

SAP S/4HANA Cookbook

Customer/Vendor Integration

CUSTOMER



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DOCUMENT INFORMATION

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Version	Changes	Date
16Q4	Initial Version	2016/Q4
16Q4_V05	Version for review	2017/Q1
17Q1	Final version	2017/Q1
17Q1_V2	Added chapters '2.4.4.1.7.7 Miscellaneous Customizing Checks' and '2.4.4.2.5.4 Switch-Off country specific checks'	2017/Q2
17Q4	Adjusted document for external release	2017/Q4
17Q4_V2	Introducing Experiences from projects	2017/Q4
18Q2	Updated paragraph 7.3.3. for bypassing CVI checks Moved sample coding from embedded object in paragraph '7.1.9.3 Master Data Checks' to Annex 1 to prevent loss in PDF conversion Replaced embedded Excel in paragraph 7.1.7.2.1 with screenshot to prevent loss in PDF conversion.	2018/Q2
18Q2_V2	<ul style="list-style-type: none"> • Replace workaround for field status by SAP Note 2516606 • HCM employee mapping (sample coding) (Chapter 7.1.10) • Process PPO before starting SUM (Chapter 7.4.1) • Required SP for vendor contact persons (Chapter 7.1.4) • Remove 7.1.9.3 Master Data Checks 	2018/Q2
19Q4	<ul style="list-style-type: none"> • Overall Update 	2019/Q4
20Q4	<ul style="list-style-type: none"> • Overall Update 	2020/Q4



1. PURPOSE AND SCOPE OF THE DOCUMENT

This document is intended as guidance on the topic of Customer/Vendor Integration (CVI). Customer/Vendor Integration is one of the key simplifications in SAP S/4HANA that affects most SAP customers.



2. CONTEXT AND MOTIVATION FOR CUSTOMER/VENDOR INTEGRATION

There are redundant object models in the traditional ERP system. Here the Vendor master and Customer master are used which are having several limitations. Limitations of the Customer/Vendor Object Model:

- Only one single address
- No relation between a Vendor and a Customer for the same real-world entity (no role concept)
- No persons (B2C)
- No time-dependency

The strategic object model in SAP S/4HANA is the Business Partner (BP). Business Partner is capable of centrally managing master data for Business Partners, Customers, and Vendors. With current development, BP is the single point of entry to create, edit and display master data for Business Partners, Customers, and Vendors.

In terms of SAP Business Partner the definition for Customer and Vendor is the following:

Customer

A Customer is a Business Partner to which goods and services are sold and/or delivered. A Business Partner can be a Customer and a Vendor at the same time if, for example, your Customer also supplies goods to you.

A Customer master holds information about the Customer such as their name, address, bank details, tax details and delivery and billing preferences. This Customer information is used and stored in transactions such as sales orders, deliveries and invoices.

Some Customer information is specific to a company (known as company code) or sales unit (known as sales area) within your organization.

Vendor

A Vendor (or Supplier) is a Business Partner which delivers and sells goods and services to your organization. A Business Partner can be a Vendor and a Customer at the same time if, for example, your Vendor also buys goods from you.

A Vendor master holds information about the Vendor such as their name, address, bank details, tax details and billing preferences. This Vendor information is used and stored in transactions such as purchase orders, goods receipts and Vendor invoices.

Some Vendor information is specific to a company (known as company code) or purchasing unit (known as purchasing organization) within your organization.

Using the Business Partner has the following advantages:

- A legal entity is represented with one Business Partner
- One Business Partner can perform multiple roles, e.g., Customer and Vendor (Supplier)
- General data is available for all different Business Partner roles, specific data is stored for each role
- Maximal data sharing and reuse of data which leads to an easier data consolidation
- Different Business Partner Categories – Organization, Person, Group
- Flexible Business Partner Relationships possible like “has contact person”, “is married with” etc.
- One Business Partner can have multiple addresses
- Time-dependency on different sub-entities e.g. role, address, relationship, bank data etc.
- Provide harmonized architecture across applications

To use the SAP Business Partner as leading object in SAP S/HANA, the Customer/Vendor Integration (CVI) must be used. The CVI component ensures the synchronization between the Business Partner object and the Customer/Vendor objects.

CVI is an automated procedure supported by the Master Data Synchronization Cockpit tool. It is used to synchronize Customer Master and Vendor Master objects with SAP Business Partner objects. CVI assigns every Customer and Vendor master data object to a newly created SAP Business Partner object and vice versa.

The diagram below illustrates the context.

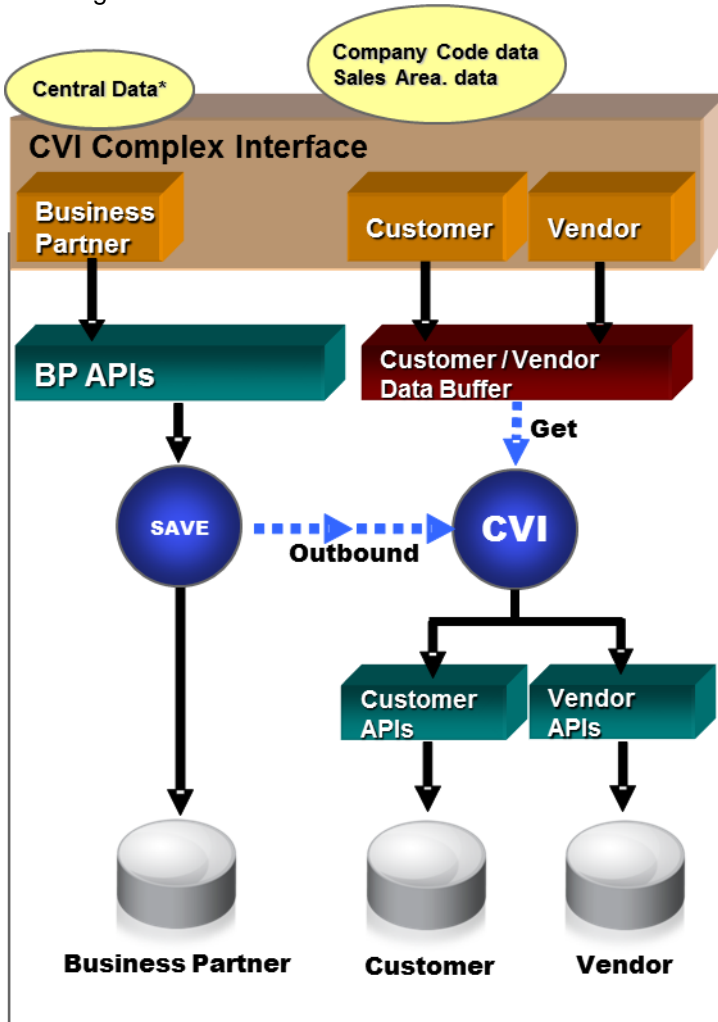


Figure 1: CVI Complex Interface.

A Business Partner is always created when a Customer or Vendor is created.

The complex interface of the CVI (Customer/Vendor Integration) contains Business Partner specific data as well as Customer and Vendor specific data.

Partially, the data of the Business Partner and Customer/Vendor are redundant (BUT000 against KNA1 & LFA1 data). For instance, 'Name and Address specific attributes are available in both sets of tables.

Customer or Vendor specific data is routed through the Customer/Vendor specific interface and mixed up with the Business Partner central data.

On commit, the Business Partner and corresponding Customer and/or Vendor is maintained/created.

SAP supports the conversion of existing Customer and Vendor data to Business Partner via guided procedure reports.

3. BUSINESS IMPACT

Only SAP Business Suite customer with Customer/Vendor integration in place can move to SAP S/4HANA, On-Premise edition 1511, 1610, 1709, 1809, 1909, 2020 and onwards (conversion approach).

To ensure a successful upgrade all Customers, Vendors and all contacts which relate to Customer or Vendor must be converted to a Business Partner including Customers, Vendors and assigned contacts with the deletion flag.

CVI requires high quality master data to be converted. As master data is of significant importance customers are recommended to run the Master Data Consistency Check Report well in advance of starting the CVI project and correct any possible master data issues that could jeopardize the CVI project. By doing so the customer is assured that the master data used in the CVI effort will be of high-quality. If not started in advance, this can be a serious roadblock for the conversion. More information on the Master Data Consistency Check Report is given in section 7.3.2.1 Master Data Cleansing: Master Data Consistency Check.

Before you execute the CVI conversion, SAP recommends archiving the Customers/Vendors with the deletion flag (section 7.3.3 Archive Customer/Vendor data with deletion flag).

It is recommended (but not mandatory) that Business Partner ID and Customer-ID / Vendor ID are the same. This approach is feasible for new implementation of S/4HANA: all numbers for BP, customer and vendor master can be designed freely.

In case of conversion of existing SAP ERP to SAP S/4HANA the number ranges for customer and vendor master are already established. When setting up number equality for BP in this case it might end up in

- additional customizing settings just to safeguard number equality: e.g. additional BP Groupings 1:1 to Account Groups
- limitations
 - as usually customer and vendor master have (partially) overlapping number ranges: so only one object can have same number with BP
 - when merging same legal entity of certain customer and vendor to one BP when both having not the same number
 - for future applications that might use BP as well and now restricted to “artificial” BP-numbering
 - when HCM employee master will be converted to BP: employee master very often consumes numbers from a broad number range (5 to 8 digits) that overlaps almost all considerable number ranges from customer and vendor master. Very often they request also same numbering for employee master and BP (e.g. usage of employees as resources in projects)

Note: In case of overlapping number ranges for Customer and Vendor in the source system an additional number range alignment is required in case of targeting equal numbering for Business Partners, Customers and Vendors (in terms of accepting exceptions).

The user interface for SAP S/4HANA to create and maintain Customer and Vendor master data is transaction BP and the respective SAP Fiori Apps (see section 4.1 and 4.2). The specific transaction codes to maintain Customer/Vendor (as in SAP Business Suite), are not available within SAP S/4HANA. The BP transaction is the single point of entry to create, edit and display master data for Business Partners, Customers, and Vendors.

The following SAP Business Suite transactions are no longer available or redirect to transaction BP:

- FD01, FD02, FD03, FD05, FD06, FD08
(Create, Change, Display, Block, Deletion mark, Confirm Customer (Accounting))
- FK01, FK02, FK03, FK05, FK06, FK08
(Create, Change, Display, Block, Deletion mark, Confirm Vendor (Accounting))
- MAP1, MAP2, MAP3
(Create, Change, Display Contact Person)
- MK01, MK02, MK03, MK05, MK06, MK12, MK18, MK19
(Create, Change, Display, Block, Deletion mark Vendor (Purchasing))

- V-03, V-04, V-05, V-06, V-07, V-08, V-09, V-11, V+21, V+22, V+23
(Create invoice recipient, payer, consignee, one-time Customer, ordering party, carrier, sales prospect, competitor, Business Partner (Sales/Centrally))
- VAP1, VAP2, VAP3
(Create, Change, Display Contact Person)
- VD01, VD02, VD03, VD05, VD06
(Create, Change, Display, Block, Deletion mark Customer (Sales))
- XD01, XD02, XD03, XD05, XD06, XD07
(Customer: Create, Change, Display, Block, Deletion mark, Change Account Group (Centrally))
- XK01, XK02, XK03, XK05, XK06, XK07
(Vendor: Create, Change, Display, Block, Deletion mark, Change Account Group (Centrally))

Mass maintenance for Business Partner fields via transaction MASS is available via object "Business Partner".

To update customer/vendor fields in S/4HANA 1511,1610 and 1709 SAP Note [2346269 – Mass Maintenance Functionality of Customers/Suppliers using XD99 and XK99](#) is required. Later versions of S/4HANA from 1809 onwards already have the functionality built in.

SAP Business Suite Customer and Vendor numbers are still used as input to those former SAP Business Suite transactions, e.g., VA01, ME21N, or standard reports. In case a new BP number is assigned to Customer or Vendor, the SAP Business Suite Customer or Vendor number must be used in those transaction or reports.

CVI ensures that Customer and Vendor master data tables are updated automatically after a BP is created/changed. All KNxx and LFix Customer/Vendor master data table are still populated as previously in SAP Business Suite.

In SAP S/4HANA BP transaction covers almost all Customer/Vendor master data fields. For additional fields that are not included in the standard SAP S/4HANA BP transaction kindly go over the BDT interface activities in order to add your own custom fields. Please also check section 7.3.7 Check and integrate Customer/Vendor enhancements.

Limitations of synchronization direction BP->Customer /Vendor in SAP ERP

Technically this synchronization direction is available in SAP ERP. However, there are some **functional restrictions** compared to S/4HANA to be considered when using BP as leading object **in SAP ERP, e.g.:**

- It is not possible to maintain all the customer- or supplier-fields or data needed. There are no plans to implement additional fields here since the xD0x- and xK0x-transactions continue to exist.
- Field modification from FI (e.g. by account group) is not considered in BP-transaction.
- Multiple Assignment is not available in SAP ERP.
- No FIORI-apps to maintain BP, BP-Customer and BP-Supplier.
- Neither account group information nor change feature is available in BP-transaction (but XD07/XK07 is available).
- There is no search help / no locator search or display like "BP by Customer/Vendor".
- Accessing Customer/Vendor documents from BP-transaction is not possible.
- From BP-transaction there is no direct menu link to Customer or Vendor classification data.
- Forward navigation in partner schema of customer/vendor data is not supported (double click on partner number is not supported).
- All the SAP Business Suite help documents refers to Customer and Vendor rather than Business Partner for these transactions.

4. SOLUTION IMPACT

4.1. Fiori App: Manage Customer Master Data

With this app, you can manage Customer master data centrally for departments involved with sales. You can create, change, search, display, and copy Customer master data with the role SAP_BR_BUPA_MASTER_SPECIALIST.

Please note that the copy function for Sales Org. and Company Code data of the same Customer master is only available in FIORI.

Key Features

- **Create Customer Master Data.**
Use Create Person or Create Organization buttons to create new Customer master data. Enter values in the relevant fields such as Basic Data, Roles, Address and so on. Save the entries.
- **Edit Customer Master Data.**
Open a Customer master data record from the List Report page. You can also use the Search field and click Go button to find the Customer master data to change. Click Edit button. This opens the Customer data in draft mode for you to change the values. Save the changes.
- **Copy Customer Master Data.**
Select a Customer master from the List Report page. Click Copy button. The new Customer master data record page is displayed with all the details of the Customer that you selected previously, except the Business Partner number, in draft mode. Edit the values as per your requirement. Save the entries. The Customer master data record is saved with a new Business Partner number.
- **Time Dependency.**
If Time Dependency is enabled, you can set validity start date and validity end date for the fields such as Roles, Address, Address Usage, Bank Accounts, and Contacts. If Time Dependency is not enabled, the system considers the default values. The default values are current date (validity start date) and 31.12.9999 (validity end date)
- **Address Usage.**
You can manage different addresses (for example, Home Address, Business Address, Holiday Home) according to your preference. Standard Address (XXDEFAULT) is mandatory for Customer and Vendor roles.
- **Attachments.**
This feature enables you to provide related attachments for Customer master data records. The app supports only General Object Services (GOS) type attachments.
Please also check this blog on the GOS attachments:
<https://blogs.sap.com/2020/11/03/generic-object-services-gos-attachments-for-business-partner/>

For more details see the Fiori Apps Library:

[https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/#/detail/Apps\('F0850A'\)/S6OP](https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/#/detail/Apps('F0850A')/S6OP)

4.2. Fiori App: Manage Supplier Master Data

With this app, you can manage Vendor master data centrally for all consuming departments (for example, purchasing department). You can create, change, search, display, and copy Vendor master data with the role SAP_BR_BUPA_MASTER_SPECIALIST.

Please note that the copy function for Purchasing Org. and Company Code data of the same Vendor master is only available in FIORI.

Key Features

- **Create Vendor Master Data.**
Use Create Person or Create Organization button to create new Vendor master data. Enter values in the relevant fields such as Basic Data, Roles, Address and so on. Save the entries.
- **Edit Vendor Master Data.**
Open a Vendor master data from the List Report page. You can also use the Search field and click Go button to find the Vendor master data to change. Click Edit button. This opens the Vendor data in draft mode for you to change the values. Save the changes.

- **Copy Vendor Master Data.**
Select a Vendor master from the List Report page. Click Copy button. The new Vendor master data page is displayed with all the details of the Vendor that you have selected previously, except the Business Partner Number, in draft mode. Edit the values as per your requirement. Save the entries. The Vendor master data record is saved with a new Business Partner Number.
- **Time Dependency.**
If time dependency is enabled, you can set validity start date and validity end date for the fields such as Roles, Address, Address Usage, Bank Accounts, and Contacts. If time dependency is not enabled, the system considers the default values. The default values are current date (validity start date) and 31.12.9999 (validity end date).
- **Address Usage.**
You can manage different addresses (for example, Home Address, Business Address, Holiday Home), according to your preference. Standard Address (XXDEFAULT) is mandatory for Customer and Vendor roles.
- **Attachments.**
This feature enables you to provide related attachments for Vendor master data records. The app supports only General Object Services (GOS) type attachments.
Please also check this blog on the GOS attachments:
<https://blogs.sap.com/2020/11/03/generic-object-services-gos-attachments-for-business-partner/>

For more details see the Fiori Apps Library:

[https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/#/detail/Apps\('F1053A'\)/S6OP](https://fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/#/detail/Apps('F1053A')/S6OP)

4.3. Business Partner Authorizations

For the concept of segregation of duty in the Business Partner there is already a field called “Authorization Group” in BP master which is also present as an authorization field which can be used to group business users & restrict the authorization based on the authorization group value of a business user.

In addition to the “traditional” authorization objects for Customer and Vendor that still will be checked, there are other authorization objects in the BP area. Go to transaction SU21 and search for authorization objects ‘B_BUPA*’ and ‘B_BUPR*’.

See below a short description of the most common authorization objects for SAP Business Partner.

Authorization Object: B_BUPA_GRP - Authorization Groups

Use this authorization to define which Business Partners can be edited based on the authorization group mentioned above.

Authorization Object: B_BUPA_ATT - Authorization Types

With this authorization object, you can define authorizations for any number of input fields in Business Partner maintenance. You determine which Business Partners may be maintained, depending on the field values. In Customizing you define an authorization type and specify the names of the fields that should be checked.

Authorization Object: B_BUPA_FDG - Field Groups

With this authorization object, you can define authorizations for individual field groups in Business Partner maintenance. You thereby define which fields in Business Partner maintenance can be maintained or viewed by a user.

Authorization Object: B_BUPA_RLT - BP Roles

With this authorization object, you define which BP roles can be edited.

For more information and possible Authorization Scenarios in S/4HANA please go over the following blog:

<https://blogs.sap.com/2020/10/16/bp-authorization-tips-and-tricks/>

4.4. Conversion Process Authorizations

To prepare the conversion and start the BP synchronization you need (amongst others) the authorizations for CVI customizing, the synchronization cockpit and the Postprocessing Office (PPO).

Authorization Object: CVI_CUST - Process Assignment Customizing and Synchronization Reports

You use this authorization object to determine whether the assignment customizing for the attributes belonging to the object pair Business Partner-Customer/Vendor and the corresponding synchronization reports can be processed.

Authorization Object: MDS_LOAD - Synchronization (Individual and Mass Maintenance)

This authorization object checks which source objects a user can synchronize with the Synchronization Cockpit and Postprocessing Office (PPO). The Synchronization Cockpit and PPO use this authorization object for mass and individual synchronization. This authorization object does not determine whether you can edit master data.

Authorization Object: C_PRECHK_M and B_MASSMAIN

For the Master Data Consistency Check Report, the authorization objects C_PRECHK_M and B_MASSMAIN provide authorization to use the Edit feature, preventing any unauthorized operation. You can correct the master data consistency errors using the Edit only if the authorization is assigned. Also, you can Mass Populate values with these authorizations.

- Authorization object C_PRECHK_M and the activity 02 assigned
- Authorization object B_MASSMAIN, activity MASSOBJTYP and values XD99 (customer) or XK99 (vendor) assigned.

4.5. Customer Hierarchies

The Customer/Vendor Hierarchy function remains the same. There is no simplification in SAP S/4HANA On-Premise.

4.6. Customer Classifications

Customer Classification is available as of SAP S/4HANA 1610, and 1511 FPS02 with SAP Note [2326148 - Classification Functionality on Business Partner Customer / Supplier side.](#)

4.7. Usage of Time-Dependency

Following entities can be activated for time-dependent data:

- BUT020 - Time Dependency BP Addresses
- BUT0BK - Time Dependency BP Bank Data
- BUT100 - Time Dependency BP Roles
- CRM_BUT050 - Time Dependency: Contact Person Relationship

Default address, bank data and contact person relationship are shared with customer/vendor master using CVI. When BP is leading object synchronized with customer/vendor (mandatory in S/4 / possible, but usually not used in ECC) it is necessary to execute report BUPTDTRANSMIT on regular base (e.g. daily).

In case performance problem occurs with this program, please consider following OSS note as a workaround: [2151842 - BUPTDTRANSMIT performance problem from but000_swap and outbound.](#)

Please note that time dependency on header level data (BUT000) is not supported in S/4HANA. Check note [2379157 - S4TWL - Business Partner BUT000/Header Level Time Dependency](#) for details.

To activate/deactivate certain time-dependent feature use IMG-node: *SAP Customizing Implementation Guide -> Cross-Application Components -> SAP Business Partner -> Activation Switch for Functions*

5. CVI CONVERSION SCENARIOS

Based on the SAP S/4HANA implementation scenario, New Install or System Conversion, different CVI process scenarios must be considered. For a New Install scenario, the central configuration for Business Partners including CVI setup and test steps are required. For a System Conversion scenario, several preparation steps are necessary to first convert the Customer/Vendor data into an SAP Business Partner.

The diagram below shows the two different process scenarios.

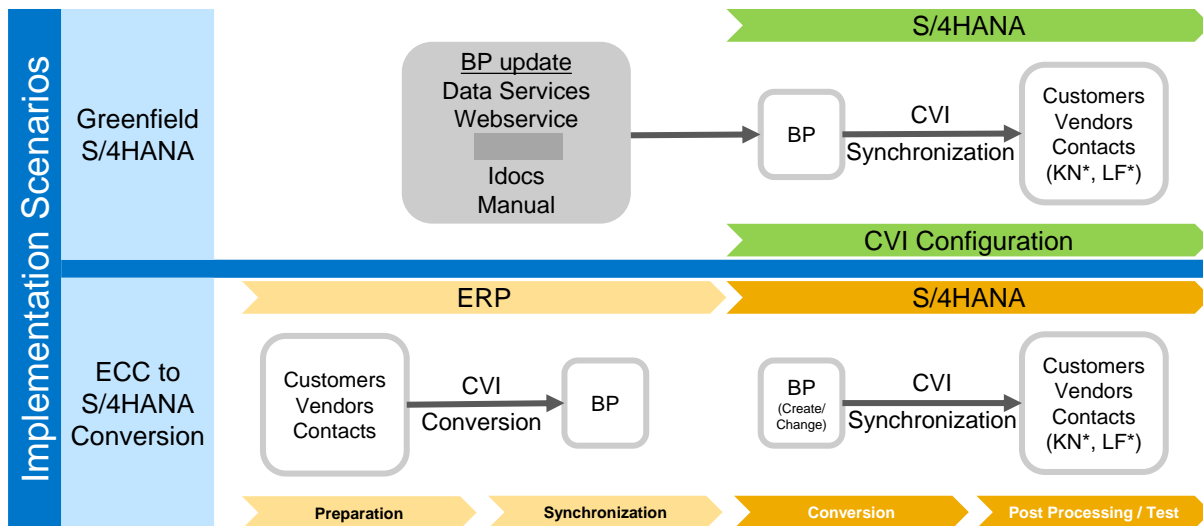


Figure 2: CVI Conversion Scenarios.

Each scenario has its own challenges, but some general considerations and preparations are relevant for both.

Skillssets

- Functional and customizing knowledge of Customer/Vendor and BP master data is necessary.
- Technical knowledge is necessary especially for enhancements.
- Business process knowledge is required for BP number range determination.

Documentation

Business Partner Conversion Document, Simplification List and Enhancement cookbook should be known. Also, for a new installed system the Business Partner Conversion Document and Simplification List is useful to understand the CVI settings for the direction BP -> Customer/Vendor. Please refer to SAP Note [2265093 - S4TWL - Business Partner Approach](#) to get the latest versions of the Conversion Document and the Simplification List Item "Business Partner Approach".

General information for Customer Vendor Integration can be found in SAP Help:

[SAP Help: Customer Vendor Integration](#).

Further links are provided throughout this cookbook and in the section 10.2 Documentation.

Enhancements

BP/CVI enhancement can be complex and time-consuming. Download the latest versions of the following SAP Notes. They contain documentation and template source codes.

- SAP Note [2309153 - BP CVI: Guideline Version 1.14 for customer enhancements in CVI \(customer/vendor integration\) in S4HANA releases](#)
- SAP Note [2295823 - BP CVI: Transfer of customer / vendor fields to the Business Partner - template source code](#)

For further information on enhancements see also chapter 7.3.7. Check and integrate Customer/Vendor enhancements



Tools

SAP provides a report to perform CVI related configuration checks, to find out missing customizing entries and to support the creation/correction of these entries. They can be used in both scenarios. See section 7.3.2.2 CVI Customizing – Check.

Especially for the conversion scenario there are further tools like the CVI cockpit (see section 7.2 CVI Cockpit).

SAP Notes

Chapter 10.1 SAP Notes provides an overview of all SAP Notes mentioned in this document (plus some additional notes which can be useful). To search for more CVI related SAP Notes use the search term 'BP_CVI'.

Further documentation

Chapter 10.2 Documentation provides links to further documentation.

6. CVI CONVERSION ON PREMISE NEW INSTALL

6.1. Configuration

As a prerequisite to configure CVI in a new installed SAP S/4HANA system, the configuration for Business Partners must be completed. Best Practice Building Blocks BN4 and J61 describe the relevant steps and configuration parameters for setting up Business Partner functionality as well as CVI settings. If a project is not based on Best Practice, use those parameters as reference only. Check, if the existing Business Partner settings meet your requirements and adjust and complete where necessary.

Building Block BN4 (2018): [Basic Settings for Business Partners](#)

This building block provides main configuration settings for the SAP Business Partner (BP) object focusing on those settings which are mandatory to create BP-Employees as part of IAM (Identity & Access Management) users.

Additional settings for the Business Partners are provided with further building blocks (e.g. J61) for which BN4 is a mandatory prerequisite.

Function list:

- BP Roles
- Number Ranges
- BP Groupings and assignment of Number Ranges
- Field Attributes per Client
- Field Attributes per BP Role
- Academic Titles
- Name Affixes
- Name Prefixes
- Marital Status
- Forms of Address
- Name Formatting Rules
- Define Address Types
- Identification Types

Building Block J61 (2018): [Central Configuration for Business Partners](#)

This building block provides main configuration settings for the SAP Business Partner (BP) object focusing on the use of BPs as BP-Customer, BP-Vendors, BP-Contacts etc. In addition, it provides settings for the "ERP" - objects "Customer" and "Vendor".

Technical settings to make use of the SAP Business Partner are provided with building block BN4. BN4 is a mandatory prerequisite for building block J61 to use the Business Partner functionality


Function list

Building Block J61 provides many configuration settings from different areas. The overview shown below is not a complete view on all settings, but a representative extract:

- Partner Determination settings for "ERP" Customer/Vendor objects
- Settings for "ERP" Customer and Vendor Account Groups
- Value table content for "ERP" Customer and Vendor fields
- Value table content for SAP Business Partner fields
- Settings for the CVI (Customer / Vendor Interface)

Building Block JA2 (2018): [Sample Master Data Business Partners](#)

This building block provides sample Business Partners (BP-Customers and BP-Contacts, BP-Vendors) for being used in a variety of scenarios like "Sell from Stock" or "Procure to Stock".



Most of the SAP Best Practices scenarios use Business Partners from this building block as sample master data for use in process scripts. Additional Business Partners for specialized scenarios are provided with other sample master data building blocks.

6.2. Migration / BP update

In a new installed system (Greenfield Approach), the upload of Business Partner data is only one of many tasks of a typical migration project. Find below an overview of available tools and interfaces.

Migration Cockpit

Migration cockpit is a tool delivered along with any installation of S/4HANA. It is intended to perform initial load of several objects (more than 150 available objects on 1909 release)

Information on Migration cockpit can be found on following links:

- help.sap.com's [landing page for data migration](#);
- [Best Practices scope item BH5: Data Migration to S/4HANA from file](#);
- [OSS note 2537549 - Collective SAP Note and FAQ for SAP S/4HANA Migration cockpit \(on premise\)](#).

Concerning business partner topic, please also refer to following OSS note:

- [2848224 - Migration Cockpit: Collective KBA for Business Partner \(Customer, Supplier\)](#)

SAP Rapid Data Migration to S/4HANA

For further information on SAP Rapid Data Migration for S/4HANA on premise use the following links:

- [SAP Best Practices Explorer](#)
- [SAP Note 2239701 - SAP Rapid Data Migration for SAP S/4HANA, on premise edition](#)

Legacy System Migration Workbench (LSMW)

LSMW is not the recommended approach to migrate data into S/4HANA.

For further information on LSMW use the following links:

- [SAP Note 2287723 - LSMW in SAP S/4HANA on-premise](#)
- A custom LSMW tool for BP upload is provided at SCN: <https://blogs.sap.com/2016/03/10/uploading-business-partner-data-using-lsmw/>. The blog is ONLY RELEVANT FOR MIGRATION TO S/4HANA 1511.

IDOC

IDOCs DEBMAS and CREMAS are available in SAP S/4HANA OP 1511. Please see [SAP Note 2312529 - Error in ALE inbound while receiving the data for DEBMAS and from S/4HANA 1610 onwards](#) please consult [SAP Note 2479954 - DEBMAS/CREMAS IDocs in SAP S/4HANA Business Partner](#). Please also check section 9.1.2 IDocs DEBMAS/CREMAS in S/4HANA in this cookbook.

RFC and SOA Services

Any external application creating or updating the Business Partner Master Data must use the available API (CL_MD_BP_MAINTAIN), IDOC or BP SOA Service as described in [SAP Note 2417298 - Creation of Business Partner with Customer and Supplier Roles](#).

Please also consider following note: [2506041 - S4TWL - API RFC CVI_EI_INBOUND_MAIN is not supported from the release S/4 HANA OP 1709 FPS2 and in Cloud Edition 1805 onwards](#)

7. CVI CONVERSION ON PREMISE SYSTEM CONVERSION

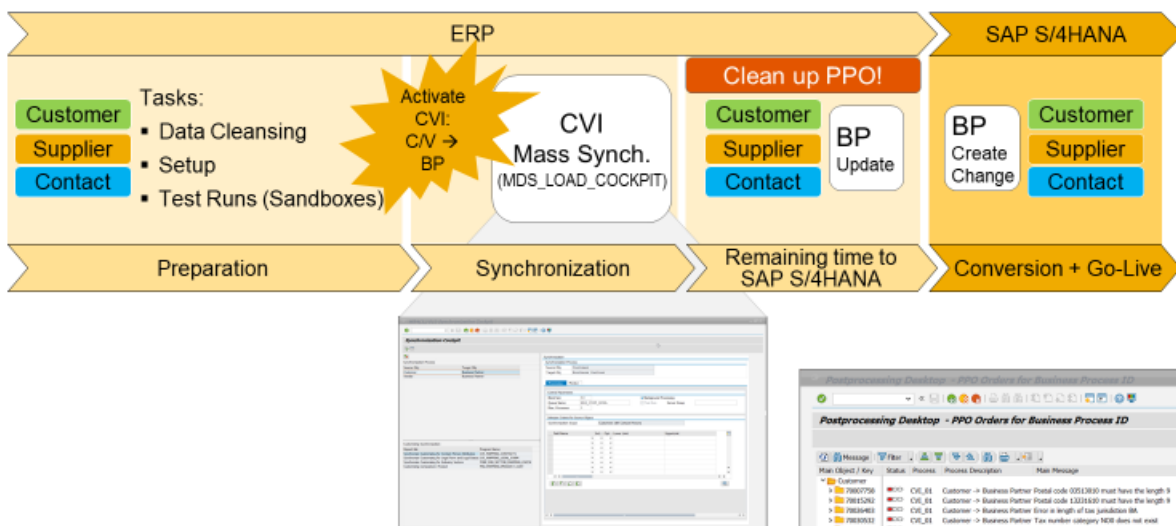
7.1. Overview and Phased Approach

To ensure a successful conversion, all Customers, Vendors and Contacts in all clients in the respective system must be converted to Business Partners. This is also true for the Business Partners that are already in use. When the Customer/Vendor transformation process is triggered, the system posts all required fields into the Business Partner. The BP transaction is the leading object and single-entry point to maintain Business Partner, Customer and Supplier (formerly known as Vendor) master data in SAP S/4HANA.

The entire Business Partner data transfer including conversion and Business Partner post processing activities usually takes place in four phases, which are illustrated in the following diagram.

Customer/Vendor Integration and Synchronization

Mass synchronization in ERP: MDS_LOAD_COCKPIT



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3

Figure 3: CVI Conversion Process.

The transformation steps **Preparation and Synchronization** are described in detail in this document and must be executed in the defined sequence and must be repeated in case of errors. The conversion process must be triggered following to the SAP S/4HANA Conversion guide. The activities in the Post Processing step are also described in the mentioned document.

7.2. CVI Cockpit

This phased approach is supported with the, so called “CVI Cockpit”. This CVI Cockpit had been provided to guide the user in a sequential and logical process flow to execute CVI activities and reflects the phases of a CVI project to prepare a SAP S/4HANA conversion.

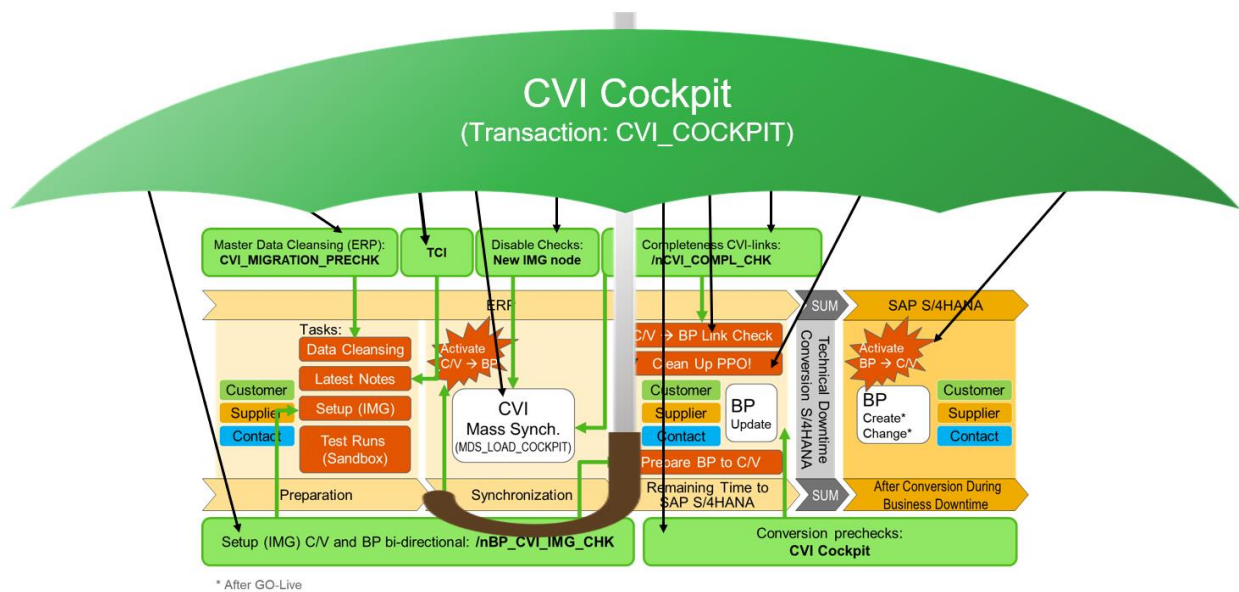


Figure 4: Phases supported by CVI Cockpit

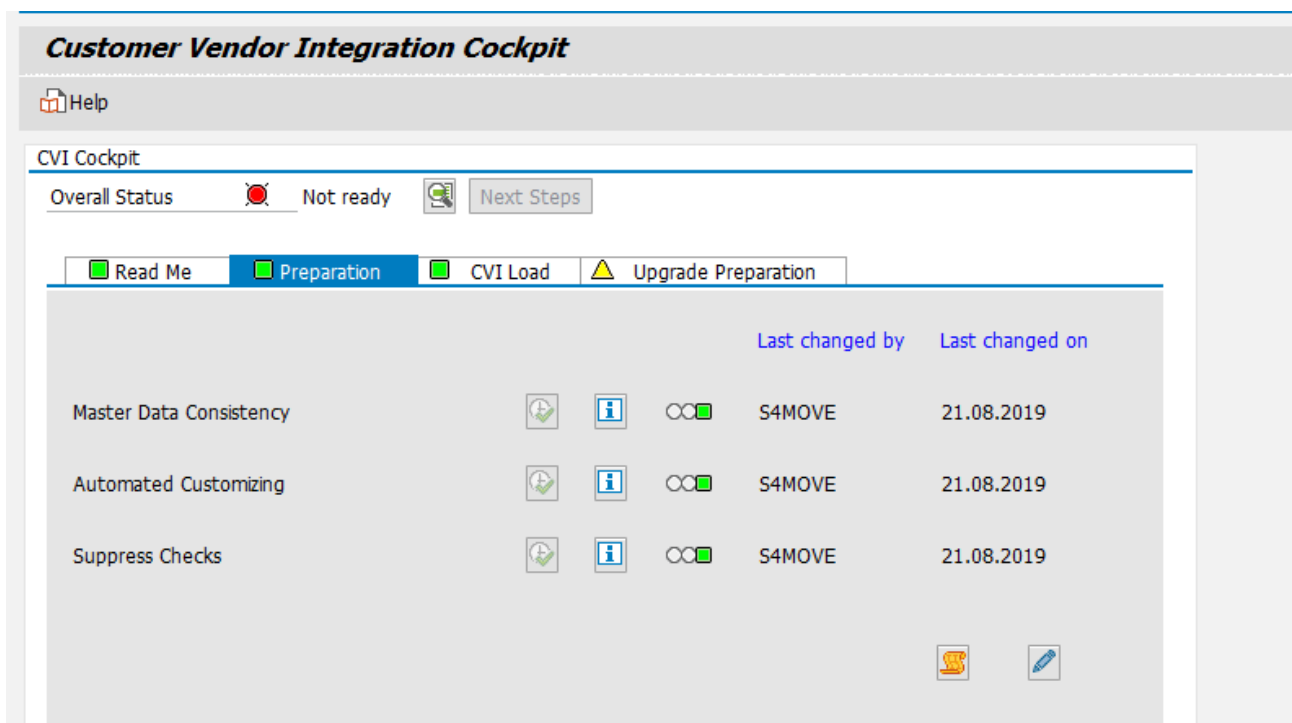


Figure 5: Transaction CVI_COCKPIT (ECC 6.0)

The CVI Cockpit collects all important activities per phase:

- Read Me
 - This is the first Stage of CVI Cockpit. Users can get information about various pre-requisite OSS notes and help documentations, related to CVI migration processes. This phase consists of:
 - Note Checker (link to SAP Note [2823648 - Information on Pre-requisite SAP Notes for Business Partner CVI Synchronization](#), please also check section 7.3.17.3.1 TCI Note for CVI)
 - CVI Library (SAP Note with important information links: [2823632 - Consulting Note for Business Partner Approach and CVI Process](#)).

- **Preparation**
This is the second Stage of CVI Cockpit. The Tasks in this stage performs necessary business checks (functional and customizing) in the Customer and Vendor master data required for CVI synchronization process to Business Partner data model. This stage also gives a provision to customize the checks which user may intend to suppress in a test or sandbox system. This phase consists mainly of
 - Master Data Consistency Check ([more information in this blog post](#) and in section 7.3.2.1 Master Data Cleansing: Master Data Consistency Check)
 - Automated Customizing ([more information in this blog post](#) and in section 7.3.2.2 CVI Customizing – Check)

- **CVI_LOAD**
This is the third stage of CVI Cockpit. It has a total of 8 tasks divided into three sections – Pre-Load Activities, Real Load Activities, and Post Load Activities. These tasks perform the main synchronization activities that creates BP master data in system, for all the customer and vendor records. This phase consists mainly of:
 - Pre-Load Activities
 - Real Load Activities with the launch of the main CVI load tool: SAP transaction MDS_LOAD_COCKPIT. More information in section 7.4 Synchronization.
 - [this LOAD Blog Post and](#)
 - [this ERROR HANDLING Blog Post](#)
 - Post Load Activities

- **Upgrade Preparation**
This is the fourth and currently the last Stage of CVI Cockpit. It is used once the SAP S/4HANA conversion project approaches the productive conversion. These checks are to be executed in advance to be prepared for having resolved all errors before conversion pre-checks are executed. This stage also helps to check the consistency of the BPs created. This phase consists mainly of:
 - Post Processing
 - Upgrade Prechecks

It supports a status logging. Per activity a certain status (in progress, done etc.) can be set. Once all activities per phase are done the next phase can be started. The Overall status is set automatically to “green” once all customers, vendors and their contact persons are linked with a Business Partner. Please consider: all manual status changes are logged with user and time.

The CVI Cockpit is available via SAP Note [2832085 - New Central Cockpit for Customer Vendor Integration \(CVI\) to Business Partner](#). It was introduced with ECC 6.0 EHP8 SP13 and it was down ported to ECC 6.0 EHP0 and upwards.

Also, be aware of these SAP Notes for the CVI Cockpit:

- [2850537](#) - DDIC Changes for Central Customer Vendor Integration (CVI) Cockpit
- [2832085](#) - New Central Cockpit for Customer Vendor Integration (CVI) to Business Partner
- [2861108](#) - CVI_COCKPIT: CVI_LOAD Table entries and Documentation
- [2812309](#) - CVI_COCKPIT: CVI_LOAD Stage
- [2891522](#) - CVI_COCKPIT: Navigation to new customizing check report

As the CVI Cockpit is linking to the Master Data Consistency Check (section 7.3.2.1) and the CVI Customizing Check Report (section 7.3.2.2), take notice of the referenced sections in the Cookbook and mentioned SAP Notes.

[This blog gives an overview about the CVI Cockpit:](#)
[New CVI Cockpit – Enabling Movement to SAP S/4HANA through seamless BP Synchronization](#)

As well this presentation gives an overview:
[S/4HANA MOVE – BP/CVI - CVI Cockpit](#)

7.3. Preparation

7.3.1. TCI Note for CVI

In order to ease the implementation of a bigger number of CVI SAP Notes, SAP has collected CVI relevant corrections into a Transport-Based Correction Instruction note (TCI-note). The implementation of the CVI TCI SAP Note is recommended in early stages of an CVI project as preparation for an SAP S/4HANA conversion project. Note transport-based correction instructions (TCI) have the following benefits compared to SAP Notes with correction instructions (CI):

- Fast consumption of consolidated CIs
- No development skills needed for implementation due to an automatic installation process
- Support of all transport-enabled SAP ABAP objects such as DDIC, Table Content, and MIME
- No adjustment activities during SP import and upgrade for SAP standard objects
- Clear functional focus and less side-effects.
- De-implement or roll back TCI (For more information, see SAP Note [2408383 - TCI - Enabling System for SAP Note Transport-Based Correction Instruction \(TCI\) Rollback](#)).

Please review this SAP Note for basic information on TCI note technology, validity and preparation activities for applying TCI notes:

- [2187425 - Information about SAP Note Transport based Correction Instructions \(TCI\)](#)

Check especially conditions related to your SAP Netweaver release.

The CVI TCI note itself can be found via this SAP Note (validity from ECC 6 EHP0 onwards, please re-check validity within the note itself and for above mentioned TCI technology in relation to you specific SAP Netweaver release):

- [2820678 - CVI SAP_APPL TCI](#)

Please check regularly for updated versions of the CVI TCI SAP Note, it's being updated with newly released notes from time to time. Be aware, that the TCI note gives a good basis with more than 170 SAP Notes (as of November 2020), but doesn't guarantee 100% SAP Note coverage for CVI. New SAP Notes in the CVI functional area can be released at any time without being immediately embedded in the CVI TCI SAP Note. Please also be aware of this additional SAP Note for the CVI TCI SAP Note:

- [2850361 - Delivery of texts \(DE/EN\) for language-dependent objects of TCIs for customer/vendor integration \(SAP Note 2818292\)](#)

This SAP Note provides a list of the SAP Notes which are contained in the CVI TCI Note:

- [2823648 - Information on Pre-requisite SAP Notes for Business Partner CVI Synchronization](#)


7.3.2. S/4HANA Pre-Checks and Check Reports

SAP supports a conversion project by providing pre-checks that identify the required steps to ensure that the system is compatible with the conversion process.

The SAP S/4HANA Transition Checks are intended for mandatory checks and its use is enforced by the upgrade tool. The upgrade tool will ensure that the SAP S/4HANA Transition Checks are executed and that the transition is performed only when all checks have been completed successfully.

Also, there are reports available to perform configuration checks, to find out missing customizing entries and to support the creation/correction of these entries. Additionally, the reports can be used to perform post checks after initial load. Those are included in CVI Cockpit.

Check reports can be launched from the CVI Cockpit. For CVI Cockpit overview see section 7.1 Overview and Phased Approach for CVI Cockpit overview and SAP Notes.



Previously used reports like PRECHECK_UPGRADATION_REPORT, CVI_UPGRADE_CHECK_RESOLVE, CVI_FS_CHECK_CUSTOMIZING or ZCUSTOMER_LINK_CHECK_REPORT should not be used any more, the following check reports which are linked into the CVI Cockpit should be used.

7.3.2.1. Master Data Cleansing: Master Data Consistency Check

During synchronization of customer and vendor masters to BP the content of certain fields is checked against current valid rules. Some fields (e.g., tax numbers) are going to be mapped to native BP-fields (e.g., Tax Codes). Old or inconsistently entered values lead to errors during the synchronization run. To check most common errors beforehand, SAP provides transaction CVI_PRECHK (report CVI_MIGRATION_PRECHK).

Remark: This report covers only the most important master data functional checks with respect to business partner conversion. The list of checks is not as extensive as the checks that are taken place in MDS_LOAD_COCKPIT during the actual conversion.

It provides the advantage, that you can run this check without having done the BP/CVI customizing.

The report can be used to check data quality and track data cleansing. It is also possible to change wrong or missing field content and to execute mass changes for the same type of error. A master data correction is possible either directly in the error list or via direct jump into master data maintenance transactions XD02/XK02.

Address Cleansing with SAP Data Quality Management (DQM)

Address cleansing is possible with the help of SAP Data Quality Management (DQM). For more information about DQM, see [SAP Data Quality Management](#).

The Master Data Consistency Check report is also compatible with Data Quality Management (DQM) 4.0 SP10 for address validations based on the configured Postal Address directories. However, microservice capabilities are only supported with DQM 4.1 version.

Please check here for details:

<https://help.sap.com/viewer/39615c43587c4405aba2de8ebf33cd66/6.18.15/en-US/cab77276399f4088999c0c8269f7333b.html>

It's possible to trigger an immediate check rerun from the error list with the given selection criteria.

Selection Screen:

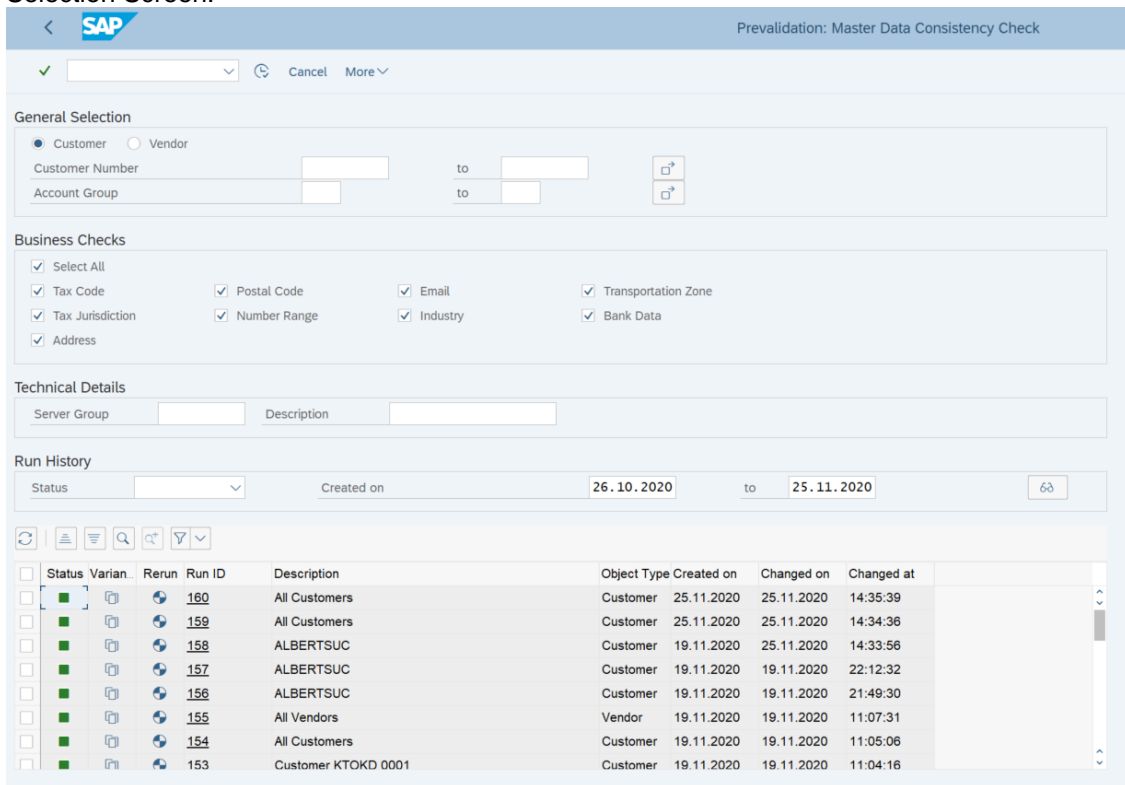


Figure 6: Selection Screen of Master Data Consistency Check

Result:

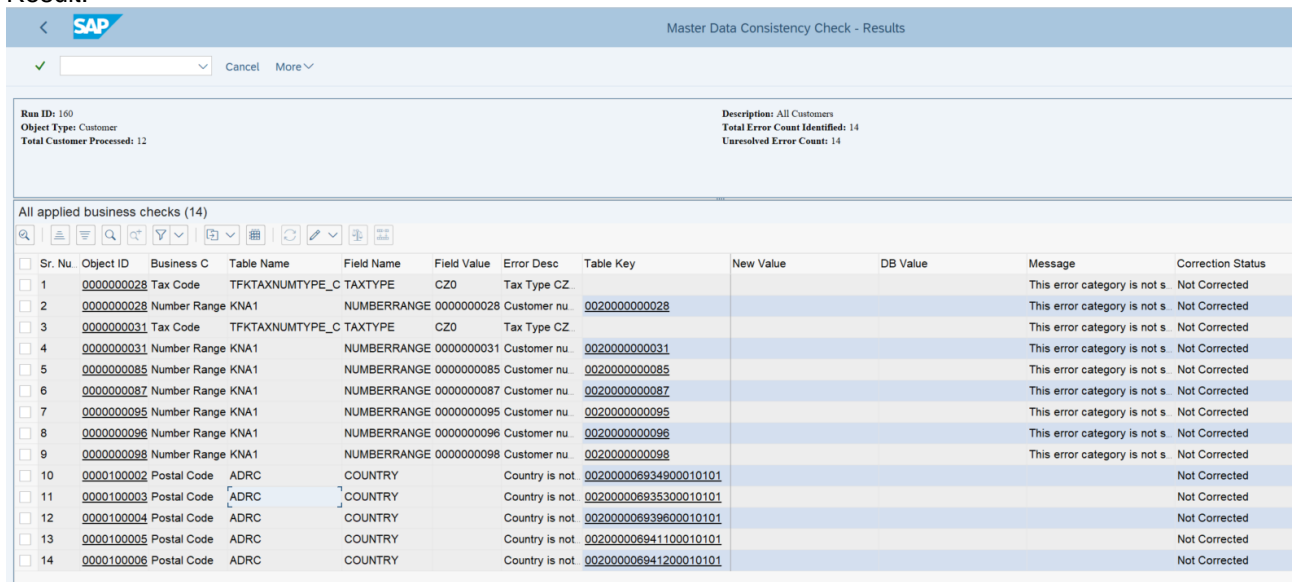


Figure 7: Result list of Master Data Consistency Check

If the report is missing (lower ECC6 support package stacks), please check these SAP Notes:

Main Note: [2743494](#) Prevalidation: Master Data Consistency Check

- [2942339](#) Prevalidation: Master Data Consistency Check V2 - DDIC creation
- [2891951](#) Enhancements to Prevalidation: Master Data Consistency Check Report
- [2949093](#) Enhancements to Prevalidation: Master Data Consistency Check Report – Authorization Object

- [2949094](#) Prevalidation: Master Data Consistency Check Report -Authorization Object: DDIC
- [2958796](#) Vendor data is not getting saved from Prevalidation: Master Data Consistency Check Report
- [2996762](#) Industry checks are not getting performed in Master Data Consistency Check (Tcode CVI_PRECHK) report
- [2968936](#) Master Data Consistency Check Report - Address Cleansing based on Data Quality Management (DQM): DDIC Creation
- [2957924](#) Master Data Consistency Check Report - Address Cleansing based on Data Quality Management (DQM)

A number range for number range number '01' for object 'CVI_PRECHK' must be added with transaction SNUM so that run ids can be created (see SAP note [2963656](#) - Transaktion CVI_PRECHK is not working).

The document "BP_Conversion_Document.pdf" attached with the SAP Note [2265093](#) - S4TWL - Business Partner Approach contains information about the Master Data Consistency Check Report in the sections 3 and 6.2.

There's also an informative blog available:

[Business Partner CVI – Master Data Consistency Checks supporting the SAP S/4HANA MOVE](#)

7.3.2.2. CVI Customizing – Check

The transaction BP_CVI_IMG_CHK "CVI Customizing – Check Report" (ABAP report CVI_CUSTOMIZING_RESOLVE) helps you with setting up the necessary BP and CVI customizing for both directions, customer/vendor to BP and BP to customer/vendor. It's integrated into the CVI Cockpit on the "Preparation" tab as "Automated Customizing" and on the "Upgrade Preparation" tab as "Preupgrade Customizing Check".

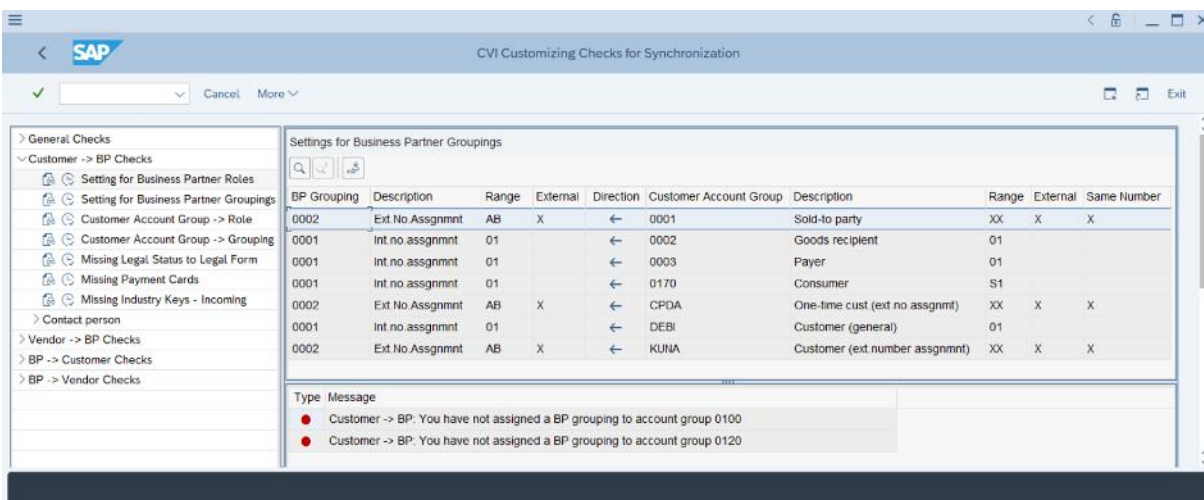


Figure 8: Example Snapshot of the CVI Customizing Check

It shows error messages for customizing which is used in master data (where applicable) and it provides for each check a link to respective customizing settings for resolution and for some even inline customizing is possible.

CVI/BP customizing steps are described in detail in this cookbook, this check report supports you with the additional checks and direct access to customizing maintenance.

There's also an informative blog available:

<https://blogs.sap.com/2020/03/31/cvi-customizing-check-report/>

Please check this note if you miss the report in your system:

[2891455](#) - New Customizing Check Report for SAP S/4HANA Master Data Migration (BP<->CVI)

7.3.2.3. CVI Completeness – Check

The transaction CVI_COMPL_CHK (ABAP report CVI_COMPLETENESS_CHECK) provides the list of Customers, Vendors and Contact Persons which have not yet been converted to Business Partners. You can select a range for which you want to view the missing information. It's possible to download the lists as MS Excel files which can be directly uploaded to MDS_LOAD_COCKPIT for a subsequent run. They are exported into files with these names in the default location, C:\Temp\CVI.

- unsync_customers.xls
- unsync_customers_contacts.xls
- unsync_suppliers_contacts.xls
- unsync_suppliers.xls

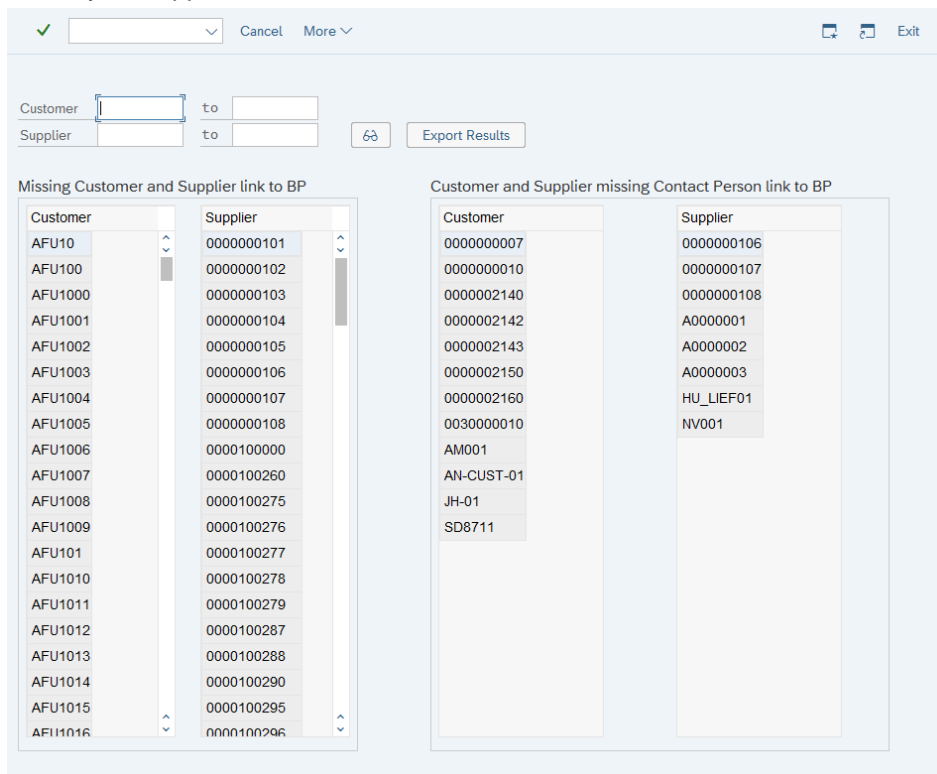


Figure 9: Example Snapshot of the CVI Completeness Check

7.3.3. Archive Customer/Vendor data with deletion flag

Before you execute the transformation for all Customer/Vendor data without restrictions, SAP recommends archiving the Customer/Vendor with the deletion flag. Also, Customer/Vendors with deletion flag which are not archived must be transferred.

Archiving is an optional step. It can be skipped if no added value is provided by the process. Archiving could simplify CVI conversion if Customer or Vendor objects settings were removed from the IMG, e.g., obsolete number range. If you plan to archive, it is recommended to mark deletion flag for archive **before activating Customer/Vendor-to-BP synchronization**. Marking deletion flag with Customer/Vendor-to-BP synchronization on will also convert the Customer/Vendor to Business Partners with archiving flag set. The Customers and Vendors with deletion flags could be converted to Business Partners.

Archiving Customer Data

Use the following link to reach the SAP Help Portal: [Archiving Customer Master Data \(FI-AR, SD\)](#)

Path:

From SAP help portal (help.sap.com), search for SAP ERP and from here go to SAP Library.

In SAP Library, go to "SAP ERP Cross-Application Functions", then go to "Scenarios in the Applications", then to "Data Archiving (CA-ARC)" and then to "Financial Accounting (FI)". From here, go to following path:

Financial Accounting (FI) > Archiving Financial Accounting Data (FI) > Archiving Customer Master Data (FI-AR, SD)

Archiving Vendor Data

Use the following link to reach the SAP Help Portal: [Archiving Vendor Master Data \(FI-AP\)](#)

Path:

From SAP help portal (help.sap.com), search for SAP ERP and from here go to SAP Library.

In SAP Library, go to “SAP ERP Cross-Application Functions”, then go to “Scenarios in the Applications”, then to “Data Archiving (CA-ARC)” and then to “Financial Accounting (FI)”. From here, go to following path: Financial Accounting (FI) > Archiving Financial Accounting Data (FI) > Archiving Vendor Master Data (FI-AP)

Archiving in Customer/Vendor Integration

The impact of archiving in environments where CVI is activated is described in SAP Help. Use link to reach the relevant section: [Archiving in Customer/Vendor Integration](#)

Path:

From SAP help portal (help.sap.com), search for SAP ERP and from here go to SAP Library.

In SAP Library, go to “SAP ERP Cross-Application Functions”, then expand “Cross-Application Components” node and click on “Master Data Synchronization”. From here, go to following path: Customer/Vendor Integration > Archiving in Customer/Vendor Integration

7.3.4. Check dependencies with SAP CRM

If you are using SAP CRM and planning to convert from SAP ERP to SAP S/4HANA you need to perform the pre-conversion actions described in SAP Note [2285062 - S4TWL: Business partner data exchange between SAPCRM and S/4 HANA, on-premise edition](#) **before** activating the CVI and starting mass synchronization. Please consider referenced notes here (e.g., GUID exchange with CRM).

For more details see section 9.4 CRM.

7.3.5. Contact Person mapping

If you are using Vendors with Contact Persons and planning to convert from a release below SAP ERP 6.0 EHP 5 (SAP_APPL 605) you need to ensure to review the SAP Note [2711712 - How to map vendor contact person to BP for various ECC system release](#) and consider the following the SAP Notes:

[2383051 - Development of vendor contact person mapping to business partner](#)

[2421613 - Switch - Mapping of vendor contact person to business partner](#)

[2638156 - Contact person address changes are not correctly updated to the related BP person](#)

This ensures a proper mapping from Contact Person to Business Partner. Therefore, this is not relevant for systems which do not have vendors with assigned contacts. You can check the existence of such vendors in table KNVK where LIFNR has non-initial values (KNVK-LIFNR <> “).

7.3.6. Activate Business Functions

For the transformation, the Business Functions **CA_BP_SOA** must be active. As a prerequisite Business Function **CA_SUPPLIER_SOA** must be activated first.

CA_BP_SOA contains the switches 'VENDOR_SFWS_SC1' and 'VENDOR_SFWS_SC2' which must be active for the Vendor contact person data to be synchronized with Business Partner contact person data.

Should the Business Function CA_BP_SOA not yet exist in the system, you must create a new Business Function in the Customer namespace with the switches VENDOR_SFWS_SC1 and VENDOR_SFWS_SC2. The new customer-specific Business Function must be of type Enterprise Business Function (G). See SAP Note [1454441 - Development of contact person for vendors](#).

You can check this with transaction SFW5. In case of the transformation, the business functions activation leads to the selection of the table KNVK with the WHERE condition LIFNR <> SPACE. You can activate the business function in transaction SFW5. Set Planned Status to True and activate the changes.

Make sure that both switches have “Global status” as On after activation.

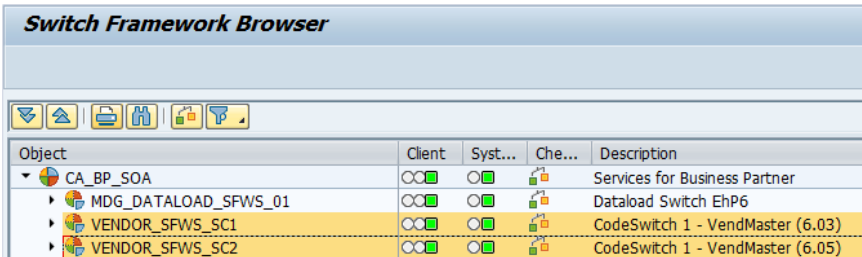


Figure 10: Activate Business Functions.

7.3.7. Check and integrate Customer/Vendor enhancements

If you need to include customer-specific Customer/Vendor fields in transaction BP, it is necessary to integrate these additional fields in the Business Partner and CVI.

The SAP Note 2309153 provides a document that explains how to make customer enhancements to the Customer/Vendor integration in order to integrate additional Customer/Vendor fields in the Business Partner and to use CVI synchronization to update them in the Customer/Vendor

The guide of SAP Note 2309153 refers to example classes that are delivered with SAP Note 2295823. It's also possible to create and use these classes in an SAP ERP Suite system as of Enhancement Package 6.

Use the links below to access the above-mentioned SAP Notes:

- SAP Note [2309153 - BP CVI: Guideline Version 1.14 for customer enhancements in CVI \(customer/vendor integration\) in S/4HANA releases](#)
- SAP Note [2295823 - BP CVI: Transfer of customer / vendor fields to the business partner - template source code](#)

The general mechanism (idea in a nutshell) to include customer enhancements in Business Partner and CVI is the following.

The BDT (Business Data Toolset) is used to enhance the existing screens in transaction BP with the additional required fields, tables and/or checkboxes. The XO (Extensible Objects) framework is used to validate and to store the data in the memory. BADl implementations within the CVI synchronization collect the data from XO memory and save it to the database, in case additional data is not part of the complex interface structure.

The document provided with SAP Note 2309153 contains further references to documentation describing the technical requirements and processes to include customer enhancements in Business Partner and CVI. You can also access these sources by using the links below.

Topic	Reference
BDT (Business Data Toolset)	BDT Developers Manual https://help.sap.com/viewer/8e1936ace52649b28ef5dc48cafe30c6/750%20SP16/en-US/44bd8d5377a0ec23e1000000a174cb4.html
XO Framework (Extensible Objects)	SAP Note 1623809 - Developer documentation for the XO framework
CVI (Customer/Vendor Integration)	SAP Note 956054 - BP CVI: Customer/vendor integration as of ERP 6.0

Topic	Reference
	Help Portal https://help.sap.com/viewer/6db8ae6e26e64854bc6f369d2dfd395f/6.18.13/en-US/771dc753b1081d4be1000000a174cb4.html
Easy Enhancement Workbench (EEW)	Help Portal https://help.sap.com/viewer/2eb99edb9d99472d9afa587acddd7a7c/750%20SP16/en-US/12b98d5377a0ec23e1000000a174cb4.html
Business Partner Extensibility	Help Portal https://help.sap.com/viewer/725b6ad626684262b8d74a55fc8ed089/750%20SP16/en-US/a6af8d5377a0ec23e1000000a174cb4.html

7.3.8. Check and adjust CVI/BP Customizing

Please consider the CVI Cockpit (section 7.2 CVI Cockpit) and the linked CVI Customizing Check (section 7.3.2.2 CVI Customizing – Check) as guiding support for the CVI/BP customizing with helpful checks.

Remark

The screenshot field values in the following chapters are for reference ONLY.

7.3.8.1. Master Data Synchronization

7.3.8.1.1. Function Modules for Data Distribution (CRM)

For CVI/BP - CRM integration related topics please cross-check section 9.4 CRM.

7.3.8.1.2. Activate Creation of Post Processing Orders

In the standard system, creation of post processing orders is deactivated for all business processes. For this reason, before you can use the *Post processing Office*, you must carry out this IMG activity.

IMG -> Cross-Application Components -> General Application Functions -> Post processing Office -> Business Processes -> Activate Creation of Post processing Orders

Activate Creation of Postprocessing Orders for component **AP-MD** and Business Processes **CVI_01** (Customer > Business Partner) and **CVI_02** (Vendor > Business Partner). Mark the checkbox to activate the entries.

You can already insert the entries for the business processes CVI_03 (Business Partner > Customer) and CVI_04 (Business Partner > Vendor) without activation checkbox marked.

After the successful synchronization of data, you must activate CVI_03 and CVI_04. See paragraph 7.6 Post Processing

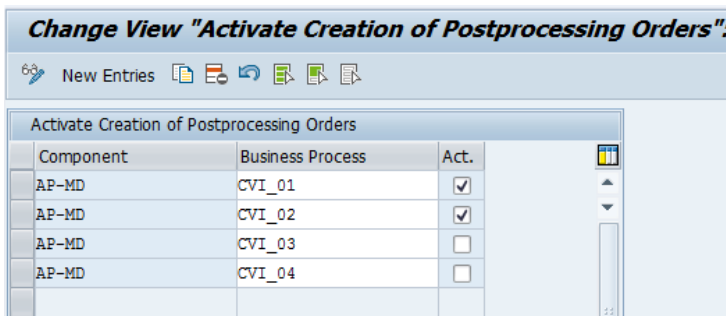


Figure 11: Activate Creation of Postprocessing Orders.

7.3.8.1.3. Activate PPO requests for Platform Objects

Use this IMG activity to define for which platform objects a post-processing request (PPO request) is to be written in the event of a synchronization error. This definition is not direction-specific, meaning a request should always be written when the platform object is used either as a source or as a target object in the synchronization.

IMG -> Cross-Application Components -> Master Data Synchronization -> Synchronization Control -> Synchronization Control -> Activate PPO Requests for Platform Objects in the Dialog

Create a new entry for the synchronization object **BP** (Business Partner) and mark the checkbox “**PPO Active**”.

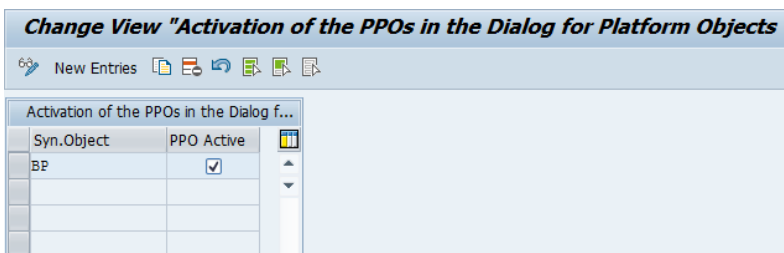


Figure 12: Activation of the PPO's in the Dialog for Platform Objects.

Remark

You can display synchronization objects provided by SAP for the master data synchronization with the following:

IMG -> Cross-Application Components -> Master Data Synchronization -> Synchronization Control -> Synchronization Control -> Synchronisation Objects

For Business Partner, Customer and Vendor the following entries must exist

Syn. Object	Sync. Mode	Extractor Class	Description	Platform	Block Size
BP	For Synchronous Comparison and Mass Data Loads	CVI_BP_EXTRACTOR	Business Partner	X	50
CUSTOMER	For Synchronous Comparison and Mass Data Loads	CMD_EI_API_EXTRACT	Customer		50
VENDOR	For Synchronous Comparison and Mass Data Loads	VMD_EI_API_EXTRACT	Vendor		50

7.3.8.1.4. Activate Synchronization Options

Using this IMG activity, you can configure the direction in which data is synchronized between the Customer/Vendor and the Business Partner. Data can be synchronized in both directions. This means that you can update data from the Business Partner to the Customer/Vendor and from the Customer/Vendor to the Business Partner.

IMG -> Cross-Application Components -> Master Data Synchronization -> Synchronization Control -> Synchronization Control -> Activate Synchronization Options

Insert new entries for

- Source Object Customer and Target Object BP
- Source Object Vendor and Target Object BP

Activate both entries by marking the activation indicator checkbox.

You can already insert the entries for

- Source Object BP and Target Object Customer
- Source Object BP and Target Object Vendor

without activation checkbox marked.

After the successful synchronization of data, you must activate these entries. See paragraph 7.6 Post Processing

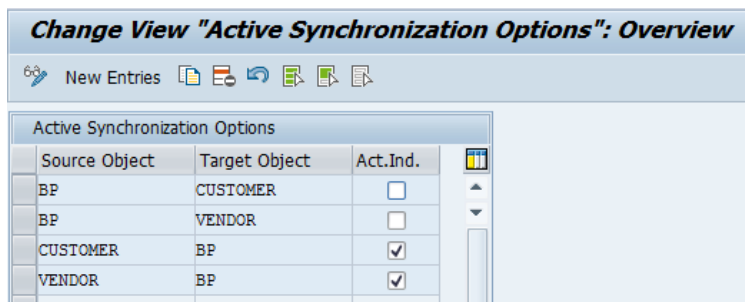


Figure 13: Settings for "Active Synchronization Options" before synchronization.

Remark

A synchronization option is a combination of source synchronization object and target synchronization object. Synchronization options can be maintained with transaction SM30, view **MDSV_CTRL_OPT**. The following entries must exist (predefined):

Source Object	Target Object	Strategy Implementation	Queue Name
BP	CUSTOMER	CVI_STRATEGY_BP_CUSTOMER	MDS_BUPA_CUST
BP	VENDOR	CVI_STRATEGY_BP_VENDOR	MDS_BUPA_VEND
CUSTOMER	BP	CVI_STRATEGY_CUSTOMER_BP	MDS_CUST_BUPA
VENDOR	BP	CVI_STRATEGY_VENDOR_BP	MDS_VEND_BUPA

7.3.8.2. Number Ranges and Groupings

7.3.8.2.1. Overview

A central task for Customer/Vendor integration is the definition and assignment of number ranges for Business Partners.

SAP recommends that you keep the Customer/Vendor number the same when converting to Business Partner (BP). When deciding for this approach please consider following remarks:

When the same number is used for a different Customer and Vendor, you must give one of them a different BP number. Additionally, you should allocate identical numbers to new Business Partners when assigning numbers to Customer/Vendor and Business Partners. If you assign identical numbers, this avoids confusion at the application level (when two different numbers appear for the Business Partner within a transaction). This is not possible in every case, for example, if SAP Business Partners already exist in the system prior to conversion or the number ranges in ECC for customers and vendors overlap.

The following principles should be considered:

- If your currently used number ranges for Customers and Vendors are disjoint, the Business Partner number range should be defined as a mirror image of the Customer/Vendor number ranges.
- If your currently used number ranges for Customers and Vendors are not disjoint, the Business Partner number range should be defined in such a way that most numbers from Customer/Vendor can be reused.
- If Customer/Vendor numeric numbers should be taken over to Business Partner
 - To allow the Customer/Vendor numeric numbers to be taken over to the Business Partner the numeric intervals of the Business Partner number ranges must be set to external during the synchronization phase in ECC.
 - After the successful data synchronization and before the Business Partner becomes the leading object in S/4HANA, the numeric intervals of the Business Partner must be changed back to internal. Additionally, the Customer/Vendor numeric number range must be set to external to allow identical numbers for Customer/Vendor and Business Partner.

The selected account group of the Customer/Vendor master record determines the number assignment of the Business Partner to be created.

If you create the Customer/Vendor and the Business Partner, the following combinations and necessary activities can result relating to the selected account group of the Customer/Vendor and the number assignment of the Business Partner:

Selected Account Group	Activity
You have selected an account group with internal number assignment to which a Business Partner grouping with internal number assignment is assigned.	The system automatically generates the Customer/Vendor number and the Business Partner number.

Selected Account Group	Activity
You have selected an account group with internal number assignment to which a Business Partner grouping with external number assignment is assigned. The number equivalence has been activated.	The system specifies the automatically selected Customer/Vendor number as the Business Partner number for Business Partner processing.
You have selected an account group with external number assignment to which a Business Partner grouping with internal number assignment is assigned.	You manually enter the Customer/Vendor number to be used in Customer/Vendor processing. The system automatically generates an internal Business Partner number.
You have selected an account group with external number assignment to which a Business Partner grouping with external number assignment is assigned. The number equivalence has been activated.	You manually enter the Customer/Vendor number to be used in Customer/Vendor processing. The system automatically specifies the selected Customer/Vendor number as the Business Partner number for Business Partner processing.

Background information and example

The Business Partner in table BUT000, the Customer in table KNA1 and the Vendor in table LFA1 use independent number range objects.

For the sake of simplification, we are focusing in this example on the Business Partner and Customer. You create each Business Partner in a specific Business Partner grouping. The account group defines the number range of the Customer master record. Both groups determine the number range in which a Business Partner and a Customer are created. The link between these objects must be configured in customizing for the Customer/Vendor Integration (CVI). Before you can assign identical numbers, you have to make sure that the number ranges for the respective Customer/Vendor account group and the Business Partner grouping are identical too.

The following example shows existing Business Partners created with internal numbers and Customer created with internal numbers with overlapping number range 01.

BP Groupings

Grouping	Short Name	Description	Number range	External
0001	Int.No.Assignment	Internal Number Assignment	01	

Intervals Business Partner

NR	From No.	To No.	Nr Status	External
01	0000000001	0999999999	5000	

Account Groups (Customer)

Group	Name	Number Range
DEBI	Customer (general)	01

Intervals Customer

NR	From No.	To Number	Nr Status	External
01	0000100000	0000199999	100010	

Since only To Number can be changed for an internal number range you must:

1. Change the "To Number" for the Business Partner interval to e.g. 0000099999.
2. Create a new Range 02 and mark for external
3. Change the BP grouping number range to 02

Intervals Business Partner

NR	From No.	To No.	Nr Status	External
01	0000000001	0000099999	5000	
02	0000100000	0000199999	-	X

BP Groupings

Grouping	Short Name	Description	Number range	External
0001	Int.No.Assignment	Internal Number Assignment	02	X

Configure CVI to assign the Customer/Vendor numbers to the BP.

Number Assignment for Direction Customer to BP

Group	Grp.	Same numbers
DEBI	0001	

During the synchronization, the new Business Partners are now created from the Customer with the same numbers (External flag marked for the number range).

After S/4HANA go-live and as a post conversion task, you should change the number range again in such a way that new identical numbers are created for Business Partner and Customers by defining a new range for Business Partner and Customer.

1. Create a new BP number range 03
2. Change the BP groupings number range to 03
3. Create new Customer number range 02 (external)
4. Change the account groups range to 02

Intervals Business Partner

NR	From No.	To No.	Nr Status	External
01	0000000001	0000099999	5000	
02	0000100000	0000199999	-	X
03	0000200000	0000300000		

BP Groupings

Grouping	Short Name	Description	Number range	External
001	Int.No.Assignment	Internal Number Assignment	03	

Intervals Customer

NR	From No.	To Number	Nr Status	External
01	0000100000	0000199999	100010	
02	0000200000	0000300000		X

Account Groups (Customer)

Group	Name	Number Range
DEBI	Customer (general)	02

Configure CVI to use same numbers for direction BP to Customer.

Number Assignment for Direction BP to Customer

Grouping	Short Name	Account Group	Name	Same numbers
001	Int.No.Assignment	DEBI	Customer (general)	X

You can use the Excel format below to document the existing settings and your changes.

Figure 14: Excel format for documenting settings.

Please find this Excel [here](#).

The following paragraphs explain the configuration settings used in the example above more in detail.

7.3.8.2.2. Define Number Ranges for Customer Master Records

In this IMG activity, you define the number intervals of the number ranges for Customer master records. When creating a Customer master record, a unique number which identifies the master record is assigned. The number comes from the number range that is provided for the account group.

Define Number Ranges for Customer Master

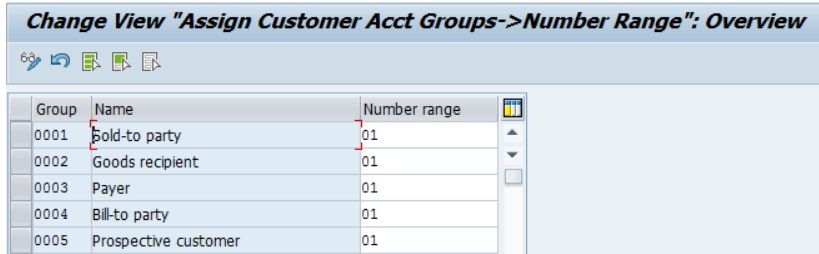
IMG -> Logistics - General -> Business Partner -> Customers -> Control -> Define and Assign Customer Number Ranges -> Define Number Ranges for Customer Master

Figure 15: Maintain Customer Number Ranges.

Assign Number Ranges to Account Groups (Customer)

IMG -> Logistics - General -> Business Partner -> Customers -> Control -> Define and Assign Customer Number Ranges -> Assign Number Ranges to Account Groups

Change View "Assign Customer Acct Groups->Number Range": Overview



Group	Name	Number range
0001	Sold-to party	01
0002	Goods recipient	01
0003	Payer	01
0004	Bill-to party	01
0005	Prospective customer	01

Figure 16: Assign Customer Account Group Number Range.

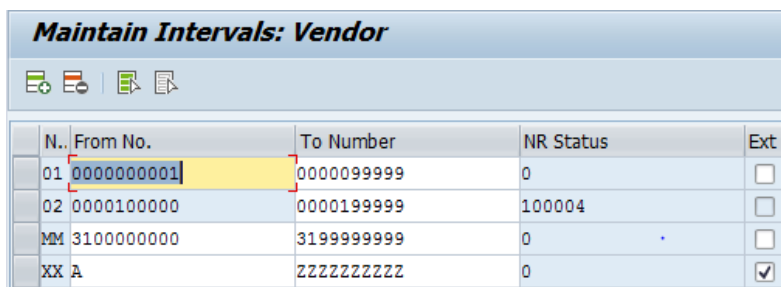
7.3.8.2.3. Define Number Ranges for Vendor Master Records

In this IMG activity, you define the number intervals of the number ranges for Vendor master records. When creating a Vendor master record, a unique number which identifies the master record is assigned. The number comes from the number range that is provided for the account group.

Define Number Ranges for Vendor Master

IMG -> Logistics - General -> Business Partner -> Vendors -> Control -> Define Number Ranges for Vendor Master Records -> Intervals

Maintain Intervals: Vendor



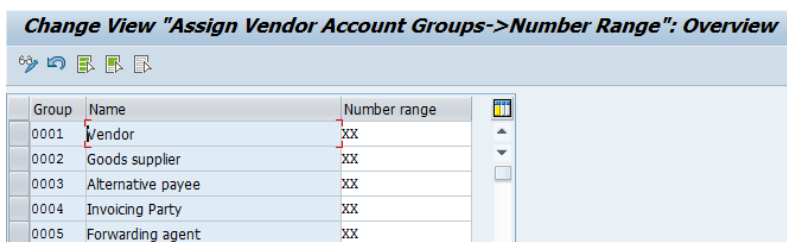
N.	From No.	To Number	NR Status	Ext
01	0000000001	0000099999	0	<input type="checkbox"/>
02	0000100000	0000199999	100004	<input type="checkbox"/>
MM	3100000000	3199999999	0	<input type="checkbox"/>
XX	A	ZZZZZZZZZZ	0	<input checked="" type="checkbox"/>

Figure 17: Maintain Vendor Number Ranges.

Assign Number Ranges to Account Groups (Vendor)

IMG -> Logistics - General -> Business Partner -> Vendors -> Control -> Define Number Ranges for Vendor Master Records -> Intervals

Change View "Assign Vendor Account Groups->Number Range": Overview



Group	Name	Number range
0001	Vendor	XX
0002	Goods supplier	XX
0003	Alternative payee	XX
0004	Invoicing Party	XX
0005	Forwarding agent	XX

Figure 18: Assign Vendor Account Group Number Range.

7.3.8.2.4. Define Number Ranges and Grouping for Business Partner

In this IMG activity, you define number ranges for Business Partners. The defined number ranges are assigned to groupings in the **Define groupings and assign number ranges** activity.

Define Number Ranges for Business Partner

IMG -> Cross-Application Components -> SAP BusinessPartner -> Business Partner -> Basic Settings -> Number Ranges and Groupings -> Define Number Ranges

Maintain Intervals: Business partner				
N..	From No.	To Number	NR Status	Ext
01	0000000001	0000099999	160	<input type="checkbox"/>
02	0000100000	0000299999	100289	<input type="checkbox"/>
03	0100000000	0199999999	0	<input checked="" type="checkbox"/>
AB	A	ZZZZZZZZZZ	0	<input checked="" type="checkbox"/>
MD	9000000000	9999999999	0	<input checked="" type="checkbox"/>

Figure 19: Maintain Business Partner Number Ranges.

For at least one number range which you are using for Customers, the *External Assignment* checkbox may not be selected as the customizing view **Define groupings and assign number ranges** (see following chapter) requires one number range as the standard range for internal number assignment and one as the standard range for external number assignment. Otherwise, the Business Partner will not be created. This means that you must define at least 2 number ranges, if you want to take over the actual Customer numbers to Business Partner numbers: one where the *External Assignment* checkbox is not selected and another one where the checkbox is selected.

See the example in section 'Overview' above for an explanation on how to adjust the Business Partner number ranges dependent on the Customer and Vendor number ranges.

Each Business Partner must be assigned to a grouping. It determines how an entry is made in the *Business Partner Number* field. If you want to take over the numbers of your Customers from your current system, you must define at least 2 groupings:

- For the 1st grouping, the *Internal Standard Grouping* radio button must be selected.
- For the 2nd grouping the *External Standard Grouping* radio button must be selected. To this grouping, you must assign the number range which you are using for your actual Customer numbers (which is assigned to the Customer account group).

Define Groupings and Assign Number Ranges

IMG -> Cross-Application Components -> SAP BusinessPartner -> Business Partner -> Basic Settings -> Number Ranges and Groupings -> Define Groupings and Assign Number Ranges

Change View "BP groupings": Overview						
Grouping	Short name	Description	Number ra...	External	Int.Std.Grpi...	Ext.Std Grp...
0001	Int.No.Assgnmnt	Internal Number Assignment	02	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>
0002	Ext.No.Assgnmnt	External Number Assignment	AB	<input checked="" type="checkbox"/>	<input type="radio"/>	<input checked="" type="radio"/>
0003	Int.No.Assgnmnt	Sync. BP with customer	03	<input checked="" type="checkbox"/>	<input type="radio"/>	<input type="radio"/>

Figure 20: Maintain Business Partner Groupings.

It is recommended to create a BP grouping for each account group. For simplicity, use the same identifiers. See also the example in chapter 7.3.8.2.8.Example of a typical business requirement

Important

CVI conversion report MDS_LOAD_COCKPIT will assign an internal Business Partner number to contact persons during conversion. The internal number range is the number range assigned to the internal standard grouping. If the assigned internal number range overlaps with the targeted Customer or Vendor number ranges, the number range for contact person must be changed to a new range outside the targeted Business Partner numbers for the Customers and Vendors. Do not share the same number range with other Business Partner groupings. The overlap of the contact person number could cause error – R1124 "Business partner with GUID xxxxx does not exist".

Grouping	Short name	Description	Number ra...	External	Int.Std.Grpi...	Ext.Std Grp...
0001	Int.No.Assgnmnt	Internal Number Assignment	02	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="checkbox"/>
0002	Ext.No.Assgnmnt	External Number Assignment	AB	<input checked="" type="checkbox"/>	<input type="radio"/>	<input type="checkbox"/>
0003	Int.No.Assgnmnt	Sync. BP with customer	03	<input checked="" type="checkbox"/>	<input type="radio"/>	<input type="checkbox"/>

Figure 21: Maintain Business Partner Groupings.

7.3.8.2.5. Define Number Range for Relationships

For internal administration of BP relationships and BP role definitions an internal number is required from the number range interval "01". Respective number range object is "BU_RELNR".

Note: The number range interval "01" does not need to be assigned to anything (e.g., to any relationship type).

Define Number Ranges (for Relationships)

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner Relationships -> Basic Settings -> Define Number Ranges

Usually number range interval "01" is shipped with SAP Standard. If it does not exist it has to be maintained, e.g.

No	From No.	To Number	NR Status	Ext
01	00000000000001	99999999999999	20	<input type="checkbox"/>

Figure 22: Define Number Ranges: BP Relationships

If the number range interval is missing error message R1 735 (R1735 - Number range interval BU_RELNR for number range object 01 incorrectly maintain.) appears.

7.3.8.2.6. Assign Business Partner Roles to Account Groups

In this IMG activity, you assign BP roles to the account group for the Customer or Vendor master record in which the Business Partner is to be created when processing the Customer or Vendor.

When you process the Customer or Vendor as part of Customer/Vendor Integration, the system creates a Business Partner with the BP roles that are assigned to the respective account group.

To ensure application scenarios are working with new Business Partner master data, it is necessary to convert the Customers/Vendors to Business Partners assigning all necessary roles like General Vendor / General Customer, FI Vendor / FI Customer, Purchase Organization, etc.

For Customers, enter at least BP Roles FLCU00 (company data) and FLCU01 (sales data). For Vendors, enter at least FLVN00 (company data) and FLVN01 (purchasing data).

You can assign more than one BP role to an account group.

Recommendation(s):

SAP delivers following "CVI"-roles for

- customers: FLCU00 (General Data + Company Code Data), FLCU01 (General Data + Sales Data)
- suppliers: FLVN00 (General Data + Company Code Data), FLVN01 (General Data + Purchasing Data)

The recommendation would be to use these standard roles. Usually it is not necessary to add roles for CVI. It is also not recommended to map BP roles to customer/vendor account groups in a 1:1 relationship. Here you find a comparison between BP roles and customer/vendor account groups:

BP Roles	Customer/Vendor Account Groups
Multiple roles can be assigned at the same time	C/V is assigned to 1 Account Group
can be <ul style="list-style-type: none"> deleted restricted (time-dependend) added excluded (Prospect and Customer at the same time) 	can be switched (e.g. Ship-to -> Sold-to)
Can be time dependent	Not time dependency
Define a "view" on BP master data (other role = other "view" on BP = different fields/entities are available)	restrict the fields that can be displayed/changed
Can control field modification	Usually control field modification (2516606 - BP CVI: Taking into account the FI-specific field modification of customer and vendor in transaction BP)
Do not control numbering	Control numbering
Control certain functions (e.g. CVI)	Control completely different functions (e.g.usage for partner functions)

Along with field modification mapping to business partner field groups in transaction BP please also check this information:

- SAP Note [2603898](#) BP_CVI: Composite SAP Note for consideration of FI field modifications (FMOD1) in transaction BP in CVI in SAP S/4HANA
- SAP Note [2848273](#) CVI_BDT: Find reason for field status (required, hidden etc.) of fields in transaction BP ("Check Visibility Report")
- Blog "Tips and Tricks on Field Modifications in Transaction BP, CVI in S/4HANA"
<https://blogs.sap.com/2020/06/17/tips-and-tricks-on-field-modifications-in-transaction-bp-cvi-in-s-4hana/>

Important:

If you are planning to use SAP Credit Management after system conversion, you can directly assign the Business Partner Role for Credit Management to the relevant Business Partners by assigning the role to the relevant account groups. As a prerequisite, you need to activate the role first. See chapter 9.3., Credit Management, for further information. Otherwise, you need to manually assign the role to each Business Partner after system conversion.

Customer to BP

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Define BP Role for Direction Customer to BP

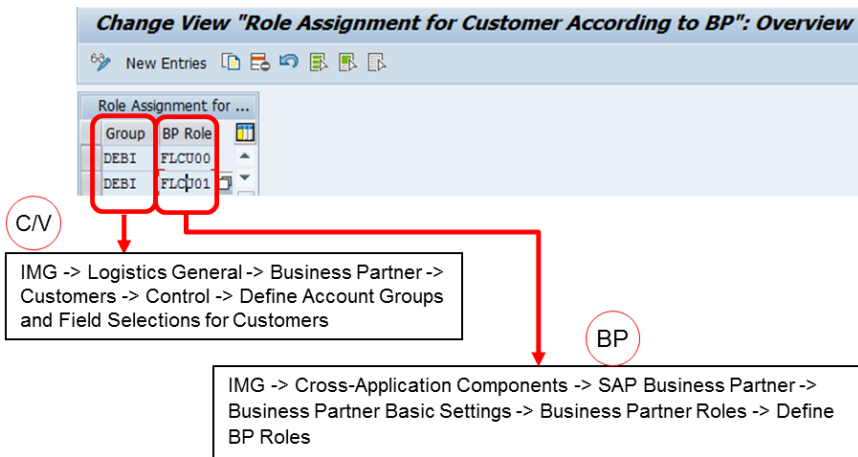


Figure 23: Maintain Role Assignment for Customer.

Vendor to BP

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Vendor Integration -> Define BP Role for Direction Vendor to BP

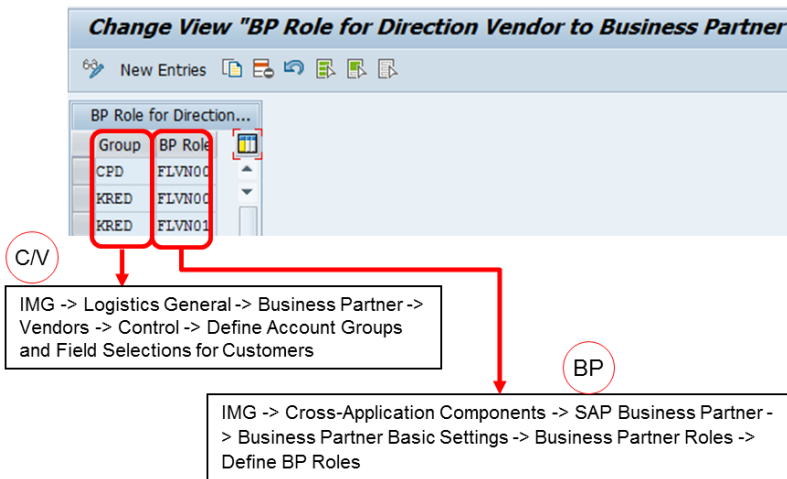


Figure 24: Maintain Role Assignment vor Vendor.

7.3.8.2.7. Number assignments (CVI-Target: Business Partner)

In this IMG activity, you assign the **groupings** for the Business Partner to the **account groups** for the **Customer/Vendor master records** to ensure that when you process Customers/Vendors as part of Customer/Vendor Integration the system also updates the Business Partner at the same time. With this assignment, you choose whether the Business Partner is to be created with a grouping with internal or external number assignment or with identical numbers.

Number Assignment (Customer to BP)

IMG: Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Keys -> Define Number Assignment for Direction Customer to BP

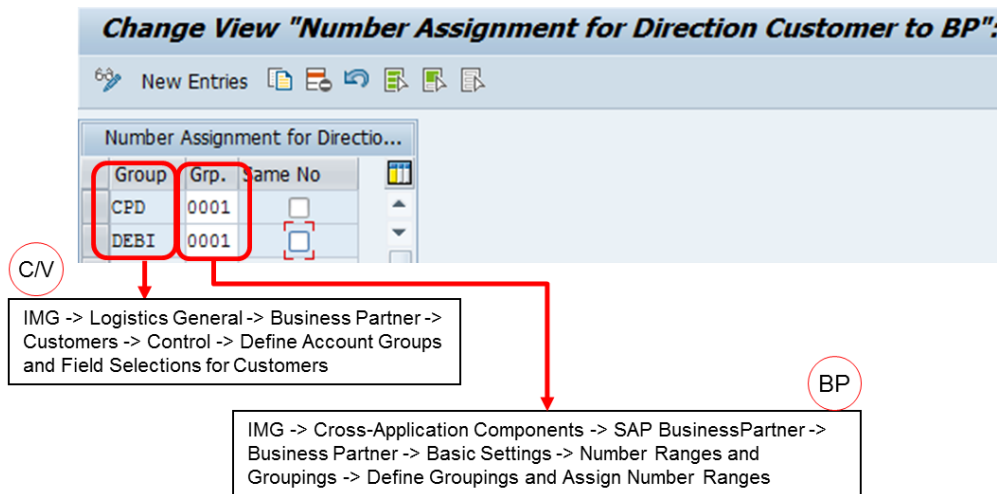


Figure 25: Number Assignment for Customer.

Number Assignment (Vendor to BP)

IMG: Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Vendor Integration -> Field Assignment for Vendor Integration -> Assign Keys -> Define Number Assignment for Direction Vendor to BP

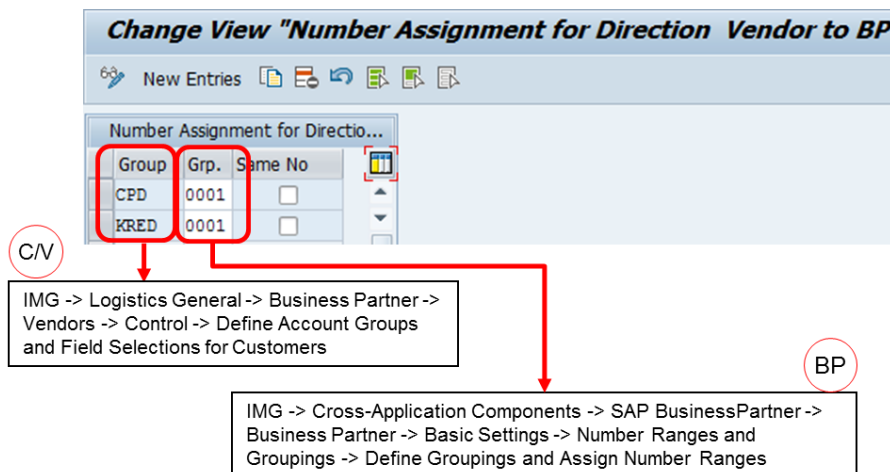


Figure 26: Number Assignment for Vendor.

7.3.8.2.8. Example of a typical business requirement

The following example describes a typical business requirement which can be solved by configuring number ranges and groupings.

Scenario

Current sold-to, ship-to, bill-to and payer Customers have different number ranges and reduced data input fields, and we want to keep the same number ranges in Business Partner

Resolution

1. Define the same number ranges in BP.
2. Create BP Grouping for each Customer account group, and assign the corresponding number range. The same name could be used as BP grouping names if they are available.
3. Map the Customer account groups to the BP groupings between Customer and BP
4. For taking into account the field modifications of customer and vendor in transaction BP please refer to [SAP Note 2516606 - BP_CVI: Taking into account the FI-specific field modification of customer and vendor in transaction BP](#)

Please consider also note [2603898 - BP_CVI: Composite SAP Note for consideration of FI field modifications \(FMOD1\) in transaction BP in CVI in S/4HANA](#) in that context providing a collection of latest explanations, enhancements and corrections regarding this topic.

5. The partner function display in BP screen will be controlled by the existing partner function determination.

Along with field modification mapping to business partner field groups in transaction BP please also check this information:

- SAP Note [2603898 BP_CVI: Composite SAP Note for consideration of FI field modifications \(FMOD1\) in transaction BP in CVI in SAP S/4HANA](#)
- SAP Note [2848273 CVI_BDT: Find reason for field status \(required, hidden etc.\) of fields in transaction BP \("Check Visibility Report"\)](#)
- Blog "Tips and Tricks on Field Modifications in Transaction BP, CVI in S/4HANA"
<https://blogs.sap.com/2020/06/17/tips-and-tricks-on-field-modifications-in-transaction-bp-cvi-in-s-4hana/>

7.3.8.3. Customer Value Mapping (Contact Person)

Attribute value mapping must be maintained and must be equal for every existing Customer instance.

7.3.8.3.1. Activate Assignment of Contact Persons

In this IMG activity, you activate the assignment of contact persons.

You activate the assignment if both of the following statements are true:

- Contact person attributes are to be processed in the Business Partner or in the Customer master record.
- You want to assign attributes to ensure that the contact person is synchronized as part of Customer integration.

See also the information regarding contact person number ranges and grouping in chapter 7.3.8.2.4 Define Number Ranges and Grouping for Business Partner.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Contact Person -> Activate Assignment of Contact Persons

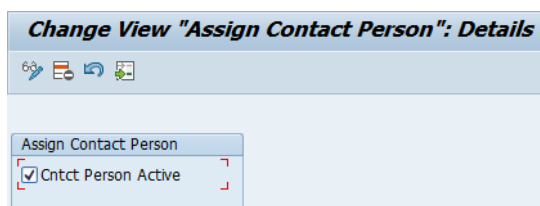


Figure 27: Activate Assignment of Contact Persons.

7.3.8.3.2. Assign Department Numbers for Contact Person

In this IMG activity, you assign the department numbers for the Business Partner to the department numbers for the contact person in the Customer master record.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Contact Person -> Assign Department Numbers for Contact Person

The values in column **Dept (CVI)** are the values used in Customer master data for contact persons. The values in column **Department (BP)** are used in Business Partner master data for contact persons. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.

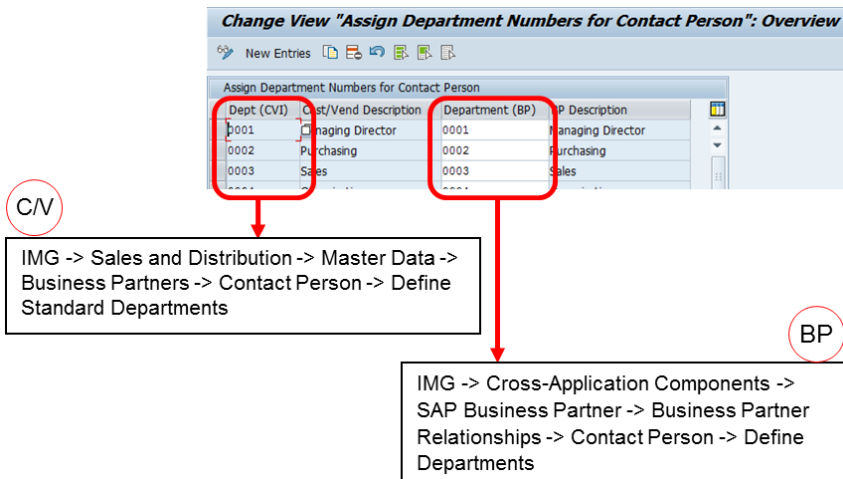


Figure 28: Assign Department Numbers for Contact Person.

7.3.8.3.3. Assign Functions of Contact Person

In this IMG activity, you assign the functions for the Business Partner to the contact person functions in the Customer master record.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Contact Person -> Assign Functions of Contact Person

The values in column **Function (CVI)** are the values used in Customer master data for contact persons. The values in column **Function (BP)** are used in Business Partner master data for contact persons. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.

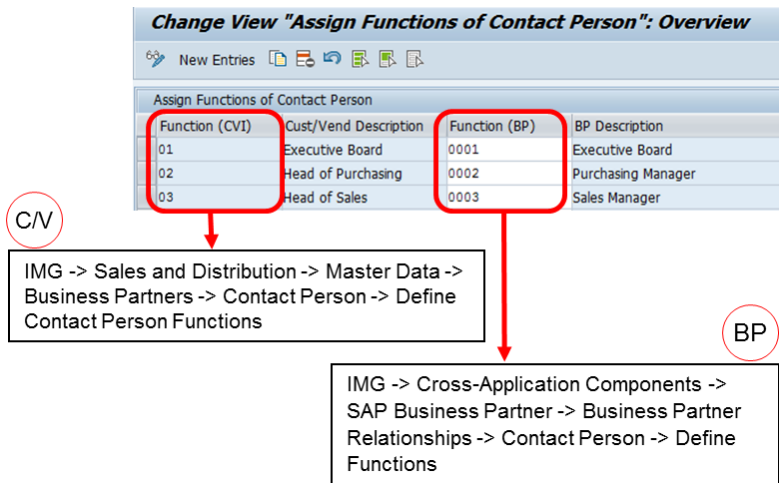


Figure 29: Assign Functions of Contact Person.

7.3.8.3.4. Assign Authority of Contact Person

In this IMG activity, you assign the partner's authority for the Business Partner to the partner's authority for the contact person in the Customer master record.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Contact Person -> Assign Authority of Contact Person

The values in column **PoAtt (CVI)** are the values used in Customer master data for contact persons. The values in column **Pwr of Att. (BP)** are used in Business Partner master data for contact persons. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.

Change View "Assign Authority of Contact Person": Overview

PoAtt (CVI)	Cust/Vend Description	Pwr of Att.(BP)	BP Description
1	General authority	1	General Authority
2	No authority	2	No Authority
3	Authorized buyer	3	Authorized Buyer
A	Sole decision maker	4	Sole Decision Maker
G	General authority	1	General Authority

C/V → IMG -> Sales and Distribution -> Master Data -> Business Partners -> Contact Person -> Define Authority

BP → IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner Relationships -> Contact Person -> Define Authority

Figure 30. Assign Authority of Contact Person.

7.3.8.3.5. Assign VIP indicator for Contact Person

In this IMG activity, you assign the VIP Indicator for the Business Partner to the VIP Indicator for the contact person in the Customer master record.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Contact Person -> Assign VIP Indicator for Contact Person

The values in column **VIP (CVI)** are the values used in Customer master data for contact persons. The values in column **VIP (BP)** are used in Business Partner master data for contact persons. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.

Change View "Assign VIP Indicator for Contact Person": Overview

VIP (CVI)	Cust/Vend Description	VIP (BP)	BP Description
1	Management	1	Managing Director
2	Test Customer	A	Test Customer

C/V → IMG -> Sales and Distribution -> Master Data -> Business Partners -> Contact Person -> Define VIP Indicator

BP → IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner Relationships -> Contact Person -> Define VIP Entries

Figure 31: Assign VIP Indicator for Contact Person.

7.3.8.4. Customer Value Mapping

Attribute value mapping must be maintained and must be equal for every existing Customer instance.

7.3.8.4.1. Assign Marital Statuses

In this IMG activity, you assign the marital statuses for the Business Partner to the marital statuses for the contact person in the Customer master record.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Assign Marital Statuses

The values in column **Marital Status (CVI)** are the values used for Customer master data. The values in column **Mar. Sts (BP)** are used in Business Partner master data. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.

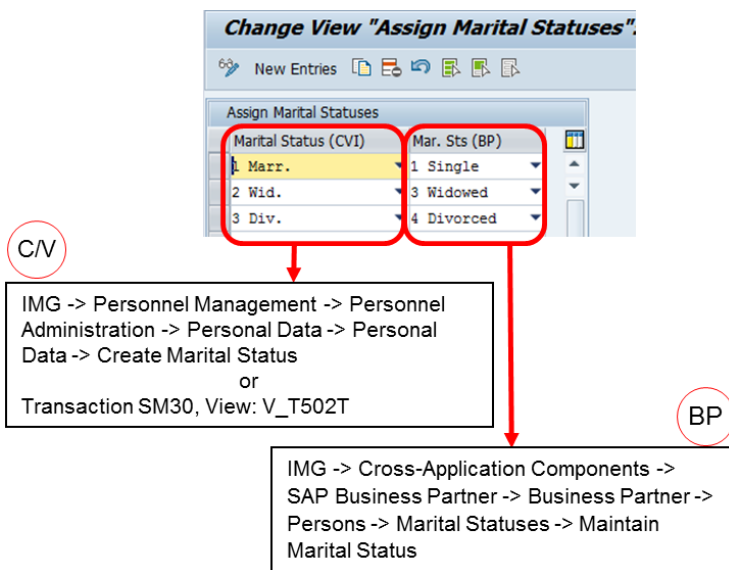


Figure 32: Assign Marital Statuses.

7.3.8.4.2. Assign Legal Form to Legal Status

In this IMG activity, you assign the legal forms for the Business Partner to the legal statuses for the Customer/Vendor master record.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Assign Legal Form to Legal Status

The values in column **Legal Sts (CVI)** are the values used for Customer/Vendor master data. The values in column **LForm (BP)** are used in Business Partner master data. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.



Change View "Assign Legal Form to Legal Status": Overview

Legal Sts (CVI)	Cust/Vend Description	LForm (BP)	BP Description
01	Legal status 01	01	Corporation
02	P.L.C.	02	P.L.C.
03	P.Lim.by Shares	03	Commercial Partnership Limited by Share

CVI (circled) points to the first column. **BP** (circled) points to the third column.

IMG -> Sales and Distribution -> Master Data -> Business Partners -> Customers -> Marketing -> Define Legal Statuses

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner -> Organizations -> Maintain Legal Forms

Figure 33: Assign Legal Form to Legal Status.

7.3.8.4.3. Assign Payment Cards

In this IMG activity, you assign the card types of payment cards for the Customer master records to the payment card types for the Business Partner.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Assign Payment Cards

The values in column **Card Type (CVI)** are the values used for Customer master data. The values in column **Card Type (BP)** are used in Business Partner master data. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer master to values for Business Partner and vice versa.

Change View "Assign Payment Card Type": Overview

Card Type (BP)	BP Description	Card Type (CVI)	Cust/Vend Description
0002	American Express	AMEX	American Express
MC01	Master Card	MC	Master-/Euro Card
Z005	Visa	VISA	Visa Card

BP (circled) points to the first column. **CVI** (circled) points to the third column.

IMG -> Cross-Application Components -> Payment Cards -> Basic Settings -> Maintain Payment Card Type

IMG -> Sales and Distribution -> Billing -> Payment Cards -> Maintain Card Types

Figure 34: Assign Payment Card Type.

7.3.8.4.4. Assign Industries

In this IMG activity, you assign industry keys for the Customer and Vendor master records to industries for the Business Partner (and vice versa), to ensure that both industry fields are updated correctly in the context of Customer/Vendor Integration.

In Business Partner processing you can store several industries from different industry systems in Business Partners belonging to the category *Organization*. You can name one industry as the standard industry for each industry system.

You can store just one industry in the Customer and Vendor master records.

In this IMG activity, you determine how the corresponding industry in the Customer/Vendor master record is derived from the standard industry for the standard industry system when you process a Business Partner. You also determine from which industry in the Customer/Vendor master record the corresponding industry is created for the Business Partner.

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Assign Industries

Select on the right the Industry System which is marked as *Standard System*.

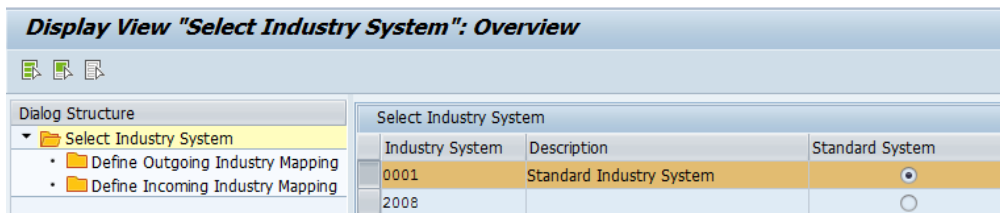


Figure 35: Select Industry System.

Select the options on the left to maintain the industry values for direction Customer to BP and BP to Customer.

Industry mapping for direction Customer/Vendor to Business Partner

Select on the left *Define Incoming Industry Mapping* (double-click) and maintain the corresponding values.

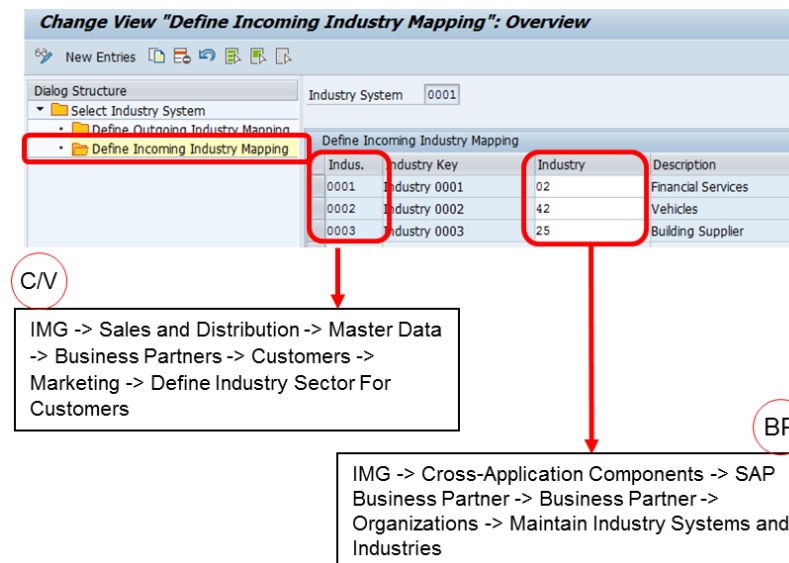


Figure 36: Define Incoming Industry Mapping.

The values in column **Indus.** are the values used for Customer/Vendor master data. The values in column **Industry** are used in Business Partner master data. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer/Vendor master to values for Business Partner and vice versa.

Industry mapping for direction Business Partner to Customer/Vendor

Select on the left *Define Outgoing Industry Mapping* (double-click) and maintain the corresponding values.

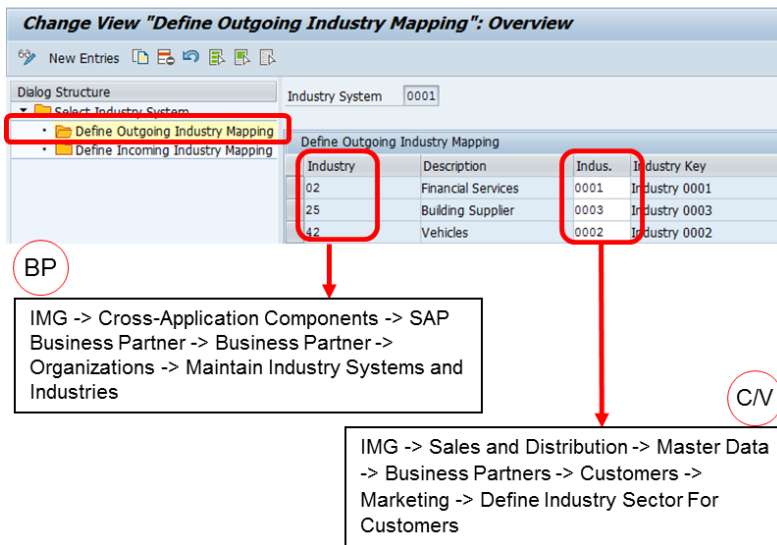


Figure 37: Define Outgoing Industry Mapping.

The values in column **Indus.** are the values used for Customer/Vendor master data. The values in column **Industry** are used in Business Partner master data. Ensure that you have maintained the corresponding values in both areas and that you assigned all values for Customer/Vendor master to values for Business Partner and vice versa.

Tool Support

Using report **FSBP_IND_SECTOR_MAPPING_CHECK** (Check and Set Up Industry Mapping), you can generate Customizing entries for industry assignment in the context of Customer/Vendor Integration, and evaluate existing or missing assignment entries.

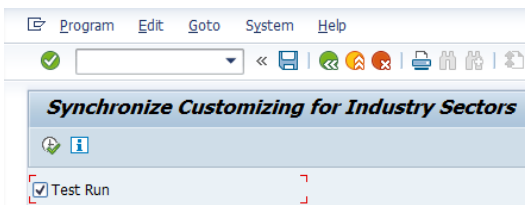


Figure 38: Synchronize Customizing for Industry Sectors.

If the number of Industry values are low, this report is not required, but useful to get an overview of missing entries.

7.3.8.5. Vendor Value Mapping

7.3.8.5.1. Contact Person

There are no specific settings for Vendor contact person mapping. If the Vendor contact person is used in EHP versions below 5, apply SAP Note [2383051 – Development of vendor contact person mapping to Business Partner](#).

7.3.8.5.2. Assign Industries

Industry value mapping must be maintained and must be equal for every existing Vendor instance.

The Vendor specific transaction in IMG leads to the same configuration as already described in the previous chapter for Customer configuration (Customer and Vendor share the same IMG table, see chapter 7.3.8.4.4 Assign Industries).

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Vendor Integration -> Field Assignment for Vendor Integration -> Assign Attributes -> Assign Industries

Ensure, that the configured values are also valid for Vendors.

7.3.8.6. Business Add-Ins (BADIs) for development of own mappings

You can implement Customer-specific mappings like Form of Address from Customer/Vendor to Business Partner using the available BADIs. Here it would also be possible to create a Business Partner in a different category, for example, person instead of organization. In this case, you must deactivate the enhancement CVI_MAP_TITLE_DIRECT and activate the enhancement implementation CVI_MAP_BP_CATEGORY in the IMG. The implementation is already available. If enhancement CVI_MAP_BP_CATEGORY is activated, the Business Partner Category will be derived based on the title of the customer or the vendor and based on the settings in customizing table TSAD3 (IMG -> Cross-Application Components -> SAP Business Partner -> Basic Settings -> Forms of Address -> Maintain Forms of Address).

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Business Add-Ins (BADIs)

The table below shows the existing BADI's and the names of the BAdI definitions.

IMG tree node	BAdI Definition
BAdI: Data Assignment BP <-> Customer/Vendor/Contact Person	CVI_CUSTOM_MAPPER
BAdI: Data Assignment of Bank Details BP -> Customer/Vendor	CVI_MAP_BANKDETAILS
BAdI: Data Assignment of Payment Cards BP <-> Customer	CVI_MAP_CREDIT_CARDS
BAdI: Data Assignment of Form of Address from Customer/Vendor to BP	CVI_MAP_TITLE
BAdI: Defaults for Creating Data from BP to Customer/Vendor	CVI_DEFAULT_VALUES

7.3.8.7. Check Business Partner Address Types

In this activity, you check the existing address types that you need for certain business transactions. The address type and the standard address type are relevant for address determination. The address type **XXDEFAULT** is supplied by SAP. Ensure that this entry exists. If not, create a new entry with name XXDEFAULT.

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner -> Basic Settings -> Address Determination -> Define Address Types

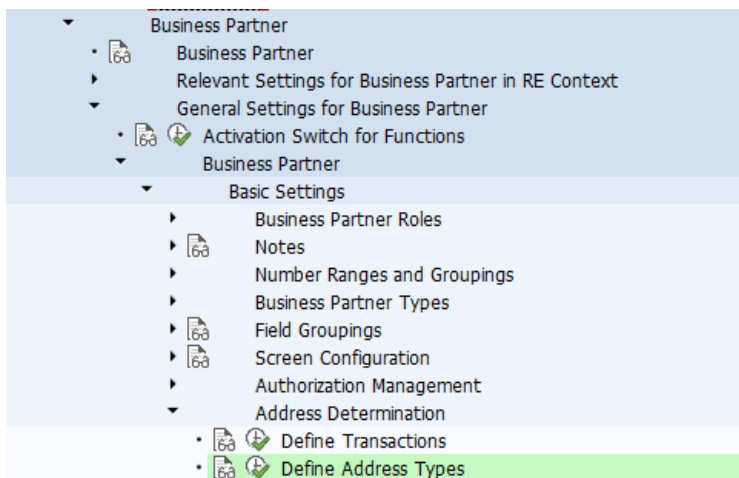


Figure 39: Check Business Partner Address Types.

7.3.9. Preparation for linking of Customer and Vendor to a single Business Partner

Currently, even if there is a Customer and a Vendor which refer the same business entity, they are linked to separate Business Partners. Implement the following SAP Note before initial load. After implementation of the SAP Note, the Customer and Vendor will be linked to one Business Partner if they are the same business entity.

- SAP Note [2363892 - Linking Customer and Vendor to a single Business Partner during initial load before upgrade to S/4](#)
- SAP Note [2968536 - Harmonize the behavior for Linking Customer and Vendor to a single Business Partner](#)

As a prerequisite, the following must be given:

The Customer and Vendor must not already be linked to separate Business Partners (that is, either Customer or Vendor should have a Business Partner linked to it, or neither should be linked to a Business Partner, but not both). This solution is applicable only when there is already a link table entry for either Customer or Vendor.

During the process of creating a Business Partner for a Customer or Vendor, it checks whether a Business Partner already exists for that business entity. If yes, then it links to the same Business Partner if the prerequisites above are met.

Technically, it's a BAdI implementation (CVI_MAP_LEGAL_ENTITY) for BAdI CVI_CUSTOM_MAPPER. The delivered implementation is just a POC which you can use as template for defining your own merge criteria.

Check also SAP Note [954816 - BP_CVI: Transactions for creating/linking BPs](#). This note provides information for the transactions for manual assignment of Customer/Vendor and Business Partner. The note explains how you can solve the problem, if synchronization fails with message 'Business Partner xxxx already exists' due to a Customer and Vendor with same number representing the same legal entity.

Transactions:

- FLBPD1 - Create BP from Customer
- FLBPD2 - Link BP to Customer
- FLBPC1 - Create BP from Vendor
- FLBPC2 - Link BP to Vendor

Please also check this blog:

SAP S/4HANA Business Partner Conversion – Merge Customer and Vendor into single Business Partner
<https://blogs.sap.com/2020/08/31/sap-s-4hana-business-partner-conversion-merge-customer-and-vendor-into-single-business-partner/>

7.3.10. Preparation for converting HCM Employees to Business Partners

To achieve that the Business Partner is a person and not an organization, there are two possibilities:

1. If the title is maintained correctly at employee vendor, you can use standard BAdI Implementation CVI_MAP_BP_CATEGORY of BAdI CVI_MAP_TITLE.
2. If the title is not maintained correctly you need to create your own implementation of BADI CVI_MAP_TITLE with your own criteria. Please know there is no multiple usage allowed for this BADI. Therefore, you must ensure that any existing coding is executed in your own implementation as well. Standard BAdI Implementation CVI_MAP_BP_CATEGORY needs to be deactivated. Enclosed you will find example coding. This example is based on separate account group (ZEMP) for employee vendors.

```
data: lv_ktokk type ktokk.
```

```

select single ktokk into lv_ktokk
  from lfal
  where lifnr = i_vendor_id.
if sy-subrc = 0 and lv_ktokk = 'ZEMP'.
  c_partner_category = bp_as_person.
endif.

```

In case you want to influence the Business Partner Number you have to implement it in BADI CVI_CUSTOM_MAPPER.

Example for setting the BP Number for Employees like EN concatenated with the employee personal number (LFB1-PERNR) and group BPAB, prerequisite is that BP has external numbering in number range.

MAP_VENDOR_TO_BP

```

data: lt_company type VMDS_EI_COMPANY_T,
      ls_company type VMDS_EI_COMPANY.

if I_VENDOR-CENTRAL_DATA-CENTRAL-DATA-KTOKK = 'ZEMP'.
  lt_company = I_VENDOR-COMPANY_DATA-COMPANY.
  loop at lt_company into ls_company where data-
pernr ne space.      "What if more than one Company Code?
    concatenate 'EN' ls_company-data-pernr into C_PARTNER-HEADER-
OBJECT_INSTANCE-BPARTNER. "What BP already exists?
    C_PARTNER-CENTRAL_DATA-COMMON-DATA-BP_CONTROL-GROUPING = 'BPAB'.
    exit.
  endloop.
endif.

```

For more information, please check these SAP Notes

- [2539457 CVI & employee vendors in wrong BP category](#)
- [2542175 CVI and reuse of existing employee business partner](#)

Additional SAP Notes to check:

- [2880559 Enhancing BAdI interface CVI_MAP_TITLE~IF_EX_CVI_MAP_TITLE with new importing parameters.](#)
- [2000099 CVI fails with error R1231: "Form of address &1 not designated for organizations"](#)

Please check for further important information in section 9.2 Employee Replication.

7.4. Synchronization

Master data synchronization replicates master data objects in an SAP system that are similar from a business, but not from a technical, point of view, and allows you to integrate different SAP applications seamlessly in your business processes.

There are two synchronization scenarios in master data synchronization:

- **Synchronization from the master data maintenance**
When you create and save new master data, the system carries out initial synchronization with the master data object types for which synchronization processes have been activated in the SAP system, and creates the corresponding master data.
If you change existing master data that has already been synchronized, the system locks this master data and all the corresponding master data of the source object type and the target object type during maintenance. When you save the changed master data, the system generally carries out a delta synchronization with the master data object types for which synchronization processes have been

activated in the SAP system and changes the corresponding master data. In some cases, changing existing master data can lead to a delta synchronization having to be carried out.

- Synchronization using the synchronization cockpit
You use the synchronization cockpit to prepare, perform and check the initial synchronization of master data objects in an SAP system.

As prerequisite you have checked and adapted the customizing and created the Customer/Vendor Integration (CVI) and contact person mapping as described in the previous chapters.

The following chapters describe the initial synchronization of Customer and Vendor master data using the synchronization cockpit.

For more information on master data synchronization see [Master Data Synchronization](#) in SAP Help.

7.4.1. Synchronization Cockpit

Using the synchronization cockpit, you can carry out all the steps for master data synchronization in an SAP system, especially:

- Selection, [preparation](#) and starting of synchronization runs.
- [Monitoring](#) of synchronization runs
- [Postprocessing](#) of synchronization errors

To start the Synchronization Cockpit, you can use the following IMG-path or call transaction **MDS_LOAD_COCKPIT**.

IMG -> Cross-Application Components -> Master Data Synchronization -> Synchronization of Mass Data -> Execute Synchronization Cockpit

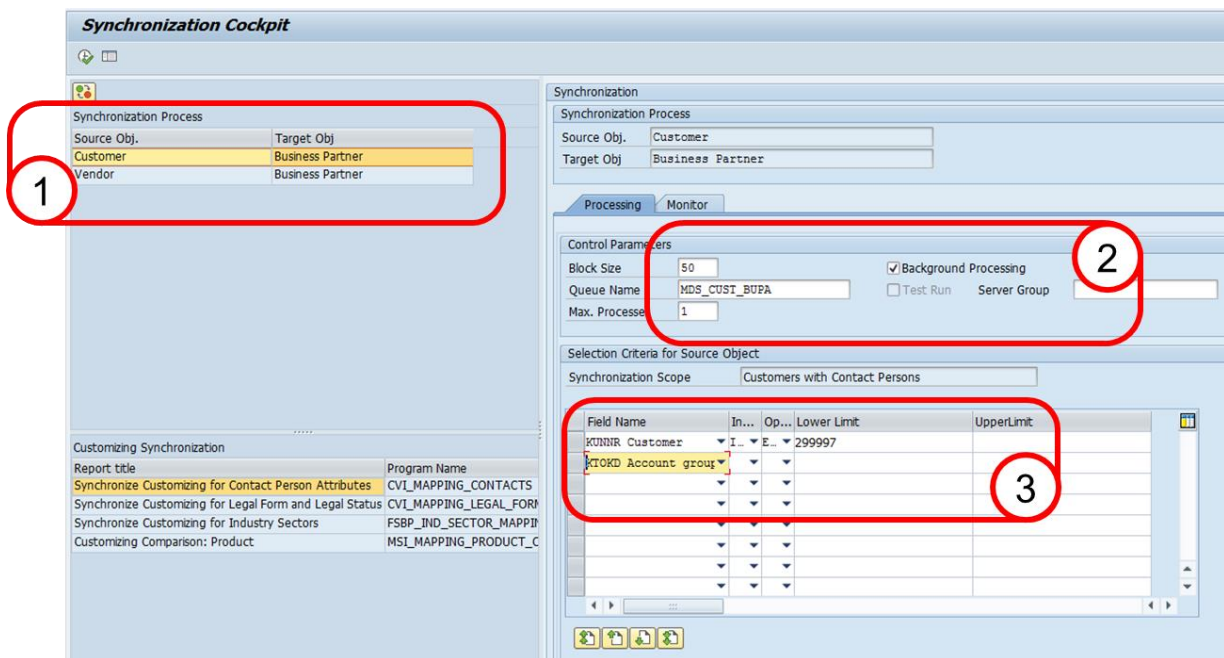



Figure 40: Synchronization Cockpit - Processing.

The screen of MDS_LOAD_COCKPIT is divided in several areas.

1. Synchronization Process

- This subscreen shows the synchronization processes which are available (active). This are the options configured in chapter 7.3.8.1.4, Activate Synchronization Options. You can use the toggle button  to switch between the view of activated processes and the view of all synchronization processes available (activated and not activated).

- Select the desired synchronization Process by double-clicking (Customer -> Business Partner or Vendor -> Business Partner)

2. Control Parameters

- Check the queue settings (block size, queue name, max.number of processes). Note, that you need to enter values in this section only if you want to change the default values.
- Customer Example for block size and number of processes: Synchronization (after master data cleansing and solving configuration issues) with 14 Mio. Customer. A block size of 50.000 in combination with 60 dialog tasks for CVI has proved to be a good size in order to optimize the usage of available processes.
- **IMPORTANT:** Queue processing (Checkbox *Background Processing* is activated) triggers dialog tasks and not batch jobs.

3. Selection Criteria for Source Object

- Input parameters can be any combination of account group, Customer/Vendor number and Central deletion flag.
- It is possible to input the selection criteria for source object using an excel file. The format of the excel file can be downloaded by clicking the Download Template button available under selection criteria for source object on the screen.
- To facilitate error analysis, run small batch or even single Customer/Vendor initially, e.g., select 10 to 50 Customers or Vendors.

The following SAP notes needs to be applied

- [2907519](#) – Master Data Synchronization Tool Revamp
- [2954330](#) – Performance Improvement of Monitor Tab in MDS_LOAD_COCKPIT
- [2958046](#) – CVI : MDS_LOAD_COCKPIT does not display Logs of a specific date

After providing your input parameters press F8 to start synchronization.

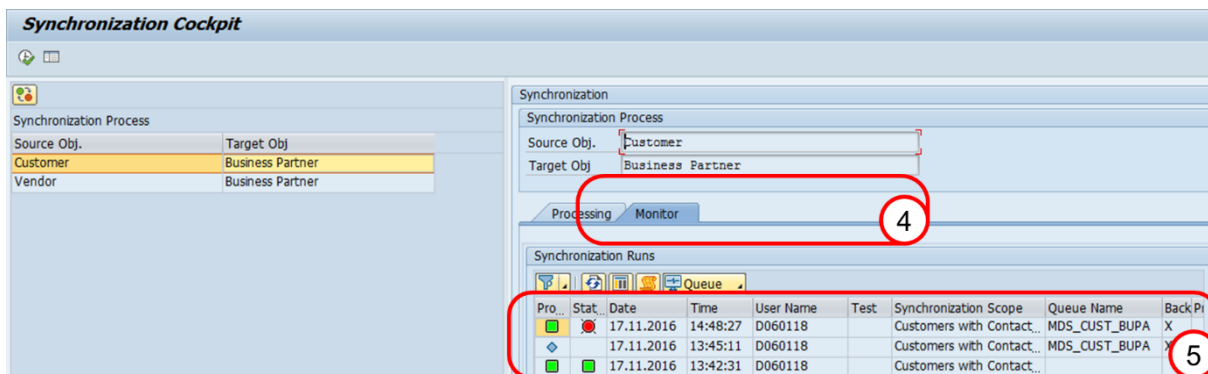


Figure 41: Synchronization Cockpit - Monitor.

4. Monitor

- To view the results, select the monitor tab. It is possible to select and display the logs based on username and date.

5. Status information per Synchronization Run

- Prior to Business Partner creation, MDS cockpit checks the quality of the master data and applies the configured CVI value mappings. For records with quality issues or missing customizing no Business Partner is created until the issues are fixed. Status of run is marked with red light.

7.4.1.1. Prerequisites

In order to avoid error messages from the CVI synchronization, set up CVI and BP customizing properly.

If you have an CRM system, check section 9.4 CRM.

For suppressing address checks in CpD related account groups (e.g., for one-time customers) check IMG-node "Activate Field Check Suppression". It can be accessed from the CVI cockpit item "Suppress Checks" from the "Preparation" phase tab or directly in the IMG:

IMG -> Cross-Application Components -> General Application Functions -> Master Data Synchronization -> Customer/Vendor Integration -> Activate Field Check Suppression

In context of CpD be aware of these notes:

- [2955243 - CPD Account Group Enhancements: Domain and Activate Field Check Suppression screen changes](#)
- [2949716 - CPD Account Group Enhancements in Master Data Consistency Check Report](#)
- [2955121 - CPD Account Group Enhancements MDS_LOAD_COCKPIT BADI \(BUPA SKIP_ADDR_CHK\) Implementation](#)

7.4.1.2. Suppress certain Checks

In earlier versions note [2344034 - SAP S/4HANA Automation for Master Data Migration](#) has implemented a BADI implementation to suppress certain country specific checks. With this procedure table T005 has been deleted (entries were saved). To restore the entries, it was required to press the [Complete]-button in CVI_UPGRADE_CHECK_RESOLVE.

Both features have been removed from current version of this note, even CVI_UPGRADE_CHECK_RESOLVE isn't to be used any more, please use transaction BP_CVI_IMG_CHK "CVI Customizing – Check Report" (section 7.3.2.2 CVI Customizing – Check)

Successor of this solution is available by a new IMG-node:

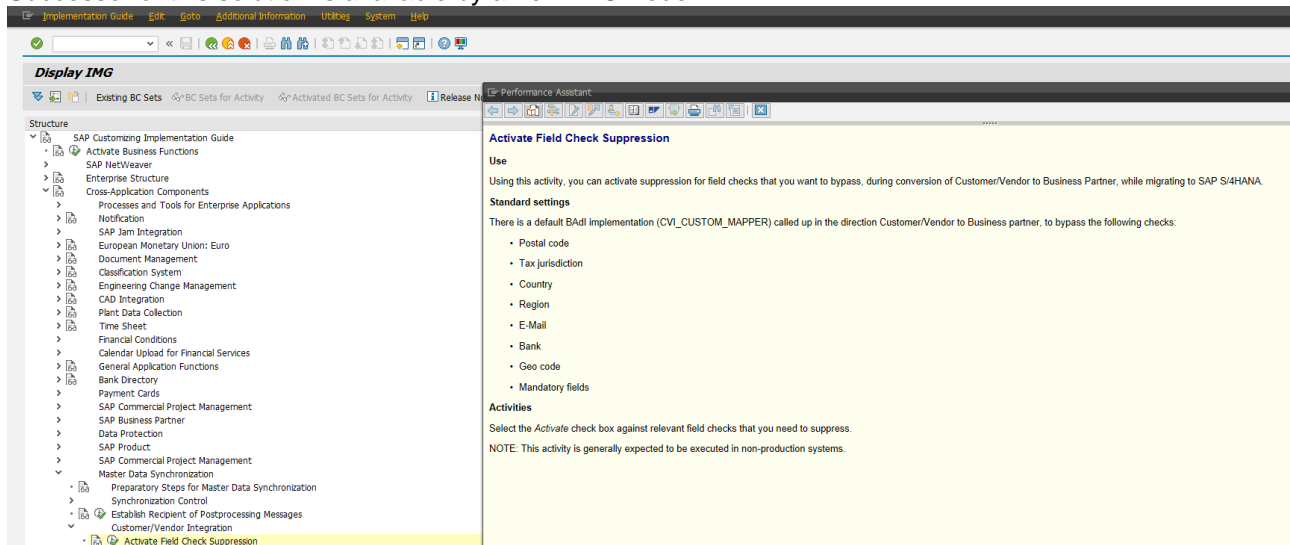


Figure 42: IMG-node "Activate Field Check Suppression"

This feature has been delivered with ECC 6 EHP 8 SP 13. For lower releases and SP stacks it can be made available by installing note [2780288 - S/4 HANA Migration: The BP checks can be suppressed in the direction Customer/Vendor->BP during synchronization from MDS_LOAD_COCKPIT.](#)

It can be accessed from the CVI cockpit item "Suppress Checks" from the "Preparation" phase tab or directly in the IMG:

IMG -> Cross-Application Components -> General Application Functions -> Master Data Synchronization -> Customer/Vendor Integration -> Activate Field Check Suppression

Functionality for suppressing address checks in CpD related account groups (e.g., for one-time customers) has been added, please also check SAP Notes mentioned in above section 7.4.1.1 Prerequisites.

7.4.1.3. Enable Test Run Capability

On the Processing tab of Synchronization Cockpit, you find the checkbox 'Test Run' which is greyed in standard. You can enable the test run functionality by implementing SAP Note [2874184 - Information on test run behaviour..](#)

When the test run mode is set from Customer to Business partner or from Vendor to Business partner, transaction MDS_PPO2 will show the logs, but the Business Partner will not be committed to databases.

Attention

Running in test run mode will lead to number range being exhausted because once the internal number is generated it cannot be reverted again and cannot be used again.

Typically, if you run Customer/Vendor to Business Partner for millions of records in test run mode, this may lead to exhausting of number range of objects like Business Partner, Address, Business Partner relationship and possibly some other application number range objects too.

So be cautious when executing test run and be aware of the Customer/Vendor range that you will be providing in the MDS_LOAD_COCKPIT transaction to migrate to Business Partner (preferably run MDS_LOAD_COCKPIT in test run mode for small Customer/Vendor ranges only).

7.4.1.4. Example: Sequence of Runs of MDS_LOAD_COCKPIT

Environment:

Objects to synchronize

- Customers
- Vendors
- Contact Person assigned to customer
- Contact Person assigned to vendor

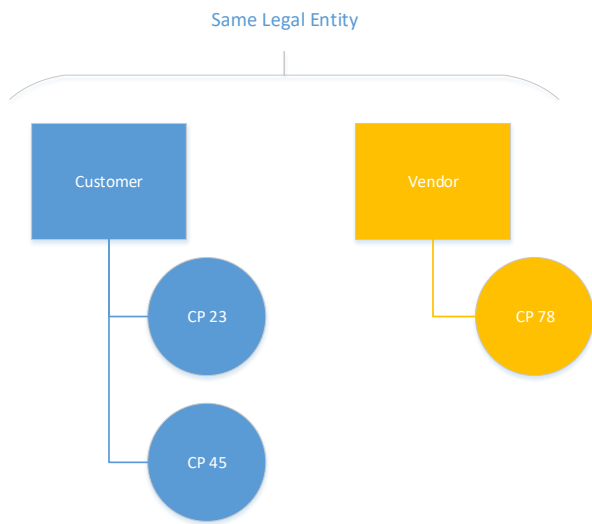
System landscape

- ERP (ECC to be converted to S/4HANA)
Customer master created here, to be replicated to CRM
- CRM
Contact Person created here, to be replicated to ERP (ECC -> S/4HANA)

Target after CVI-sync

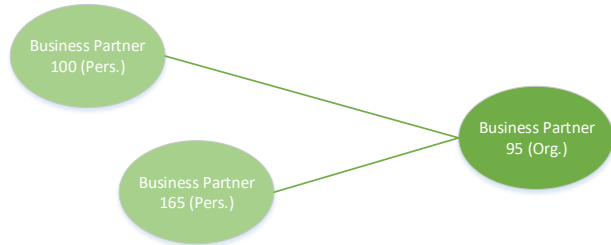
- Customers linked to BP
- Vendors linked to BP
- Customer and Vendor are merged to one BP, if same legal entity
- Contact Person (customer) linked to BP
- Contact Person (vendor) linked to BP
- At merged customer and vendor contact person of customer available as Contact Person at vendor (and vice versa)
(as this would be standard behavior when a BP (contact person) will be linked to a BP (organization) that is linked to a customer and a vendor)
- As only BP with customer role are replicated to CRM all the Contact Person coming from merged vendor have to be replicated to CRM

Situation before CVI
ECC

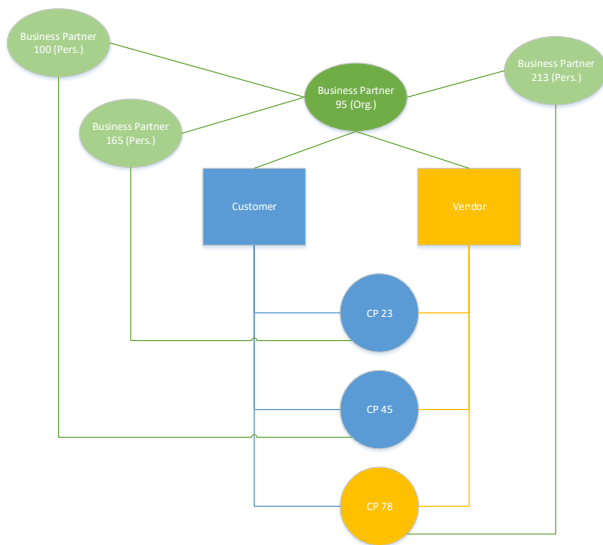


CRM

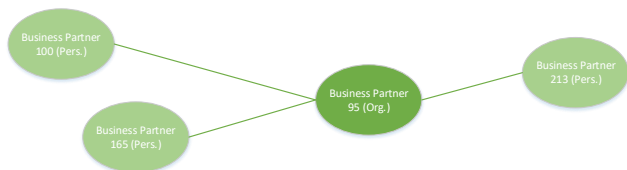
Business Partners for
 • Customer
 • Contact Person of customer



Target Situation after CVI Synchronization
ECC



CRM

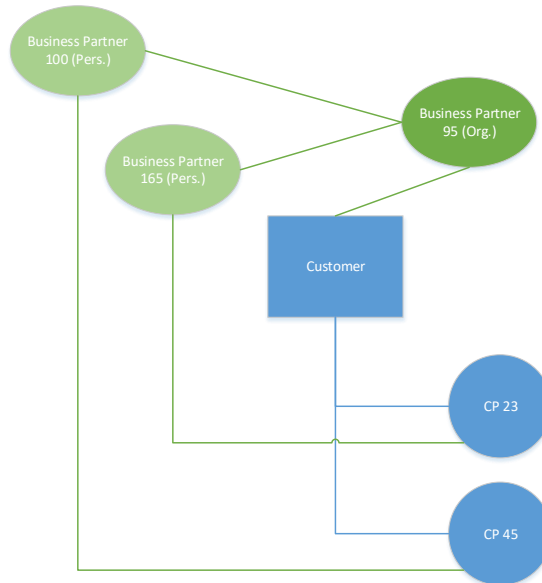


Steps to Achieve Target Situation

1. Switch off CRM-Replication (recommendation)

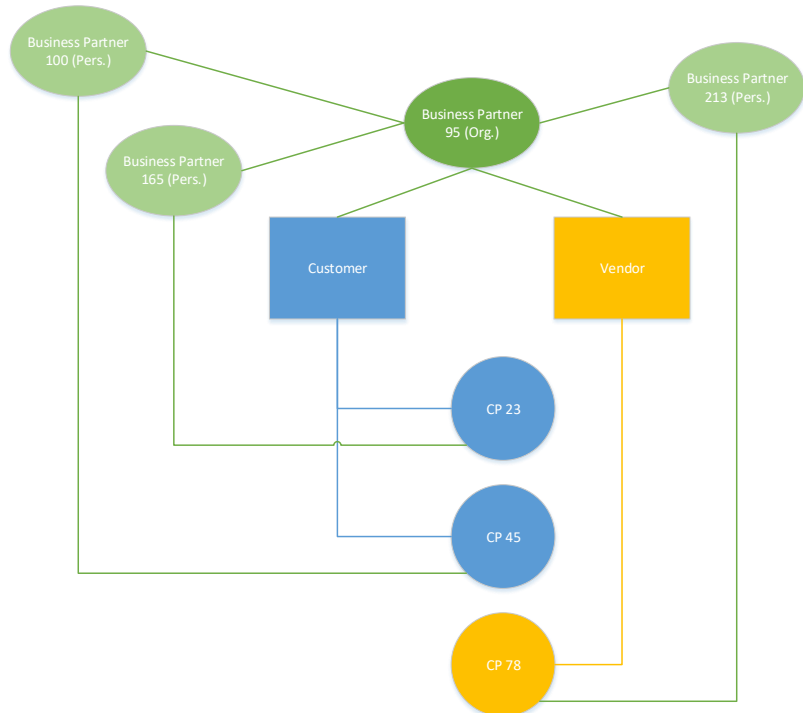
2. MDS_LOAD_COCKPIT:
Customer -> BP
Convert all customers to BP.
All assigned Contact Person
will be converted in BP as well.

ECC:



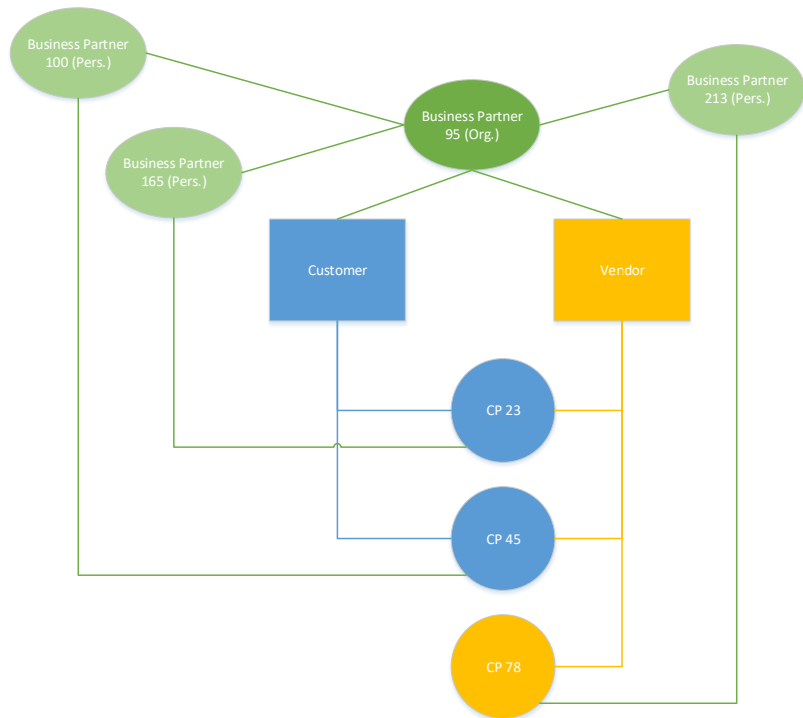
3. MDS_LOAD_COCKPIT: Vendor
-> BP
Convert all vendors to BP. All
assigned Contact Person will
be converted in BP as well.
In this step same vendor of
legal entity as customer will be
assigned to existing BP from
step 2

ECC:



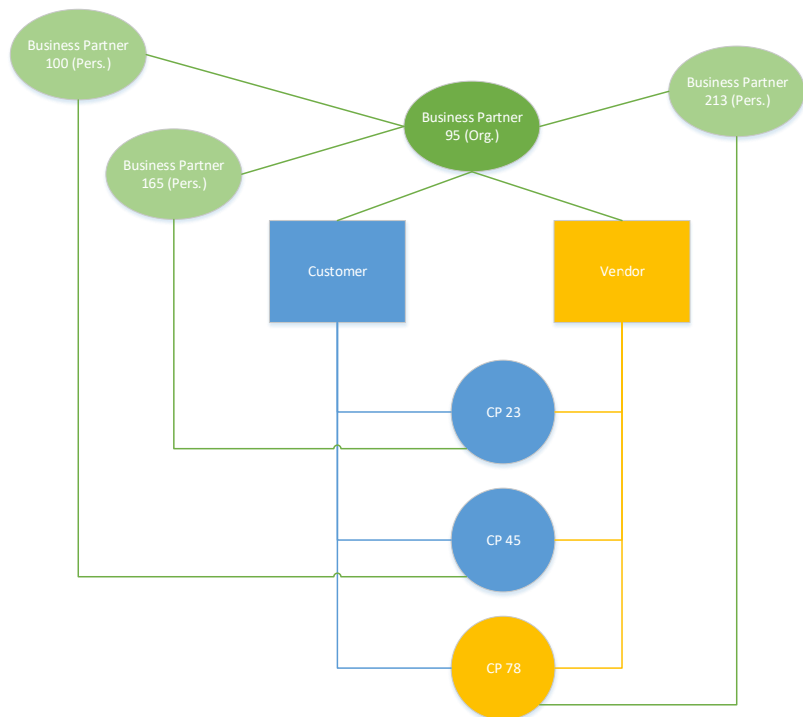
4. MDS_LOAD_COCKPIT: BP -> Vendor
 Select only BP where customer and vendor are merged into.
 This step is to link the previous customer contact Person to vendor.

ECC:



5. MDS_LOAD_COCKPIT: BP -> Customer
 Select only BP where customer and vendor are merged into.
 This step is to link the previous vendor contact Person to customer.

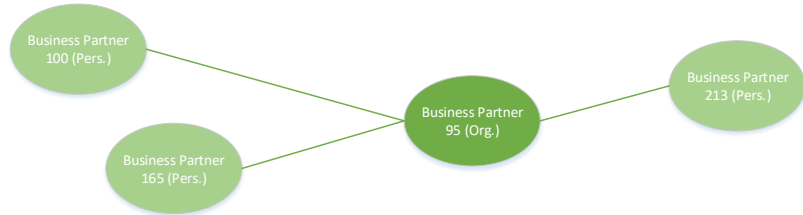
ECC:



6. Switch on CRM-Replication

- 7. BUPA_SEND: replicate all Contact Person with their relationships from BP with merged customer and vendor

CRM:



7.4.2. Post Processing Office (PPO)

After having executed the above steps, it should be checked if post-processing orders have been created, which should be processed. Therefore, use transaction MDS_PPO2 to get the error messages which occurred during the master data synchronization run.

Errors which happen during synchronization are logged and can be displayed and resolved using the Postprocessing Office PPO. In MDS Cockpit select the Monitor tab.

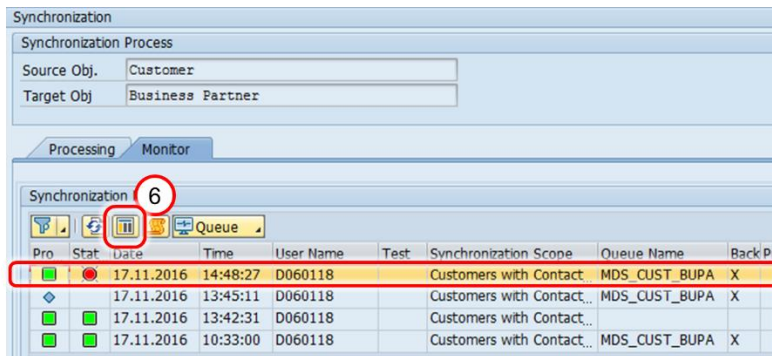


Figure 43: Resolve PPO Error.

To resolve the error, select the line with error status and click the button *Call PPO*. This will navigate to transaction **MDS_PPO2** which displays the corresponding error details.

Alternatively, you can directly call transaction MDS_PPO2 as well as transaction /N/SAPPO/PPO3 (with selection criteria 'Software Component' = 'AP-MD').

On the Overview screen, double-click the Business Partner or Customer/Vendor number to view the corresponding error messages.

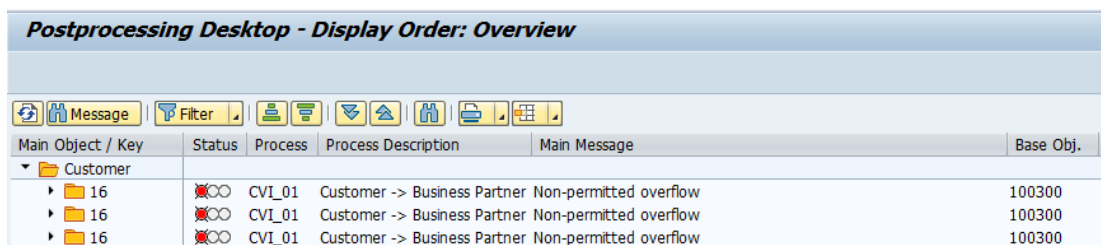


Figure 44: Display PPO Error Message.

If it is a data error (see 1 in figure below),

- Select the source object tab (Customer or Vendor).
- Choose Display or Change option. It opens the corresponding transaction page so that you can view or edit the data.
- Save the changes. The data automatically get synchronized to the target object.

If it is a Customizing error (see 2 in figure below),

- Manually navigate to the corresponding Customizing table/activity and resolve the error.
- Come back to the error entry
- Start synchronization. You have two synchronization options:
 - Individual Synchronization - Synchronizes the selected source and target objects
 - Mass Synchronization - Synchronizes all source and target objects based on the selected error code

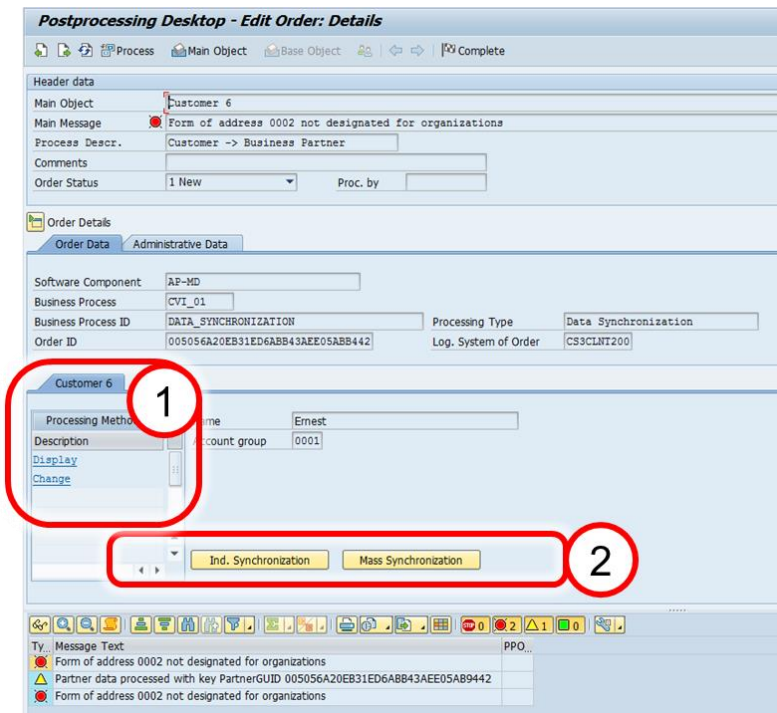


Figure 45: Display PPO Details.

Once the errors are resolved, come back to MDS_PPO2, and manually set the error status by using the **Complete** button.

After resolving synchronization errors, to know if any other errors have occurred, re-execute the MDS_PPO2 report using the date on which you corrected synchronization errors, as the selection criteria.

Go to chapter 7.4.5 Configuration and Master Data Issues to get an overview of common synchronization issues and their resolution.

7.4.2.1. Download PPO messages

For error analysis and documentation, it can be useful to download the list of error messages from PPO. There is no built-in-functionality to download the messages as spreadsheet as in other ALV-views. You can get the messages as spreadsheet by executing the following steps:

1. Go to transaction MDS_PPO2. Enter the selection criteria and press Execute(F8).
2. To change the layout of the output according to your needs (e.g. insert fields Message Class and Message Number), press the small triangle right from the 'Select layout...' - button and select 'Change layout...'.
3. Open the print menu by pressing the small triangle right from the 'Print view' -button and select 'Print preview of entire hierarchy'.
4. In the preview window select 'System -> List -> Save -> Local File' and save the file as text file.
5. Import the txt-file in Excel

7.4.2.2. Technical Background

The following objects can be useful as starting point to understand more in detail the functionality of the synchronization cockpit from a technical perspective.

Function Modules

- MDS_LOAD_START
Start of mass synchronization
- MDS_LOAD_RESTART
Restart mass synchronization

Tables

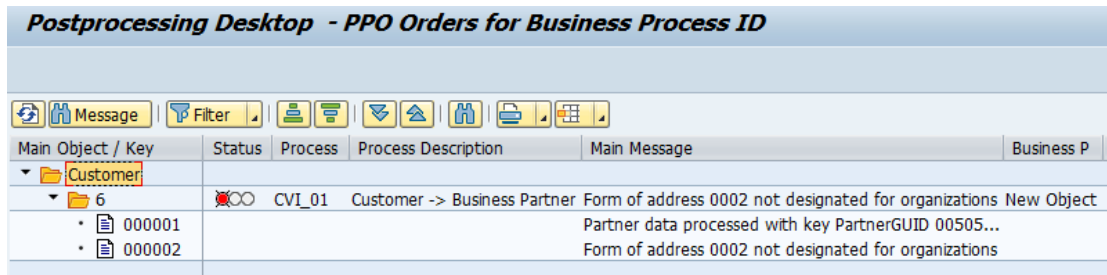
- /SAPPO/ORDER_DAT
Additional Data for Postprocessing Order
- /SAPPO/ORDER_HDR
Postprocessing Order - Header Data
- /SAPPO/ORDER_MSG
Messages for Postprocessing Order
- /SAPPO/ORDER_OBJ
Related Objects for Postprocessing Order

7.4.3. Example - Resolve Synchronization Errors Using PPO

The following example shows the step by step resolution of synchronization errors for a single Customer. For the Customer example, two different errors are in place:

1. Customizing error
2. Master data error

After synchronization run we get an error message in the monitor of MDS cockpit. We select the entry and choose **Call PPO** which shows us the error message 'Form of address 0002 not designated for organizations'.



The screenshot displays the 'Postprocessing Desktop - PPO Orders for Business Process ID' interface. It features a toolbar with icons for Message, Filter, and other functions. Below the toolbar is a table with columns: Main Object / Key, Status, Process, Process Description, Main Message, and Business P. The table shows a hierarchy starting with 'Customer', which is expanded to show a folder '6'. Under '6', there are three entries: '000001' with a status of 'CVI_01' and a message 'Partner data processed with key PartnerGUID 00505...', and '000002' with a status of 'CVI_01' and a message 'Form of address 0002 not designated for organizations'. The '000002' entry is highlighted, indicating it is the selected error.

Figure 46: Display PPO Orders for Business Process ID.

This is a typical customizing error. CVI creates new Business Partners of type organization. The form of address is not allowed for organizations.

The respective customizing can be found here:

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner -> Basic Settings -> Forms of Address -> Maintain Form of Address

Change View "Titles (Business Address Services)": Overview

63 New Entries

Titles (Business Address Services)					
Key	Title	Person	Org.	Grp.	Gender
0001	Ms.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Female
0002	Mr.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Male
0003	Company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Gender not known
0004	Mr. and Mrs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Gender not known
0005	My_title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gender not known

Figure 47 "Maintain Form of Address.

If you would switch on "Org." e.g., for "Ms." or "Mr.", a business partner of category "Organization" would be created. To avoid this, for correction, the BAdI CVI_MAP_BP_CATEGORY can be activated as described in section 7.3.8.6.

After applying the corrections, we return to the error entry in PPO and restart the synchronization by choosing *Individual Synchronization* or *Mass Synchronization*. We decide to start Mass Synchronization, because several entries exist in PPO for this Customer. Obviously, it has been included in several synchronization runs. Remark: Only the latest run will be processed further.

Mass Synchronization: Object Selection

Object Key	Status	Process	Business Process Desc.	Message Text	Note	Agent	Proc. Date	Created
0000000006		CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations				18.11.20
0000000006		CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations				18.11.20
0000000006		CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations				21.11.20

Figure 48: Mass Synchronization - Object Selection.

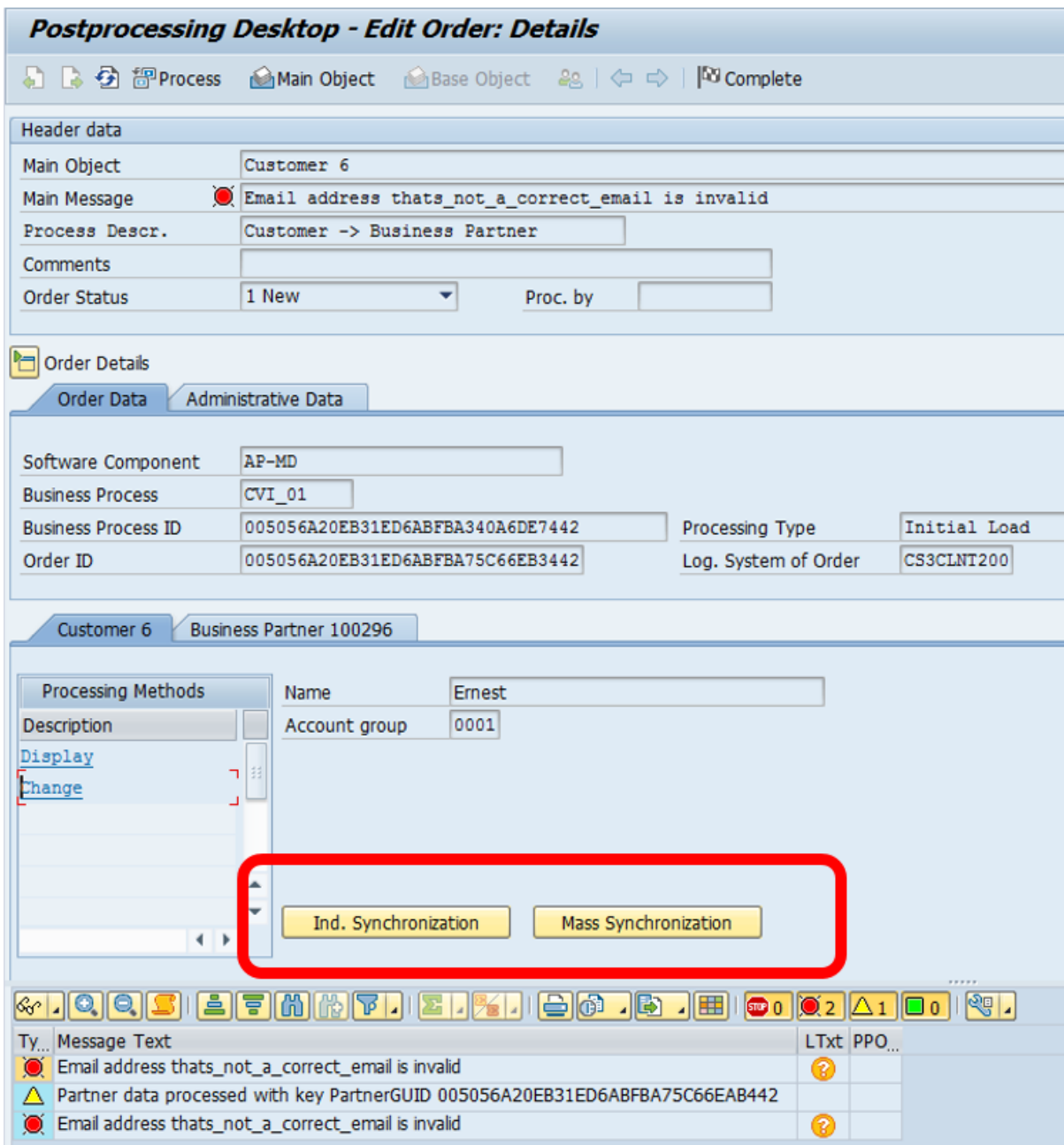


Figure 49: Postprocessing Desktop - Edit Order: Details.

We select all entries and start processing. Go back to MDS cockpit and refresh the monitor tab. We get a second error line in the monitor tab.

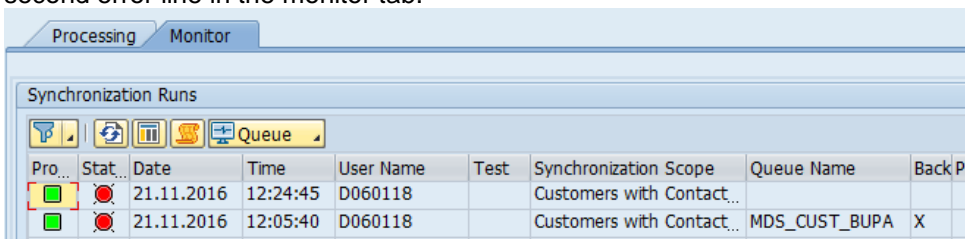


Figure 50: MDS Cockpit - Monitor.

We choose the new entry and open PPO. A new error message is shown: *Email address thats_not_a_correct_email is invalid*. The customizing error has been resolved, but a master data error

appears. The synchronization process checks if the format of the email-address is valid. If it is not valid, a PPO-order is created.

We start editing the Customer master data directly from the PPO-order by double-clicking **Change** as processing method from the Customer tab.

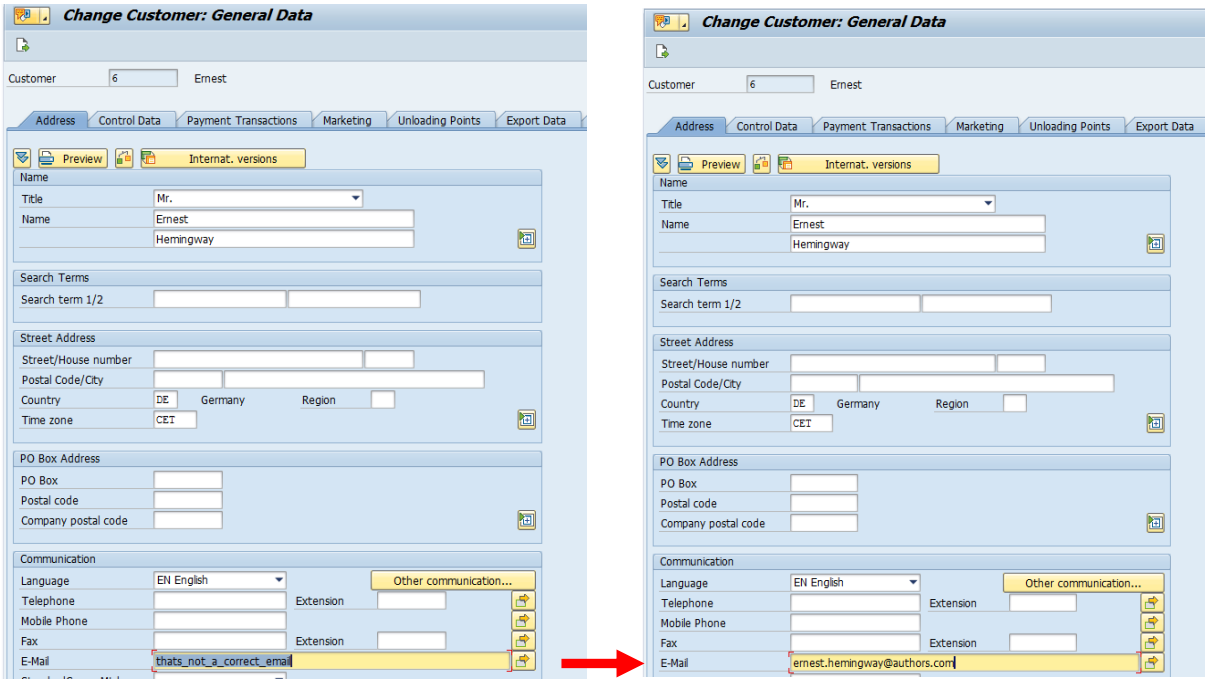


Figure 51: Change Customer: General Data.

After changing the email address and saving the Customer, the data gets automatically synchronized to the target object.

The entries in PPO and the MDS cockpit monitor are not updated. Selecting all entries for this Customer in **MDS_PPO2** still shows three error messages.

Postprocessing Desktop - Edit Order: Overview						
Main Object / Key	Status	Process	Process Description	Main Message	Base Obj.	Cor
Business Partner						
Customer						
6	☒☐☐	CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations	New Object	
6	☒☐☐	CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations	New Object	
6	☒☐☐	CVI_01	Customer -> Business Partner	Email address thats_not_a_correct_email is invalid	100296	

Figure 52: PPO Desktop - Edit Order: Overview.

Manually set the error status by using the *Complete* button (after opening the PPO order).

Postprocessing Desktop - Edit Order: Overview						
Main Object / Key	Status	Process	Process Description	Main Message	Base Obj.	Proc. by
Business Partner						
Customer						
6	○○	CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations	New Object	D060118
6	○○	CVI_01	Customer -> Business Partner	Form of address 0002 not designated for organizations	New Object	D060118
6	○○	CVI_01	Customer -> Business Partner	Email address thats_not_a_correct_email is invalid	100296	D060118

Figure 53: PPO Desktop - Edit Order: Overview.

To validate, that the Business Partner has been created successfully, check the CVI link table **CVI_CUST_LINK** with transaction SE16. An entry for the Customer has been added.

Alternatively use transaction **MDS_LINKS** (= Report **CVI_MAPPING_BP_CUST_VEND**) to check, that a valid link exists.

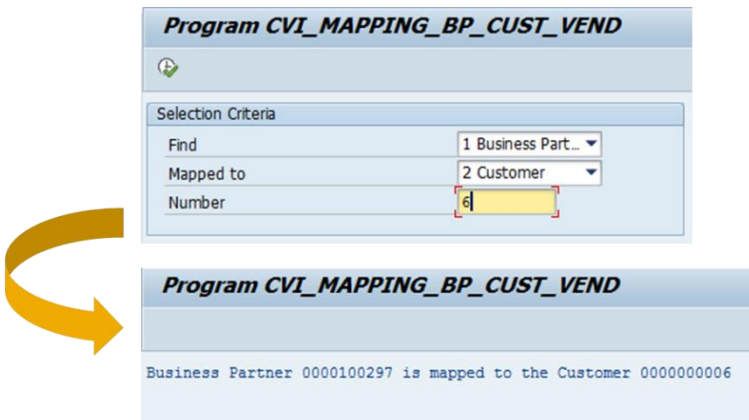


Figure 54: Report CVI_MAPPING_BP_CUST_VEND .

To avoid post processing effort, the customizing settings as well as the master data quality should be checked carefully before starting the synchronization. See chapter 7.3.9 Preparation for linking of Customer and Vendor to a single Business Partner.

7.4.4. Check Completion of Synchronization

As described in section 7.3.2.3, the CVI_COCKPIT provides the link to the completeness check transaction CVI_COMPL_CHK (ABAP report CVI_COMPLETENESS_CHECK). Customers, Vendors and Contact Persons which have not yet been converted to Business Partners are listed and it's possible to download the lists as MS Excel files which can be directly uploaded to MDS_LOAD_COCKPIT for a subsequent run after corrections were made.

The old transaction CVI_PRECHECK_UPGRADE (Report PRECHECK_UPGRADATION_REPORT) to check the completion is obsolete as per SAP Note [2831894 - Obsolete : CVI conversion: Pre-check upgrade report.](#)

7.4.5. Configuration and Master Data Issues

In the following, configuration and master data issues which may occur during the synchronization of Customer and Vendor master data are described. Check your configuration and master data carefully and adjust if necessary. Ensure, you have made all settings described in the previous chapters and you have maintained missing values in the Customer/Vendor or Business Partner Customizing.

Errors may occur due to missing configuration settings, specific master data constellations, or other causes. The non-exhaustive list of possible issues is based on customer project experience and will be updated frequently. Perform CVI conversion in a sandbox with production data at an early stage of the SAPS/4HANA project to identify and resolve possible issues (see also chapter 7.5.2, CVI Conversion Approach: Example).

A collection of synchronization issues can be found in SAP Note 2904137 - PPO Hints for the generic error messages in MDS_PPO2

7.4.5.1. CVI Customizing Issues

7.4.5.1.1. BUPA_TAXN011 - Tax number category does not exist

The root cause for this error is a missing tax number category in view V_TFKTAXNUMTYPEC. You must maintain in view V_TFKTAXNUMTYPEC the entries for the countries relevant for your system.

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner -> Basic Settings -> Tax Numbers -> Maintain Tax Number Categories

The standard settings follow a naming convention of two letters and a number:

- The two letters are the ISO code of the country for which the tax number is used.
- The number is a sequential number.

The number controls which *Tax Number* field in the Customer or Vendor master this tax number is used.

For creation of new entries in V_TFKTAXNUMTYPEC you need to select one of the predefined tax types as key. If the tax type does not exist in the system, you must first create a new entry in view V_TFKTAXNUMTYPE using transaction SM30.

Category	Name	Duplicate Check
DE0	Germany: VAT Registration Number	1 On
DE1	Germany: Income Tax Number (§48)	Off
DE2	Germany: VAT Number (Credit Proc. §14)	Off
DK0	Denmark: VAT Registration Number	Off

Transaction SM30, View V_TFKTAXNUMTYPE

Figure 55: Maintain Tax Number Categories.

See also SAP Notes

- [1006160 - New tax number types for new EU members as of 01.01.2007](#)
- [775919 - Missing tax number categories of business partner](#)

7.4.5.1.2. R11173 - Specify an industry

Root cause for the error message *Specify an industry* is that the industry of the Customer (KNA1-BRSCH) or Vendor (LFA1-BRSCH) has not been configured in the industry system. Please see chapter 7.3.8.4.4 Assign Industries for details.

You must maintain all industries which are used for Customer/Vendor also for Business Partner and vice versa.

To view and maintain industries in Customer/Vendor customizing:

IMG -> Sales and Distribution -> Master Data -> Business Partners -> Customers -> Marketing -> Define Industry Sector For Customers

To view and maintain industries in BP customizing:

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner -> Organizations -> Maintain Industry Systems and Industries

To assign Customer/Vendor industries to BP industries and vice versa

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Attributes -> Assign Industries

7.4.5.1.3. F2868/F2869 - Address form is not configured for organizations

Root cause for the error message *Form of address xxx not designated for organizations* is incomplete customizing of address forms.

Customer/Vendor does not use different Business Partner categories. In SAP Business Partner, it is necessary to distinguish between the Business Partner categories person, organization, and group. For more details on forms of address see [SAP Help Business Address Services](#).

CVI creates new Business Partners of type Organization. Maintain the address forms valid for organizations and groups.

IMG -> Cross-Application Components -> SAP Business Partner -> Business Partner -> Organizations -> Maintain Industry Systems and Industries

Key	Title	Person	Org.	Grp.	Gender
0001	Ms.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 Female
0002	Mr.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1 Male
0003	Company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Gender not known
0004	Mr. and Mrs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Gender not known
0005	My_title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gender not known

Figure 56: "Maintain Form of Address."

If you would switch on "Org." e.g., for "Ms." or "Mr.", a business partner of category "Organization" would be created. To avoid this, for correction, the BAAd CVI_MAP_BP_CATEGORY can be activated as described in section 7.3.8.6.

7.4.5.1.4. T5002 - Telephone/fax code for country code XX is not maintained

Root cause for error message *Telephone/fax code for country code XX is not maintained* is missing customizing for the country settings.

Maintain the country specific phone numbers.

IMG -> SAP Netweaver -> General settings -> Set Countries -> Define Country Codes

Ctry	Name	Tel.from	Tel. to	Digit del.	TLX fr.	Telex to
DE	Germany	00	49	0	0	
DJ	Djibouti	00	253	0		38
DK	Denmark	009	45	0		55

Figure 57: Define Country Codes.

7.4.5.2. Master Data Issues

Master data issues are often based on master data uploads using wrong data formats, disabled standard checks or using customer reports to maintain/update master data. Other sources are changed configuration settings without adjusting the dependent master data records (e.g. change of transport zones).

7.4.5.2.1. Trading partner xxx assigned to customer yyy doesn't exist

Root cause for error message *Trading partner xxx assigned to customer yyy doesn't exist* is that the trading partner specified in field KNA1-VBUND doesn't exist in table T880 (Similarly for Vendors, LFA1-VBUND).

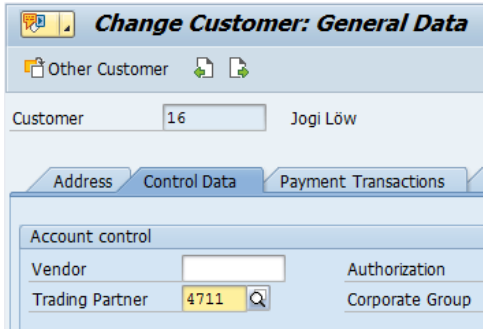


Figure 58: Change Customer General Data – Trading Partner.

This error can happen, for example, if the master data has been uploaded as table dumps and field VBUND has been transferred using a wrong format. Format of the field must be 6-digit numeric (field definition is CHAR 6, but only 6-digit numeric values are allowed).

If the values in field VBUND are wrong change them manually using transactions XD02/XK02 or create a report to automate the correction.

Remark

If IDOCs are used for the master data replication, the master data record will not be posted with the VBUND value in wrong format.

If the format of the values in field Trading Partner is correct but the ID is missing in table T880 maintain the missing entry.

Customizing path:

IMG -> Enterprise Structure -> Definition -> Financial Accounting -> Define Company

7.4.5.2.2. AR102 - Bank Account Key must have length xx

Root cause for error message regarding invalid bank account number is that the bank account number (Customer: KNBK-BANKN, Vendor: LFBK-BANKN) is defined with a length different than specified in the country settings.

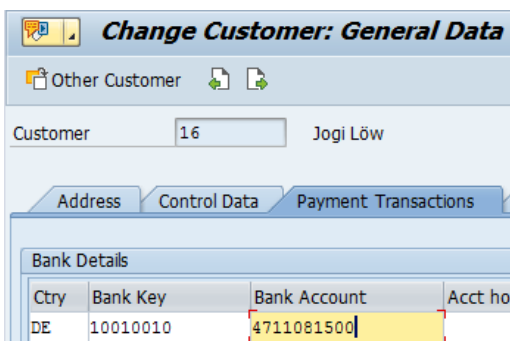


Figure 59: Change Customer General Data – Bank Account.

To ensure the correct posting, length of bank account number must comply with the country-specific settings for bank accounts.

To check the country settings

IMG -> SAP Netweaver -> General settings -> Set Countries -> Set Country-Specific Checks

Change the values manually using transactions XD02/XK02 or create a report to automate the correction.

7.4.5.2.3. AR147 - Bank control key must be two characters long

Root cause for error message regarding invalid bank control key is that the bank control key (Customer: KNBK-BKONT, Vendor: LFBK-BKONT) is defined in a wrong format. It must be two character in length.

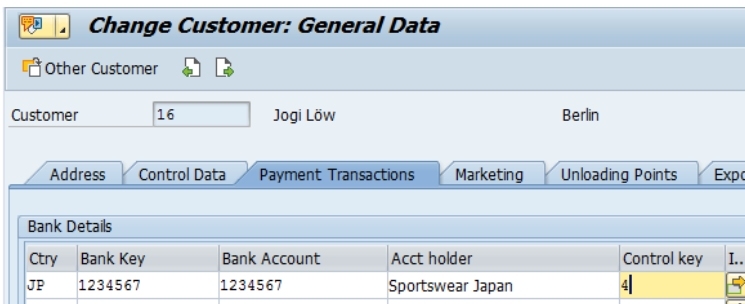


Figure 60: Change Customer General Data – Bank Control Key.

Change the values manually using transactions XD02/XK02 or create a report to automate the correction.

7.4.5.2.4. Bank key xxx doesn't exist for country yy

Root cause for error message regarding missing bank key is that the bank key (Customer: KNBK-BANKL, Vendor: LFBK-BANL) is not defined in bank master data.

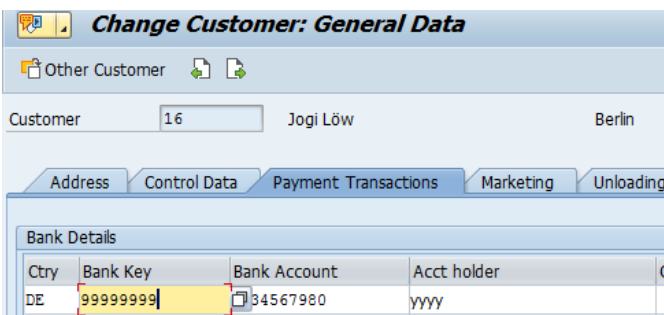


Figure 61: Change Customer General Data – Bank Key.

Reason can also be that either the bank key in Customer/Vendor master data is wrong or the key is missing in bank master.

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

To change the bank master data use transaction **FI01** (Create) or **FI02** (Change).

7.4.5.2.5. Missing account holder

Root cause for error message regarding missing account holder is that the account holder information (Customer: KNBK-KOINH, Vendor: LFBK-KOINH) is not provided, but necessary for the country of the bank.

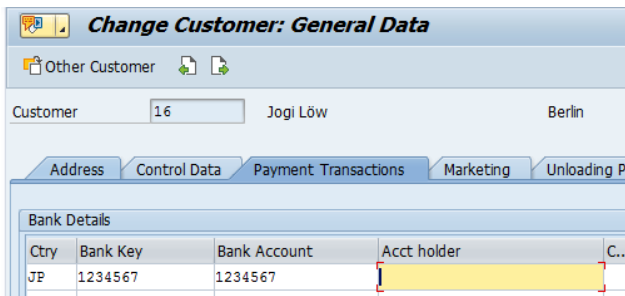


Figure 62: Change Customer General Data –Account Holder.

To ensure the correct posting, an additional check to ensure account holder information exists for every account needs to be performed before master data replication

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

7.4.5.2.6. AM654 - Postal Code (PO Box) must have length xx or yy

Root cause for error message regarding postal code length and PO Box is that postal code (PO Box) format is different from the format defined in the country settings.

Wrong postal code information can be present in tables KNA1/LFA1 as well as in table ADRC.

In tables KNA1/LFA1 the following fields are used:

- PSTLZ
Postal Code
- PSTL2
PO Box Postal Code
- PFACH
PO Box

In table ADRC the following fields are used:

- POST_CODE1
Postal Code
- POST_CODE2
PO Box Postal Code
- PO_BOX
PO Box

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

7.4.5.2.7. AR128/AR129 - Tax Code n is not valid

Root cause for message *Tax Code n is not valid* (n=1 or n=2) are invalid tax numbers in fields STCD1 or STCD2 of either customer (table KNA1) or Vendor (table LFA1) master data.

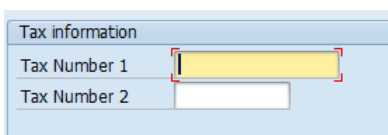


Figure 63: Tax Number.

Change the values manually using transactions XD02/XK02 or create a report to automate the correction.

7.4.5.2.8. Tax Jurisdiction Code is not valid

Root cause for error message regarding tax jurisdiction code is that the jurisdiction code stored in Customer/Vendor master data (Customer: KNA1-TXJCD, Vendor: LFA1-TXJCD) is different from the format defined in customizing.

To check the customizing

IMG -> Financial Accounting -> Financial Accounting Global Settings -> Tax on Sales/Purchases -> Basic Settings -> Specify Structure for Tax Jurisdiction Code

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

7.4.5.2.9. BUPA_TAX200 - The tax number for tax number category XXX is already maintained

Root cause for error message regarding already existing tax number is double maintenance of VAT registration number.

The VAT registration number is maintained in Customer/Vendor master in field KNA1-STCEG (Customer) or LFA1-STCEG (Vendor) and additionally in the section 'Other' in field KNAS-STCEG (Customer) or LFAS-STCEG (Vendor).

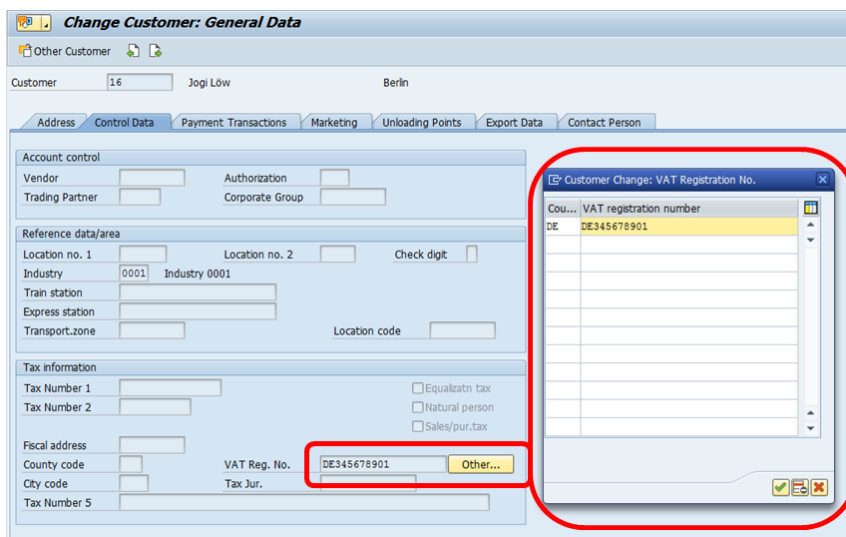


Figure 64: Change Customer General Data – VAT Info.

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

See also SAP Note [2232604 - Error BUPA_TAX200 when replicate vendor or customer to Business Partner.](#)

7.4.5.2.10. Entry in field Tax code n is longer than XX characters

In the mapping methods for Vendor executed in the conversion, the tax number 1 of the Vendor (field LFA1-STCD1) in ECC is mapped to tax code 2 (field LFA1-STCD2) of the Business Partner, if the tax country of the Vendor is Germany (DE).

The field STCD1 is defined with 16 characters and STCD2 with 11 characters. The Function Module BUPA_TAX_NUMBER_CHECK checks the length of these two fields.

If the tax code has more than 11 characters, the error AR103 occurs, because it is possible to enter a tax code with more than 11 characters in the tax code 1 of the Customer/Vendor in ECC.

See SAP Note [2098239 - Entry in field tax code 2 is longer than 11 characters](#) for details.

Change the error message AR103 to a Warning or Info message.

Switch off the error message using transaction **OBA5** to define a new user specific message control. Select Application Area **AR**. In the maintenance view, press *New Entries*. Select message number 103 and select 'W' (or 'I') as message type for Online- and Batch Input processing. Save the new entry.

Change View "Message Control by User": Overview					
Area <input type="text" value="AR"/> SSRV function module messages					
Message Control by User					
Msg...	Message Text	User Name	Online	BatchI	Standard
103	Entry in field & is longer than & characters		W	W	E

Figure 65: Tax Code Too Long.

Remark

See SAP Note [958424 - BP:Error message for tax code 2 customized](#) for a description how to make messages customizable.

7.4.5.2.11. References to non-existing Customers/Vendors

Root cause for error message regarding non-existing Customers/Vendors are referenced Vendors in Customer master data (KNA1-LIFNR) or referenced Customers in Vendor master data (LFA1-KUNNR) which do not exist.

If IDOCs are used for the master data replication, the master data record will not be posted.

To ensure the correct posting, an additional check for existence of referenced Customer/Vendor should be performed in the source system before master data replication.

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

7.4.5.2.12. Incorrect Credit Card Numbers assigned

Root cause for error message regarding incorrect credit card numbers is a credit card number which does not fit to the settings made in customizing for the credit card type.

Credit cards are stored in table VCNUM. Assignment of credit cards to Customers is stored in table VCKUN. In both tables the field CCNUM is used to store the credit card number.

To check and adjust the customizing of credit card types use Customizing path

IMG -> Sales and Distribution -> Billing -> Payment Cards -> Maintain Card Types

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

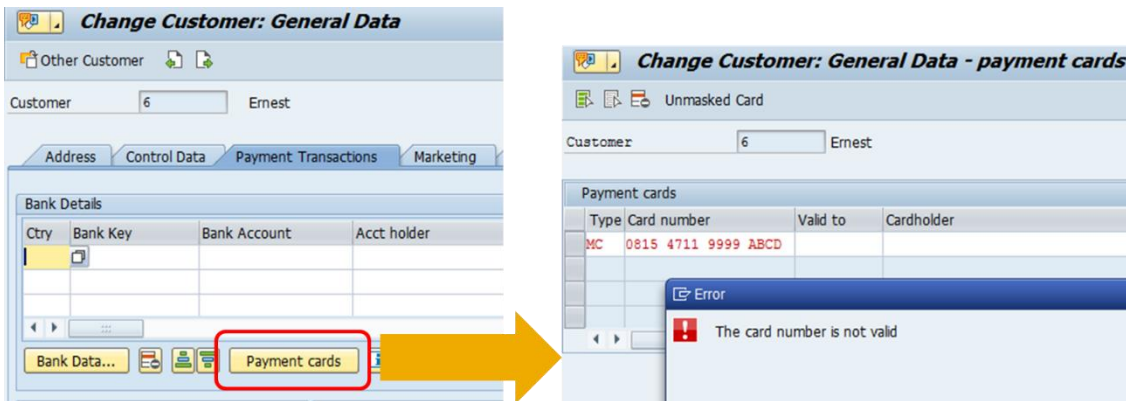


Figure 66: Invalid Credit Card Number.

7.4.5.2.13. BC428 - Inconsistent visiting hours in KNVK table (Non permitted overflow)

Root cause for this error message (Message BC428) is that as soon as visiting hours are used for contact person, a begin and end time has to be defined for the morning and the afternoon time intervals. This error appears if only begin time or end time is maintained.

Fields:

- KNVK-MOAB1
Morning Interval Begin
- KNVK-MOBI1
Morning Interval End
- KNVK-MOAB2
Afternoon Interval Begin
- KNVK-MOBI2
Afternoon Interval End

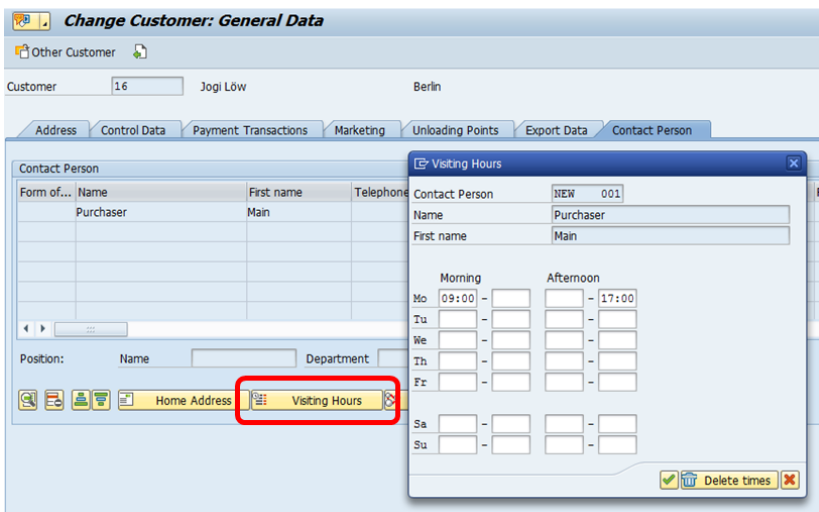


Figure 67: Change Customer General Data – Visiting Hours.

To change the values in Customer/Vendor master, use transaction XD02/XK02 or create a report to automate the correction (e.g. delete the contact hours).

7.4.5.2.14. Missing web address in Customer master

Root cause for error message regarding missing web address in Customer/Vendor master is a communication entry of type HPG (Homepage) without valid URL-address. In general, this error occurs when a communication type has been maintained without identifier.

The communication types and identifiers are stored in table ADR12 using mainly the following fields:

- ADR12-URI_TYPE
Identifier
- ADR12-URI_SRCH
Short form
- ADR12-URI_ADDR
Address

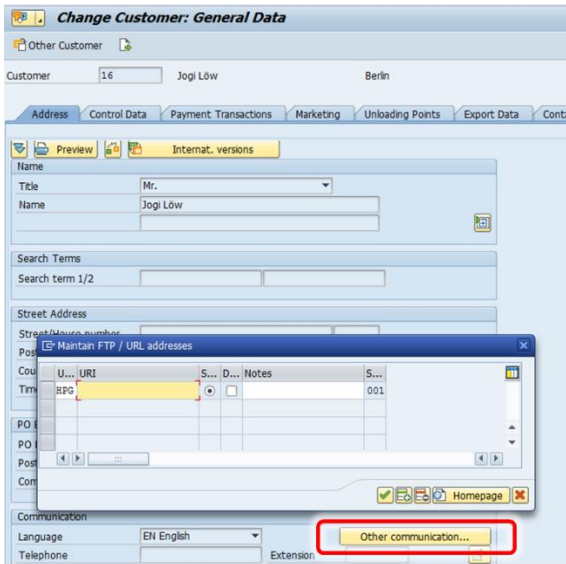


Figure 68: Change Customer General Data – Web Address.

To change the values in Customer/Vendor master, use transaction XD02/XK02 or create a report to automate the correction (e.g. delete all entries without URI-address).

7.4.5.2.15. Business Partner country not defined

Root cause for error message related to an undefined Business Partner country is, that country has not been maintained in Customer/Vendor master but is a mandatory entry in Business Partner.

To change the values in Customer/Vendor master use transaction XD02/XK02 or create a report to automate the correction.

7.4.5.2.16. F2840 - The transport zone XX is not defined for country XX

Root cause for error regarding undefined transport zone is that the country does not have the transport zone anymore which was maintained in Customer/Vendor data.

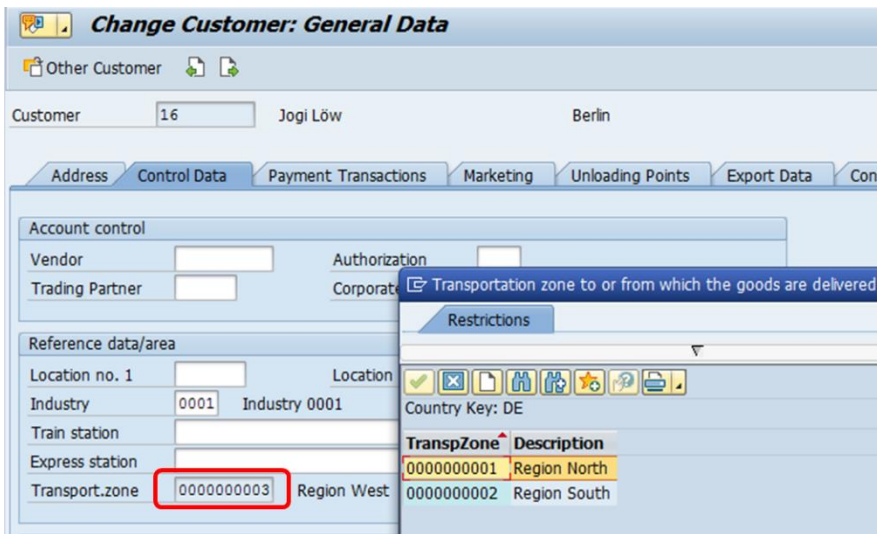


Figure 69: Change Customer General Data – Transport Zones.

Maintenance of transportation zones

IMG -> SAP Netweaver -> Application Server -> Basis Services -> Address Management -> Maintain Transport Zones

To change the values in Customer/Vendor master use transaction XD02/XK02, or create a report to automate the correction.

7.4.5.2.17. The use of the last X characters in field XYZ is restricted (XX of YY)

Root cause for this message are Customer/Vendor name and address data which could cause the fields to be truncated in some scenarios. These scenarios are data transfers with ALE, EDI or printing of the address. In these cases the system only uses the first 35 characters of name fields, of the fields Street, City, District and the first 10 characters of the field 'Search Term 1'.

If you do not want the address data to be truncated in these scenarios, only use the first 35 characters of the address fields or the first 10 characters of the field 'Search Term 1' during maintenance, or abbreviate the texts, if necessary.

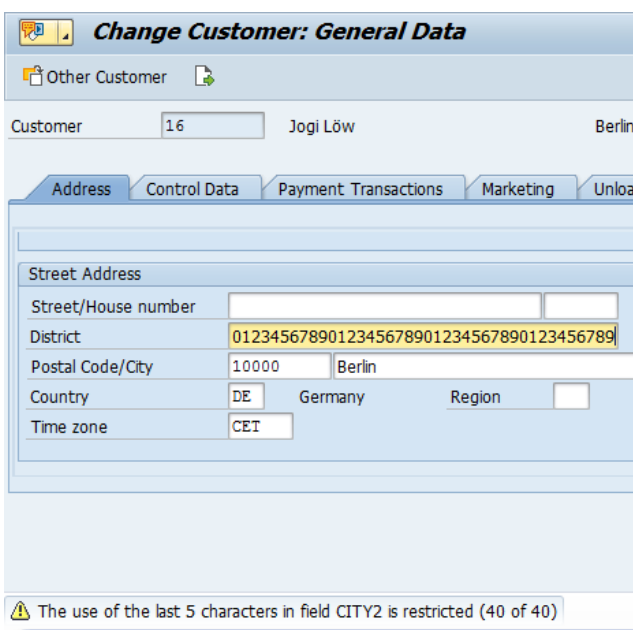


Figure 70: Change Customer General Data – Values Too Long.

To change the values in Customer/Vendor master use transaction XD02/XK02, or create a report to automate the correction.

The message (AM228) can be suppressed via Customizing. Use following path:

IMG -> Cross-Application Components -> Bank Directory -> Change Message Control

Alternatively call transaction **OBA5**. Select Application Area **AM**. In the maintenance view press *New Entries*. Select message number 228 and select '-' as message type for Online- and Batch Input processing. Save the new entry.

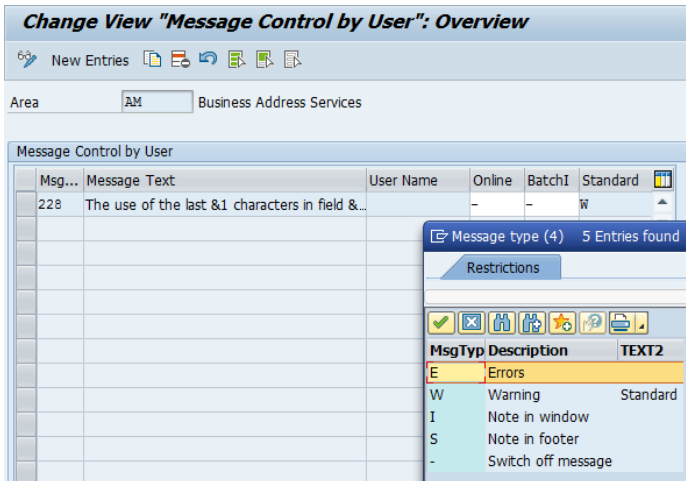


Figure 71: Message Control By User.

7.4.5.2.18. No geocoder for country ... maintained in system

This message may arise on a customer or supplier that has no address (and even no country) assigned. This kind of setting can be in use while managing one-time customers / suppliers (CPD).

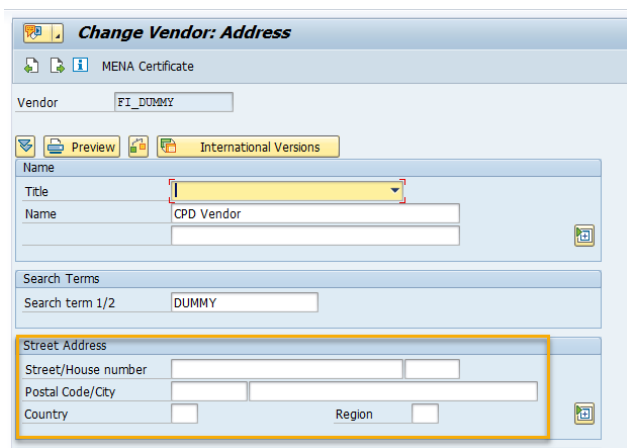


Figure 72: Master data with no address.

Solution consists in assigning (at minimum) a country to allow synchronization or for suppressing address checks in CpD related account groups (e.g., for one-time customers) check IMG-node "Activate Field Check Suppression". For details and related SAP Notes, please check section 7.4.1.1 Prerequisites.

7.4.5.3. Miscellaneous Issues

7.4.5.3.1. R11124 - Business partner with GUID xxxxx does not exist

Root cause for error *Business partner with GUID xxxxx does not exist* is a wrong number range setting for contact persons.

Do not share the number range for contact persons with other BP groupings. The contact person number range is the internal standard grouping number range. For more details see chapter 7.3.8.2.4 Define Number Ranges and Grouping for Business Partner.

Another cause is an inconsistency in link tables CVI_CUST_LINK and CVI_VEND_LINK. To solve the issue, correction reports should be implemented and run.

[974504 - Inconsistencies in link tables of master data sync](#)

7.4.5.3.2. R1908 - Business Partner with GUID xxxxxx already exists

This issue occurs if a corresponding Business Partner to a Customer/Vendor has been created but without an entry in link tables CVI_CUST_LINK or CVI_VEND_LINK exists. Correction report will solve the issue. SAP Note 2373665 - Missing link in the CVI table for the same number objects

7.4.5.3.3. Lock table overflow

It's possible to get a lock table overflow during synchronization process. This is due a technical restriction, caused by parameter `enqueue/table_size`. If necessary, increase the value of parameter `enqueue/table_size` significantly (e.g., 4 - 10 GB, dependent on system configuration and master data volume).

Please note: lock table overflows can cause inconsistencies in link tables of master data as mentioned in "0 - " (ref. to note 974504 - Inconsistencies in link tables of master data sync).

7.4.5.3.4. Update termination error (ADRNR)

The synchronization process can terminate due to the exhausted number range object ADRNR. The creation of new Business Partners also creates a lot of new addresses. Before starting the CVI mass run check the current number object and change it if needed.

Customizing path:

IMG -> SAP Netweaver -> Application Server -> Basis Services -> Address Management -> Maintain Address and Person Number Range

Alternatively call transaction **SNRO** with number range object **ADRNR** or use transaction **SA01**.

7.4.5.3.5. R11244 - Error for validity periods of addresses

There are inconsistencies in addresses. To correct these inconsistencies, check SAP Notes [1064373 - SAP BP:Report to clear address inconsistencies BUT000<->ADR*](#) and [865271 - BP_MISC: Report to get the inconsistency with addresses](#)

7.4.5.3.6. AM053 - Specify either address number or address handle

There are inconsistencies in addresses. To correct these inconsistencies, check SAP Notes [1064373 - SAP BP:Report to clear address inconsistencies BUT000<->ADR*](#) and [865271 - BP_MISC: Report to get the inconsistency with addresses](#)

7.4.5.3.7. F2810/F4230 - Bank XXX marked for deletion in country YY

The bank key used in Customer/Vendor master data (Customer: KNBK-BANKL, Vendor: LFBK-BANL) is marked for deletion (e.g. with transaction **FI06**).

The message with message number **BF00210** is defined by default as an error, therefore synchronization fails.

Switch off the error message using transaction **OBA5** to define a new user specific message control. Select Application Area **BF00**. In the maintenance view press *New Entries*. Select message number 210 and select '-' as message type for Online- and Batch Input processing. Save the new entry.

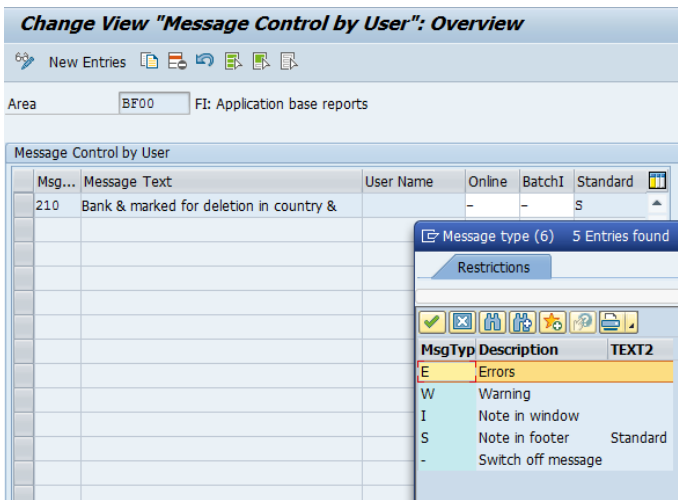


Figure 73: Message Control By User.

7.4.5.3.8. Not all address numbers have been defined

It has been reported, that in some cases no address from ADRC table has been linked to a Customer/Vendor. At the same time, transactions XD02/XK02 try to read address data from ADRC and fail.

To ensure the correct posting, an additional check needs to be performed before master data replication to ensure the assignment of the address number.

Create a report to automate the check and correction.

7.4.5.3.9. Others


The (non-exhaustive) list below shows some other customizing and master data errors not described in the previous chapters. These errors have appeared during previous Customer conversion projects and are listed here for convenience.

To solve the issues, change master data manually or via tools. If the customer accepts the existing data quality due to time or resource constraints, and the check of the error is configuration, bypass check via configuration could be considered as a short-term remedy so that the SAP S/4HANA conversion may start according to schedule. The data errors must be fixed and the data error check should be restored before go-live.

Message Class / Number	Message
AM/129	The transport zone xxxxxx is not defined for country xx
AR/102	VAT Reg.No. XXXXXXXXXX must have length 12
AR/103	VAT Reg.No. XXXXXXXXXX is longer than 12 characters
AR/104	Bank Key AAA must contain only numbers
AR/191	ISO code XX is not correct in the VAT registration number
AR/196	VAT registration number contains invalid characters
BF00/211	Bank XXX does not exist
FSBP_FS_ATTRIBUTES/015	Company XXX does not exist
GEOCODING/002	Geocoder SAP0: Country specification is incomplete (Customizing)
R1/286	Business partner xxx already exists (see also chapter 7.3.9)
R1/1124	Business partner with GUID xxxxx does not exist
T5/002	Telephone/fax code for country code xx is not maintained

7.5. Conversion Process

The Conversion Process to upgrade the ECC system to SAP S/4HANA must be triggered following the S/4HANA Conversion Guide. The Conversion step to be executed by the technical team is part of the system conversion from the ECC system to SAP S/4HANA On-Premise. No additional CVI action is required.



As a prerequisite for the system conversion, the configuration of CVI must be in place and must have been tested. The conversion of all Customer/Vendor master data to Business Partner should preferably be done before the system conversion so that any issues with customizing or master data settings can be anticipated and resolved, as oppose to attempting to perform CVI conversion as part of the system conversion.

7.5.1.CVI Conversion Approach: Key Considerations

Key considerations when planning for the CVI Conversion (Business Partner synchronization) are:

- No Downtime
- Not in critical path in the SAP S/4HANA conversion process
- No last-minute surprise in effort or time

CVI requires high quality master data to be converted. The quality checks cannot be switched off on the cockpit level. This way the customer is forced to run a master data quality project for Customer and Vendor master. If not started in advance, that can be a serious roadblock for upgrade.

There are other factors influencing the time and effort for CVI Conversion and which can conflict with the targets mentioned above.

- BP/CVI/Pre-Check Know-How
- Customer/Vendor/BP number ranges
- BP Customizing consistency including field attributes
- Customer/Vendor/Business Partner Data consistency
- Customer/Vendor Enhancements (Extensions – can be complex and time consuming)
- Data volume

Customers should start immediately to run CVI in current system to avoid any delay in the SAP S/4HANA Conversion project.

7.5.2.CVI Conversion Approach: Example

1. For the following steps, use the transaction CVI_COCKPIT to perform the systematic sequence of tasks. Maintain and track the progressive status of the CVI Conversion in this transaction.
2. Perform CVI conversion in a sandbox with production data in an early stage of the SAP S/4HANA project.
 - Identify all data errors before the production CVI conversion and decide the error resolution. Certain master data errors could need a custom program to correct existing master data. If the errors have no impact on the business process, workaround measures could be implemented via configuration to relax the data validation. For example, title Mr. is used for a Customer and the system expects Company.
 - Assess the CVI conversion process runtime in the production environment. If the required conversion time is long enough to impact the SAP S/4HANA conversion schedule, the CVI conversion could be done in advance following the steps below. Otherwise, the CVI conversion could be done with the SAP S/4HANA Conversion.
3. Configure CVI in ECC production system ONLY for the synchronization direction 'Customer/Vendor-to-Business Partner'
4. Run the Load Tool in the CVI cockpit, (which calls the transaction MDS_LOAD_COCKPIT preferably during a quiet time to avoid any disruption to business transactions. Though no downtime is needed.
5. Run the Post Processing and Completeness Check steps in the CVI_COCKPIT transaction to identify any Customers/Vendors/contact persons not converted, evaluate and resolve the errors before running the Load Tool (MDS_LOAD_COCKPIT) step again for those unconverted objects.
6. The users will continue to use the ECC Customer/Vendor maintenance transaction to create the Customer/Vendor master data before the SAP S/4HANA conversion, and the CVI will create the Business Partners in background.

7. Lock the BP transaction in the ECC system to prevent user usage before converting the ECC system to SAP S/4HANA.
8. Convert the ECC system to S/4HANA.
9. Activate the CVI in the Business Partner-to-Customer/Vendor direction in the S/4HANA system.

7.5.3. Bypassing CVI Pre-check during SUM run (for Proof of Concept use ONLY)

During an SAP S/4HANA Proof of Concept (POC) test in a sandbox environment, if the Customer/Vendor master data quality is poor and there is not enough time to correct the data, the CVI pre-check during the SUM run could be bypassed by following the steps described in the SAP Notes below.

Important

Bypassing the checks isn't recommended by SAP and should only be made in exceptional cases for testing purposes in sandbox environments.

During the actual SAP S/4HANA conversion, it is not advisable to bypass this check as ideally these errors need to be corrected. Corrections can be done manually or with other customer specific reports dependent on the source of error. These are key tools supporting the identification of errors and the correction of errors:

- Customizing check transaction CVI Customizing – Check Report (transaction code BP_CVI_IMG_CHK) either directly or via the CVI cockpit as “Automated Customizing” on the “Preparation” phase tab or „Preupgrade Customizing Checks“ on the “Upgrade Preparation” phase tab. Please check SAP Note [2891455 - New Customizing Check Report for SAP S/4HANA Master Data Migration \(BP<->CVI\)](#).
- Completeness Check transaction (transaction code) lists not yet synchronized customers, vendors and contact persons. It can be started either with transaction code CVI_COMPL_CHK or from CVI Cockpit from the “CVI Load” phase tab.
- The Post Processing Office helps to find errors during CVI synchronization. Errors can be corrected, and synchronization can be repeated. The Post Processing Office can be accessed through CVI cockpit on the “CVI Load” and the “Upgrade Preparation” phase tab.
- Master Data Consistency Check report (transaction code CVI_PRECHK). Although this report is considered for early detection and correction of most common master data consistency errors in the preparation phase, it's still useful in later phases before conversion. Next to individual master data record correction, you could also do mass corrections, e.g., setting some constant values just to avoid synchronization errors during a PoC in a sandbox.

Implement the following SAP Notes before executing the MDS_LOAD_COCKPIT transaction to bypass few of the mandatory checks, which are basically used to synchronize the Customer/Vendor data to Business partner (see chapter 7.4.1 Synchronization Cockpit):

- SAP Note [2336018 - BP S4HANA : Suppress Mandatory BP field groups checks via MDS_LOAD_COCKPIT transaction](#)
- SAP Note [2345087 - BP BAP: Missing values in required entry fields cause posting termination in mass processing](#)

Also consider switching off further checks including court specific checks as described in section 7.4.1.2 Suppress certain Checks.

7.5.4. Tips and Tricks

- Performance MDS_LOAD_COCKPIT: creating a single Business Partner consumes reasonable time. Although SAP has improved the performance of it the full load could exceed given times for synchronization. MDS_LOAD_COCKPIT provides the option to run the synchronization in parallel processes. It is highly recommended to use this option. Based on some experiences the database performance isn't the bottleneck. So more than 10 processes in parallel do not slow down DB performance.
- Usually, the number ranges used by BP are not buffered in SAP-Standard. Each single process generated a new number from NRIV. This could lead, e.g when using massive parallel processing, to parallel locks on the number ranges. This can be prevented when using buffering for number ranges.

7.6. Post Processing

After the successful initial load of Business Partners and completed system conversion, some settings need to be changed to ensure, that Business Partner is the leading object. You must adjust the system to synchronize newly created or changed Business Partners back to Customer/Vendor.

Since S/4HANA 2020 there is transaction **BP_CVI_IMG_CHK** (CVI Customizing Checks for Synchronization) helping you to check customizing for CVI in S/4HANA. It does consistency checks and lets you directly jump to the respective customizing. It corresponds to the same transaction in ECC as described in section 7.3.2.2 CVI Customizing – Check but focuses on S/4HANA as in S/4HANA the Business Partner is the leading object and synchronization direction is from Business Partner to Customer/Vendor. It can be started via transaction code BP_CVI_IMG_CHK and can be found here in customizing:

IMG -> Cross-Application Components -> Master Data Synchronization -> Business Partner (CVI) -> Customizing Checks -> Business Partner Customer/Supplier Integration Checks

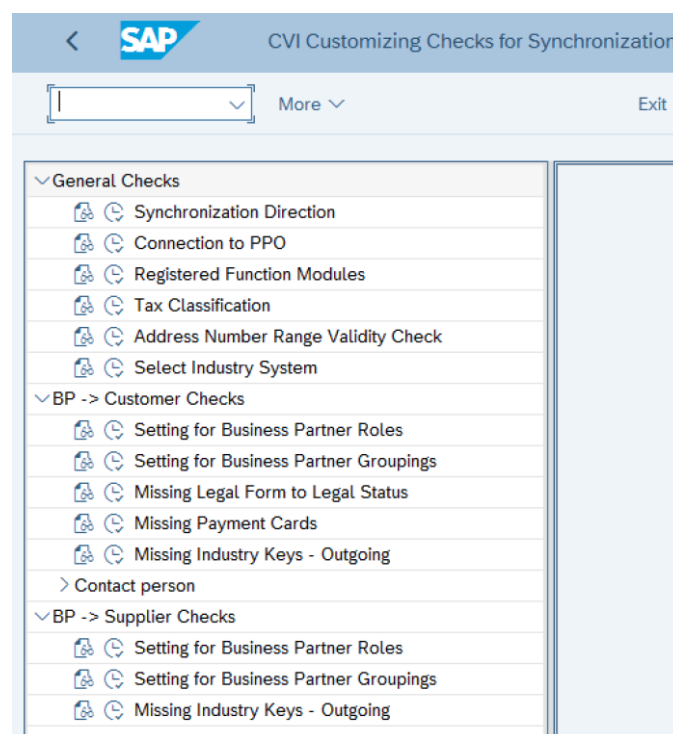


Figure 74: Transaction BP_CVI_IMG_CHK for checking CVI customizing in S/4HANA

7.6.1. Activate Creation of Post Processing Orders (Direction BP to Customer/Vendor)

In the standard system, creation of post processing orders is deactivated for all business processes. In paragraph 7.3.8.1.2 Activate Creation of Post Processing Orders post processing orders for the processes Customer/Vendor to Business Partner (CVI_01 and CVI_02) have been enabled. Now the direction Business Partner to Customer/Vendor must be activated.

IMG -> Cross-Application Components -> General Application Functions -> Post processing Office -> Business Processes -> Activate Creation of Post processing Orders

Activate Creation of Postprocessing Orders for component **AP-MD** and Business Processes **CVI_03** (Business Partner > Customer) and **CVI_04** (Business Partner > Vendor). Mark the checkbox to activate the entries.

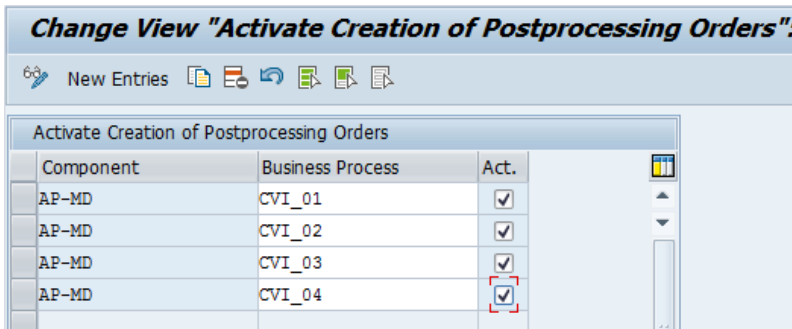


Figure 75: Activate Creation of Postprocessing Orders.

Remark

After completing the system conversion to S/4HANA, maintenance of Customers/Vendors is only possible using the Business Partner transaction. Therefore, business processes CVI_01 and CVI_02 are no longer in use. Customizing entries can remain but will not be used.

Attention	Before performing the conversion to S4/HANA via SUM, it is crucial to resolve the Postprocessing Orders listed in the Post Processing Office since they are not covered by the SUM pre-check. For that, transaction MDS_PPO2 can be used. (see also chapter 7.2.3) Otherwise, data inconsistency will occur.
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7.6.2. Activate Synchronization Options (Direction BP to Customer/Vendor)

Using this IMG activity, you can configure the direction in which data is synchronized between the Customer/Vendor and the Business Partner. Data can be synchronized in both directions. This means that you can update data from the Business Partner to the Customer/Vendor and from the Customer/Vendor to the Business Partner.

In chapter 7.3.8.1.4 Activate Synchronization Options you activated the options for direction Customer/Vendor to Business Partner. Now, you need to activate the direction Business Partner to Customer/Vendor.

IMG -> Cross-Application Components -> Master Data Synchronization -> Synchronization Control -> Synchronization Control -> Activate Synchronization Options

If not already done in preparation phase, insert new entries for

- Source Object BP and Target Object Customer
- Source Object BP and Target Object Vendor

Activate both entries by marking the activation indicator checkbox.

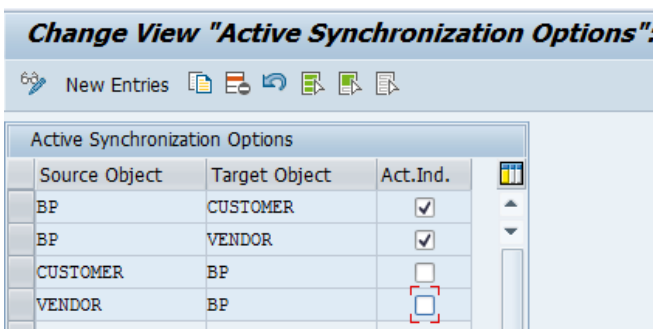


Figure 76: Active Synchronization Options.

Remark

After completing the system conversion to S/4HANA, maintenance of Customers/Vendors is only possible using the Business Partner transaction. Therefore, synchronization options Customer -> Business Partner and Vendor -> Business Partner are not any longer in use. Customizing entries can remain, but will not be used.

7.6.3. Set BP Role Category for Direction BP to Customer

In this IMG activity, you define which BP role categories enable Customer/Vendor integration in the direction from the Business Partner to the Customer/Vendor. You can determine how the system creates a corresponding Customer/Vendor in Financial Accounting when you process a Business Partner.

The BP role categories entered in this IMG activity are Customer-based. This means that the system considers Customer/Vendor integration when it processes Business Partners with a corresponding BP role. In the IMG activity, you define whether the Business Partner role assigned to the BP role category is a mandatory or optional Customer/Vendor Business Partner role.

In the case of mandatory Customer/Vendor Business Partner roles the system automatically creates corresponding Customers/Vendors. In the case of optional Customer/Vendor Business Partner roles you can determine whether you want to create a corresponding Customer/Vendor during Business Partner processing.

BP to Customer

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Set BP Role Category for Direction BP to Customer

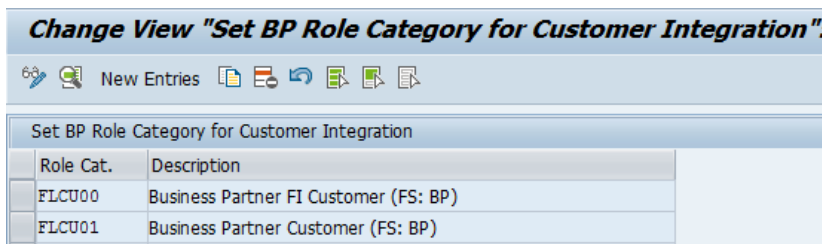


Figure 77: Set Business Partner Role for Customer Integration.

On the overview screen, you have to assign a Business Partner role category. The system creates a Business Partner with the relevant account group in the BP roles that are assigned to this account group.

BP to Vendor

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Vendor Integration -> Set BP Role Category for Direction BP to Vendor

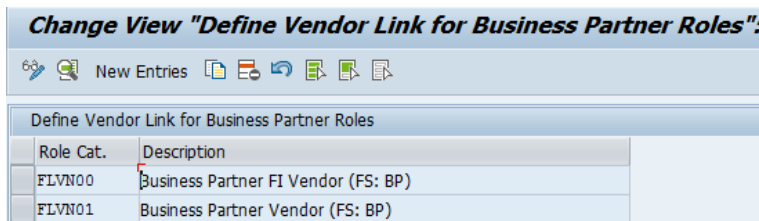


Figure 78: Define Vendor Link for Business Partner Roles.

On the overview screen, you must assign a Business Partner role category. The system creates a Business Partner with the relevant account group in the Business Partner roles that are assigned to this account group.

7.6.4. Number assignment (CVI-Target: Customer/Vendor)

In this IMG activity, you assign account groups for the Customer/Vendor master record to Business Partner groupings, to ensure that the Customer/Vendor is updated at the same time as the Business Partner is processed as part of Customer/Vendor integration. With this assignment, you can choose whether the Customer/Vendor master record is created with an account group with internal or external number assignment or with identical numbers. In case you are using same numbers you need to adjust the number ranges for business partners and customer / vendor as described in chapter 7.1.8.2. Number Ranges and Groupings

Assign the same intervals for Business Partner and Customer/Vendor. Set the Customer/Vendor number assignment to external to ensure that newly created Customer/Vendor will have the same numbering as the corresponding Business Partner. Set the flag "Same number".

Number Assignment (BP to Customer)

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Customer Integration -> Field Assignment for Customer Integration -> Assign Keys -> Define Number Assignment for Direction BP to Customer

Change View "Number Assignment for Direction BP to Customer": Overview

Gr...	short name	AC...	Name	Same Nu...
0001	Int.No.Assgnmnt	DEBI	Customer (general)	<input checked="" type="checkbox"/>
0002	Ext.No.Assgnmnt	KUNA	Customer (ext.number assgnmnt)	<input type="checkbox"/>
GPEX	Ext.no.assgnmnt	DEBI	Customer (general)	<input type="checkbox"/>
GPIN	Int.no.assgnmnt	DEBI	Customer (general)	<input type="checkbox"/>



Figure 79: Number Assignment for Direction Business Partner to Customer.

Number Assignment (BP to Vendor)

IMG -> Cross-Application Components -> Master Data Synchronization -> Customer/Vendor Integration -> Business Partner Settings -> Settings for Vendor Integration -> Field Assignment for Vendor Integration -> Assign Keys -> Define Number Assignment for Direction BP to Vendor

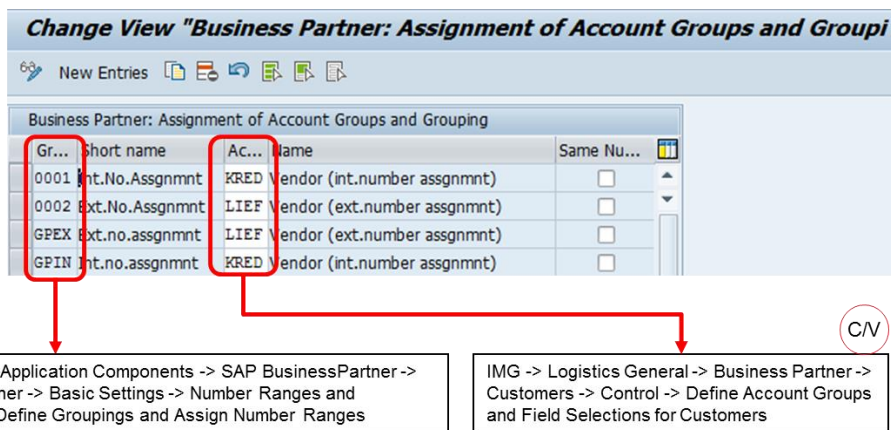


Figure 80: Assignment of Account Groups and Groupings.

7.6.5. Change Field Status of Account Groups

After system conversion, the transactions to create or maintain Customer and Vendor cannot be used anymore and are redirected to Business Partner transaction BP.

Future settings regarding field status of Customer and Vendor master records can be configured using the corresponding Business Partner settings. To make sure that the field status settings defined in customer and vendor master records are considered in transaction BP, implement SAP Note [2516606 - BP_CVI: Taking into account the FI-specific field modification of customer and vendor in transaction BP / 2603898 - BP_CVI: Composite SAP Note for consideration of FI field modifications \(FMOD1\) in transaction BP in CVI in S/4HANA](#)

Further helpful hints in handling this topic:

Along with field modification mapping to business partner field groups in transaction BP please also check this information:

- SAP Note [2603898 BP_CVI: Composite SAP Note for consideration of FI field modifications \(FMOD1\) in transaction BP in CVI in SAP S/4HANA](#)
- SAP Note [2848273 CVI_BDT: Find reason for field status \(required, hidden etc.\) of fields in transaction BP \("Check Visibility Report"\)](#)
- Blog "Tips and Tricks on Field Modifications in Transaction BP, CVI in S/4HANA"
<https://blogs.sap.com/2020/06/17/tips-and-tricks-on-field-modifications-in-transaction-bp-cvi-in-s-4hana/>

For finding field group and data set, in transaction BP place the cursor into the field you want to get information about. Enter OK-Code BDT_ANALYZER in transaction field. After this a Pop-Up will appear where you can get all technical information as of field group, data set, etc.

For further field status analysis, you can use transaction CVI_CHECK_VISIBILITY. If in transaction BP an input field is mandatory, display-only, hidden or optional and you expect a different field status for this field group, or you wish to change it, this transaction can show you the reason for the field status.


7.6.6. Industry Mapping

You need to maintain the industry mapping for the direction Business Partner to Customer/Vendor. The configuration steps are already described in chapter 7.3.8.4.4 Assign Industries, 'Industry mapping for the direction Business Partner to Customer/Vendor'.

Check, that you maintained valid values as described in the above-mentioned paragraph.

7.6.7. General Mapping Checks

Ensure that all the values you maintained for value mapping in CVI Customizing are available in Business Partner Customizing. Double check your settings for Contact Person, Customer and Vendor. See chapters



7.3.8.3 Customer Value Mapping (Contact Person), 7.3.8.4 Customer Value Mapping and 7.3.8.5 Vendor Value Mapping for reference.

7.6.8. Tipps and Tricks

- Over the time the PPO could contain a huge number of entries. In non-productive systems you may use transactions from package /SAPPO/ORDER to clean up the PPO.
Please consider note [2776860](#) - program /SAPPO/DELETE_ORDERS is obsolete and deletion of PPO orders are not supported.
- Transaction MDS_COMPARE_TOOL can be used to validate synchronization between Business Partners and Customer/Vendor Masters. It is available in both, ECC and S/4HANA. It is neither mandatory nor strongly recommended to use it. However, when there are issues or doubts regarding correct synchronization this transaction can be used to check.
Please consider: all changes to customers/vendors in ECC that are not synchronized with BP are lost in S/4HANA as the BP becomes the leading object.

8. IMPACT ON CUSTOM CODE

There is some impact on custom code related to CVI/BP in S/4HANA.

All Batch Input and CALL TRANSACTION statements must be reimplemented with API CL_MD_BP_MAINTAIN.

Only one exceptional case for CALL TRANSACTION is usable, when just calling the transaction without any parameter for calls to those old transactions, which are automatically re-directed to the proper transaction for these old transactions:

FD01, FD02, FD03, FK01, FK02, FK03, MAP2, MAP3, MK01, MK02, MK03, V-03, V-04, V-05, V-06, V-07, V-08, V-09, V-11, VAP1, VAP2, VAP3, VD01, VD02, VD03, XD01, XD02, XD03, XD05, XK01, XK05, XK06, XK07, XK02, XK03.

The exception is not valid old transactions where re-direct doesn't work:

FD06, FK06, MK06, MK12, MK18, MK19, VD06, XD06, XD0, V+21, V+22, V+23, MAP21, FDO

The listing of the above-mentioned old transactions can be found in the central note [2265093 – S4TWL – Business Partner Approach](#).

The ECC corresponding Customer/Vendor master data table fields are populated in SAP S/4HANA via Business Partner to Customer/Vendor CVI.

Instead of writing a direct write statement or a custom code on the tables mentioned in piece list SI_MD_BP or for creating or updating the Business Partner master data you must use the available API (CL_MD_BP_MAINTAIN), IDOC or BP SOA Service as described in SAP Note [2417298 - Creation of Business Partner with Customer and Supplier Roles](#).

9. IMPACT ON SURROUNDING SYSTEMS / OTHER APPLICATIONS

9.1. Interfaces

9.1.1. General Information

The following interfaces for Business Partners still work in an SAP S/4HANA side-by-side implementation

- CIF interface for Business Partner, e.g., SCM-EWM, SCM-TM
- Middleware for Business Partner synchronization, e.g., CRM
- BW report on Customers and Vendors (for BW extractors always check note [25002020 - S4TWL - BW Extractors in SAP S/4HANA](#))

Any external application creating or updating the Business Partner Master Data must use IDOC or BP SOAP Service as described in SAP Note [2417298 - Creation of Business Partner with Customer and Supplier Roles](#).

Please also consider following notes:

- SAP Note [2506041 - S4TWL - API RFC_CVI_EI_INBOUND_MAIN](#) is not supported from the release S/4 HANA OP 1709 FPS2 and in Cloud Edition 1805 onwards
- SAP Note [2650140 - RFC_CVI_EI_INBOUND_MAIN](#) to become obsolete.

For creation of business partners in the same system, the API ABAP Class CL_MD_BP_MAINTAIN can be used.

Batch Input as a technology to maintain customer master and supplier master data will not be supported in S/4HANA. Since SAP S/4HANA follows the "Business Partner first" approach, Batch Input programs will cease to work as classical customer and supplier transactions have been made obsolete. For details and alternatives check SAP Note [2492904 - S4TWL - Batch Input for Customer Master/Supplier Master](#).

You can navigate to transaction BP from another application within the system by calling by the function module (FM) BUP_PARTNER_MAINTAIN.

See also chapter 6.2. Migration / BP update.

9.1.2. IDocs DEBMAS/CREMAS in S/4HANA

These both IDoc-types are still available in S/4HANA. The inbound processing has been redesigned to support CVI-synchronization from BP to Customer/Vendor (see note [2417298 - Integration of Business Partner with Customer and Supplier Roles](#)).

Restrictions have to be considered as the IDocs only cover Customer or Vendor Part (e.g. merging of customer and vendor to same BP is not supported). Also due to the changed API (supporting sync BP-> C/V) some technical restrictions exist (ref. to note [2479954 - DEBMAS/CREMAS IDocs in SAP S/4HANA Business Partner](#)).

Notes:

- IBAN only: If the IDocs contain IBAN only (no bank ID, bank account, just IBAN) the MM-Switch MM_SFWS_SC2 (Business Function LOG_MM_CI_2) has to be activated for both IDoc types to process these (ref. to KBA [1664137 - IBAN field is not getting updated by CREMAS / DEBMAS Idoc](#)).
- You are trying to use the DEBMAS/CREMAS IDOCs to replicate Business Partner (Customer/Vendor) with Bank Account information with only IBAN and without Account Number, but the Bank Account information is not replicated. Solution: Implement this SAP Note: [2754287 - DEBMAS/CREMAS IBAN without Bank Account Number functionality](#)
- For custom logic in DEBMAS/CREMAS in S/4HANA please check SAP Note [2630068 - Handling custom logic in DEBMAS/CREMAS in S/4 HANA](#)

9.2. Employee Replication

SAP S/4HANA customers may also be using SAP ERP HCM on-premise and like to continue to use SAP ERP HCM. SAP HCM can be run in either a separate instance or single instance with SAP S/4HANA. The

integration among both on-premise instances (SAP HCM with SAP S/4HANA on-premise) will be available via ALE in case SAP HCM is running on separate instance. In case SAP HCM is running in the same instance as SAP S/4HANA on-premise, then the integration is automatically given as part of so-called Compatibility Mode.

The new data model in S/4HANA is based on Business Partners (BP). A BP must be assigned to each employee. **Employee master data is not part of CVI.** They will need to be created as Business Partners with role 'Employee' and 'Vendor'.

After conversion to SAP S/4HANA, the migration report /SHCM/RH_SYNC_BUPA_FROM_EMPL must be executed before productive use of the system. Due to customizing dependencies, the report cannot be executed in technical downtime.

For more details, please refer to the following SAP Notes:

- [2340095 - S4TWL - Conversion of Employees to Business Partners](#) (check the attachments according to intended S/4HANA target release, e.g., "Integration Guide - OP 2020.pdf").
- [2713963 - FAQ: CVI - Customer Vendor Integration for system conversion to SAP S/4HANA](#)
- [2409229 - Employee Synchronization Report: FAQ](#)

Mandatorily please check for the [New Employee Business Partner Model in S/4HANA](#). It was introduced with S/4HANA 2020 on-premise. E.g. it allows to properly reflect concurrent and global employment of BPs in role Employee (see details in the [link](#)). In order to get the new model, it needs to be switched on, check "Integration Guide - OP 2020.pdf" for details.

For any preparing or existing CVI/BP configurations in ECC please be especially aware of "Integration Guide - OP 2020.pdf", section 3 "Conversion from SAP ERP to SAP S/4HANA" and your ECC CVI target model design (SAP Note on page 18). If you want to go for the [New Employee Business Partner Model in S/4HANA](#), check for using this implementation SAP Note:

- [2539457 - CVI & employee vendors in incorrect BP category](#): If CVI is active, BP is created in Person category during Vendor creation or conversion.

These options via the following SAP Notes then are not recommended:

- [2542175](#): If CVI is active, Employee BP is reused during Vendor creation or conversion (instead of creating new BP for the Vendor). From the note: "However, this SAP S/4HANA data model has restrictions and we therefore not do recommend it."
- [2869343](#): If CVI is active, Employee BP is reused despite potential restrictions during Vendor creation or conversion. From the note: "This is not desired by default because this data model may have restrictions regarding the data currentness of the employee business partner if you use or will use concurrent employment or a country reassignment (CE/GE) in HR, and we therefore do not recommend it."

Please also check section 7.3.10 Preparation for converting HCM Employees to Business Partners.

For releases S/4HANA 1809 FPS02 – 1909 (all FPS, SPS), additional detailed information and 'how to' could also be found in the cookbook: [SAP S/4HANA Cookbook Employee Business Partner Integration as of SAP S/4HANA 1809 FPS02](#). This cookbook doesn't reflect changes which were introduced with S/4HANA 2020.

For personal data handling topics please review this SAP Note:

- [2959779 FAQ: Personal Data handling of Employee Business Partners](#)

9.3. Credit Management

Credit Management (FI-AR-CR) is not available as part of SAP S/4HANA. The functional equivalent in SAP S/4HANA is SAP Credit Management (FIN-FSCM-CR). You must migrate FI-AR-CR to FIN-FSCM-CR.

The migration contains amongst others Business Partner related steps (e.g. Activating the Business Partner Role for Credit Management).

For details see SAP Note [2270544 - S4TWL - Credit Management](#). A detailed task list including business partner related steps is attached to the note.

9.4. CRM

Note [2285062 – S4TWL: Business partner data exchange between SAPCRM and S/4HANA, on-premise edition](#) provides an overall introduction how to handle adaptations in the various CVI-phases. This note contains links to further notes and information.

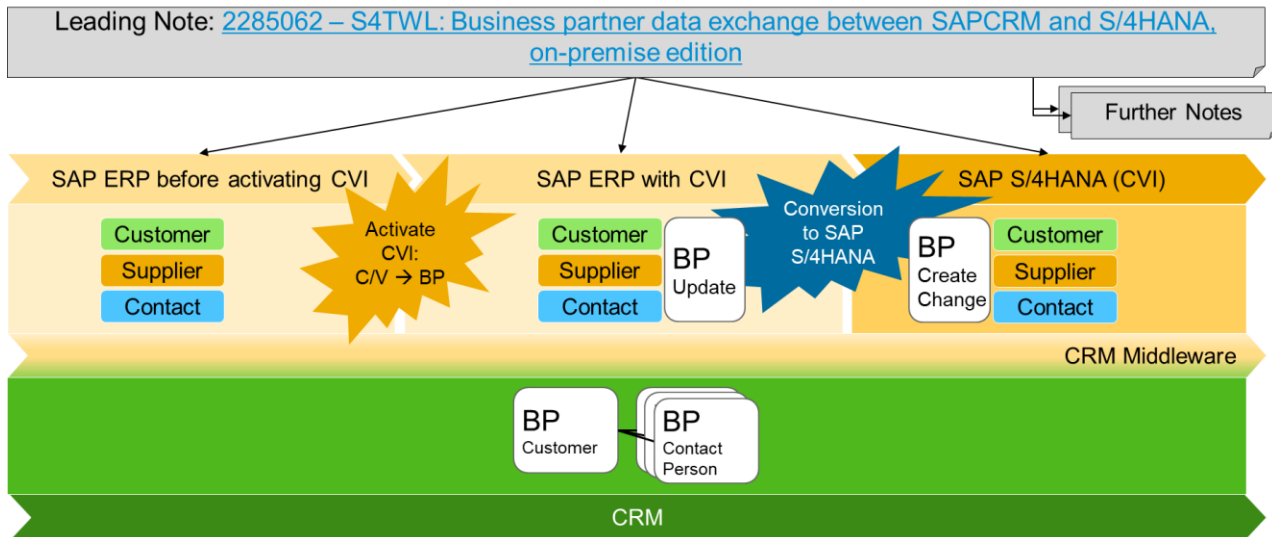


Figure 81: Phases for SAP CRM Integration in SAP ERP and SAP S/4HANA

It also contains important and mandatory steps to be executed **before** activating the CVI and starting mass synchronization- Please consider following cross referenced notes:

- [2283695 – Synchronization cockpit generates business partners with wrong GUIDs by ignoring SAP CRM mapping tables](#)
- [2420959 – Address GUID RFC BADI for CVI_MAPPER](#)

Important

It is imperative that the BAdI's are implemented before the Customer Vendor Integration (CVI) is activated and the mass synchronization of Customer or Vendor master data for the generation of Business Partners is started. If you start the synchronization before the implementation, the mapping between Business Partners that is used in an integration scenario with SAP CRM is irretrievably lost.

A check report is provided to examine whether the BAdI implementation is available in your system (note [2304337 - Description note for Pre Check Class for Badi implementation CVI_MAPPER](#)). In addition, a check report is available that identifies any existing inconsistencies (if you have been using an active CVI already) or any inconsistencies that appear after mass synchronization.

For more information about the preparation steps as well for the steps after system conversion, please refer to the latest version of the above-mentioned SAP Note.

Phases:

- ECC, before activating CVI
 - check consistency and completeness of SAP CRM mapping tables containing BP-GUIDs from SAP CRM (CRMKUNNR, CRMPARNR, CRMLIFNR)
 - implement notes [2283695 – Synchronization cockpit generates business partners with wrong GUIDs by ignoring SAP CRM mapping tables](#), [2420959 – Address GUID RFC BADI for CVI_MAPPER](#),
- ECC, activating CVI and mass synchronization with MDS_LOAD_COCKPIT
 - Before MDS_LOAD_COCKPIT: deactivate CRM Middleware
 - Mass synchronization with MDS_LOAD_COCKPIT: GUIDs from before mentioned tables are used

- After MDS_LOAD_COCKPIT: Change setup and reactivate CRM Middleware
Decide for a leading object (Customer or BP) and use note [1808119 – Creating or Changing ECC customer results in two queues in CRM](#)
If BP becomes leading object follow instructions from note [1968132 – Business partner replication between CRM and ECC with active CVI](#)
- After MDS_LOAD_COCKPIT: Check for any inconsistent GUIDs with report from note [2304337 – Description note for Pre Check Class for Badi implementation CVI_MAPPER](#)
- S/4HANA (after SUM), BP is leading object
 - Execute steps from note [2283810 – Customizing settings for business partner data exchange between SAP S/4HANA, on-premise edition and SAP CRM in downtime after S/4HANA conversion](#). Please be also aware of note [2882755 - Addendum to note 2283810](#), if you do not want to exchange business partner, customer master, and vendor master data in SAP S/4HANA.
 - Consider these 2 notes for any restrictions: [2231667 – Restrictions for integration of SAP S/4HANA, on-premise edition with SAP CRM, partially resolved with 2324473 – Integration of SAP CRM with SAP S/4HANA: resolved restrictions](#)

A detailed description is presented in openSAP course “[Key Functional Topics in a System Conversion to SAP S/4HANA](#)” (please refer to week 3, unit 5).

See also the following list of SAP Notes related to SAP CRM and CVI:

- [2231667 – Restrictions for integration of SAP S/4HANA, on-premise edition with SAP CRM](#)
- [Partially resolved with 2324473 – Integration of SAP CRM with SAP S/4HANA: resolved restrictions](#)
- [1808119 - Creating or Changing ECC customer results in two queues in CRM](#)
- [1968132 - Business partner replication between CRM and ECC with active CVI](#)
ECC 617 only. For lower releases please apply SAP Note [2545498 - Incorrect Business partner GUIDs between ERP and CRM with Active CVI](#)
- [2283695 - Synchronization cockpit generates business partners with wrong GUIDs by ignoring CRM mapping tables](#)
- [2654430 - Data exchange between the CRM and S4 is not possible as Guid of the Business partners are different in both the systems for the old business partners.](#)
- [2748477 - Mapping of CRM GUID to S4 BP GUID not considered in FM - COM_BUPA_MWX_FILTER_MAIN](#)
- [2624257 - Vendor creation results in inconsistent guids between main tables and CRM mapping table](#)
- [2704424 - Customer creation results in inconsistent guids between main tables and CRM mapping table.](#)
- [2545498 - Incorrect Business partner GUIDs between ERP and CRM with Active CVI](#)
- [2283810 - Customizing settings for business partner data exchange between SAP S/4 HANA, on-premise edition and SAP CRM](#)

BP Role Filtering

If there is a need to filter out roles or complete business partner for replicating from ERP to CRM a Z-function module has to be registered in ERP in table COM_BUPA_CALL_FU (transaction COM_BUPA_CALL_FU). It has to be entered at event R3OUT / object BUPA before the main function module to prepare BP data is called, e.g.

Display View "Determining Function Modules for Data Exchange: BP": Overview

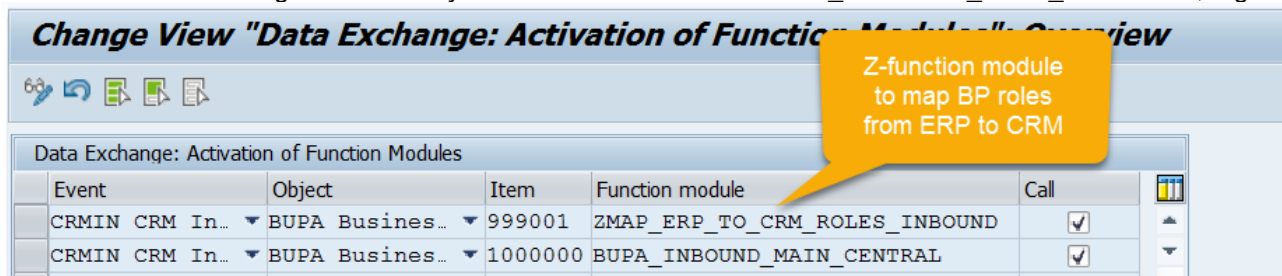
Time	Object	Item	Funct.name	Call
R3OUT Mappin...	BUPA Busines...	50000	ZCMD_COM_BUPA_MWX_BPS_FILL	<input checked="" type="checkbox"/>
R3OUT Mappin...	BUPA Busines...	200000	CMD_COM_BUPA_MWX_BPS_FILL	<input checked="" type="checkbox"/>
R3OUT Mappin...	BUPR BP Rela...	200000	CMD_COM_BUPA_MWX_BPR_FILL	<input checked="" type="checkbox"/>

Reasons to filter roles and/or BP, e.g.:

- Vendor roles are not required in CRM
- BP that are not assigned to any customer master (e.g. “pure” vendors) are not required in CRM

BP Role Mapping (Tips&Tricks):

If a role mapping from ERP (ECC and S/4) to CRM is required, an own Z-function module has to be registered in CRM in table CRMC_BUT_CALL_FU (transaction BUPA_CALL_FU). This Z-function module has to be registered directly before function module “BUPA_INBOUND_MAIN_CENTRAL”, e.g.:



Event	Object	Item	Function module	Call
CRMIN CRM In...	BUPA Busines...	999001	ZMAP_ERP_TO_CRM_ROLES_INBOUND	<input checked="" type="checkbox"/>
CRMIN CRM In...	BUPA Busines...	1000000	BUPA_INBOUND_MAIN_CENTRAL	<input checked="" type="checkbox"/>

Please note: check chapter “9.7 MDG (embedded in S/4)” for the reason not doing it in ERP outbound event CRMOU.

9.5. Industry Solution – Utilities (IS-U)

The Utilities Industry Solution cannot use MDS_LOAD_COCKPIT to convert C/V to BP. Please refer to the SAP Notes below:

- [2344100 - S4TWL - CVI Integration for SAP ISU](#)
- [2354282 - S4 PreChecks IS-UT: Reports for the conversion for transition of the SAP Utilities Industry Solution to S/4 HANA](#)
- [2364509 - Report REU_CVI_CUST_LINK does not process all records](#)
- [2202282 - S4TC IS-UT Master Check for S/4 System Conversion Checks](#)

Please note that reports REU_CVI_CUST_LINK & REU_CVI_EKUN_TO_BUT0ID need to be run to ensure CVI to be completed. You have also to keep in mind delta synchronization will not be triggered every time you create a new customer. Therefore, those programs need to be launched for all unsynchronized entries anytime you need to have CVI completed for a given technical conversion step.

Following note contains a comprehensive FAQ regarding IS-U and CVI:

- SAP Note [2792765 - FAQ: IS-UT upgrade S4](#)

9.6. Industry Solution – Retail (IS-R)

For the Retail Industry Solution please refer to these SAP Notes:

- [2310884 - SAP S/4HANA conversion for site master](#)
Especially, have a look at the attachments of the note.
- [2451504 - CVI Customizing Check Report for Customers/Vendors assigned to Sites](#)

9.7. MDG (embedded in S/4)

As per current experience please consider:

- MDG itself is using existing functionality to map and prepare data of Business Partner to be displayed. E.g., it uses event CRMOU of CRM-middleware. Every active function module will be called. This has to be considered in particular when own Z-function modules shall be registered. With this background event CRMOU is not appropriate e.g., to map BP roles from S/4 to CRM.



9.8. SAP Cloud for Customer (C4C)

For integration to SAP Cloud for Customer please find the supported integration scenarios per S/4HANA release in this note: [2293815 - S/4HANA Enterprise Management: Information about Integration Scenarios with SAP Cloud for Customer](#). The ERP AddOn CODERINT is not used in S/4HANA anymore as the integration is part of the S/4HANA core. In case of an upgrade the ERP AddOn will be deinstalled.

A describing document “S/4HANA Conversion with Integration to SAP Cloud for Customer” from an S/4HANA conversion validation can be found here:

<https://www.sap.com/documents/2018/09/925c68a9-1d7d-0010-87a3-c30de2ffd8ff.html>

or as blog here:

<https://blogs.sap.com/2018/09/20/s4hana-conversion-with-integration-to-sap-cloud-for-customer/>

10. ADDITIONAL INFORMATION

10.1. SAP Notes

Below is an overview of useful SAP Notes. The ones which are mentioned in this document are marked in column 'Link in Document'. See especially SAP Note [2265093 - S4TWL - Business Partner Approach](#).

Topic	SAP Note	Title / Description	Link in Document
BP Master Note	2265093	S4TWL - Business Partner Approach	x
New Install / Migration	2239701	SAP Rapid Data Migration for SAP S/4HANA, on premise edition	x
	2287723	LSMW in SAP S/4HANA on-premise edition	x
	2324208	Permitted Payee : DDIC changes	x
	2331298	S/4 HANA Option to Load RFC Functions not available in BP Load program	x
	2312529	Error in ALE inbound while receiving the data for DEBMAS	x
Enhancements	2309153	BP_CVI: Guideline Version 1.14 for customer enhancements in CVI (Customer/Vendor integration) in S4HANA releases	x
	2295823	BP_CVI: Transfer of Customer / Vendor fields to the Business Partner - template source code	x
	1623809	Developer documentation for the XO framework	x
	2565693	BP_BCL: Customer-specific validation of central BP data does not work in certain cases	
MDS_LOAD_COCKPIT Synchronization	2513118	MDS_LOAD_COCKPIT creates CVI_CUST_LINK/ CVI_VEND_LINK entries in test run mode	
	2701228	PPO improvements for mds_load_cockpit	
	2780288	S/4 HANA Migration: The BP checks can be suppressed in the direction Customer/Vendor->BP during synchronization from MDS_LOAD_COCKPIT	
	2906882	Checks are not suppressed after the SAP Note 2780288	
	2898039	BP CVI: Incorrect error handling during mass synchronization of vendors to business partners	
	2923695	Inconsistent CVI links created due to error while creating BP during synchronization.	

Topic	SAP Note	Title / Description	Link in Document
	2907519	Master Data Synchronisation Tool Revamp	
	2954330	Performance Improvement of Monitor Tab in MDS_LOAD_COCKPIT	
	2958046	CVI : MDS_LOAD_COCKPIT does not display Logs of a specific date	
	2955619	MDS_LOAD_COCKPIT excel upload rows count	
	2386600	CVI: incorrect error handling in BP Synchronization with Contact Person	
	2446456	CVI: Contact Person Business Address mapping is not always correct	
	2763205	Customer contact person communication change not reflected to Business Partners	
	2777401	Contact person business address not getting updated when an address is changed	
	2804399	Synchronization to BP fails post test run execution.	
	2647788	Simulation functionality in Business Partner	
	2786293	CVI: During Business partner mapping to Customers/Vendors, contact persons are not mapped correctly.	
Linking / Mapping	974504	Inconsistencies in link tables of master data sync	x
	1958471	CVI_VEND_CT_LINK table has inconsistent entries (SAP Note mentioned in 974504)	
	2831298	Inconsistency in CVI_VEND_CT_LINK table.	
	2798554	CVI_OTH: Views for tables CVI_CUST_LINK and CVI_VEND_LINK with BP ID	
	954816	Transactions for creating/linking BPs	x
	1306639	BP_CVI: Optnl creation of BP from cust./vend. w/ active CVI	
	2383051	Development of Vendor contact person mapping to Business Partner (current status of SAP Note: Pilot)	x
	2363892	Linking Customer and Vendor to a single Business Partner during initial load before upgrade to S/4	x

Topic	SAP Note	Title / Description	Link in Document
Business Functions	1454441	Development of contact person for Vendors (see prerequisites and side effects)	x
Restrictions	2214213	SAP S/4HANA, on-premise edition 1511: Restriction Note (limited number of fields in BP)	x
Checks & Tools	2832085	New Central Cockpit for Customer Vendor Integration (CVI) to Business Partner	x
	2823648	Information on Pre-requisite SAP Notes for Business Partner CVI Synchronization	x
	2820678	CVI SAP_APPL TCI	x
	2891455	New Customizing Check Report for SAP S/4HANA Master Data Migration (BP<->CVI)	x
	2211312	S4TC SAP_APPL: Pre-Conversion check for Business Partner (check class)	x
	2210486	Obsolete - Conversion report: Documentation of checks and IMG activities plus Z-report to use BP-check-class	*
	956054	BP_CVI: Customer/Vendor integration as of ERP 6.00	x
	2344034	S/4HANA Automation for Master Data Migration (CVI_UPGRADE_CHECK_RESOLVE)	x
	2345087	Prerequisite for 2344034: Missing values in required entry fields cause posting termination in mass processing	x
	2336018	Prerequisite for 2344034: Suppress Mandatory BP field groups checks via MDS_LOAD_COCKPIT transaction	x
	2874184	Information on test run behaviour.	x
	2743494	2743494 - Prevalidation: Master Data Consistency Check	x
	2780288	S/4 HANA Migration: The BP checks can be suppressed in the direction Customer/Vendor->BP during synchronization from MDS_LOAD_COCKPIT	x
	2891522	CVI_COCKPIT: Navigation to new customizing check report	X

Topic	SAP Note	Title / Description	Link in Document
	2861108	CVI_COCKPIT: CVI_LOAD Table entries and Documentation	X
	2812309	CVI_COCKPIT: CVI_LOAD Stage	X
	2850361	Delivery of texts (DE/EN) for language-dependent objects of TCIs for customer/vendor integration (SAP Note 2818292)	X
	2850537	Central Customer Vendor Integration(CVI) Cockpit - Interface note	X
	2942339	Prevalidation: Master Data Consistency Check V2 - DDIC creation	X
	2891951	Enhancements to Prevalidation: Master Data Consistency Check Report	X
	2949093	Enhancements to Prevalidation: Master Data Consistency Check Report - Authorization Object	X
	2949094	Prevalidation: Master Data Consistency Check Report -Authorization Object: DDIC	X
	2958796	Vendor data is not getting saved from Prevalidation: Master Data Consistency Check Report	X
	2996762	Industry checks are not getting performed in Master Data Consistency Check (Tcode : CVI_PRECHK)	X
	2968936	Master Data Consistency Check Report - Address Cleansing based on Data Quality Management (DQM): DDIC Creation	X
	2957924	Master Data Consistency Check Report - Address Cleansing based on Data Quality Management (DQM)	X
	2807124	Mismatching parameter for interface IF_ADDRESS_COMM_CHECK	
	2749015	Country specific checks for communication data	
	2832840	Documentation Update for BaDI Suppression Checks	
	2872225	CVI_BDT: Unit tests for reports CVI_CHECK_VISIBILITY and CVI_CHECK_VISIBILITY_BUPR	

Topic	SAP Note	Title / Description	Link in Document
BP Corrections	2326148	Classification Functionality on Business Partner Customer / Vendor side.	
	2484379	Returns Vendor Functionality	
Mass Maintenance	2346269	Mass Maintenance Functionality of Customers/Vendors using XD99 and XK99	x
Interfaces/DEBMAS/ CREMAS IDocs	2417298	Creation of Business Partner with Customer and Supplier Roles	X
	2506041	S4TWL - API RFC_CVI_EI_INBOUND_MAIN is not supported from the release S/4 HANA OP 1709 FPS2 and in Cloud Edition 1805 onwards	X
	2479954	DEBMAS/CREMAS IDocs in SAP S/4HANA Business Partner	x
	2754287	DEBMAS/CREMAS IBAN without Bank Account Number functionality	x
	1664137	IBAN field is not getting updated by CREMAS / DEBMAS Idoc	x
Employee	2340095	S4TWL - Conversion of Employees to Business Partners	x
	2323301	Customizing document - Synchronization of Business Partner for SAP HCM Employee Role	x
	2792166	Same number for BP and employee → Consider referenced notes	
	2475550	HCM Employee Handling in BP transaction - DDIC Report	x
	2475604	HCM Employee Handling in BP transaction	x
	2463565	Behavior of transaction BP in S/4HANA system with respect to Employee data from HR system	x
	2507610	Exception raised while calling S/4 method due to mismatch in returning parameter.	x
	2539457	CVI & employee vendors in wrong BP category	x
	2542175	CVI and reuse of existing employee business partner	x
2000099	CVI fails with error R1231: "Form of address &1 not designated for organizations"	x	

Topic	SAP Note	Title / Description	Link in Document
	2880559	Enhancing BAdI interface CVI_MAP_TITLE~IF_EX_CVI_MAP_TITLE with new importing parameters.	x
	2959779	FAQ: Personal Data handling of Employee Business Partners	x
CRM	2285062	S4TWL: Business partner data exchange between SAP CRM and S/4HANA	x
	2283810	Customizing settings for Business Partner data exchange between SAP S/4 HANA, on-premise edition and SAP CRM	x
	2882755	Addendum to note 2283810	x
	1968132	Business partner replication between CRM and ECC with active CVI (ECC 617 only)	x
	2526204	Restricting the replication of vendor BP's from ECC to CRM	x
	2283695	Synchronization cockpit generates business partners with wrong GUIDs by ignoring SAP CRM mapping tables	x
	2420959	Address GUID RFC BADI for CVI_MAPPER	x
	2304337	Description note for Pre Check Class for Badi implementation CVI_MAPPER	x
	1808119	Creating or Changing ECC customer results in two queues in CRM	x
	2231667	Restrictions for integration of SAP S/4HANA, on-premise edition with SAP CRM	x
	2324473	Integration of SAP CRM with SAP S/4HANA: resolved restrictions	x
	2654430	Data exchange between the CRM and S4 is not possible as Guid of the Business partners are different in both the systems for the old business partners.	x
	2704424	Customer creation results in inconsistent guids between main tables and CRM mapping table.	x
	2624257	Vendor creation results in inconsistent guids between main tables and CRM mapping table	x
2748477	Mapping of CRM GUID to S4 BP GUID not considered in FM - COM_BUPA_MWX_FILTER_MAIN	x	

Topic	SAP Note	Title / Description	Link in Document
	2545498	Incorrect Business partner GUIDs between ERP and CRM with Active CVI	x
Credit Management	2270544	S4TWL - Credit Management S4TWL - Credit Management	X
Time Dependency	2379157	S4TWL - Business Partner BUT000/Header Level Time Dependency (- -> To include in precheck, if BP is in use and time dependency for BUT000 is activated)	X
Field Control	2603898	BP_CVI: Composite SAP Note for consideration of FI field modifications (FMOD1) in transaction BP in CVI in S/4HANA	X
	2848273	CVI_BDT: Find reason for field status (required, hidden etc.) of fields in transaction BP ("Check Visibility Report")	x
	2516606	BP_CVI: Taking into account the FI- specific field modification of customer and vendor in transaction BP	x
TAX Errors	1006160	New tax number types for new EU members as of 01.01.2007	X
	2098239	Entry in field tax code 2 is longer than 11 characters	x
	958424	BP:Error message for tax code 2 customized	X
	2445162	CVI: BP Tax number DE5 mapping is incorrect for Vendors	
	2317896	Field taxnumber of stcd5 is filled during synchronization.	
	2299895	Wrong CVI mapping of chinese tax number	
	2527465	CVI fails for tax catagories AR1D and AR1Z for country Argentina	
	2463731	Chinese Golden Tax Number: Tax-Type CN5 mapping with STCD5	
	1751648	Missing Tax Number Category Argentina Localization	
	1382602	Vat Registration number for switzerland mapped incorrectly	
	1128784	Error:VAT registration number was already edited for country	
1041155	Migration problem for Switzerland VAT registration number		

Topic	SAP Note	Title / Description	Link in Document
	2232604	Error BUPA_TAX200 when replicate Vendor or Customer to Business Partner	X
	2766031	Tax number check and tax number entry (STCEG) in FI after EU withdrawal	
IS Utilities	2344100	S4TWL - CVI Integration for SAP ISU	x
	2354282	S4 PreChecks IS-UT: Reports for the conversion for transition of the SAP Utilities Industry Solution to S/4 HANA	x
	2202282	S4TC IS-UT Master Check for S/4 System Conversion Checks	X
	2792765	FAQ: IS-UT upgrade S4	X
Retail	2310884	SAP S/4HANA conversion for site master	
	2814283	S4 Precheck doesn't exclude Contact Persons for site master	

10.2. Documentation

Below is a list of links to further resources.

- [S/4HANA Simplification Item Catalog](#)
- [Conversion Guide for SAP S/4HANA 2020](#)
- [SAP Help: Introduce Business Partner Approach](#)
- [SAP Help: Customer Vendor Integration](#)
- [SAP Help: Master Data Synchronization](#)
- [SAP Note 2265093 S4TWL - Business Partner Approach](#)
- [SAP Note 2340095 S4TWL – Conversion of Employees to Business Partners](#)
- [SAP Note 2713963 FAQ: CVI - Customer Vendor Integration for system conversion to SAP S/4HANA](#)
- [SAP Note 2823632 Consulting Note for Business Partner Approach and CVI Process](#)

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