>®</sup>, WINDOWS<sup>®</sup>, NT<sup>®</sup>, EXCEL<sup>®</sup>, Word<sup>®</sup>, PowerPoint<sup>®</sup> and SQL Server<sup>®</sup> are registered trademarks of Microsoft Corporation.

IBM<sup>®</sup>, DB2<sup>®</sup>, OS/2<sup>®</sup>, DB2/6000<sup>®</sup>, Parallel Sysplex<sup>®</sup>, MVS/ESA<sup>®</sup>, RS/6000<sup>®</sup>, AIX<sup>®</sup>, S/390<sup>®</sup>, AS/400<sup>®</sup>, OS/390<sup>®</sup>, and OS/400<sup>®</sup> are registered trademarks of IBM Corporation.

ORACLE<sup>®</sup> is a registered trademark of ORACLE Corporation.

INFORMIX<sup>®</sup>-OnLine for SAP and Informix<sup>®</sup> Dynamic Server<sup>™</sup> are registered trademarks of Informix Software Incorporated.

UNIX<sup>®</sup>, X/Open<sup>®</sup>, OSF/1<sup>®</sup>, and Motif<sup>®</sup> are registered trademarks of the Open Group.







HTML, DHTML, XML, XHTML are trademarks or registered trademarks of W3C<sup>®</sup>, World Wide Web Consortium, Massachusetts Institute of Technology.

JAVA<sup>®</sup> is a registered trademark of Sun Microsystems, Inc.

JAVASCRIPT<sup>®</sup> is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

SAP, SAP Logo, R/2, RIVA, R/3, ABAP, SAP ArchiveLink, SAP Business Workflow, WebFlow, SAP EarlyWatch, BAPI, SAPHIRE, Management Cockpit, mySAP.com Logo and mySAP.com are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other products mentioned are trademarks or registered trademarks of their respective companies.

## Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax
	Tip

## Contents

<b>Sales and Distribution (SD) Workflow Scenarios .....</b>	<b>5</b>
<b>Processing Credit Memo Requests (SD-SLS-RE) .....</b>	<b>6</b>
<b>Example: Processing Credit Memo Requests .....</b>	<b>8</b>
<b>Technical Implementation of the Workflow (SD-SLS-RE) .....</b>	<b>9</b>
Object Types (SD-SLS-RE) .....	10
Initial Values (SD-SLS-RE) .....	11
Workflow Template (SD-SLS-RE).....	12
Flow for Workflow Template .....	14
Standard Tasks (SD-SLS-RE) .....	15
Preparation and Customizing (SD-SLS-RE) .....	17
Activate Event-Receiver Linkage .....	18
Using and Linking to the Application Functions (SD-SLS-RE) .....	19
<b>Change Master Contract (SD-SLS-OA) .....</b>	<b>20</b>
<b>Example: Using Workflow to Change the Master Contract .....</b>	<b>22</b>
<b>Technical Implementation of the Workflow (SD-SLS-OA).....</b>	<b>23</b>
Object Types (SD-SLS-OA) .....	24
Workflow Template (SD-SLS-OA).....	25
Standard Tasks (SD-SLS-OA) .....	29
<b>Preparation and Customizing (SD-SLS-OA) .....</b>	<b>31</b>
Using and Linking to the Application Functions (SD-SLS-OA) .....	33
<b>Removing Errors in Internet Sales Orders (SD-SLS).....</b>	<b>34</b>
<b>Technical Implementation (SD-SLS) .....</b>	<b>35</b>
Object: Sales Order (SD-SLS) .....	36
Standard Task TS20000357: Error in Quotation (SD-SLS) .....	37
Standard Task TS20000347: Error in Order on Account (SD-SLS) .....	38
Standard Task TS20000346: Error in Credit Card Order (SD-SLS) .....	39
Standard Task TS20000372: Error in Cash-on-Delivery Order (SD-SLS) .....	40
Standard Role AC2000045: Agent for Internet Sales Order (SD-SLS) .....	41
Workflow Template: Correcting errors in Internet sales orders (SD-SLS).....	42
<b>Preparation and Customizing (SD-SLS).....</b>	<b>44</b>
<b>Handling of Exceptions at Store Goods Receipt (SD-POS) .....</b>	<b>46</b>
<b>Technical Implementation (SD-POS).....</b>	<b>47</b>
<b>Preparation and Customizing (SD-POS) .....</b>	<b>48</b>
<b>Operation and Link to Application (SD-POS) .....</b>	<b>49</b>

## Sales and Distribution (SD) Workflow Scenarios

See also:

[BC - Workflow Scenarios in Applications \[Ext.\]](#)

## Processing Credit Memo Requests (SD-SLS-RE)

## Processing Credit Memo Requests (SD-SLS-RE)

### Purpose

Credit memo requests normally need to be checked by the employee who entered them as well as approved by an additional decision-maker. The value of the credit memo determines who is able to approve it.

Once a credit memo request is created, the system normally creates a billing block. This block prevents you from billing the credit memo request and can only be removed by an authorized employee.

Using the workflow, you can represent the whole business process, with all the people involved, for approving credit memo requests within your company. This enables you to process credit memo requests simply and efficiently. If you do not use the workflow, the system does not control the process flow so you will have to organize the steps in credit memo processing yourself.

If the value of a credit memo request is below a minimum value, the system automatically releases it for billing by removing the billing block.

If the credit memo request exceeds a certain value, the system automatically informs the employee responsible. She or he receives a work item in their inbox and can process it directly from there.

The employee responsible can cancel, release, or process a credit memo request.

If the employee cancels the request, the system automatically creates a reason for rejection in the credit memo request and ends processing.

If the employee releases the request, the system automatically removes the billing block in the credit memo request and releases it for billing.

If the employee processes the request, she or he can use all the functions available in the change transaction.

The people informed by the workflow do not need to know either the name of the transaction or the menu path of the transactions involved.

### Prerequisites

- You have configured the settings in Customizing for the workflow and created an organizational plan (see [Preparation and Customizing \(SD-SLS-RE\) \[Page 17\]](#)).
- When you create credit memo requests, the system normally sets a billing block, which prevents it from being billed. Only authorized employees may remove this billing block, thus releasing the document for billing. The person who is able to check the credit memo before releasing it depends on the value of the credit memo.



You create the billing block for credit memo requests in Customizing for Sales and Distribution when you define the order type (*Sales and Distribution* → *Sales* → *Sales Documents* → *Sales Document Header* → *Define sales document types*).

When using the workflow for processing credit memo requests, we recommend that you should only allow the billing block to be removed by the people who are authorized to release credit memos of any value.

## Process Flow

Depending on the value of the credit memo request, the system runs through one of the following processes when you enter a credit memo request:

- **If the value of the credit memo request is smaller or equal to a certain limit (L1), the system automatically releases the credit memo request.** The system removes the billing block in the background, releasing the credit memo request for billing.
- If the value of the credit memo request is between limit L1 and limit L2, or equal to L2, the job responsible is informed that the credit memo request should be checked. All the people assigned to this job receive a work item in their integrated inbox, where they can cancel, release or process the credit memo request.

- Cancel credit memo request

The employee has to enter a reason for rejection. The system automatically transfers the reason for rejection into the credit memo request and stops processing.

- Release credit memo request

The system automatically removes the billing block in the credit memo request and releases the document for billing.

- Process credit memo request

Here, the user branches into the “Change sales order” transaction, where they can use all the functions in this transaction. According to the user’s authorization, he or she can remove a billing block, enter a reason for rejection, or process individual items (for example, delete or add order items, or change the order quantity).

The system checks whether the billing block was removed manually. If there is a billing block, the system re-checks the value of credit memo request and informs the employee responsible. This process is repeated until the credit memo request has either been rejected or released.

---

**Example: Processing Credit Memo Requests****Example: Processing Credit Memo Requests**

Each employee in the sales department is allowed to release credit memo requests up to a value of USD 300. The following authorization procedure has been defined for credit memo requests that exceed this limit:

- Credit memo requests with a value of between USD 300 and USD 5,000 may only be released by the group leader.
- Credit memo requests that exceed a value of USD 5,000, may only be released by the sales manager.

## Technical Implementation of the Workflow (SD-SLS-RE)

## Object Types (SD-SLS-RE)

### Object Types (SD-SLS-RE)

The interface between R/3 functionality and the workflow system is created using object technology.

In the following scenario, the business application object for Credit memo requests is **Object type BUS 2094**.

## Initial Values (SD-SLS-RE)

In the workflow, the person who releases or processes the credit memo request is decided according to the value of the credit memo request. You can determine two limit values: Amount limit 1 and amount limit 2.

In order to ensure correct, cross-company code credit memo processing, you also need to specify a reference currency. The document currency for the credit memo request is then converted into the reference currency.



The following company codes and their house currencies exist in one company:

- Company code 1: House currency FRF
- Company code 2: House currency DEM

The employees assigned to the sales organization process the credit memo requests for company code 1 and company code 2.

A reference currency (for example, USD) is defined in the workflow container. The net values in the sales documents are converted into the reference currency which means that the credit memo requests can then be processed and checked, independently of the currency in the company code.

## Workflow Template (SD-SLS-RE)

## Workflow Template (SD-SLS-RE)

### Definition

The following two workflow templates are delivered in the standard system for credit memo processing:

- Identification: WS20000009  
Identification code: Credit memos  
Long text: Credit memo processing
- Identification: WS20000019  
Identification code: CMR\_CHECK  
Long text: Check credit memo requests

For additional information, see:

[Flow of Workflow Template \[Page 14\]](#).

### Use

#### Workflow Template 20000009 Credit Memo Processing

##### Triggering Event in Workflow Template

Updating the credit memo request triggers the event created for object type BUS2094 which starts the workflow template.

##### Workflow Container and Data Flow

The information needed for the workflow is contained in the credit memo request. This information is available as an event parameter in the container for the triggered event and have to be transferred into the workflow container using data flow.

The following data flow definition between the triggering event and the workflow container is therefore defined in the standard system:

Workflow Container	Event Parameter Container
_WF_Initiator <--	_EVT_Object (credit memo request)
RefCurrency (reference currency)	
CUSTCOMPLAINTORDER (credit memo request)	
NetValue_Limit_1 (amount limit 1)	
NetValue_Limit_2 (amount limit 2)	
End_Flag (End indicator)	

## Workflow Template (SD-SLS-RE)

The `_WF_Initiator` element is available in the workflow container in the standard system, while the other elements listed here have been added to the workflow container.

**Terminating Events**

The workflow template for credit memo requests is terminated with the *Release credit memo request* and *Reject credit memo request* events.

**Check Workflow Template 2000019 Credit Memo Processing****Workflow Container**

The workflow container contains the end indicator (`End_Flag`), information about the credit memo request (`CUSTCOMPLAINTORDER`) and the employee responsible (`ResponsibleAgents`).

**Processor Assignment**

All people or organizational units that are assigned to the workflow template are informed.

**Maintain Processor Assignment**

Depending on the net value of the credit memo request and the defined organizational plan, the employee responsible receives a workitem in his or hers integrated inbox.

For this to take place, you must list the various objects from organization management in **Customizing for the SAP Business Workflow** who can work with workflow-relevant credit memo requests, for example, jobs or positions. Before you do that, you need to set up the organizational plan.



User Haywood has the group leader position while user Miller is in the sales manager position.

For additional information, see: [Preparation and Customizing \(SD-SLS-RE\) \[Page 17\]](#).

**Terminating Events**

The workflow template for checking credit memo requests is terminated with the *Release credit memo request* and *Reject credit memo request* events.

---

**Flow for Workflow Template**

## Flow for Workflow Template

When you create a credit memo request, the created event is triggered for object BUS2094 and the workflow template 20000009 is started.

The system checks how high the net value of the credit memo request is. If the net value is below limit 1 (minimum limit), the system automatically releases the credit memo request in background processing.

If the net value of the credit memo request is over limit value 1, the system terminates workflow template 20000009 and initiates workflow template 20000019.

The relevant employee, depending on the value of the credit memo request and the organizational structure in use (sales organization, distribution channel, division), is then informed of this

by the arrival of a work item in their integrated inbox. If the employee releases the credit memo request, the system ends the workflow and deletes the work item from the inbox.

If the employee stops processing the work item, it remains in the inbox until it has been completed and only then is the workflow finished.

If the employee changes any of the determining factors in the credit memo request (such as net value), the net value of the credit memo request has to be re-checked. The system deletes the work item from the inbox.

Workflow template 20000009 receives a terminating event and workflow template 20000019 is triggered. Depending on the value of the item, the relevant employee is informed and receives a work item in their integrated inbox. Once the employee has finished processing the work item (by rejecting or releasing the credit memo request), the workflow is concluded. If the credit memo request is changed, workflow template 20000019 is called up. Processing continues until the credit memo request has either been rejected or released.

## Standard Tasks (SD-SLS-RE)

### Definition

Standard tasks are single-step tasks supplied by SAP that describe basic business activities.

The following standard tasks are delivered:

**Standard Task:** TS20000010

**Identification code:** DELBILLBLOCK

**Description:** Delete billing block in the credit memo request

#### Referenced method, attributes

**Object type:** BUS2094 (credit memo request)

**Method:** DELETEBILLINGBLOCK (synchronous method)

**Attributes:** Background processing

**Standard Task:** TS20000011

**Identification code:** COMPL\_REJECT

**Description:** Reject credit memo request

#### Referenced method, attributes

**Object type:** BUS2094 (credit memo request)

**Method:** COMPLETE\_REJECTION (synchronous method, online)

**Attributes:** none

**Standard Task:** TS20000012

**Identification code:** EDIT

**Description:** Process credit memo request

#### Referenced method, attributes

**Object type:** BUS2094 (credit memo request)

**Method:** EDIT\_ASYNCRON (asynchronous method)

**Attributes:** none

**Standard Task:** TS20000013

**Identification code:** SETBILLBLOCK

**Standard Tasks (SD-SLS-RE)**

**Description:** Set billing block in the credit memo request

**Referenced method, attributes**

**Object type:** BUS2094 (credit memo request)

**Method:** SETDEFAULTBILLINGBLOCK (synchronous method)

**Attributes:** Background processing

**Standard Task:** TS20000054

**Identification code:** Convert

**Description:** Convert net value into reference currency

**Referenced method, attributes**

**Object type:** BUS2094 (credit memo request)

**Method:** CONVERTTOREFCURRENCY (synchronous method)

**Attributes:** Background processing

## Preparation and Customizing (SD-SLS-RE)

### Activities

#### Organizational Plan

All the users who have been identified in Customizing for the SAP Business Workflow may release credit memo requests. These users can also be assigned to different organizational units.

Organizational units are areas within a company that belong together for organizational and business purposes, such as a department.



The following organizational units, positions and the people who fill them have been set up in the system:

Organizational unit	Chief position	Filled by
Sales organization 0001	Sales manager	Miller
Sales area 0001/01/01	Group leader	Haywood

You can set up the organizational plan in Customizing for Basis. In the Implementation Guide, choose *Basic Components* → *Business Management* → *SAP Business Workflow* → *Edit organizational plan*.

#### Event-Receiver Linkage

The event **created** for object type BUS2094 (credit memo request) is the triggering event for the workflow template 20000009 and is the standard entry in the event linkage table. In order to start the workflow template, you must activate the linkage between the triggering event and the workflow template, as the receiver for the event, in Customizing for the SAP Business Workflow.

See [Activate event-receiver linkage \[Page 18\]](#).

---

**Activate Event-Receiver Linkage**

## Activate Event-Receiver Linkage

1. Make the settings in Customizing (choose Basic Components → *Business Management* → *SAP Business Workflow* → Perform task-specific Customizing).
2. Activate the event linkage for the workflow template (*Sales and distribution* → *Sales* → *Activate event linking*).



You can also activate the event-linkage by generating workflow template 2000009 directly.

## Using and Linking to the Application Functions (SD-SLS-RE)

### Activities

In the following description, we assume that you have created a credit memo request.

#### Generating Events

The `created` event that triggers the workflow is created automatically once a credit memo request has been created.

#### Processing Credit Memos

The people who have been assigned to this task receive a work item in their inbox. If this work item is executed, the credit memo can be released, canceled or processed.

You can call up the inbox by choosing *Office* → *Inbox*.

**Change Master Contract (SD-SLS-OA)****Change Master Contract (SD-SLS-OA)****Purpose**

In companies that use a high number of contracts, several contracts are often subject to the same business controls (for example, agreements on pricing or terms of payment). Contracts with the same business requirements can be linked to a master contract as lower level contracts. The general requirements stipulated in the master contract are then valid for all the lower level contracts assigned to it. The referencing procedure acts as a set of rules in Customizing which enables you to control which data from the lower level contract can be changed and which data has to agree with the master contract. This ensures that the defined requirements remain consistent in all the assigned lower level contracts.

If any of the fields in the master contract that have to be identical to the equivalent fields in the lower level contract are changed, these fields must also be changed in all assigned lower level contracts.

The workflow enables you to control the process of changing master contracts simply and efficiently. All the lower level contracts assigned to a master contract are updated and the employees involved are automatically informed if an error occurs, such as an application error or if the document is blocked.

**Process Flow**

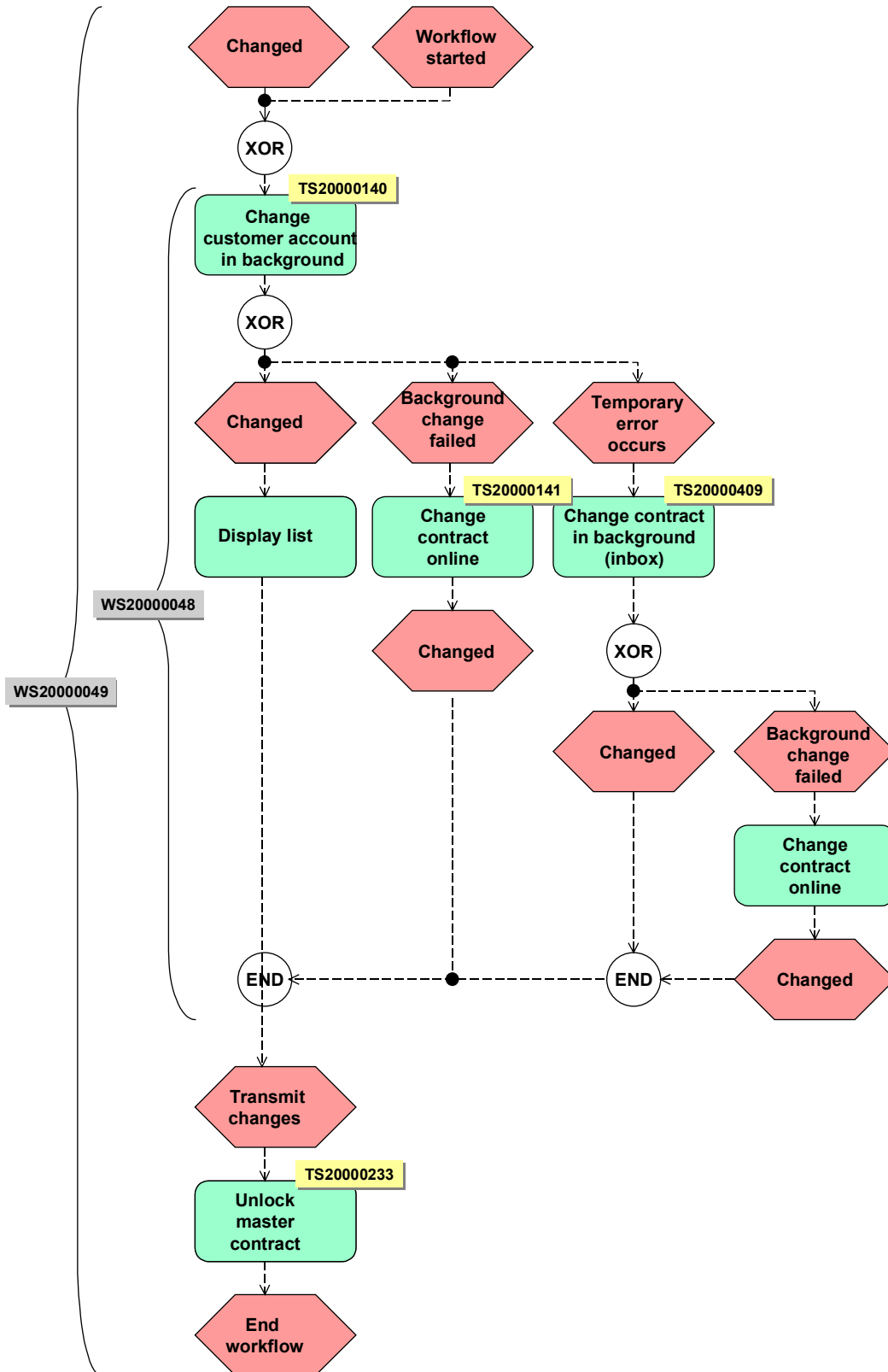
Changing the master contract triggers a workflow that accesses the assigned lower level contracts and automatically copies the changes to the lower level contract. If an error occurs, a work item appears in the inbox of the person who changed the master contract, who has to process it manually. A separate window displays all the changes that have been made for information purposes.

If a temporary error occurs in a lower level contract that you want to change, for instance, it is blocked because someone is processing it, the system carries out the changes later on in the background. You can decide how much later on the system makes the changes by making the settings for a time span in Customizing. If the system cannot make the changes after several attempts, the person who changed the master contract receives a work item in their integrated inbox. When you trigger the work item, the system tries to change the lower level contract in the background again. If an application error then occurs, the system replaces the work item with a new one that can only be processed online.

In order to guarantee consistent data retention, all the lower level contracts that are to be changed are blocked until the workflow has finished. Once the changes have been made, the workflow finishes and the document is unblocked.

The following graphic illustrates this process schematically:

Change Master Contract (SD-SLS-OA)



---

**Example: Using Workflow to Change the Master Contract**

## Example: Using Workflow to Change the Master Contract

As well as selling office equipment, Miller Ltd also offer their customers an extensive maintenance service. Miller Ltd has signed several maintenance contracts with one of their customers.

The same terms of payment are valid for all the maintenance contracts signed with that customer. These maintenance contracts are assigned to a master contract which contains all terms of payment.

The customer would like to change the terms of payment. The employee responsible at Miller Ltd, Ms. Connelly, changes the terms of payment in the master contract and the changes are automatically copied into all the assigned lower level contracts.

If an error occurs in the system to prevent the changes from being made, Ms. Connelly receives a work item in her integrated inbox for each of the lower level contracts that could not be changed. She can change the lower level contract directly from the inbox using the information displayed in another window about the changes made in the master contract.

If any of the lower level contracts that need to be changed are blocked by another employee, the system carries out the changes in the background. If the document remains blocked, Ms. Connelly receives a work item for that lower level contract in her integrated inbox. Starting the work item causes the system to try and change the lower level contract in the background. The work item stays in Ms. Connelly's inbox until the changes could be made or an application error occurs. If an application error occurs, Ms. Connelly receives another work item in her integrated inbox that can only be processed online. Once the lower level contract has been changed, the work item is completed and the document is unblocked.

The lower level contracts that have not yet been updated are blocked for manual processing until the workflow has finished successfully.

## Technical Implementation of the Workflow (SD-SLS-OA)

## Object Types (SD-SLS-OA)

### Object Types (SD-SLS-OA)

The interface between R/3 functions and the workflow system is created using object technology.

The following scenario explains how:

Master contracts: Object type **BUS 2095**

Customer contract (lower level contract): Object type **BUS 2034**

are processed.

## Workflow Template (SD-SLS-OA)

The following two workflow templates are delivered in the standard system for changing master contacts:

- Identification: WS20000048  
     Identification code: SD\_KK\_WF  
     Long text: Workflow for changing customer contracts
- Identification: WS20000049  
     Identification code: SD\_GK\_WF  
     Long text: Updates according to master contract

## Workflow Template WS20000049

### Triggering Event in Workflow Template

When you change the master contract, the changed event for object type BUS 2095 (master contract) is triggered and starts the workflow template. Workflow template WS20000048 starts for all the lower level contracts assigned to the master contract. Workflow template WS20000048 generates a work item for each lower level contract.

### Workflow Container and Data Flow

Information on object reference for the master contract to be processed (`_EVT_OBJECT`), the name of the person who changed the master contract (`_EVT_CREATOR`), a list of all the lower level contracts that should be changed (`CONTRACTLIST`), and the values that should be changed according to the referencing procedure (`CHANGEDVALUES`) must be available in the workflow. This information is available as an event parameter in the container for the triggered event and has to be transferred into the workflow container using data flow.

The following data flow definitions between the triggering event and the workflow container have been defined in the standard system:

Workflow Container	Event Parameter Container
GroupContract	<-- <code>_EVT_CREATOR</code>
CustomerContracts	<-- <code>_EVT_OBJECT</code>
ChangedValues	<-- <code>CONTRACTLIST</code>
	<-- <code>CHANGEDVALUES</code>

### Terminating Events

Workflow template WS20000049 finishes if all the workflows have finished for the lower level contracts (event changed to object type BUS2034). Before this happens, task TS20000233 is triggered (workflow indicator is deleted from table VBAK).

---

**Workflow Template (SD-SLS-OA)****Workflow Template WS2000048 (Change Contract)****Triggering Event**

Workflow template WS2000049 triggers workflow template WS2000048 to change all lower level contracts. The workflow template contains the two standard tasks - TS20000140 (change contracts in background processing) and TS20000141 (change contract online). **See also:** [Standard Tasks \(SD-SLS-OA\) \[Page 29\]](#)

**Workflow Container and Data Flow**

The workflow container receives the following information:

- CustomerContract
- ChangedValues
- For the text display of the work item in the employee's integrated inbox:
  - msgv4 (MessageVariable 4)
  - msgv3 (MessageVariable 3)
  - msgv2 (MessageVariable 2)
  - msgv1 (MessageVariable 1)
  - msgtext (short text with replaced variables)
  - msgno (MessageNo)
  - msgid (Messageld)
- GroupContract

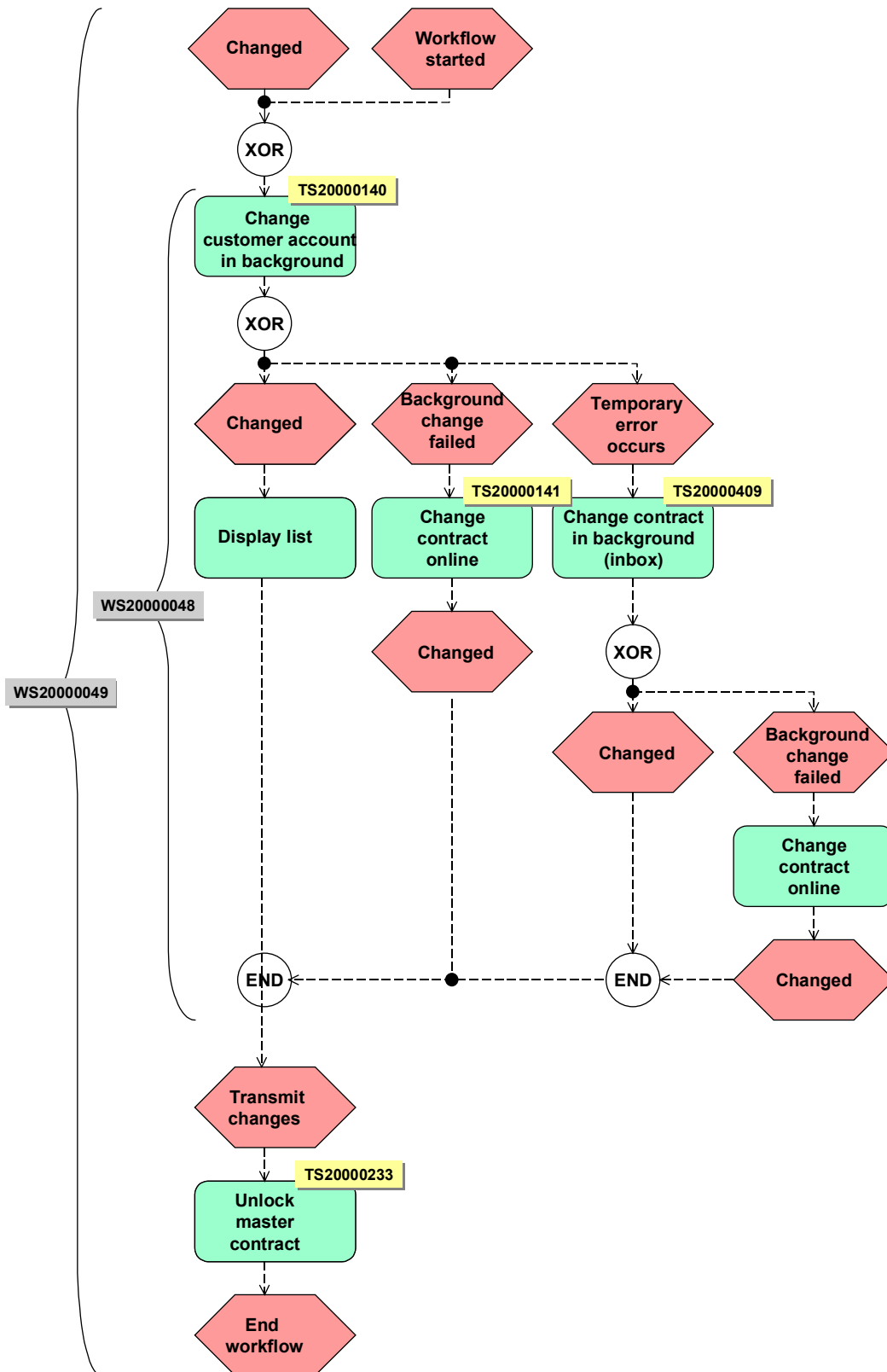
**Terminating Events**

There is a workflow for each lower level contract which finishes once the lower level contract has been changed (changed event for object type BUS2034).

The complete workflow finishes once all the lower level contracts have been changed.

The following graphic shows the schematic flow of the workflow template and its tasks:

Workflow Template (SD-SLS-OA)





## Standard Tasks (SD-SLS-OA)

Standard tasks are single-step tasks supplied by SAP that describe basic business activities.

The following standard tasks are delivered:

- TS20000140
- TS20000141
- TS20000409
- TS20000233

**Standard task:** TS20000140

**Identification code:** SD\_KK\_CHANGE

**Description:** Change customer contract in the background

### Referenced method, attributes

**Object type:** BUS2034 (master contract)

**Method:** CHANGEINBACKGROUND

**Attributes:** Background processing

In this task, the system tries to change the lower level contracts, according to the changes in the group contract, in the background. If a temporary error occurs (for example, the document is locked), the system calls up task TS20000409. If this task cannot be implemented because of an application error, the system calls up task TS20000141.

**Standard task:** TS20000141

**Identification code:** SD\_KK\_EDIT

**Description:** Change customer contract online

### Referenced method, attributes

**Object type:** BUS2034 (master contract)

**Method:** EDIT (online method)

**Attributes:** None

If the system could not change the lower level contract in background processing, the person who changed the master contract in task TS20000141 receives a work item in the inbox and can then make the change online.

### Maintain Processor Assignment

We recommend that you classify TS20000141 as a general task so that the person who changed the master contract is also permitted to process the lower level contracts. If any errors occur, the person who changed the master contract receives a work item in their inbox.

For additional information, see: [Preparation and Customizing \(SD-SLS-OA\) \[Page 31\]](#)

**Standard task:** TS20000409

**Standard Tasks (SD-SLS-OA)****Identification code:** SD\_KK\_EDIT**Description:** Change customer contract in the background (inbox)**Referenced method, attributes****Object type:** BUS2034 (master contract)**Method:** CHANGEINBACKGROUND**Attributes:** Background processing

If a temporary error occurs (for example, the document is blocked), the system will try to change the master contract again in the background at a later point. You can define the time span at which this occurs in Customizing. If the system cannot make the changes, the person who changed the master contract receives a work item in their integrated inbox. Starting the work item causes the system to try and change the lower level contract in the background. The work item stays in the employee's inbox until the changes could be made or an application error occurs. If an application error occurs, task TS200000141 is called up and the person who changed the document receives another work item in their integrated inbox that can only be processed online.

**Standard task:** TS20000233**Identification code:** SD\_GK\_DQ**Description:** Unlock master contract**Referenced method, attributes****Object type:** BUS2095 (master contract)**Method:** DEQUEUE (synchronous method)**Attributes:** Background processing

Once workflow has started, the system automatically sets the ENQUEUE\_GRP indicator (block master contract until all lower level contracts have been updated) in table VBAK (sales document header data). Once the whole workflow has finished, the system deselects this indicator using task TS20000233.

## Preparation and Customizing (SD-SLS-OA)

### Application-Specific Customizing

You need to make the following settings in **Customizing for Sales and Distribution**:

- Update lower level contracts  
Select the *Update lower level contract* field for sales document type group contract, so that the workflow copies all the changes in the master contract into the assigned lower level contracts, according to the referencing procedure.  
Make this setting by going to Customizing for Sales and Distribution and choosing *Sales* → *Sales Documents* → *Sales Document Header* → *Define sales document types* for the sales document type group contract.
- Processor assignment  
Assign a processor by going to Customizing for Sales and Distribution and choosing *Sales* → *Sales Documents* → *Contracts* → *Master Contract* → *Activate Workflow for Master Contracts*. For more information on this Customizing activity, see the online Implementation Guide.
- Event linkage  
You must activate event linkage for object types BUS2095 and BUS2034. You can do this by going to Customizing for Sales and Distribution and choosing *Sales Documents* → *Contracts* → *Master Contract* → *Activate Workflow for Master Contracts*. For more information on this Customizing activity, see the online Implementation Guide.

### Customizing for SAP Business Workflow



Note that the changes in the lower level contracts are made according to the referencing procedure for the master contract that was agreed on in Customizing. See the relevant chapter in the Implementation Guideline for master contracts.

### Organizational Plan

You can also assign the people who can change the master contract to other organizational units.

Organizational units are areas within a company that belong together for organizational and business purposes, such as a department. However, they are not normally required for the workflow scenario. Only those employees who are authorized to change master contracts and who have changed a master contract, receive a work item in their inbox if an application error occurs, for example, if the workflow is incorrectly implemented. The work item can be forwarded to all the people who are listed in the employee assignment but the employees who process it must also be authorized to change the contracts.

You can set up the organizational plan in Customizing for Basis. In the Implementation Guide, choose *Basis Components* → *Business Management* → *SAP Business Workflow* → *Edit organizational plan*.

---

**Preparation and Customizing (SD-SLS-OA)****Change customer contract in the background: Set time span**

If a temporary error occurs when you change the contract (for example, the lower-level contract is blocked), the system will try to change the master contract again in the background at a later point. You can define the time span at which this occurs in Customizing.

You can define the time span in Customizing for Workflows (*Basis Components* → *SAP Business Workflow* → *Basic Settings (System, SAP Business Workflow)* → *Activate automatic monitoring of incorrect work items*).

## Using and Linking to the Application Functions (SD-SLS-OA)

### Prerequisites

You have created the link to the workflow (see application-specific Customizing), created a master contract, and assigned the lower level contracts to the master contract.

### Process Flow

1. Change a field in the master contract for which there is a rule in the referencing procedure (Customizing for master contracts).
2. This triggers the changed event for business object BUS2094 (master contracts) and initiates the workflow template WS2000049.
3. The workflow template WS2000048 is called up for each lower level contract related to the changed master contract.
4. The system implements the standard task TS20000140 (change in background) for all the lower level contracts:
  - The system calls up standard task TS20000141 (implement change online) for all lower level contracts that cannot be changed in the background (change failed event for object type BUS2094).  
The person who changed the master contract receives a work item in their inbox. The employee can change the lower level contract directly from the inbox using the information displayed in another window about the changes made in the master contract. The whole workflow finishes if all the lower level contracts are changed.
  - The system calls up task TS20000409 (background change of customer contract) for all lower level contracts that contain a temporary error (blocked by processing). After a certain time span, which has been defined in Customizing for workflows, the system tries to change the lower level contracts in the background again. The workflow is complete once all the lower level contracts have been changed. If the system cannot change the contract because it is still blocked, for example, the person who changed the master contract receives a work item in their integrated inbox. When they execute the work item, the system changes the lower level contract in the background. The work item remains in the inbox until the lower level contract has been changed. If an application error occurs when the system changes the contract in the background, it calls up task TS20000141. The employee receives a work item in their integrated inbox that can only be processed online.
  - Once all the workflows are finished for the lower level contracts, the whole workflow ends.



In order to guarantee consistent data retention, all the lower level contracts that are to be changed are blocked until the relevant workflow has finished for the lower level contract.

---

**Removing Errors in Internet Sales Orders (SD-SLS)**

## Removing Errors in Internet Sales Orders (SD-SLS)

### Purpose

In the Internet application component *Online Store*, customers can obtain quotes and enter orders over the Internet. They can choose to pay either by invoice, credit card or cash on delivery.

If a quotation or order cannot be created because certain master data or Customizing settings are missing or not properly maintained, the transaction is cancelled and an error message is displayed in the customer's browser.

This workflow enables the relevant associates to be informed automatically about the error so that they can be corrected as quickly as possible.

### Process Flow

The event triggering the workflow is generated automatically when an error occurs in the entry of a sales order or quotation in an Online Store.

A workitem containing information about the errors that occurred and all the details required to correct the error is sent to the inbox of the sales associates responsible for the Online Store.

## Technical Implementation (SD-SLS)

### Object Types Used

Object technology is used to create the interface between the R/3 functions and the workflow system. The information given below is of a technical nature and is not necessary for an initial overview.

### Standard Tasks

The standard tasks provided by SAP as single steps describe the basic business activities from an organizational point of view. A single-step task relates to a single object method (= technical link to R/3 functionality), and is linked to the agents possible from an organizational point of view.

### Workflow Template

The actual operational procedure is implemented as a workflow template. You can find this workflow template in your R/3 system.

---

Object: Sales Order (SD-SLS)

## Object: Sales Order (SD-SLS)

### Definition

The sales order business object (object type *BUS2032*) is a request from a customer to a company asking for a specific quantity of materials to be delivered, or services to be rendered, on a given date.

A sales order is sent to a sales area, and this sales area is then responsible for fulfilling the contract.

### Use

It is also possible to simulate a sales order. In this process, prices are determined, taking account of customer-specific conditions, and current delivery data is determined for a sales order, but the sales order itself is not created. A simulated sales order is referred to as a quotation in this case (not to be confused with the customer quotation business object, object type *BUS2031*).

Location in object repository: *Sales and distribution* → *Sales* → *Customer quotation*

## Standard Task TS20000357: Error in Quotation (SD-SLS)

### Use

This standard task is used to decide whether an error that occurred during creation of a quotation (in this case, equivalent to the simulation of a sales order in the online store) is to be corrected. The agent is provided with all information needed to reconstruct and correct the error. This includes the error message plus long text, the online store in which the error occurred, the sales area responsible, the ordering party (customer), all materials in the order items, the pricing date and the delivery date.

The agent can end processing of the task by choosing *Error corrected*. The agent can also cancel the task, in which case the task remains in the agent's integrated inbox for further processing.

Object method referenced: object type *DECISION*, method: Process

Agent assignment: For the validity period, this standard task is addressed to the agents in the sales office or sales area which are responsible for the online store. These employees are determined via standard role *20000045* (agent for Internet sales orders).

---

**Standard Task TS20000347: Error in Order on Account (SD-SLS)****Standard Task TS20000347: Error in Order on Account (SD-SLS)****Use**

This standard task is used to decide whether an error that occurred during creation of a order for which an invoice is to be issued to the customer is to be corrected. As in standard task *TS20000357*, the agent is provided with all information needed to reconstruct and correct the error. In addition, the agent is told that the customer wanted the order to go on his/her account and that an invoice was to be issued.

The agent can end processing of the task by choosing *Error corrected*. The agent can also cancel the task, in which case the task remains in the agent's integrated inbox for further processing.

Object method referenced: object type *DECISION*, method: Process

Agent assignment: For the validity period, this standard task is addressed to the agents in the sales office or sales area which are responsible for the online store. These employees are determined via standard role *20000045* (agent for Internet sales orders).

## Standard Task TS20000346: Error in Credit Card Order (SD-SLS)

### Use

This standard task is used to decide whether an error that occurred during creation of a credit card order is to be corrected. As in standard task *TS20000357*, the agent is provided with all information needed to reconstruct and correct the error. In addition, the agent is told that the customer wanted to pay by credit card, and is informed of the type of credit card, the card number, and the expiration date.

The agent can end processing of the task by choosing *Error corrected*. The agent can also cancel the task, in which case the task remains in the agent's integrated inbox for further processing.

Object method referenced: object type *DECISION*, method: *Process*

Agent assignment: For the validity period, this standard task is addressed to the agents in the sales office or sales area which are responsible for the online store. These employees are determined via standard role *20000045* (agent for Internet sales orders).

---

**Standard Task TS20000372: Error in Cash-on-Delivery Order (SD-SLS)**

## Standard Task TS20000372: Error in Cash-on-Delivery Order (SD-SLS)

### Use

This standard task is used to decide whether an error that occurred during creation of a cash-on-delivery order is to be corrected. As in standard task *TS20000357*, the agent is provided with all information needed to reconstruct and correct the error. In addition, the agent is told that the customer wanted to pay by cash on delivery.

The agent can end processing of the task by choosing *Error corrected*. The agent can also cancel the task, in which case the task remains in the agent's integrated inbox for further processing.

Object method referenced: object type *DECISION*, method: Process,

Agent assignment: For the validity period, this standard task is addressed to the agents in the sales office or sales area which are responsible for the online store. These employees are determined via standard role *20000045* (agent for Internet sales orders).

## Standard Role AC2000045: Agent for Internet Sales Order (SD-SLS)

### Use

This standard role determines positions or organizational units that are assigned to a sales office or sales area transferred in a role container.

If this container includes a reference to a sales office (parameter *Sales office*), the employees responsible for this sales office are determined. If this role resolution leads to no employees being determined, or the container does not contain a sales office (because one is not defined for the online store), the employees responsible for the sales area (parameter *SalesAndDistribArea*) are selected.

The structure and assignment of SAP organizational object types Sales office and Sales area to object types of organizational management in Customizing is described later in this document.

## Workflow Template: Correcting errors in Internet sales orders (SD-SLS)

## Workflow Template: Correcting errors in Internet sales orders (SD-SLS)

### Use

If an error occurs in a sales order or quotation in the IAC "Online Store", the system starts a workflow based on the template SD\_KI\_WF.

Workflow template: 20000169, abbreviation: SD\_KI\_WF, name: Correct errors in Internet sales order

### Triggering events of the workflow template

The event *erroInternetCreate* (error creating in the Internet) for object type *BUS2032* (sales order) is the triggering event for the workflow template.



This "link" between the event and the workflow template to be triggered is deactivated in the standard system and must first be activated in Customizing for SAP Business Workflow, before the workflow template is actually triggered. (See [Preparation and Customizing \(SD-SLS\) \[Page 44\].](#))

### Workflow container and binding

As the workflow can only be started if a sales order or quotation is not created because of an error, no object reference to a sales order is available. Event parameter *\_Evt\_Object* in the container of the triggering event is initially empty.

The information exists as event parameters in the container of the triggering event and must be transferred to the workflow container via a binding.

As a result, the following binding definition between the triggering event and the workflow container is defined in the standard system:

Workflow container	Event parameter container
<i>MessageType</i>	<i>MessageType</i>
<i>MessageID</i>	<i>MessageID</i>
<i>MessageNumber</i>	<i>MessageNumber</i>
<i>MessageText</i>	<i>MessageText</i>
<i>MessageDetail</i>	<i>MessageDetail</i>
<i>OnlineStore</i>	<i>OnlineStore</i>
<i>OstoreDescription</i>	<i>OstoreDescription</i>
<i>SalesDocumentType</i>	<i>SalesDocumentType</i>
<i>RequestedDelivDate</i>	<i>RequestedDelivDate</i>
<i>PricingDate</i>	<i>PricingDate</i>
<i>SalesOffice</i>	<i>SalesOffice</i>

**Workflow Template: Correcting errors in Internet sales orders (SD-SLS)**

<i>SalesAndDistribArea</i>	<i>SalesAndDistribArea</i>
<i>OrderingParty</i>	<i>OrderingParty</i>
<i>MaterialList</i>	<i>MaterialList</i>
<i>SalesOrderSimulate</i>	<i>SalesOrderSimulate</i>
<i>PaymentMethod</i>	<i>PaymentMethod</i>
<i>PaymentCardType</i>	<i>PaymentCardType</i>
<i>CardNumber</i>	<i>CardNumber</i>
<i>ExpirationDate</i>	<i>ExpirationDate</i>

These elements have been created in addition to the elements available in the standard system.

---

**Preparation and Customizing (SD-SLS)**

## Preparation and Customizing (SD-SLS)

### Use

In addition to the general Customizing procedures that must be performed to make sure workflow system functions properly, several other customizing steps are necessary for this workflow template.

### Activities

#### Processing the organizational structure

Various users are able to check and correct errors in Internet sales orders. These users must be entered in Customizing for SAP Business Workflow. Only those users responsible for handling incorrect Internet sales orders in the sales office or sales areas are to be selected.

First assign a sales order to the online store by choosing *Logistics - General* → *Logistics Basic Data: Product Catalog* → *Internet-application components*.

In the container of the triggering event, the sales office and sales area are copied to parameters *SalesOffice* and *SalesAndDistribArea*. From here, they are transferred via a binding to the workflow container, and from there to the role container for standard role *20000045* (agent for Internet sales orders), which carries out role resolution in workflow. If this container includes a reference to a sales office, the employees responsible for this sales office are determined. If this role resolution leads to no employees being determined, or the container does not contain a sales office (because one is not defined for the online store), employees transferred for the sales area are selected.

Enter your organizational plan by choosing Customizing activity *Basis Components* → *Business Management* → *SAP Business Workflow* → *Edit organizational plan*.

Execute Customizing activity *Basis Components* → *Business Management* → *SAP Business Workflow* → *Basic Settings* → *Maintain assignments for SAP organizational object types*, and enter the SAP organizational object types *Sales office* (object type *TVBUR*) and *Sales area* (object type *BUS0006003*), if necessary. List all organizational management object types that are used to correct errors in Internet store orders, such as positions and/or organizational units.

You then use transaction *PFOM* to assign the appropriate sales office (object type *TBVUR*) or sales area (object type *BUS0006003*) to the organizational units and/or positions that represent the sales office or sales area responsible.

#### Performing task-specific Customizing

Classify the general tasks.

You assign tasks in Sales and Distribution as follows:

1. Execute the Customizing activity (*Basis* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing*).
2. Here, under *Sales and Distribution* → *Sales*, choose the activity *Assign tasks to agent*.
3. Classify the standard tasks *TS20000357* (error in quotation), *TS20000347* (error in order on account), *TS20000346* (error in credit card orders) and *TS20000372* (error in cash-on-delivery order) as general tasks.

## Activating event-receiver linkage

Event *ErrorInternetCreate* (error creating in Internet) for object type *BUS2032* (sales order) is the triggering event for workflow template *20000169* (correct error in Internet sales order) and as such is entered as standard in the event linkage table. So that the workflow template is actually started, you must activate the linkage between the triggering event and the workflow template, as the receiver of the event, in Customizing for SAP Business Workflow.

Activate the workflow template *SD\_KI\_WF* in your system as follows:

1. Execute the Customizing activity *Basis Component* → *Business Management* → *SAP Business Workflow* → *Perform task-specific Customizing*.
2. Activate the event linkage for the workflow template (*Sales and Distribution* → *Sales* → *Activate event linking*).

(Alternatively, you can activate event-receiver linkage by working directly in the workflow template)

---

**Handling of Exceptions at Store Goods Receipt (SD-POS)**

## Handling of Exceptions at Store Goods Receipt (SD-POS)

### Purpose

You can use the functions of store goods receipt for stores that do not have a direct link to the central SAP System and therefore post their goods receipt in a store merchandise management system. This goods receipt data is then transferred in the form of an IDoc to the central SAP System, where it is processed automatically. If the data is complete and error-free, the goods receipts of the stores are posted in the central system.

In IDoc inbound processes, exceptions may occur, and you can process these using workflow. Exceptions are situations in which the system is not able to process data automatically, because information on the goods movement item is missing.

Exceptions therefore usually apply to a single goods movement item. Exception handling is required, for example, if one of the following situations occurs:

- The open goods receipt quantity is too low
- Quantity variances were determined in the goods receipt check
- The system could not uniquely assign a purchase order or delivery to the store goods receipt
- The system could not determine a purchase order or delivery to the store goods receipt
- The system could not expand a shipping unit into its individual articles

The workflow described below is used to handle these exceptions.

### Process Flow

A store associate enters goods receipts and other goods movements in a store's merchandise management system.

As a result, IDocs of type *WPUWBW01* are created and used to transfer the information relating to goods receipt to the central SAP System automatically. The central SAP System posts the IDocs in the background.

If one of the above-mentioned exceptions occurs during inbound processing for the IDoc, the system triggers workflow for the item concerned, and creates a work item. The person responsible for processing the exception receives the work item in his/her integrated inbox.

Workflow is complete when no further errors occur for a goods movement item, which means that the data can be successfully posted in the central SAP System.

## Technical Implementation (SD-POS)

The following information is of a technical nature. You need the information if you are interested in the details of implementation, or want to carry out enhancements yourself.

### Object Types

Object technology is used to create the interface between the SAP functions and the Workflow system.

During POS inbound processing, an IDoc of type *WPUWBW01* is created. This contains the data that the central SAP System needs to process the goods receipts that were posted in the store.

The methods for processing work items are provided by business object *IDOCPUWB* (POS inbound goods movements). This object type represents the purely technical interface for executing work items, not a concrete IDoc.

### Task Group

Task groups are collections of standard tasks, workflow templates and other task groups that are used in a common context.

For this workflow, two technical solutions were implemented that are assigned to the following task groups:

- The single-step task for workflow linkage of store goods receipt are grouped together under task group *20000029*.
- A revised version, in the form of a workflow template (implemented as of Release 4.6) is stored under task group *20000023*.

If you want to use this workflow, you must select one of these two solutions in Customizing for POS Interface.

---

**Preparation and Customizing (SD-POS)**

## Preparation and Customizing (SD-POS)

### Use

Several other specific customizing steps are necessary for this workflow template in addition to the general customizing that is necessary to make sure that the workflow system functions correctly.

### Prerequisites

You have carried out the general customizing for SAP Business Workflow.

### Customizing Activities for Workflow "Handling Exceptions at Store Goods Receipt"

In the "POS Goods Movements Control " section of Customizing for POS Interface, you define whether you use "old" workflow exception processing (single-step tasks) or "new" workflow exception processing (workflow template), or whether you want to completely deactivate workflow exception processing.

Here, you can also define whether the system handles exceptions for goods receipts for PO items for which the "Delivery complete" indicator has been selected by triggering workflow, or whether the quantity is to be posted directly providing the quantity requirements (such as tolerances) are met.

You choose *Workflow* → *Store goods receipt* to find the Customizing activities generated for old and new workflow exception processing. You can use these Customizing activities to perform task-specific Customizing for both workflow solutions. At this point, you can use the organizational plan to assign the person responsible for processing the exception.

## Operation and Link to Application (SD-POS)

### Use

When goods receipts are posted in the store, an IDoc of type *WPUWBW01* is created.

When the information contained in this IDoc is transferred to the central SAP System, checks are automatically carried out. If exceptions are determined during these checks, the data relating to the goods receipt item(s) concerned is written to the workflow container. This data is transferred to a work item, which is displayed in the integrated inbox of the person responsible for processing the exception. You use the organizational plan to assign the people responsible for processing exceptions.

The methods for processing the work items are provided by business object *IDOCPUWB*, on which IDoc *WPUWBW01* is based.

### New Workflow Link (Workflow Template)

In the new version, workflow is executed using a workflow template. This contains the following single-step tasks:

- Store goods receipt: Processing step

When the work item is executed, a user dialog is called in a separate window. In this window, the prepared data for the incorrect goods receipt item is displayed from the relevant IDoc segment for which workflow was started. An error message relating to the specific problem is also displayed.

Depending on the exception that occurred, the person responsible has various options for processing the item. For example, the person responsible can *reject*, or *post* the data, or *create an automatic purchase order*.

It is possible to process partial quantities of the transferred quantities in sequence. Once a partial quantity has been posted successfully, a new work item is created for the remaining quantity, and you can continue processing with this work item.

Concrete posting of the item is carried out by batch input, which means that the corrected information is transferred to the central system in the background. If a problem occurs during processing, background processing is terminated so that the person responsible can intervene online at the point where the problem occurred. Background processing then continues.

- Store goods receipt: Delete error log for exception processing

Workflow is complete when there are no remaining quantities to be processed. At this point, the error log that is displayed in the POS monitor for this POS goods receipt item is deleted.

### Old Workflow Link

The old version of workflow is executed with the following single-step tasks:

- Store goods receipt for purchase order
- Store goods receipt for unknown purchase order
- Store goods receipt with automatic purchase order

**Operation and Link to Application (SD-POS)**

- Store goods receipt with quantity variance
- Store goods receipt for delivery
- Store goods receipt for shipping unit

When the work item is executed, these single-step tasks are run in batch input, with the exception of the single-step task for processing quantity variances. For this step, a dialog box is displayed in which the person responsible can correct the quantity variances. Background processing is starts.

All the data determined by the system is transferred to the batch input. If a problem occurs during processing, batch input continues online, so that the person responsible can analyze the problem.

Workflow is complete when the item can be successfully posted.

The error log displayed in the POS monitor for the POS goods receipt item is updated once the work item has been processed successfully.