

ELO Suite for SAP

ArchiveLink® (SAP

NetWeaver® & SAP S/

4HANA®)

ERP Datatransfer for ELO DocXtractor

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ERP Datatransfer for ELO DocXtractor

Introduction

This documentation describes how to install and configure ERP Datatransfer for ELO DocXtractor from ELO Digital Office GmbH.

This implementation has been tested for the following ELO versions:

- ELOprofessional and ELOenterprise version 11.01.000 and higher
- ELO DocXtractor 5 SP01 and higher

The ERP Datatransfer for ELO DocXtractor interface enables you to provide changed or new data in the ERP system (such as order data) to ELO DocXtractor immediately. This makes the planning of jobs for reading data in the ERP system as well as interval-controlled updates of the entire database obsolete. The data in the matching server as well as the ELO DocXtractor database are current on runtime.

Basics

The use of ERP Datatransfer for ELO DocXtractor requires a corresponding user in the connected ERP system with the permissions necessary to run and configure the interface. For more detailed information, refer to the sections for the ERP system in use in this documentation.

An active, configured ELO DocXtractor system with administrator access is also required.

To use ERP Datatransfer for ELO DocXtractor, your computer must also meet the following system requirements and release statuses of ELO, ELO DocXtractor, and the different ERP systems:

- DocXtractor version 5 SP01 and higher
- The following SAP versions or higher:
 - SAP_BASIS 702 SAPKB70213
 - SAP_BASIS 730 SAPKB73009
 - SAP_BASIS 731 SAPKB73106

Getting started

Installing the ELO DocXtractor system

If using ELO DocXtractor version 5 SP01 to 5 SP03, an additional installation package is provided. This is a ZIP file that has to be installed on the existing ELO DocXtractor system.

The following document describes the installation and configuration of ERP Datatransfer for DocXtractor:

- Installation
- Configuration

Installation

Installation with ELO DocXtractor up to version 5 SP03

In versions 5 SP01 to 5 SP03, ERP Datatransfer for ELO DocXtractor is not an integral part of the ELO DocXtractor installation, so it has to be configured later. The required *ERPDataTransfer.zip* is available to this end.

ERPDataTransfer.zip package

The *ERPDataTransfer.zip* package contains the following:

- *ERPDataTransfer.spx* library
 - This file contains the implementation of the ERP Datatransfer for ELO DocXtractor logic.
- *ERPDataTransferTest.spl* SPL library
 - Library with example calls for ERP Datatransfer for ELO DocXtractor (not required).
- *ERPDataTransfer.cmd* CMD file
 - Required to return the error code.
- *specialConfigsERPDataTransfer.xml* XML file
 - Contains the configuration entries for ERP Datatransfer for ELO DocXtractor.
- *shell2Http.exe* file
 - HTTP server for executing shell commands.
- *README.md* file
 - Readme for shell2http.
- *LICENSE*
 - shell2http license.
- *status.html* file
 - Status page for ERP Datatransfer for ELO DocXtractor.
- *SlotFunctions.spl* file
 - Required to initialize the DocXtractor Java interface.

Configuring ERP Datatransfer for ELO DocXtractor

The instructions described in this section require access to the file system of the server of your ELO DocXtractor installation.

1. Extract the *ERPDataTransfer.zip* folder to the following directory on the ELO DocXtractor server:

`%SF_ROOT_DIR%\System\ERP Datatransfer`

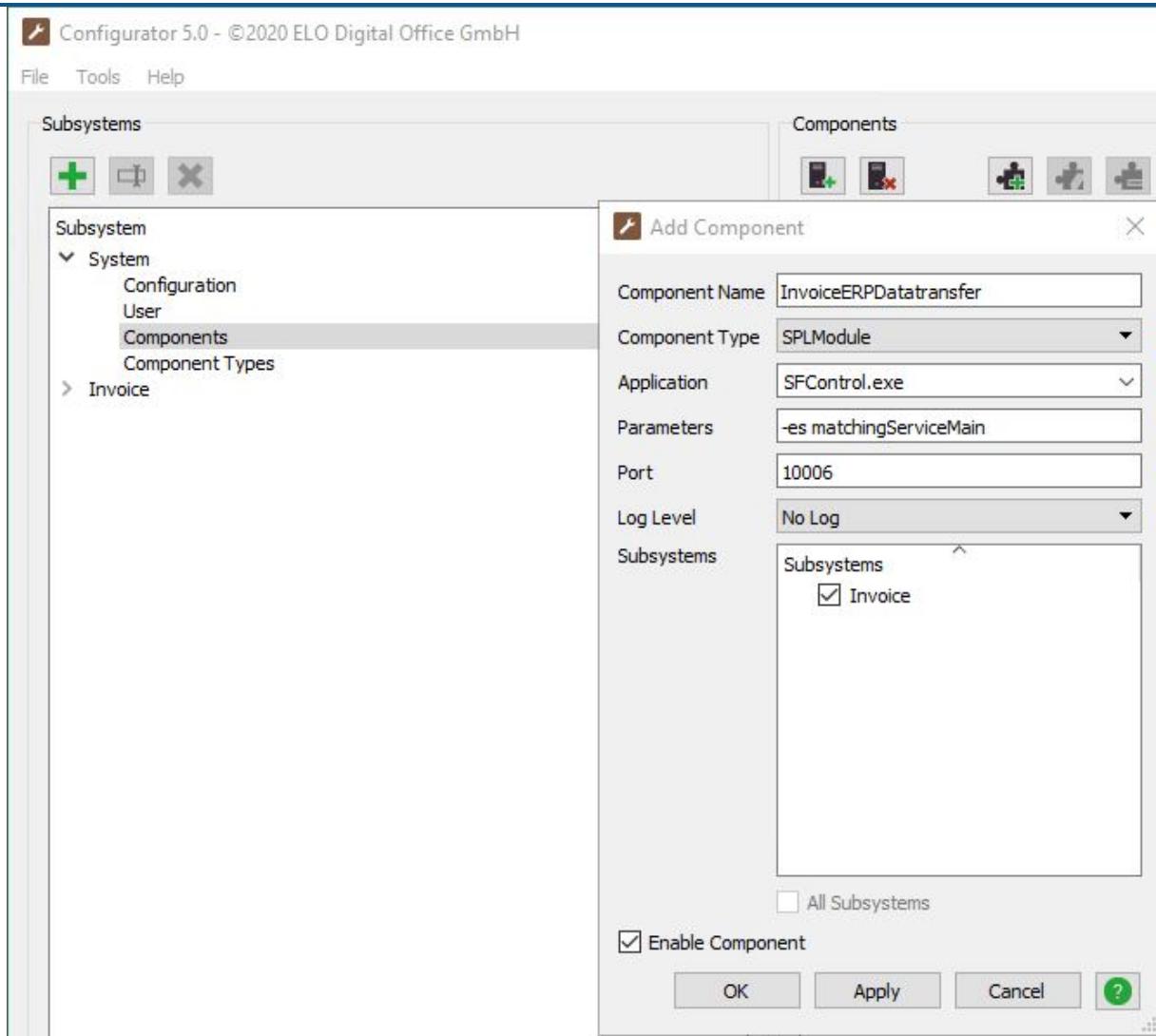
2. Copy or move the following files from the `%SF_ROOT_DIR%\System\ERP Datatransfer` directory to the following locations:

- *ERPDataTransfer.spx*



Store the *ERPDatatransfer.spx* file in the following directory: %SF_ROOT_DIR%\\<Subsystem>\\Data\\Custom\\Databases

- *ERPDatatransferTest.spl*
 - File the *ERPDatatransferTest.spx* file, which contains call examples and is not required for ERP Datatransfer for ELO DocXtractor to work, to the following directory: %SF_ROOT_DIR%\\<Subsystem>\\Data\\Custom\\Databases
- *SlotFunctions.spl*
 - If the %SF_ROOT_DIR%\\<Subsystem>\\Data\\Custom\\Databases directory already contains a *SlotFunction.spl* file, insert the contents of the file from the package into the existing *SlotFunctions.spl*. If the %SF_ROOT_DIR%\\<Subsystem>\\Data\\Custom\\Databases directory does not contain a *SlotFunctions.spl*, you can copy this file to the directory.
- *ERPDatatransfer.cmd*
 - File the *ERPDatatransfer.cmd* file to the following directory: %SF_ROOT_DIR%\\<Subsystem>\\Data\\Custom\\Databases
- *specialConfigsERPDatatransfer.xml*
 - Store the *specialConfigsERPDatatransfer.xml* file in the following directory: %SF_ROOT_DIR%\\<Mandant>\\Config



3. In the ELO DocXtractor Configurator, now add a new component under *System > Components*.

The settings are as follows:

Component name: *InvoiceERPDataTransfer*

Component type: *SPLModule*

Application: *SFControl.exe*

Parameter: *-es matchingServiceMain*

Port: A free port; the Configurator suggests the next free port

Log level: *No log*

Subsystem: *Invoice* (or the subsystem ERP Datatransfer for ELO DocXtractor will be used for)

4. Check the *Activate component* box.

ERP Datatransfer for ELO DocXtractor from version 5 SP04

From ELO DocXtractor version 5 SP04, ERP Datatransfer for ELO DocXtractor will likely be available as a smartblock. The steps described above no longer have to be performed starting with this version.

Add two columns to database tables

1. If they don't already exist, add the following two columns to the *SFI_ORDER_ITEM* and *SFI_VENDOR* ELO DocXtractor matching databases:

Column name	Data type	Allow null values
TIMES	Datetime2(3)	Yes
MODIFIED	Nvarchar(1)	Yes

The columns then have to be integrated in the ELO DocXtractor Document Manager.

2. Open the Document Manager and select *Definition -> Matching data....*
3. Navigate to the *SFI_ORDER_ITEM* and *SFI_VENDOR* tables and check the *TIMES* and *MODIFIED* columns.
4. Set data retention to *Store*.

Configuration

Configuring ERP Datatransfer for ELO DocXtractor

To see the configuration entries for ERP Datatransfer for ELO DocXtractor, the Configurator first has to reinitialize the subsystem (from a technical point of view, it has to reload the *specialConfigsERPDatatransfer.xml* file). You can either restart the Configurator or switch to another subsystem and back.

1. In the Configurator, navigate to the configuration settings for your subsystem. Later, this will be represented by *Invoice*.

Configuration Entry	Value	Default Value
↙ ELO		
↙ ERP Datatransfer		
Host	10.49.110.196	
OpenJDKPath	E:\ELOenterprise\java	
Password	52-247-139-10-8-11-59-34	password
Port	6060	6060
PrimaryKeyColumns	SFI_VENDOR VE_PK;SFI_ORDER_ITEM ORI_PK	
ReloadTables	SFI_ORDER_ITEM SFI_ORDER	SFI_ORDER_ITEM SFI_ORDER
SaveDataDir	E:\DocXtractorII_50\System\Log\ELOCCENTW20\ERP Datatransfer	
Separator	¶	¶
User	DocXtractor	user
WriteLogFile	1	0

2. Within the *ELO|ERP Datatransfer* configuration entry, set the parameter described below.

Host

Enter the server IP address or FQDN the web service for ERP Datatransfer for ELO DocXtractor should run on here. Generally, this is the address of the server ELO DocXtractor is installed on.

OpenJDKPath

This configuration entry must contain the OpenJDK directory, e.g. %SF_ROOT_DIR%\System\Etc\jdk-15.

Information

This entry will likely no longer be necessary as soon as ERP Datatransfer for ELO DocXtractor becomes a smartblock.

Password

Create a password here that the ERP system will then use to authenticate with the ERP Datatransfer for ELO DocXtractor interface.

Port

The port for the ERP Datatransfer for ELO DocXtractor web service.

Information

You may have to enable ports in the network explicitly. If you have connection problems, contact your network administrator. This port is self-defined; do not confuse it with the port of the added ELO DocXtractor component.

PrimaryKeyColumns

This configuration entry is required if ERP Datatransfer for ELO DocXtractor has to generate a primary key for the data sets before making an entry to the ELO DocXtractor matching data.

Enter the table name and the column in the following convention: Table|Column. For additional tables and columns, use a semicolon as a separator. If an entry is specified for a table, a new data set is inserted in the specified column of the value *max+1* during the Insert action.

Example: Invoice

With a standard ELO DocXtractor Invoice installation, a combination of company code and vendor represent the unique key for the vendor. If you want to provide all bank accounts per vendor to ELO DocXtractor, this would result in a primary key violation. To be able to save all bank accounts, we add the column *VEPK* to the *SF_VENDOR** table in this case. This additional column is also added to the *Unique Index* of the table and the matching server configuration. As the values for this column don't come from the ERP system, ERP Datatransfer for ELO DocXtractor generates a unique key.*

The value for the configuration entry for the case above would then be: *SFI_VENDOR|VE_PK*.

Information

You also need to consider the settings in DocXtractor: Make the *VE_PK* column known as the primary key to the MatchingServer in the DocXtractor Document Manager.

ReloadTables

In this configuration entry, you can define which tables or views the matching server should reload when changes are made to data in a specific table. The value of the configuration entry is a list of values separated by semicolons.

```
<Table>|<Table or View 1>¶<Table or View 2>¶...<Table or View n>
```

For the Invoice case in which order data requires a reload of the order view after changes to item data, the value looks like this:

SFI_ORDER_ITEM|SFI_ORDER

SaveDataDir (optional)

If this configuration entry has been set, ERP Datatransfer for ELO DocXtractor saves the data transferred from the ERP system for debugging in the directory specified in the configuration entry.

Separator

The defined column separator the data is transferred with.

User

This user name is used for authentication between the ERP system (e.g. an SAP system) and the ERP Datatransfer for ELO DocXtractor interface.

Information

The user does not have to be a system-specific ERP user. However, the user has to be entered in the ERP system configuration for authentication/connection. You will find this configuration taking connecting to an SAP system as an example in the section Installation and configuration: Configuring a destination.

WriteLogFile

Specifies whether a log file should be written per import when importing data.

Please note

Writing log files results in significant decreases in performance. We recommend only writing logs if there is a specific reason to do so.

Updating the system

- Once you have set up ERP Datatransfer for ELO DocXtractor as described above, you have to *refresh the clients* and *refresh the subsystem* in the Coordinator. ERP Datatransfer for ELO DocXtractor will then be visible in the Coordinator as follows.

Clients	Image Stacks	Archive Stacks	Statistics	System Overview	
Client	Host		State	Log	Subsystems
> Analyser			2 of 2 ready		
> DatabaseHub			0 of 0 ready		
> Exporter			1 of 1 ready		
> Importer			1 of 1 ready		
> LearnModule			1 of 1 ready		
> MatchingServer			1 of 1 ready		
SPLModule			1 of 1 ready		
InvoiceERPDataTransfer	ELOCCENTW20		Started	No Log	Invoice
> Verifier			0 of 2 ready		

Alternative: Instead of updating the client and the subsystem, you can also restart the CoordinatorKernel service.

ERP Datatransfer for ELO DocXtractor

Available functions

ERP Datatransfer for ELO DocXtractor requires basic authentication with user and password for all calls.

\status

The ERP Datatransfer for ELO DocXtractor status page can be queried with http_get.

\lastError

The last error including date and time can be queried with http_get.

\insert

The data sets can be entered to the matching database via the matching server with http_post.

Example http_post body:

```
-----9051914041544843365972754266

Content-Disposition: form-data; name="uplfile"; filename="uplfile.txt"

Content-Type: text/plain

TABLE|SFI_VENDOR

COLUMNS|VE_RECIPIENT_NO|VE_VENDOR_NO|VE_NAME|VE_STREET|VE_ZIPCODE|VE_CITY|...
1000|1341905464315|ELO Academy|Tübinger Straße 43|70669|Stuttgart|...
1000|1334314986436|Lightning Computers|Tübinger Straße 150|70191|Stuttgart|...
```

```
-----9051914041544843365972754266--
```

\insertDB

The body of http_post has an identical structure to that of \insert. The difference is that the data isn't transferred to the database via the matching server, but directly via ODBC. After Insert, the data is loaded to the matching server database.

\update

The data sets sent with http_post update the data in the matching server and matching database.

Example http_post body:

```
-----9051914041544843365972754266
```

```
Content-Disposition: form-data; name="uplfile"; filename="uplfile.txt"
```

```
Content-Type: text/plain
```

```
TABLE¶SFI_VENDOR
```

```
COLUMNS¶VE_RECIPIENT_NO¶VE_VENDOR_NO¶VE_NAME¶VE_STREET¶VE_ZIPCODE¶VE_CITY¶...
```

```
FILTER¶VE_RECIPIENT_NO¶VE_VENDOR_NO
```

```
1000¶1341905464315¶ELO Academy¶Heilbronner Straße 150¶70178¶Stuttgart¶...
```

```
-----9051914041544843365972754266--
```

\delete

The data sets sent with http_post are removed from the matching server and the matching database.

Example http_post body:

```
-----9051914041544843365972754266
```

```
Content-Disposition: form-data; name="uplfile"; filename="uplfile.txt"
```

```
Content-Type: text/plain
```

```
TABLE¶SFI_VENDOR
```

```
COLUMNS\VE_RECIPIENT_NO\VE_VENDOR_NO

FILTER\VE_RECIPIENT_NO\VE_VENDOR_NO

1000\1341905464315

-----9051914041544843365972754266--
```

\deleteAll

\deleteAll deletes all data sets from a matching database table.

Example http_post body:

```
-----9051914041544843365972754266

Content-Disposition: form-data; name="uplfile"; filename="uplfile.txt"

Content-Type: text/plain

TABLE\SFI_VENDOR

-----9051914041544843365972754266--
```

Structure of the http_post body

Keyword Description	(1) (2) (3) (4)
TABLE The name of the database table that is to be updated.	x x x x
COLUMNS Column name of the tables affected by update.	x x x
FILTER Table column names used to select the relevant data sets.	x x

Keyword used in

1. \Insert or \InsertDB
2. \Update
3. \Delete
4. \DeleteAll

Performance

Performance measurements were taken during development of ERP Datatransfer for ELO DocXtractor. These were carried out under the following conditions:

-

- Notebook with i7
- 24 GB of RAM
- Windows 10
- ELO DocXtractor 4.3 SP09
- SQL Server Express 2014
- Modification of table *SFI_VENDOR* with complete data sets (that is, including bank data, tax information, telephone and fax number, e-mail)

When inserting new data sets with \insert, the data sets transferred with http_post can be entered to the matching database via the matching server. The advantage of this is that the data is available to the ELO DocXtractor system right away without reloading. However, each time a data set is inserted, the matching server index is optimized. As a result, you can only insert approx. 10 data sets per second. This is especially important to remember when initially filling the matching database.

Besides \insert, ERP Datatransfer for ELO DocXtractor also provides an \insertDB function. As the data is written directly to the database, the matching server index does not have to be optimized after every Insert. Measurements have shown that you can insert approximately 350-400 data sets per second in the matching database in this way.

We therefore do not recommend transferring more than

- 2,000 data sets per \insert call (corresponding to approx. 3-4 minutes) and
- 100,000 data sets per \insertDB call (corresponding to approx. 3-4 minutes).

In any case, the values should be adapted to the actual performance of the specific system.

Please note

If you use an ELO DocXtractor version lower than 5.0 SP01, do not submit more than 100,000 data sets per call. This kind of call would very likely fail and cause a communication error in SAP. Use the filter function or an Insert per company code.

In both cases, make sure that the web service call does not result in a timeout when the call is performed within the ERP system.

Note regarding the *SFI_ORDER_ITEM* table

The performance difference between \insert and \insertDB isn't as significant with the *SFI_ORDER_ITEM* table. The \insert function is much faster, as no key columns are defined for the table in the matching server, making entries to the matching server easier.

SAP Netweaver® und SAP S/4HANA®

SAP NetWeaver® and SAP S/4HANA®

This chapter explains how to connect ERP Datatransfer for ELO DocXtractor to SAP NetWeaver® and SAP S/4HANA® systems.

Information

Using ERP Datatransfer for ELO DocXtractor requires outgoing HTTP communication capabilities. You can check this within the SAP system in the *SMICM* transaction under *Goto - Parameters - Display* and then under *icm/server_port*. *http protocol* must contain an entry. The SAP system must also be able to reach the ELO server and the ELO DocXtractor system.

Process description

To supply ELO DocXtractor with the required data, such as order data or vendor data, a trigger is required within the SAP system to initiate data transmission to ELO DocXtractor. Within SAP, you can use the event linkage function for this. For example, changing or creating orders within the SAP system results in a triggering event, which you can use as a starting point for programs. If you change and save an order, the *CHANGED* event results in the new data set being sent to ERP Datatransfer for ELO DocXtractor.

This documentation covers the following topics and more:

- Installation and configuration
- Set up events
- Initial startup
- SAP program for automatic sending of queue entries
- Source of SAP data

Installation and configuration

SAP transport

You will find all the required programs and functions in the SAP transport provided on the ELO SupportWeb. Inform your customer or the SAP partner about the SAP transport to be installed and provide it to them.

Information

Inform your customers or SAP partner of the following:

- The standard SAP transport routes must be used.
- All developments and functions within the transport in ELO were developed in a separate SAP namespace, called */ELO/*.

You may have to enable the *Ignore Invalid Component Version* option when importing the SAP transport.

It is also possible that you will encounter warnings when importing the transport due to different release statuses (return code 8), which can be ignored.

Once the SAP transport has been imported successfully into the SAP system, the other required steps can be performed.

Check workflow customizing

You need to check that the workflow customizing is correctly configured.

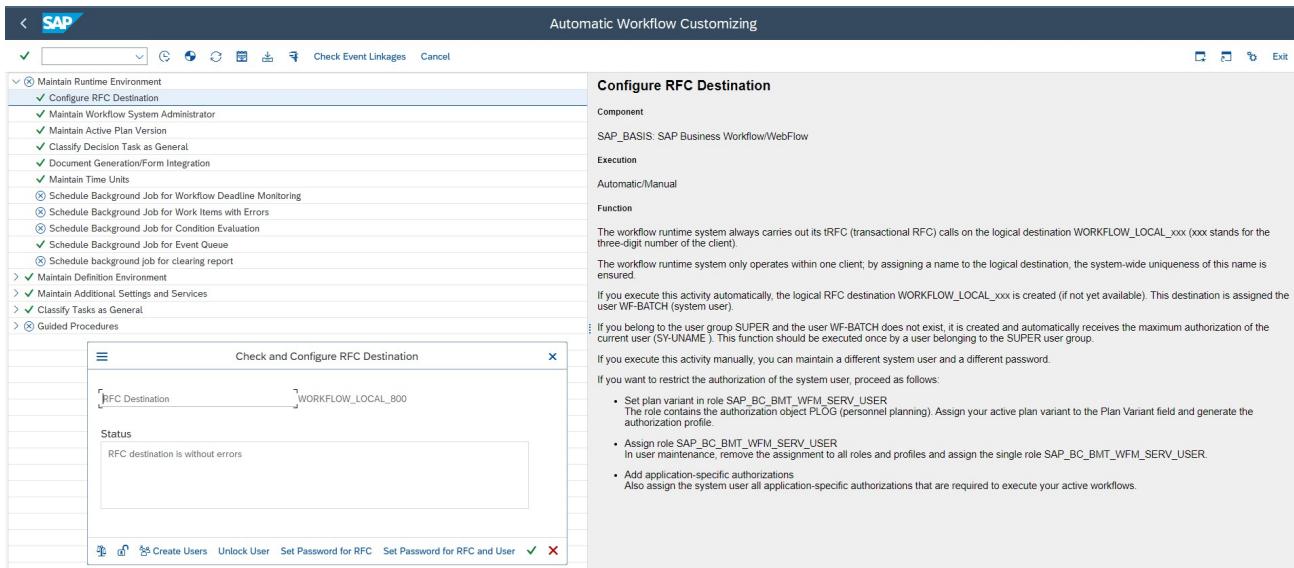


Fig.: Transaction SWU3 – Check RFC destination

Firstly, use transaction *SWU3* to check whether a user is stored for the RFC destination *WORKFLOW_LOCAL_<client>*.

If a customizing has not been entered for the menu item *Configure RFC Destination*, you need to configure this first

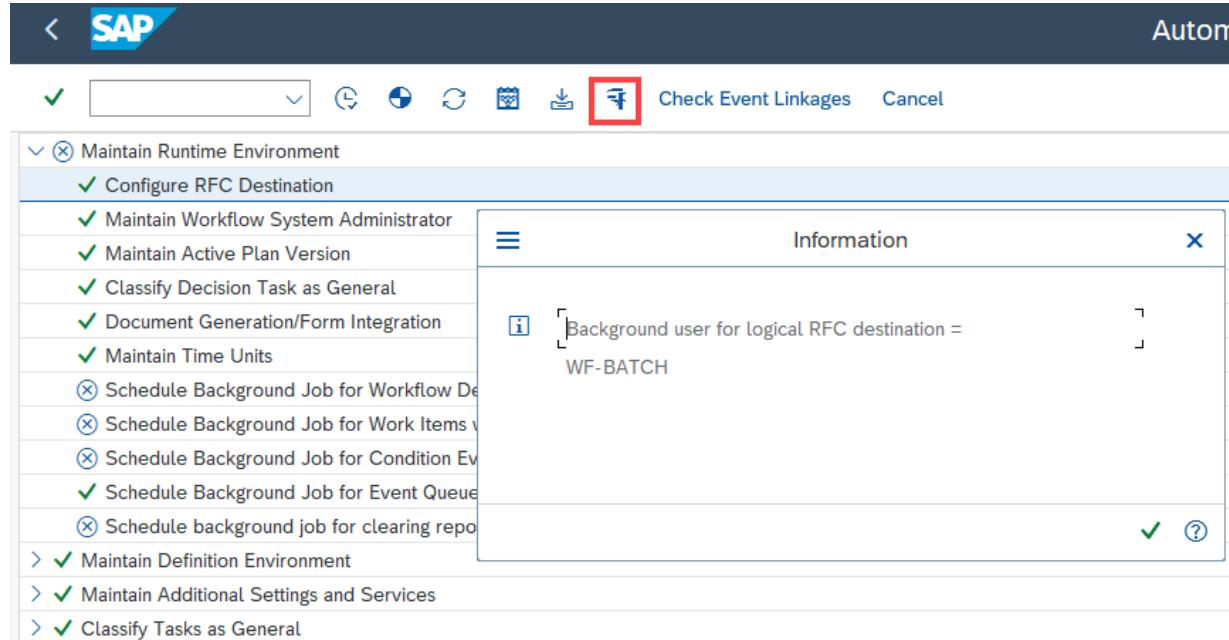


Fig.: Transaction SWU3 – Check background user

2. If you click the icon highlighted here or press F7, you can find out which user has been entered for the workflow destination.

Configuring permissions

The events in SAP are carried out by the *WF-BATCH* user as standard. If this user does not have full access, for example via the profile *SAP_ALL*, a role with the following rights has to be set up and assigned to the event user:

Permissions for event user

Permissions object Field name Value

S_RFC	RFC_TYPE	FUGR
S_RFC	RFC_NAME	/EL0/DOCX
S_RFC	ACTVT	16

If you want to transfer all values from the SAP system to ELO DocXtractor initially with a user, this user will need rights to execute the */EL0/DOCX_SETTINGS* transaction.

Permissions for ERP data transfer for ELO DocXtractor interface users

Permissions object Field name Value

S_TCODE	TCD	/ELO/DOCX_SETTINGS
---------	-----	--------------------

Configuring a destination

To ensure access from the SAP system to the ELO DocXtractor system, you will have to configure an *HTTP connection to an external server* in transaction *SM59*.

The screenshot shows the SAP transaction SM59 for configuring an RFC destination. The destination is named "DOCX_CONNECT". The "Connection Type" is set to "HTTP Connection to External Serv". The "Description" section contains three entries: "Description 1" (DocX Connect), "Description 2", and "Description 3". Below the destination configuration, there is a navigation bar with tabs: Administration, Technical Settings (which is selected and highlighted in blue), Logon & Security, and Special Options. Under the "Technical Settings" tab, there is a "Target System Settings" section with fields for "Target Host" (ELOCCENTW11) and "Service No." (6060). There is also a field for "Path Prefix".

Fig.: Connection information

1. Enter the connection data from the ELO DocXtractor configuration, such as *Host* and *Port*, which you configured in sections Configuring ERP Datatransfer for ELO DocXtractor: Host and Port.

RFC Destination DOCX_CONNECT

Connection Test

RFC Destination	DOCX_CONNECT
Connection Type	G HTTP Connection to External Serv

Description

Description 1	DocX Connect
Description 2	
Description 3	

Administration Technical Settings **Logon & Security** Special Options

Logon Procedure

Logon with User

Do Not Use a User
 Basic Authentication

User	DocXtractor
PW Status	saved
Password	*****

Logon with Ticket

Do Not Send Logon Ticket
 Send Logon Ticket Without Target System Reference
 Send Assertion Ticket for Dedicated Target System

System ID	Client
-----------	--------

Fig.: Logon

2. Use the *Basic Authentication* method in *Logon & Security* and enter the logon information that you defined in the sections Configuring ERP Datatransfer for ELO DocXtractor: Password and Configuring ERP Datatransfer for ELO DocXtractor: User in the ELO DocXtractor configuration as the *User* and *Password*.

Information

If you want to populate the system with a very large volume of data initially, we recommend manually increasing the timeout temporarily for this process if you don't use the transmission type InsertDB. Switch to the *Special options* tab and select *Set timeout*. Enter a value in seconds. We recommend temporarily entering a value of 600 seconds.

Interface configuration

1. If the SAP transports have been imported to the target system, you can call the transaction / *ELO/DOCX_SETTINGS*.

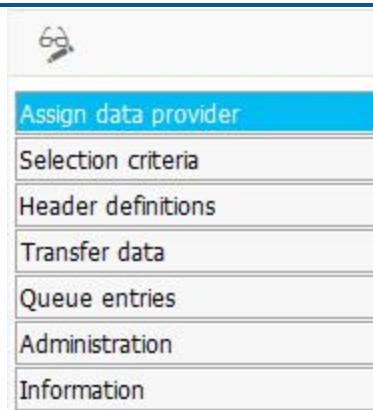


Fig.: Configuration in the SAP system, overview

The ERP Datatransfer for ELO DocXtractor configuration interface opens. The following sections explain the configuration options.

Please note

If you want to make changes to the configuration, you will have to switch to change mode by clicking *Display/Change* or the F6 key.

Data provider per business object

Obj. Cat.	Object Type	Event	ObjectTypeName	Destination Name
BO	/ELO/VEN	CHANGED	/ELO/CL_DOCX_GET_VENDORS	DOCX_CONNECT
BO	BUS2012	CHANGED	/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2012	CREATED	/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2012	RELEASED	/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2012	SIGNIFICANTLYCHANGED	/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2017	CREATED	/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	LFA1	CREATED	/ELO/CL_DOCX_GET_VENDORS	DOCX_CONNECT

Fig.: Configuring a data provider per business object

The data provider is responsible for data retrieval and can initially be populated with the configuration for the default values. Make sure to manually set the destination name depending on the destination you configured.

Example: Changing a purchase order (BUS2012)

- The class `/ELO/CL_DOCX_GET_ORDERS` is applied in the `CHANGED` event in the SAP business object `BUS2012` for data determination. Access takes place via the `DOCX_CONNECT` destination and the data is sent to ERP Datatransfer for ELO DocXtractor. The interface enters the data in the matching server and matching database.

The data provider configuration also allows you to customize data retrieval for your customer-specific requirements.

The following describes the setting parameters:

- Object category: Set to *BO* (business object) by default, to define instances of *BOR* (business object repository) object types.
- Object type: Enter the SAP business object the additional settings apply to here.
- Event: This setting depends on the object types you selected and defines which event the class set below will call.
- Class/interface: Name of the class to be executed during the event. The class /EL0/ CL_DOCX_GET_VENDORS is provided for the vendor data as well as the class /EL0/ CL_DOCX_GET_ORDERS for the order data. If you create your own class, you will have to integrate the /EL0/IF_DOCX_GETDATA interface.
- Destination name: Enter the name of the destination you configured in the section Installation and configuration: Configuring a destination.

Selection criteria

In the configuration interface for the selection criteria, you can configure restrictions for data determination to consider when executing an event.

You can use the selection criteria to narrow down the results to a specific company code, for example.

General		
Company code	<input type="text"/>	
Creditor	<input type="text"/>	
Vendor data		
Name	<input type="text"/>	
Account group	<input type="text"/>	
Business partner role	<input type="text"/>	
<input checked="" type="checkbox"/> including blocked <hr/> <input type="radio"/> Only one bank account <input checked="" type="radio"/> All bank accounts <hr/> <input type="radio"/> Only one VAT ID no. <input checked="" type="radio"/> All VAT ID no.		
<input type="button" value="Tax number mapping"/> <hr/>		
DocX vendor data table	<input type="text" value="SFI_VENDOR"/>	
Order data		
Purchasing document type	<input type="text"/>	
Purchasing document	<input type="text"/>	
Partner role	<input type="text"/>	
Number of days retroactively	<input type="text" value="180"/>	
<input checked="" type="checkbox"/> incl. orders used up <input checked="" type="checkbox"/> incl. planned incidental costs <input type="checkbox"/> Without goods receipt <input checked="" type="checkbox"/> Material master record price		
DocX order data table	<input type="text" value="SFI_ORDER_ITEM"/>	

Fig.: Configuring the selection criteria

The following provides an overview of the three configuration areas.

General: The values that can be set here are universal and apply for determining vendor data and order data.

- Company code (multiple selection possible)
- Vendor (multiple selection possible)
- Business partner (multiple selection possible)

Vendor data: In this area, you can select the vendor data. You can also increase the volume of data output, for example.

The following settings are possible:

- Vendor name (multiple selection possible)
- Account group (multiple selection possible)
- Business partner role (multiple selection possible)
 - Including blocked vendors
- One bank account
- All bank accounts
- One VAT ID no.
- All VAT ID no.
- DocX vendor data table

Please note

If you select *All bank accounts* and/or *All VAT ID numbers*, you will have to make some changes to the ELO DocXtractor table. These changes are explained based on the Invoice example in the section Configuring ERP Datatransfer for ELO DocXtractor: PrimaryKeyColumns.

Order data: In this area, you can select the order data.

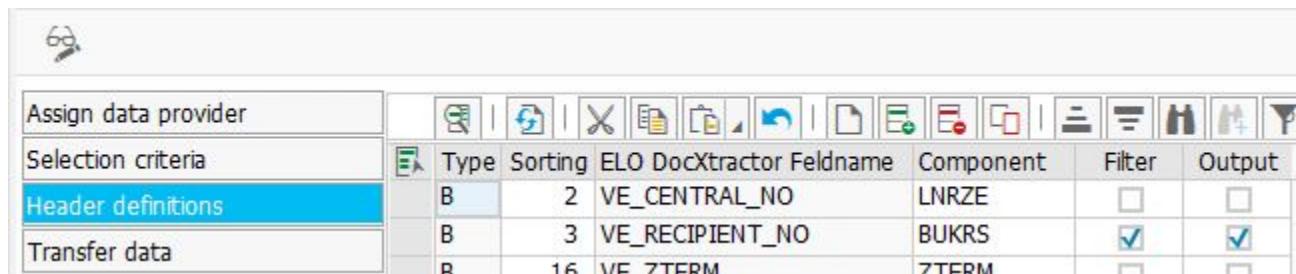
The following settings are possible:

- Purchasing document type (multiple selection possible)
- Purchasing document (multiple selection possible)
- Partner role
- Number of days retroactively
 - Including orders used up
 - Including planned incidental costs
 - Without goods receipt
 - Material master record price
- DocX order data table

Please note

If you enable the *Including planned incidental costs* option, you may have to make changes to the database. This applies to the *SFI_ORDER_ITEM* table and the *ORI_POS_NO* column. Generally, this is a five-figure amount. If you include the planned incidental costs, the condition is attached to the position. The result is that the column *ORI_POS_NO* has to be increased to 10 digits in the database.

Header definitions



	Type	Sorting	ELO DocXtractor Feldname	Component	Filter	Output
Assign data provider						
Selection criteria						
Header definitions	B	2	VE_CENTRAL_NO	LNRZE	<input type="checkbox"/>	<input type="checkbox"/>
Transfer data	B	3	VE_RECIPIENT_NO	BUKRS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	R	16	VE_ZTERM	ZTERM	<input type="checkbox"/>	<input type="checkbox"/>

Fig.: Configuring the header definitions

By configuring header definitions, you can configure the mapping between fields determined from the data and fields from the ELO DocXtractor table. The table definition is structured as follows:

- Type: Defines the type that the field matching belongs to. Type *O* (orders), *V* (vendors), and *P* (partners) fields are available as standard.
- Sort order: By entering a numeric sequence, you can define the order that the columns of the table should be output in. This allows you to control the order in which the columns in the ALV grid (ALV = SAP List Viewer) are shown in the *Transfer data* option. This setting does not affect database population and is only intended for better visualization.
- ELO DocXtractor field name: In this table column, enter the field name of the ELO DocXtractor table you want to transfer the component contents to.
- Component: Enter the component field name in these fields. In this case, the component is a separate table that contains the determined data from the SAP system. You will find more information about field mapping in the section Source of SAP data: Vendor data.
- Filter: This flag is used for updates and as a filter. For example, you can set the columns for the company code and vendor number in the vendor data, then the system will determine all data sets where these two values match in case of changes.
- Output: Check this box if you want to transfer the data set to ELO DocXtractor.

Transfer data

Data provider	
<input checked="" type="radio"/> Order data	
<input type="radio"/> Vendor data	
<input type="radio"/> Vendor data (BP)	
<input type="radio"/> Own class	
Class name	<input type="text" value="/ELO/CL_DOCX_GET_ORDERS"/> 
Data selection	
<input checked="" type="radio"/> All entries	
<input type="radio"/> Restrict to object ID	
Object ID	<input type="text"/>
Transmission type	
<input checked="" type="radio"/> Do not transfer, only show	
<input type="radio"/> Update	
<input type="radio"/> Delete	
<input type="radio"/> Insert (Small data volumes)	
<input type="radio"/> InsertDB (Large data volumes)	
<input type="checkbox"/> Clear DocX table	
Destination	<input type="text" value="DOCX_CONNECT_ENTW20"/>

Fig.: Configuration – Transfer data

With the *Transfer data* function, you can display the determined data applying the set selection criteria and transfer it to a destination. This function can help you perform tests when configuring ERP Datatransfer for ELO DocXtractor.

You also have the option to initially populate the matching server and the matching database with order and vendor information with this function. See the Initial startup chapter for more details.

The following configurations are available:

Data provider: Select which data the data provider should determine and send to the defined destination. You can choose order data, vendor data, or your own class. If you use your own class, you have to maintain it. The section Installation and configuration: Data provider per BO describes how to maintain custom classes.

Data selection: With the *All entries* parameter, you can display or transmit the result unfiltered. This is similar to a selection on the database with *. However, if you select *Restrict to object ID*, the selection is restricted to this input. The *ObjectID* always depends on the SAP business object. This

means that you select the vendor number (*lfa1-lifnr*) for SAP business object *LFA1* and the document number/order number (*ekbe-ebeln*) for SAP business object *BUS2012*.

Information

Initial population of the matching server and matching database with all the data from the SAP system may take several minutes. If a communication error is returned, the connection may have timed out. This does not mean that data transfer has failed. In the ELO DocXtractor logs, check whether all data has been transferred properly. The communication error message can be avoided in this case by increasing the destination timeout. You will find all the necessary information in the section Installation and configuration: Configuring a destination. Another option for populating the database is using the *InsertDB* transmission type.

Transmission type: Five options are available. In every case, the first step results in data being displayed in an ALV grid within the SAP system. In this grid, data is selected and the corresponding command is run on the selection.

- Do not transfer, only show: All data is displayed with the set selection criteria. No additional steps are possible.
- Update: Selected entries are updated in the matching server and matching database. An update results in all entries for the vendor or order being deleted and entered again.
- Delete: All selected entries are deleted in the matching server and matching database.
- Insert (small data volumes): Enters all selected data sets in the matching database via the matching server. This variant is used to transfer small data volumes, as the matching server index is optimized each time a data set is inserted. Refer to the section ERP Datatransfer for ELO DocXtractor: performance for more information.
- InsertDB (large data volumes): The selected data sets are entered directly to the matching database. The matching server index is then optimized. Refer to the section ERP Datatransfer for ELO DocXtractor: performance for more information.

Queue entries

ERP Data Transfer for ELO DocXtractor - Settings change							
	Date	Time	User Name	Destination Name	Method	No.	Error message
Assign data provider							
Selection criteria	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT	insert	2	<input checked="" type="checkbox"/> Kommunikationsfehler
Header definitions	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT		2	<input type="checkbox"/> Destination ist nicht vorhanden
Transfer data	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT	delete	2	<input type="checkbox"/> Kommunikationsfehler
Queue entries	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT	insert	2	<input type="checkbox"/> Kommunikationsfehler
Administration	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT	insertDB	2	<input type="checkbox"/> Kommunikationsfehler
Information	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT	insertDB	2	<input type="checkbox"/> Kommunikationsfehler
	18.06.2021	14:28:09	PRECHTL	DOCX_CONNECT	insertDB	2	<input type="checkbox"/> Kommunikationsfehler

Fig.: Configuration - Queue entries

All transfers with errors or unsuccessful transfers that SAP has sent to ERP Datatransfer for ELO DocXtractor are listed in an ALV grid.



Fig.: Configuration – Transfer data from queue again

The *Transfer data* button or the F7 key allows you to run through the selected queue entry again.

To delete a queue entry, select the lines and then click the recycle bin icon or press the F9 key.

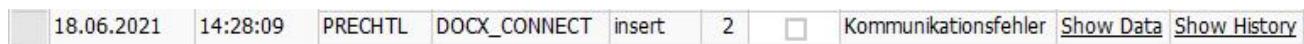


Fig.: Configuration – Queue entry

To refresh the view of the queue, click the button to the left of the *Transfer data* icon or press the F5 key. If you close the queue entry view and open it again, the data will also be refreshed.

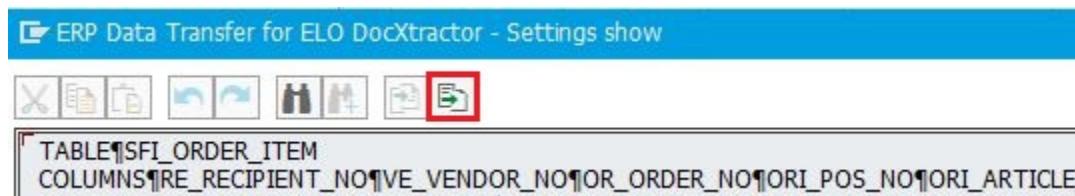


Fig.: Configuration – Queue entry: Show data

Using the *Show Data* function, you can also show all contents sent in the failed attempt. You can then save the data set to your local system as a file.

The *View history* function gives you an overview of the transfer attempts for this queue entry and the corresponding error messages.

The chapter SAP program for automatic sending of queue entries explains how to automatically resend failed queue entries

Administration

Reset tables

You can use this function to restore the settings to the default state.

Warning:
Previously saved settings will be deleted!

Reset tables

Business partner logic

With this function, you can enable or disable business partner logic for data determination.

Fig.: Configuration – Administration – Reset tables

In the administration area, you can reset the tables to their original state on delivery and enable or disable business partner logic. After enabling business partner logic, the logic in the *Transfer data* area (see Installation and configuration: Transfer data) can be selected in the data provider. This is called *Vendor data (BP)*.

Please note

Resetting the tables deletes all custom settings for ERP Datatransfer for ELO DocXtractor within the SAP configuration. If you change the business partner logic, we recommend resetting the tables after. The header definitions are then completed for the changed logic.

Information

The *Information* area contains copyright information and the product version. If you submit a support case, always name the product version.

Set up events

Events are needed for each changed or created vendor and each changed and created order. These events forward the object ID of the changed/created object to the data providers set up in the section Installation and configuration: Data provider per business object.

Add event linkage

Adding event linkages requires permission to the *SWETYPV* transaction. All entries are added as they are defined in the section Installation and configuration: Data provider per business object.

Event Type Linkages						
Object Category	ObjectType	Event	Receiver Type	Type linka...	Enable ev...	Status
BOR Object Typ	/ELO/VEN	CHANGED	FUBA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No errors
BOR Object T...	/MRSS/CD	ASSIGNDATECHANGED	WS00200027	<input type="checkbox"/>	<input type="checkbox"/>	No errors
BOR Object T...	/MRSS/CD	CANDINOTAVAILABLE	WS00200043	<input type="checkbox"/>	<input type="checkbox"/>	No errors

Fig.: Add event linkage

1. Click the *New Entries* function.

Please note

	Obj. Cat.	Object Type	Event	ObjectTypeName	Destination Name
BO	/ELO/VEN	CHANGED		/ELO/CL_DOCX_GET_VENDORS	DOCX_CONNECT
BO	BUS2012	CHANGED		/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2012	CREATED		/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2012	RELEASED		/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2012	SIGNIFICANTLYCHANGED		/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	BUS2017	CREATED		/ELO/CL_DOCX_GET_ORDERS	DOCX_CONNECT
BO	LFA1	CREATED		/ELO/CL_DOCX_GET_VENDORS	DOCX_CONNECT

Fig.: Configuring a data provider per business object

The following steps have to be taken for each entry from the data provider per business object. The same image as from the section Installation and configuration: Data provider per business object applies here.

New Entries: Details of Added Entries

Object Category	BOR Object Type		
Object Type	/ELO/VEN		
Event	CHANGED		
Receiver Type	FUBA		
Linkage Setting (Event Receiver)			
Receiver Call	Function Module		
Receiver Function Module	/ELO/DX_TRANSFER_CHANGE_EVENT		
Check Function Module			
Receiver Type Function Module			
Destination of Receiver			
Event delivery	Using tRFC (Default)		
<input checked="" type="checkbox"/> Linkage Activated <input type="checkbox"/> Enable Event Queue			
Behavior Upon Error Feedback	Do not change linkage		
Receiver Status	No errors		

Fig.: Event linkage details

2. Make the following settings:

- Object category: *BOR object type*
- Object type: The value can be found in the object types; see the screenshot from section Installation and configuration: Data provider per business object.
- Event: The value from the screenshot named above is also used here.
- Receiver type: FM (function module)
- Receiver call: *Function module*
- Receiver function module (first): Two function modules are provided, /ELO/DX_TRANSFER_CHANGE_EVENT and /ELO/DX_TRANSFER_CREATE_EVENT. Select the function module from the event here. By default, this means that all events that are not called CREATED are assigned the function module /ELO/DX_TRANSFER_CHANGE_EVENT. CREATED events are assigned the function module /ELO/DX_TRANSFER_CREATE_EVENT.
- Event delivery: *Using tRFC (default)*
-

Linkage enabled: Box checked

- Behavior upon error feedback: *Do not change linkage*
- Receiver status: *No errors*

3. Click the icon to save or press CTRL+S.

4. Go a step back with the arrow icon or press the F3 key to add entries (as defined in the section Installation and configuration: Data provider per business object).

Information

Depending on the SAP release version, configured events may not occur. In this case, the configuration will not have any negative effects on your SAP system.

Enable event linkage for incoming goods

To enable events resulting due to incoming goods, configure your SAP system based on Note 1614466 on the SAP Support Portal. Check the SAP system for the steps named in the note.

Check change document events

To check change document events, you will need access to the transaction SWEC. This transaction is necessary as SAP systems do not trigger events when changing or adding vendors as standard. This makes two entries necessary. Ideally, these entries will already exist thanks to the transport, so check this first.

KRED	BOR Object Type ▾ /ELO/VEN	CHANGED	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
KRED	BOR Object Type ▾ LFA1	CREATED	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Fig.: Check whether events already exist

Information

Your SAP system may be configured to trigger an event more than once. A CHANGED type event triggered multiple times causes the entry database to be updated multiple times, which may possibly result in minor performance restrictions. But if a CREATED type event is called multiple types, error messages will be written to the queue entries from the section Installation and configuration: Queue entries due to duplicates. If this is the case, check which event is unnecessary and remove the relevant entry.

If these two entries already exist, you can skip the next steps.

Add change document events

If neither of these entries exist, you will have to add them.

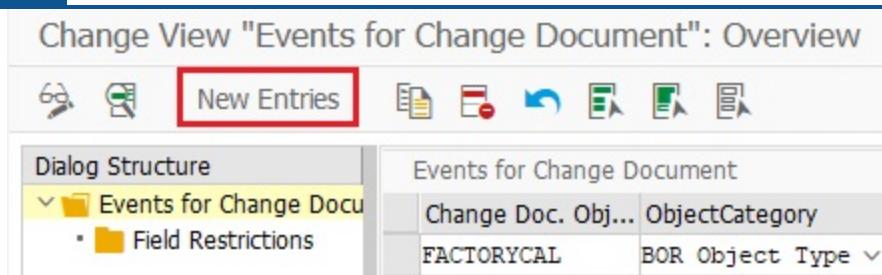


Fig.: Add event to the change document

1. Click the *New Entries* button.

Change doc. object	KRED
Object Category	BOR Object Type
Object Type	/EL0/VEN
Event	CHANGED
Trigger Event	Function Module
<input type="radio"/> On Create	Object Type
<input checked="" type="radio"/> On Change	Event ID
<input type="radio"/> On Delete	Event Container

Fig.: Event for vendor "On Change"

2. Complete the fields as follows:

- Change document object: KRED
- Object category: *BOR object type*
- Object type: /EL0/VEN
- Event: CHANGED
- Trigger event: Select *On Change*

3. Click the *Save* button or press **CTRL+S**.

4. Click the *New Entries* button again.

Change doc. object	KRED
Object Category	BOR Object Type
Object Type	LFA1
Event	CREATED
Trigger Event	Function Module
<input checked="" type="radio"/> On Create	Object Type
<input type="radio"/> On Change	Event ID
<input type="radio"/> On Delete	Event Container

Fig.: Event for vendor "On Create"

5. Complete the fields as follows:
 - Change document object: KRED
 - Object category: *BOR object type*
 - Object type: LFA1
 - Event: CREATED
 - Trigger event: Select *On Create*
6. Click the *Save* button or press CTRL+S.

Initial startup

The data transfer process is explained in the section Installation and configuration: Transfer data. If using the system for the first time, data control via events only will not be enough. The matching server database has to be populated with all data sets once.

1. Go to the *Transfer data* menu for this reason.
2. Under *Data provider*, select *Order data*.
3. Under *Data selection*, select *All entries*.
4. Use *InsertDB* as the transmission type and check the *Clear DocX table* box.
5. Click *Run* or press the F8 key.

Now, all data is gathered and displayed. Depending on the data volume, this can take several minutes.

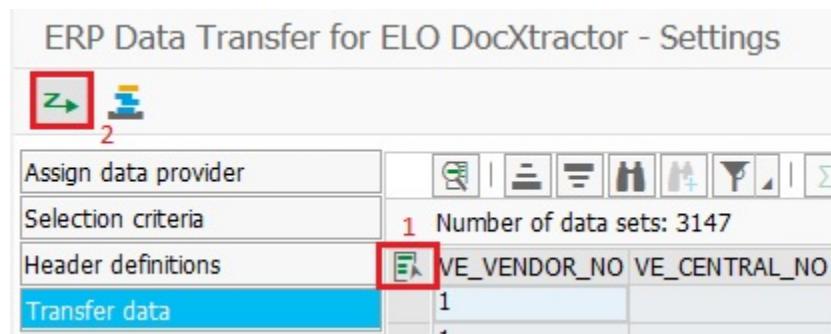


Fig.: Initial database population

6. Click the *Select all* button followed by the *Transfer data* button.

The transfer process can take much longer than the previous data determination process within the SAP system. For more information about a possible timeout, refer to the section Installation and configuration: Configuring a destination.

SAP program for automatic sending of queue entries

One part of the scope of delivery is the SAP program */ELO/DOCX_QUEUE*. This program allows you to re-send failed transfers within the queue entries of the administration area from the chapter Installation and configuration: Queue entries with a specified time. This program can also be configured as a job in SAP.

The program has two transfer parameters.

- Consider entries to: Enter a date from the past here. All queue entries from today to the entered date are considered. If you leave the field blank, the program will consider all entries up to seven days in the past.
- Maximum failed attempts: This value determines how often a queue entry can fail during transfer before it is skipped.

Source of SAP data

This chapter describes what tables and fields the SAP system retrieves the vendor and order data from.

Vendor data

Overview of tables

The following tables are used in the SAP system to read vendor data:

Table Description

ADR6 E-mail addresses (Business Address Services)

BNKA Bank master record

LFA1 Vendor master (general part)

LFB1 Vendor master (company code)

LFBK Vendor master (bank details)

T001 Company codes

T005 Countries

TIBAN IBAN

Field mapping

The following table shows the relationship between SAP database fields and the ELO DocXtractor database fields in the *SFI_VENDOR* table.

SAP field	DocXtractor field	Description
LFA1-LIFNR	VE_VENDOR_NO	Vendor account number
LFB1-LNRZE	VE_CENTRAL_NO	HQ account number
LFB1-BUKRS	VE_RECIPIENT_NO	Company code
LFA1-NAME1	VE_NAME	Name
LFA1-NAME2	VE_NAME2	Name 2
LFA1-STRAS	VE_STREET	Street address
LFA1-PSTLZ	VE_ZIPCODE	Postal code
LFA1-PFACH*	VE_STREET	Post office box (used if no street is entered)
LFA1-PSTL2*	VE_ZIPCODE	Postal code of the post office box (used if no street is entered)
LFA1-ORT01	VE_CITY	City
LFA1-LAND1	VE_COUNTRY	Country code
LFBK-BANKN	VE_ACCOUNT_NO	Account number
BNKA-BANKA	VE_BANK	Bank

SAP field	DocXtractor field	Description
LFBK-BANKL	VE_BANK_NO	Bank code
LFBK-BVTYP	VE_BANK_ID	Partner bank type
BNKA-SWIFT	VE_SWIFT_BIC	Swift BIC
TIBAN-IBAN	VE_IBAN	IBAN
LFB1-ZTERM	VE_ZTERM	Payment terms key
LFA1-STCEG	VE_VAT_ID_NO	VAT ID
LFA1-STENR	VE_TAX_ID_NO_DE	Tax number
LFA1-STCD2	VE_TAX_ID_NO	Tax number 2
LFA1-TELF1	VE_TELEFONE_NO	Phone number
LFA1-TELFX	VE_FAX_NO	Fax number
LFB1-BUSAB	VE_CLERK_ID	Employee HQ
LFA1-BBBNR	VE_ILN	ILN (international location number)
LFB1-AKONT	VE_RECONC_ACCOUNT	Control account in general ledger accounting
LFA1-VBUND	VE_PARTNER_ID	Partner
ADR7- SMTP_ADDR	VE_EMAIL	E-mail address

Fields in SAP transaction

The following transaction images were taken with SAP client version 750. The transactions belonging to the images are XK02 and XK03.

Change Vendor: Address

Vendor

Preview Internat. versions

Name

Title

Name

Search Terms

Search term 1/2

Street Address

Street/House number

Postal Code/City

Country Region Baden-Wuerttem...

Time zone

PO Box Address

PO Box

Postal code

Communication

Language Other communication...

Telephone Extension

Fax Extension

E-Mail

Data line

Telebox

Fig.: Vendor address

Change Vendor: Control

Tax categories

Vendor	VE_VENDOR_NO	k OHG	Stuttgart
--------	--------------	-------	-----------

Account control

Customer	VE_VENDOR_NO	Authorization	<input type="checkbox"/>
Trading Partner	<input type="text"/>	Corporate Group	<input type="text"/>

Tax information

Tax Number 1	VE_TAX_ID_NO	Tax number type	<input type="checkbox"/>	Equalizatn tax
Tax Number 2	VE_TAX_ID_NO	Tax type	<input type="checkbox"/>	Natural Person
Tax Number 3	<input type="text"/>		<input type="checkbox"/>	Sales/pur.tax
Tax Number 4	<input type="text"/>		<input type="checkbox"/>	Tax Split
Fiscal address	<input type="text"/>	Soc. Ins. Code	<input type="checkbox"/>	Soc.insurance
Tax Jur.	<input type="text"/>	VAT Reg. No.	VE_VAT_ID_NO	<input type="checkbox"/> Other...
Rep's Name	<input type="text"/>	Type of Busines	<input type="text"/>	
Tax office	<input type="text"/>	Type of Industr	<input type="text"/>	
Tax Number	VE_TAX_ID_NO_DE			

Reference data

Location no. 1	VE_ILN	Location no. 2	VE_ILN	Check digit	VE_ILN
Cred.info no.	<input type="text"/>	Last ext.review	<input type="text"/>		
Industry	<input type="text"/>	Train station	<input type="text"/>		
SCAC	<input type="text"/>	Car.freight grp	<input type="text"/>	ServAgntProcGrp	<input type="text"/>
Transport.zone	<input type="text"/>			Stat.gr.service	<input type="text"/>
POD-relevant	<input type="checkbox"/>	QM system to	<input type="text"/>		
Actual QM sys.	<input type="text"/>				
External manuf.	<input type="text"/>				

Person subject to withholding tax

Date of birth	<input type="text"/>	Place of birth	<input type="text"/>
Sex	<input type="text"/>	Profession	<input type="text"/>

Fig.: Vendor control

Change Vendor: Payment transactions

Vendor ELO-03 Elektronik OHG Stuttgart

Bank Details					
C...	Bank Key	Bank Account	Acct Holder	A.. IBAN	IBANValue
DE	VE_BANK_NO	VE_ACCOUNT_NO	Elektronik OHG Müller	VE_IBAN	
DE	68051004	4451937	Elektronik OHG Müller2	DE38680510040004451937	2
DE	68051004	4451939	Elektronik OHG Müller3	DE81680510040004451939	3

Bank Data...

Payment transactions

Alternative payee

DME Indicator

Instruction key

ISR Number

Different Payee in Document

Individual Entries
 Entries for Referen.

Permitted Payee

Fig.: Bank details for vendor 1

Bank Details

Bank Data

Bank Country DE

Bank Key 68051004

Address

Bank name VE_BANK

Region

Street

City

Bank Branch

Control data

SWIFT/BIC VE_SWIFT_BIC

Bank group

Postbank Acct

Bank number 68051004

Fig.: Bank details for vendor 2

Change Vendor: Accounting information Accounting

Vendor	ELO-03	Elektronik OHG	Stuttgart
Company Code	VE_RECIPIENT_NO		

Accounting information

Recon. account	VE_RECONC_ACCOUNT	Sort key	<input type="text"/>
Head office	VE_CENTRAL_NO	Subsidy indic.	<input type="checkbox"/>
Authorization	<input type="text"/>	Cash mgmnt group	IHC
		Receipts	<input type="checkbox"/>

Fig.: Accounting for vendor 1

Change Vendor: Payment transactions Accounting

Vendor	ELO-03	Elektronik OHG	Stuttgart
Company Code	1000	BestRun Germany	

Payment data

Payt Terms	VE_ZTERM	Tolerance group	<input type="text"/>
Cr memo terms	<input type="text"/>	Chk double inv.	<input type="checkbox"/>
Chk cashng time	<input type="text"/>		

Fig.: Accounting for vendor 2

Change Vendor: Correspondence Accounting

Vendor ELO-03 Elektronik OHG Stuttgart
Company Code 1000 BestRun Germany

Dunning data

Dunn.Procedure	<input type="text"/>	Dunning block	<input type="text"/>
Dunn.recipient	<input type="text"/>	Legal dunn.proc.	<input type="text"/>
Last dunned	<input type="text"/>	Dunning level	<input type="text"/>
Dunning clerk	<input type="text"/>	Grouping key	<input type="text"/>
Dunn. Areas			

Correspondence

Local process.	<input type="checkbox"/>	Acct statement	<input type="checkbox"/>
Acctg clerk	VE_CLERK_ID		

Fig.: Accounting correspondence

Business partners

Overview of tables

The following tables are used in SAP to read order data:

Table Description

BUT000 BP: General data

- LFA1 Vendor master (general part)
- LFB1 Vendor master (company code)
- LFBK Vendor master (bank details)
- T001 Company codes
- T005 Countries
- TIBAN IBAN

Field mapping

The following table shows the relationship between SAP database fields and the ELO DocXtractor database fields in the *SFI_VENDOR* table.

SAP field	DocXtractor field	Description
BUT000-PARTNER	VE_VENDOR_NO	Vendor (or reference to vendor)

SAP field	DocXtractor field	Description
LFB1-LNRZE	VE_CENTRAL_NO	HQ account number
LFBI-BUKRS	VE_RECIPIENT_NO	Company code
For person: ADRP-NAME_TEXT	VE_NAME	Full name
For organization: BUT000-NAME_ORG1, 2, 3, 4 (depending on the length)		
VE_NAME	Full name	
BUT000-NAME_ORG2, 3, 4 (depending on the length)	VE_NAME2	Name 2
ADRC-STREET + ADRC-HOUSE_NUM1	VE_STREET	Street address
ADRC-PO_BOX (if ADRC_STREET is empty)	VE_STREET	Street address
ADRC-POST_CODE2	VE_ZIPCODE	Postal code
ADRC-CITY1 or PO_BOX_LOC	VE_CITY	City
ADRC-COUNTRY or PO_BOX_CTY	VE_COUNTRY	Country
BUT0BK-BKVID	VE_BANK_ID	Partner bank type
BUT0BK-BANKN	VE_ACCOUNT_NO	Account number
BUT0BK-BANKL	VE_BANK_NO	Bank code
BNKA-SWIFT	VE_SWIFT_BIC	Swift BIC
TIBAN-IBAN	VE_IBAN	IBAN
LFB1-ZTERM	VE_ZTERM	Payment terms key
DFKKBPTAXNUM-TAXNUM (Variable with TAXTYPE)	VE_VAT_ID_NO	VAT ID
DFKKBPTAXNUM-TAXNUM (Variable with TAXTYPE)	VE_TAX_ID_NO_DE	Tax number
ADRC-TEL_NUMBER	VE_TELEFONE_NO	Telephone number
ADRC-FAX_NUMBER	VE_FAX_NO	Fax number
LFB1-BUSAB	VE_CLERK_ID	Employee
BUT000-LOCATION1	VE_ILN	(International location number)
LFB1-AKONT	VE_RECONC_ACCOUNT	Control account in general ledger accounting
BP001-VBUND	VE_PARTNER_ID	Partner
ADR7-SMTP_ADDR	VE_EMAIL	E-mail address

Fields in SAP client

The following images were taken with SAP client version 750. The transaction in the images is *BP*.

Business Partner	<input type="text"/>		Grouping	Internal number assignm... ▾
Create in BP role	CVI: FI Vendor (New)	▼		
<hr/>				
Company Code				
Company Code	<input type="text"/> VE_RECIPIENT_NO			
Customer	<input type="text"/>			
Vendor	<input type="text"/> VE_VENDOR_NO			
<div style="border: 1px solid #ccc; padding: 5px; display: flex; justify-content: space-between;"> Company Codes Switch Company Code</div>				

Fig.: Business partner vendor header data

Address		Address Overview		Identification		Control		Payment Transactions		Status			
Name													
Title	Mr.												
First name	VE_NAME												
Last name	VE_NAME												
Name Affix 1/2	VE_NAME												
Academic Title 1/2	VE_NAME				VE_NAME								
Name supplement	Baron												
Country for format	DE	Germany				Special Format		02					
Correspondence lang.	DE	German											
Search Terms													
Search Term 1/2	TESTVORNAME												
Standard Address													
		Print Preview											
Street Address													
Street/House number	VE_STREET						VE_STREET						
Postal Code/City	VE_ZIPCODE		VE_CITY										
Country	VE_COUNTRY	Germany				Region							
Time zone	CET												
PO Box Address													
PO Box													
Postal Code													
	VE_STREET												
Communication													
Telephone	VE_TELEFONE_NO				Extension		VE_TELEFONE_NO						
Mobile Phone													
Fax	VE_FAX_NO				Extension		VE_FAX_NO						
E-Mail	VE_EMAIL												
Other communication...													

Fig.: Business partner address

The screenshot shows the 'Identification' tab selected in the top navigation bar. The page is divided into several sections:

- Personal Data:** Fields for Sex (Unknown, Female, Male), Marital Status, and Nationality.
- Identification Numbers:** A table for External BP Number with columns: IDType, Description, Identification number, Responsible Institution, Entry date, Valid from, and Valid To.
- Change History:** A button labeled "Change History" and a message "Entry 0 of 0".
- Tax Numbers:** A table for Natural Person with columns: Category, Name, and Tax Number. It lists DE0 (Germany: VAT Registration Number), DE1 (Germany: Income Tax Number (§48)), and DE2 (Germany: VAT Number (Credit Proc. §14)).

Fig.: Business partner individual data: identification

The screenshot shows the 'Identification' tab selected in the top navigation bar. The page is divided into several sections:

- Organizational Data:** Fields for Legal form, Legal entity, Date founded, Liquidation date, and Int. location no. 1 (with value VE_ILN).
- Control Parameters:** Fields for BP Type, Authorization Group (with value VE_PARTNER_ID, noted as Stakeholder: Visibility 0 (Unrestricted)), Print Format, Trading Partner, and Grouping Charact.

Fig.: Business partner organization: identification

The screenshot shows the 'Control' tab selected in the top navigation bar. The page is divided into several sections:

- Control Parameters:** Fields for BP Type, Authorization Group (with value VE_PARTNER_ID, noted as Stakeholder: Visibility 0 (Unrestricted)), Print Format, Trading Partner, and Grouping Charact.

Fig.: Business partner control

Address Address Overview Identification Control **Payment Transactions** Status Where-Used List No Title SAP GT

Bank Details

ID	Ctry	Bank Key	Bank acct	Control Key	IBAN	IBAN	Name of Financial Institution
VE_BANK_ID	VE_BANK_NO	VE_ACCOUNT_NO			VE_IBAN		VE_BANK

Bank Data

Bank Country: DE
Bank Key: VE_BANK_NO

Address

Bank name: Postbank Hamburg
Region: 07 Rhineland Palatinate
Street: Str
City: Ort
Bank Branch: Zweig

Control data

SWIFT/BIC: VE_SWIFT_BIC
Bank group:
 Postbank Acct
Bank number: VE_BANK_NO

Buttons: Change Documents, Administrat.data...,

Fig.: Business partner payment transactions

Vendor: Account Management Vendor: Payment Transactions Vendor: Correspondence Vendor: Withholding Tax

Account Management

Reconciliation acct: VE_RECONC_ACCOUNT
Head office: VE_CENTRAL_NO
Sort key
Subsidy indic.
Authorization Group

Fig.: Business partner vendor: account management

Vendor: Account Management **Vendor: Payment Transactions** Vendor: Correspondence Vendor: Withholding Tax

Payment Data

Terms of Payment: VE_ZTERM
Credit memo pvt term
Tolerance group
Check cashing time
 Check Double Invoice

Fig.: Business partner vendor: payment transactions

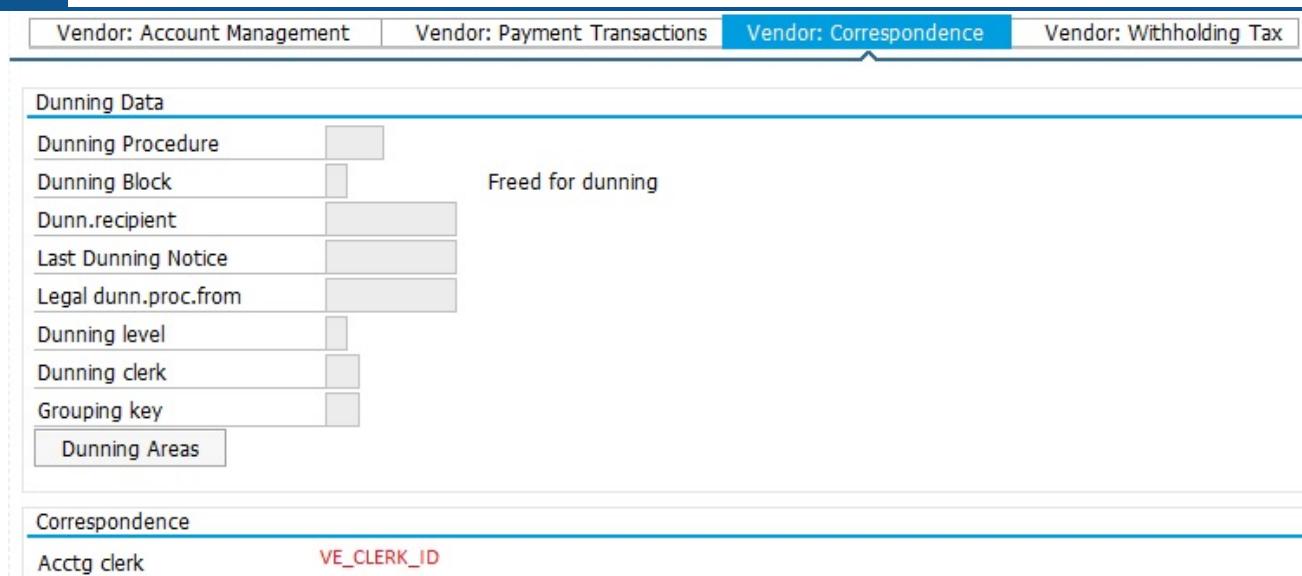


Fig.: Business partner vendor: correspondence

Order data

Overview of tables

The following tables are used in the SAP system to read order data:

Table Description

- EINA Purchasing info record – general data
- EINE Purchasing info record – purchase organization data
- EKBE Purchasing document history
- EKKO Purchasing document header
- EKPA Partner roles in purchasing
- EKPO Purchasing document item
- KONV Conditions (transactional data)
- LFA1 Vendor master (general part)
- T685A Conditions: Types: price element additional data
- WYT3 Partner roles

Field mapping

The following table shows the relationship between SAP database fields and the ELO DocXtractor database fields in the *SFI_ORDER_ITEM* table.

SAP field	DocXtractor field	Description
EKPO-BUKRS	RE_RECIPIENT_NO	Company code

SAP field	DocXtractor field	Description
EKKO-LIFNR (if blank, then EKPA-LIFN2 or WYT3-LIFN2)	VE_VENDOR_NO	Vendor (or reference to vendor)
EKPO-WERKS	ORI_PLANT	Plant
EKKO-ZTERM	OR_TOP_NO	Payment terms
EKPO-EBELN	OR_ORDER_NO	Purchasing document
EKPO-EHELP + '-KONV-KSCHL'	ORI_POS_NO	Position (optional: - condition type)
EKPO-MATNR	ORI_ARTICLE_NO	Material
EKPO-TXZ01	ORI_DESCRIPTION	Short text
EKPO-MENGE (calculated internally)	ORI_QUANTITY	Order quantity
EINE-NETPR	ORI_SINGLE_NET_PRICE	Net price
KONV-KWERT (or calculated from the EKBE-WRBTR entries)	ORI_TOTAL_NET_PRICE	Condition value (or calculated from the amount)
EKPO-PEINH	ORI_PUNIT	Price unit
EKBE-XBLNR	ORI_DELIVERY_NO	Reference
IS_DELIVERY	ORI_IS_DELIVERY	Flag whether or not entries in the EKBE table exist (1 or 0)
EKBE-BWART	ORI_WART	Movement type
EKBE-BLDAT	ORI_DELIVERY_DATE	Document date
EKBE-BUDAT	ORI_POSTING_DATE	Posting date
EKBE-BELNR	ORI_MATERIAL_DOC_NO	Material document
EKBE-LFGJA	ORI_MATERIAL_DOC_YEAR	Business year reference document
EKBE-BUZEI	ORI_MATERIAL_ITEM	Item in the material document
EKPO-PSTYP	ORI_CON_FLAG	Item type in the purchasing document
EKPO-BPUMZ	ORI_BPUMZ	Counter for converting BPRME into BME
EKPO-BPUMN	ORI_BPUMN	Denominator for converting BPRME into BME

Fields in SAP transaction

The following transaction images were taken with SAP client version 750. The transaction in the images is *ME23N*.

Standard PO 4500022576 Created by ELO Service Nutzer

Document Overview On Print Preview Messages Personal Setting Save As Template

Standard PO OR_ORDER_NO VE_VENDOR_NO + VE_NAME Doc. date 10.10.2019

Delivery/Invoice Conditions Texts Address Communication Partners Additional Data Org. Data Status Release strategy Payment Processing

Payment Terms	OR_TOP_NO	Currency	EUR
Payment in	10 days 3,000	Exchange Rate	1,00000
Payment in	15 days 2,000	Exch.Rate Fixed	
Payment in	20 days net		
Incoterms		GR Message	

S..	Item	A	I	Material	Short Text	PO Quantity	O... C Deliv. Date	Net Price	Curr...	Per	O... Matl Group	Plnt	Stor. Location	B
	10			100-432	Kabelbaum	2 ST	D 21.10.2019	15,00	EUR	1	ST Metal Proce...	Hamburg		
				ORI_POS_NO	ORI_ARTICLE_NO	ORI_QUANTITY		ORI_SINGLE_NET_PRICE	ORI_PUNIT			ORI_PLANT		
				ORI_CON_FLAG	ORI_DESCRIPTION									

Fig.: Order 1

Item [10] 100-432 , Kabelbaum

Material Data Quantities/Weights Delivery Schedule Delivery Invoice **Conditions** Account Assignment Texts Delivery Address Confirmations

View 1 Pricing Elements: Table

N..	CnTy	Name	Amount	Crcy	per	Condition value	Curr.	Status	Num...	OUn	CCon...	Un	Condition value	CdCur	S...
	PBXX	Gross Price	0,00	EUR	1 ST	0,00	EUR		0 ST	0 ST		0 ST	0,00		
		Net incl. disc.	15,00	EUR	1 ST	30,00	EUR		1 ST	1 ST		1 ST	0,00		
			15,00	EUR	1 ST	30,00	EUR		1 ST	1 ST		1 ST	0,00		

Fig.: Order 2

Item [10] 100-432 , Kabelbaum

Material Data **Quantities/Weights** Delivery Schedule Delivery Invoice Conditions Account Assignment

PO Quantity	2 ST	Order Unit <-> Ord. Price Unit	ORI_BPUMN	ST	<-> ORI_BPUMZ	ST
PO Qty in SKU	2 ST	Order Unit <-> SKU	1	ST	<->	1
Net Weight	0 KG	/1 ST	Net weight	0 KG	/Item	
Gross Weight	0,500 KG	/1 ST	Gross weight	1 KG	/Item	
Volume	0,000	/1 ST	Volume	0,000	/Item	
Points	0,000	/1 ST	Points	0,000	/Item	

Fig.: Order 3

Item [10] 100-200 , Antrieb

Material Data Quantities/Weights Delivery Schedule Delivery Invoice Conditions Account Assignment Purchase Order History Texts Delivery

Sh. Text	MvT	Material Document	Item	Posting Date	Quantity	Delivery cost quantity	OUn	* Amount in LC	L.cur	* Qty in OPUn	DelCostQty (OPUn)	Crcy	Reference
WE	101	ORI_MATERIAL_DOC_NO	ORI_MATERIAL_ITEM	29.01.2018	1		0 ST	1.300,00	EUR	1	0	EUR	ORI_DELIVERY_NO
Tr./Ev. Goods receipt					*	1	ST	* 1.300,00	EUR	*	1		EUR
VRe	ORI_WART509490		ORI_MATERIAL_ITEM		1		0 ST	0,00	EUR	1	0	EUR	
VRe	5105609489		1 ORI_POSTING_DATE		1		0 ST	0,00	EUR	1	0	EUR	
VRe	5105609488		1 29.01.2018		1		0 ST	0,00	EUR	1	0	EUR	
Tr./Ev. Parked invoice					*	3	ST	* 0,00	EUR	*	3		EUR

Fig.: Order 4

1.

Navigate to the material document by clicking the material document number, as shown in the figure *Order 4*.

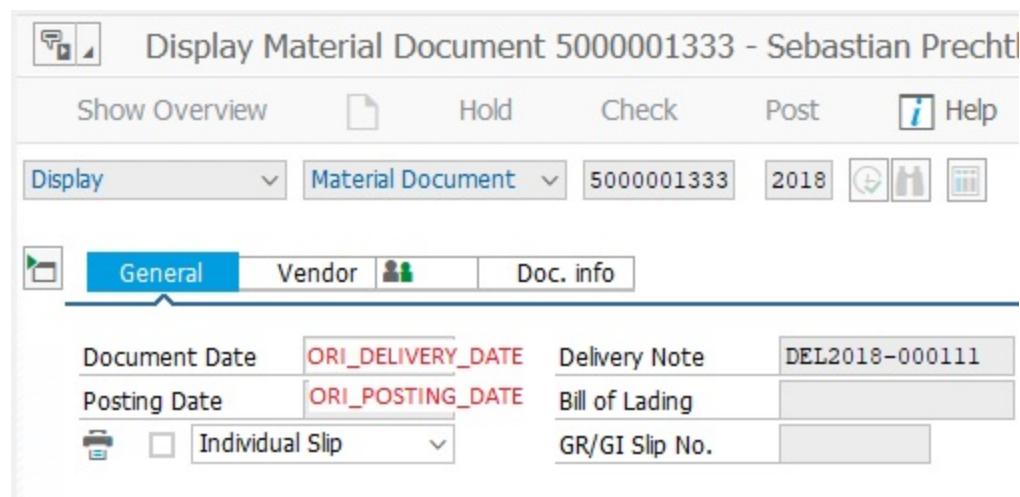


Fig.: 'Material document' for order data

The *Material document* area appears.

Troubleshooting

Overview

The following documentation describes error messages:

- DocX error: Error processing data record(s) in line(s) 0, 1, ..., n
- DocX error: Error in update: Database index VEVENDORNO, VERECIPIENTNO for table SFI_VENDOR is missing. Partial index match is required.
- SAP event trace: Consumer started correctly/name or password is not correct

Error messages

DocX error: Error processing data record(s) in line(s) 0, 1, ..., n

This error message describes which line numbers failed during transfer. For more exact information regarding the error, refer to the DocXtractor log in SFControl Services.

1. Open the SFL log file with the DocXtractor Log Viewer.
2. Open the branch for *Call importMatchingData* and then *Call importMatchingDataInt* under that. The exact description is thrown for each line here.

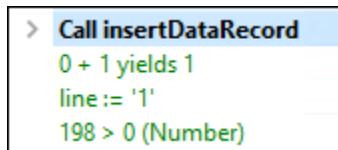


Fig.: Error message for 'line 1'

3. Open the branch *Call insertDataRecord* and then the branch via *Error caught*.

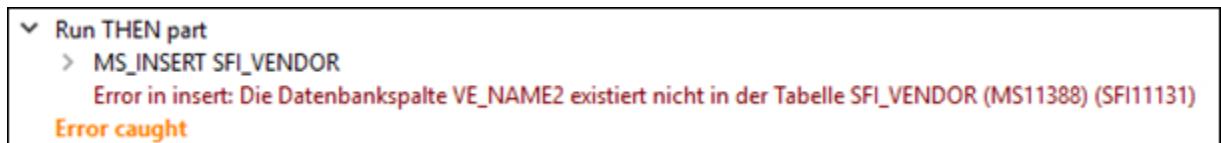


Fig.: Exact cause of the error

You will find the exact cause of the error for the line in red here. Generally, the error repeats itself for all other entries.

DocX error: Error in update: Database index VE_VENDOR_NO, VE_RECIPIENT_NO for table SFI_VENDOR is missing. Partial index match is required.

This error can be fixed by disabling the index entry check.

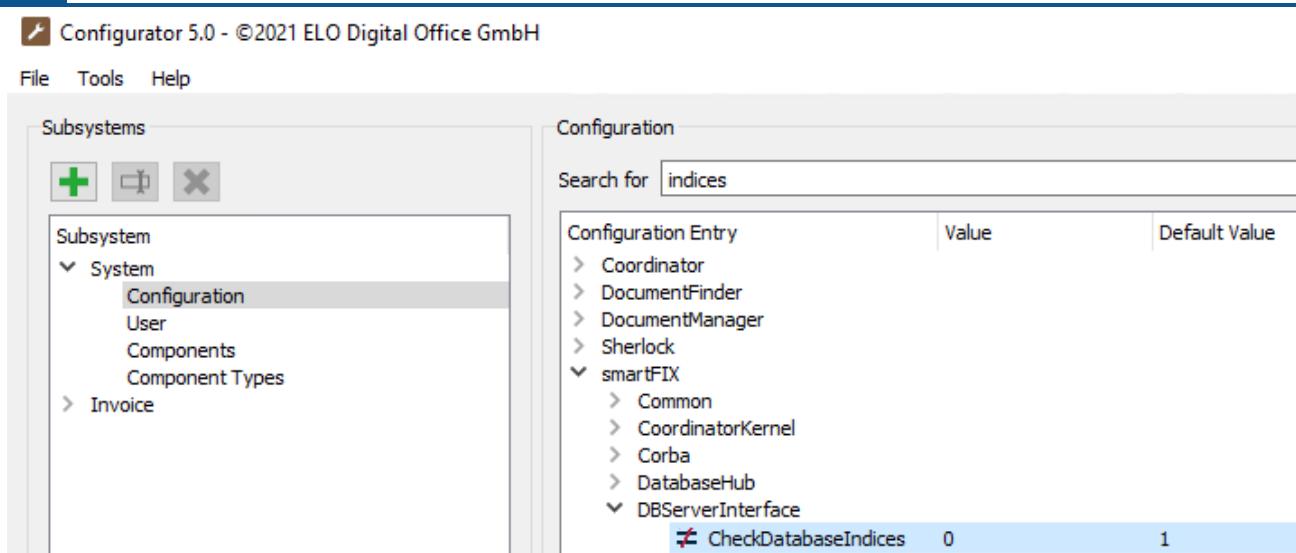


Fig.: Disable index check

1. Open the DocXtractor configurator and navigate to *Subsystem > System > Configuration*.
2. In the configuration area, open *smartFIX > DBServerInterface* and set the parameter *CheckDatabaseIndices* to the value *0*.

SAP event trace: Consumer started correctly/name or password is not correct

The screenshot shows the SAP Event Trace application interface. The top menu bar includes 'Ereignis', 'Bearbeiten', 'Springen', 'System', and 'Hilfe'. Below the menu is a toolbar with various icons for file operations like opening, saving, and printing.

The main area displays the 'Ereignis-Trace anzeigen' (Event Trace) screen. It is divided into several sections:

- Ereignisdaten:** Contains fields for 'Ereigniskennung' (Event ID: 1499056), 'Objekttyp' (/ELO/VEN), 'Objektschlüssel' (0000166181), 'Ereignis' (CHANGED), 'Ereigniserzeuger' (US [redacted]), and 'Erzeugungszeit' (23.02.2022 11:01:20 CET).
- Verbraucherdaten:** Contains 'Verbrauchertyp' (FUBA) and 'Objektschlüssel'.
- Trace-Daten:** Contains 'Trace-Zeitpunkt' (23.02.2022 11:01:20 CET), 'Hauptprogramm' (RSM13000), and two entries under 'Aktion': 'Verbraucher korrekt gestartet' and 'RFC-Status' (Name oder Kennwort ist nicht korrekt (Wiederholen)).

Red boxes highlight the 'RFC-Destination' field in the Verbraucherdaten section and the 'RFC-Status' entry in the Trace-Daten section, indicating they are the focus of the error message.

Fig.: Event trace

You can this error by checking the following entries:

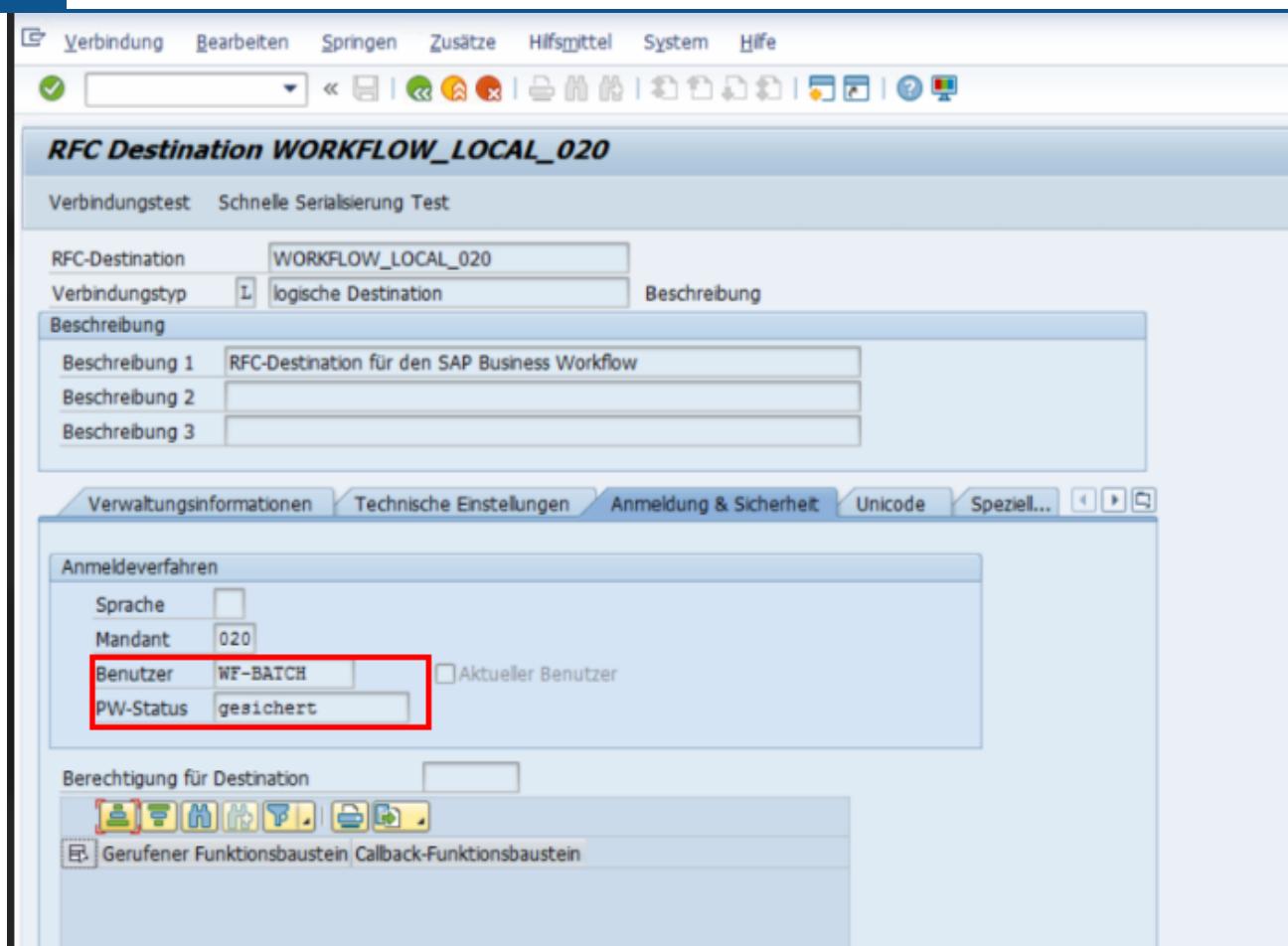


Fig.: RFC – User and password

- Which user is stored in the RFC destination?
- Does this user exist and was the correct password entered?

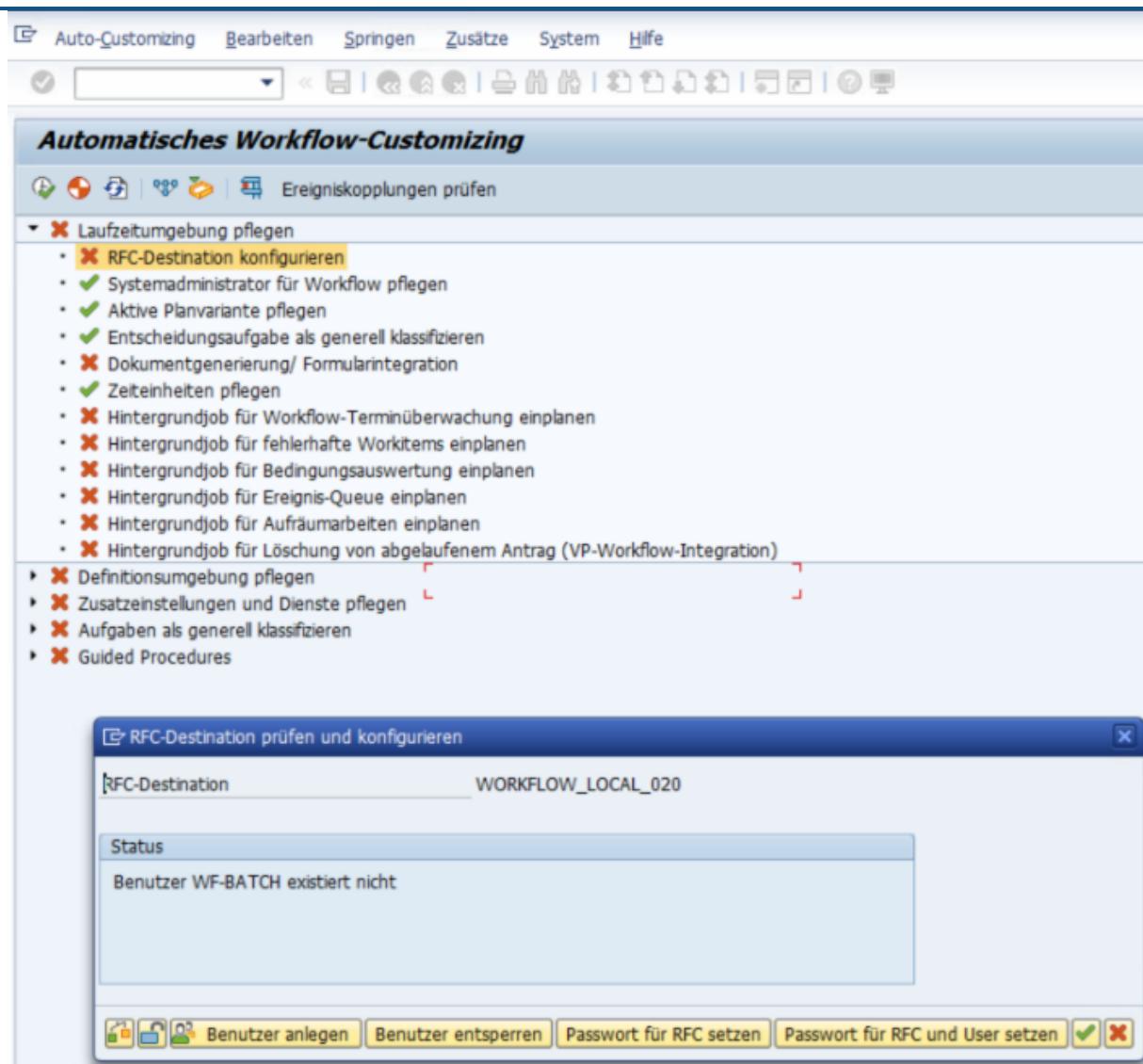


Fig.: Workflow customizing

- Is the workflow customizing correctly configured? See Check workflow customizing