



Implementation Guide | PUBLIC

Document Version: 2H 2023 – 2023-12-14

Replicating Employee Data from SAP ERP HCM to Employee Central Using SAP Cloud Integration as the Middleware

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1 Introduction

The purpose of this guide is to help implement the integration of SAP ERP HCM systems with SAP SuccessFactors Employee Central.

Use this integration guide to set up a regular or one-time replication of employee-related data from the SAP ERP HCM system to Employee Central.

! Restriction

The integration add-on for SAP ERP HCM and SAP SuccessFactors Employee Central (SFSF EC INTEGRATION add-on with software component PA_SE_IN) can be used to integrate the cloud HR solution provided by SAP (SAP SuccessFactors) with on-premise ERP applications provided by SAP (SAP ERP HCM) only. The add-on is included in the license for these systems.

The add-on cannot be licensed to use for integration between non-SAP cloud HR solutions and SAP ERP HCM.

Filtering of the employee data for extraction should be done only for country. To do so, you can define periods based on countries in which the data is valid for the replication. Data that is outside these periods are classified as invalid for the replication. You can use the data replication described in this guide in two scenarios:

- Either to set up a regular web service-based replication or csv file-based replication of employee data from the SAP ERP HCM system to Employee Central when using the side-by-side deployment option.
- Or to set up a delta-enabled migration to initially move your employee data from the SAP ERP HCM system to Employee Central if you want to transition to the side-by-side or the core hybrid deployment option and plan to use Employee Central as the master system for employee-related data in the future.

The **side-by-side deployment option** is for customers who want to transition their HCM system to the Cloud while still leveraging investments into employee data administration on premise. It comprises the coexistence of HR core in the Cloud (SAP SuccessFactors Employee Central) and on premise (SAP ERP HCM). In this scenario, Employee Central is used as the cloud-based core HR system for a subset of employees. SAP ERP HCM as still retained as the core HR system for another subset of employees. Changes are being made in the system of record of the employee's data. The core HR system landscape is inhomogeneous or distributed and needs to be consolidated to enable centralized access, reporting, and so on. For more information see the *Integrating SAP ERP with Employee Central in a Side-by-Side Deployment Option* integration guide.

The **core hybrid deployment option** means that Employee Central is used as the system of record holding the employee data and reporting lines of all employees, but existing processes such as Payroll, Time Management, or custom HR processes still run in an SAP ERP HCM on-premise system landscape.

! Restriction

Data replication from SAP ERP HCM systems to Employee Central is generally available for:

- Existing SAP SuccessFactors customers leveraging SAP SuccessFactors Performance & Goals, SAP SuccessFactors Succession & Development, Employee Profile and Organization Chart as part of the Foundational Capabilities, and the related Reporting capabilities.

- Net new SAP SuccessFactors customers who don't use any of the SAP SuccessFactors solutions yet, but have implemented or plan to implement SAP SuccessFactors Employee Central for parts of their organization.

1.1 Before Starting: Am I reading the right documentation?

Before you start looking for information in this document, you need to be sure you're looking in the right place.

This document describes how to set up **integration** between SAP ERP HCM and SAP SuccessFactors Employee Central. It assumes that you have a team of experts in place who know their ways in the systems involved in the integration.

What this document does **not** describe:

- How to set up and use Employee Central. For example:
 - How to configure object types in Employee Central. We tell you which prerequisites object types must fulfill so that they can be replicated between SAP ERP HCM and Employee Central. For example, whether a length restriction applies to a specific field. For basics such as how to restrict the length of a field, please see the Employee Central documentation.
 - Why and how to enable Position Management in Employee Central. We tell you what happens in the integration if Position Management is or is not enabled. For basics such as when and how to enable it, please see the Employee Central documentation.
- How to set up and use the SAP ERP HCM system. For example:
 - How to use the Customizing Implementation Guide (IMG) in your system. We tell you which customizing activities and settings are relevant for integration. For basics such as how to make entries in customizing views or how to implement a Business Add-In, please see the SAP ERP HCM documentation.
 - How to create a variant for a program or schedule it to be run in the background. We tell you which programs you need to execute or schedule. For basics such as how to define variants or background jobs, please see the SAP ERP HCM documentation.
- How to set up and use the middleware. For example:
 - How to find and use the monitoring UI. We tell you what you should pay attention to when monitoring integration flows. For basics such as how to use middleware monitoring in general, please see the middleware documentation.
 - How to upload a certificate. We tell you when a certificate is required. For basics such as how to upload it, please see the middleware documentation.

Read the following information to learn how to set up and use the products or modules involved in the integration.

Product / Module	Where to Find Information
Employee Central	https://help.sap.com/docs/SAP_SUCCESSFACTORS_EMPLOYEE_CENTRAL > <i>Implement</i>

Product / Module	Where to Find Information
SAP ERP HCM	<p>For platform information: https://help.sap.com/docs/SAP_NETWEAVER > <i>ABAP Platform</i></p> <p>For information about SAP ERP in general: https://help.sap.com/docs/SAP_ERP</p> <p>For specific information about SAP ERP HCM: https://help.sap.com/docs/ERP_HCM</p>
Middleware	https://help.sap.com/docs/CLOUD_INTEGRATION

i Note

For information about data purge, refer to the following sections in the SAP SuccessFactors guide *Implementing and Managing Data Protection and Privacy*:

- [Purge of Employee Central Data Replicated to the Enterprise Resource Planning \(ERP\) System](#)
- [Purge of Data Related to Data Replication to Employee Central in the Enterprise Resource Planning \(ERP\) System](#)

1.2 Your Integration Team

The implementation and integration process of SAP SuccessFactors Employee Central with SAP ERP HCM is a collaborative effort that leverages the skills of various experts.

You need to pull together a team of experts for your implementation project when integrating SAP SuccessFactors Employee Central with SAP ERP HCM.

The following experts are typically involved in the process:

Expert	What the Expert Does
SAP SuccessFactors consultant	<ul style="list-style-type: none"> • Is the main point of contact for the entire implementation and integration process. • Ensures that all required system settings for Employee Central are done. • Works closely with the SAP ERP HCM team, to ensure successful data replication.
Middleware consultant	Provides support on setting up the middleware.
SAP ERP HCM consultant	<ul style="list-style-type: none"> • Is the main point of contact for the configuration of SAP ERP HCM according to the needs of the customer. • Works closely with the SAP SuccessFactors consultant to ensure successful data replication.

1.3 Target Group of This Document

Take a look at the target groups this document is intended for.

The following groups of people will benefit from reading this document:

- Implementation partners, consultants, and Product Support, for fast support of customers and prospective customers
- Cloud operations
- SAP-certified administrators at customer site

1.4 Terminology

Here's an overview of some terms used in this document, which might be unfamiliar to you.

Table 1: Terminology Overview

Term	Abbreviation	Definition
Application Programming Interface	API	An interface technology for connecting application systems with one another.
Business Add-In	BAI	A technology used to adapt SAP software to specific requirements. BAIs are used to create predefined enhancement options in SAP ERP HCM, which can be implemented by partners and customers.
Business Integration Builder	BIB	A generic framework used for the mapping between SAP ERP HCM and Employee Central data model which can be used for transferring data between the ERP and EC systems and vice versa.
Central Person	CP	An object in the SAP ERP HCM system that links the employee to the business partner, which means, to a party in which a company has a business interest.
Comma-Separated Values file	CSV file	A file that stores data, such as numbers and text, in plain text. Each line of the file is a data record. Each record consists of one or more fields, separated by commas.

Term	Abbreviation	Definition
effective dated	–	Effective-dated Employee Central fields have a history associated with them while non-effective dated fields do not have a history. For example, compensation-specific fields are effective dated while fields like <i>Name</i> and <i>National ID</i> are not effective dated.
feature	–	An object in the SAP ERP HCM system that determines default values by querying different personnel and data structure fields.
Intermediate Document	IDoc	A format for electronic data interchange between systems.
personnel number	PERNR	The identifier of an employee in the SAP ERP HCM system.
system of record	–	The system in which an employee is mastered, meaning, the system that is the authoritative data source for the employee's master data.

This is an overview of terminology changes we've made for the Business Integration Builder (BIB). Using BIB you set up the SAP ERP HCM system for organizational or employee data replication from Employee Central.

Table 2: Terminology Changes for Business Integration Builder

Old term		New term	
Long form	Abbreviated form	Long form	Abbreviated form
Employee Central company	EC company	Employee Central instance	EC instance
Employee Central company ID	EC company ID	Employee Central instance ID	EC instance ID
Employee Central company description	EC company description	Employee Central instance description	EC instance description
Employee Central template	EC template	Employee Central entity	EC entity
Employee Central template ID	EC template ID	Employee Central entity ID	EC entity ID
Employee Central template description	EC template description	Employee Central entity description	EC entity description

Old term		New term	
Long form	Abbreviated form	Long form	Abbreviated form
Employee Central template name	EC template name	entity name in Employee Central	entity name in EC
ERP picklist ID	–	Employee Central picklist ID	EC picklist ID
Employee Central picklist ID	EC picklist ID	Employee Central picklist name	EC picklist name
template group	–	transformation template group	–
SAP ERP template	ERP template	transformation template	–
Employee Central to SAP ERP	EC to ERP	from Employee Central	from EC
SAP ERP to Employee Central	ERP to EC	to Employee Central	to EC
SAP ERP / SAP ERP HCM	–	Enterprise Resource Planning system	ERP system

2 Preparing the Systems for Employee Data Replication

Here's how to prepare Employee Central and SAP ERP HCM.

The full transmission start date defines when you will start using Employee Central as the system of record for the data contained in the replication scope. Before the full transmission start date, SAP ERP HCM is the system of record. You can replicate the employee master data to SAP ERP HCM by using either of these two ways:

- Using Business Integration Builder framework (BIB) framework
- Without using Business Integration Builder framework (BIB) framework

Non-BIB-based replication

For the non-BIB-based replication, you need to split all the infotypes within the replication scope at the earliest transfer date. This means that you need to split all relevant infotype records in a way that the old record ends on the day before the earliest transfer date and a new record starts on the earliest transfer date.

❖ Example

Let's say your earliest transfer date is January 1, 2018. There is a record of the *Personal Data* (0002) infotype that starts on November 1, 2015 and ends on December 31, 9999 (system high date). Before you switch to Employee Central being the system of record for this employee's data, you therefore delimit this infotype record so that it ends on December 31, 2017. Then you create a new infotype record that starts on January 1, 2018 and ends on December 31, 9999. Now you replicate employee data from SAP ERP HCM to Employee Central. Starting January 1, 2018 you maintain the data in Employee Central only.

BIB-based replication

For the BIB-based replication to SAP ERP HCM, you do not need to split the infotype data at the earliest transfer date. Infotype split is not a prerequisite in this approach.

⚠ Caution

Employee data with time constraint 3 can only be migrated to Employee Central entities that also support overlapping data records.

Related Information

2.1 Checking the Minimum Setup Required for Your Systems

In this section, we describe the preparatory steps for replication of employee master data from SAP ERP HCM to Employee Central.

Procedure

1. Is Employee Central already set up?

For more information, see the [Implementing Employee Central Core](#) implementation guide. Find the most current version of this guide in SAP Help Portal at http://help.sap.com/hr_ec.

2. Is the middleware already set up?

For more information about how to set up SAP Cloud Integration, refer to [SAP Cloud Integration](#).

Caution

You are only allowed to configure the content as described in this guide. If you make modifications not described in this guide, SAP will not provide support for the modified content.

The middleware content described in this guide is meant for use in SAP Cloud Integration. You are not allowed to deploy it in an on-premise SAP Process Orchestration system. For more information, see SAP Note [2428801](#).

3. Do you meet the minimum setup requirements for on-premise SAP ERP HCM systems?

Table 3: Required Software Component Versions and Support Packages

Component	Required Software Component Version
SAP NetWeaver	SAP_BASIS with one of the following versions: <ul style="list-style-type: none">• 700 with SP27 or a higher SP• 701 with SP12 or a higher SP• 702 with SP08 or a higher SP

Component	Required Software Component Version
SAP ERP HCM	<p>The following software component versions are required in your system:</p> <ul style="list-style-type: none"> • SAP_APPL SAP_APPL 600 SP15 or a higher version/SP • SAP_HR The required minimum is one of the following versions: <ul style="list-style-type: none"> • SAP_HR 600 SP59 • SAP_HR 604 SP25 • SAP_HR 608 (initial delivery version, no SP required) <p>The minimum version ensures that the integration works, but you most probably need to implement additional SAP Notes. Which SAP Notes are required depends on the exact SP level available in your system.</p> <p>To prevent additional effort caused by investigating the required SAP Notes and by implementing them, we recommend that you use at least one of the following versions:</p> <ul style="list-style-type: none"> • SAP_HR 600 SPC7 (127) • SAP_HR 604 SP93 • SAP_HR 608 SP21 • EA-HR The required minimum is one of the following versions: <ul style="list-style-type: none"> • EA-HR 600 SP59 • EA-HR 602 SP38 • EA-HR 603 SP33 • EA-HR 604 SP25 • EA-HR 605 SP02 • EA-HR 606 (initial delivery version, no SP required) • EA-HR 607 (initial delivery version, no SP required) • EA-HR 608 (initial delivery version, no SP required) <p>The minimum version ensures that the integration works, but you most probably need to implement additional SAP Notes. Which SAP Notes are required depends on the exact SP level available in your system.</p>

Component	Required Software Component Version
	<p>To prevent additional effort caused by investigating the required SAP Notes and by implementing them, we recommend that you use at least one of the following versions:</p> <ul style="list-style-type: none"> • EA-HR 603 SPA1 • EA-HR 604 SP93 • EA-HR 605 SP64 • EA-HR 606 SP49 • EA-HR 607 SP38 • EA-HR 608 SP21
Integration add-on for SAP ERP HCM and SAP SuccessFactors Employee Central	<p>PA_SE_IN 100 SP31 and SAP Note: 3044921</p> <div> <p>i Note</p> <p>Only this newest PA_SE_IN support package ensures that all features described in this document are available in your system.</p> </div>

For more information, refer to [SFSF EC INTEGRATION 1210](#) in the Software Download Center. You can access the Software Download Center from [SAP for Me](#) by choosing *Systems and Provisioning*.

⚠ Caution

The PA_SE_IN software component can be installed in Unicode systems only. Non-Unicode systems are not supported.

The Unicode conversion was already announced in the year 2006. The support of non-Unicode systems ends soon. The SFSF EC INTEGRATION add-on with the software component PA_SE_IN has been developed and tested in a Unicode environment. It's not planned to offer it for non-Unicode systems. This means that Unicode is a prerequisite if you want to run the integrations provided by this add-on. For more information, refer to:



- SAP Note [838402](#) (*Problems within non-Unicode systems and landscape*) and the customer letter attached to this SAP Note
- SAP Note [1322715](#) (*Unicode FAQs*)
- SAP Knowledge Base Article (KBA) [2033243](#) (*End of non-Unicode Support: Release Details*)


4. Are the required SAP Notes installed?

Make sure that you have the up-to-date version of each SAP Note, which you can find in SAP for Me at <https://me.sap.com/home>. Check the LOD-EC-INT application areas to find SAP Notes that provide bug fixes which are relevant for data replication from SAP ERP HCM to Employee Central

Here are some important SAP Notes providing enhancements and changes to the system behavior, which aren't contained in the minimum version of the `PA_SE_IN 100` software component mentioned above:

Table 4: Required SAP Notes

SAP Note Number	Title	Issue Corrected by the SAP Note	Correction Will Be Contained in Support Package
1487337 	<i>Downporting the class CL_ABAP_DYN_PRG</i>	Contains various quality improvement measures for dynamic programming.	none
1043195 	<i>Configuration of Web service runtime</i>	You don't know how to set up the technical configuration of the Web service runtime environment in your SAP ERP HCM system and how to check it.	none

5. Have you already installed the SAP GUI? If not, download it from <http://support.sap.com/swdc> .

2.2 How to Keep Your Systems in Sync

Why we recommend installing the latest support package of the integration add-on in your on-premise SAP ERP HCM system.

The main use case of the *SFSF EC INTEGRATION 1210* add-on, which comprises the `PA_SE_IN 100` software component version, is to synchronize data between the cloud solution SAP SuccessFactors Employee Central and an on-premise SAP ERP HCM system.

Cloud solutions are regularly upgraded by SAP. Upgrades of on-premise systems are customer-managed.

New features in Employee Central often require enhancements of the `PA_SE_IN` software component. New integration features are also made available in the latest version of the `PA_SE_IN` software component only. You can use these new features only if your on-premise system is up to date. Furthermore, the data synchronization between Employee Central and the SAP ERP HCM system can only run smoothly if regular upgrades are performed on both sides. Therefore, the on-premise add-on must also be upgraded regularly.

Ideally, you install the latest support package of the add-on together with each new Employee Central release.

If this isn't possible due to upgrade restrictions concerning your on-premise system, we recommend installing the latest support package of the add-on at least once a year. Only then we can ensure that the integration runs smoothly.

2.3 Preparing Employee Central for Employee Data Integration

Here are some things you should consider when setting up the data model for employee-related data in Employee Central.

- The field length of an Employee Central field that is within the integration scope must be the same as the length of the target field in the SAP ERP HCM system, which you want to map.
For example, if you want to map the Employee Central field [Country](#) to the SAP ERP HCM field [Country Key](#) (LAND1) and LAND1 has a length restriction of 3 characters, you must restrict the length of the [Country](#) field in the Employee Central data model to 3 characters.
- Picklists for Employee Central fields that you want to map to SAP ERP HCM fields must be uploaded to Employee Central **before** data replication starts so that picklist entries from Employee Central can be mapped to value help entries from SAP ERP HCM.
- If you use CSV file-based data replication, set the locale of the user who imports the CSV files containing the data that was extracted from the SAP ERP HCM system to [English US](#) (under ► [Account Navigation](#) ► [Options](#) ► [Change Language](#) ►). This is to ensure that the Employee Central data model uses the same date and number format as the SAP ERP HCM system does. You can change the locale when the initial upload to Employee Central is finished.
- For some specific requirements Position Management must be enabled for your account using the [Manage Employee Central Settings](#) admin tool in Employee Central.
- Some specific requirements apply to the default Employee Central entities provided for data replication. For more information see the section that lists the entities you can use.

i Note

Infoporter is not responsible for sending the welcome emails for new users and also does not control the password generation logic in Employee Central.

→ Remember

As a customer, you don't have access to Provisioning. To complete tasks in Provisioning, contact your implementation partner or Account Executive. For any non-implementation tasks, contact Product Support.

Related Information

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

2.3.1 Permissions Required for SAP SuccessFactors API Access

Data replication between SAP SuccessFactors Employee Central and the SAP ERP HCM system requires administrator and user permissions for SAP SuccessFactors APIs.

The permissions listed here grant users and administrators access to the SAP SuccessFactors OData API and SFAPI. SFAPI access includes access to CompoundEmployee API.

For more information about role-based permissions – what they are, how they work, how you set them up – refer to [Implementing Role-Based Permissions](#) in the SAP Help Portal.

Table 5: Permissions Required for API Access

Who's This Permission For?	Permission Location	Permission Name
User	<i>General User Permission</i>	<i>SFAPI User Login</i>
Administrator	<i>Employee Central API</i>	<i>Employee Central Foundation SOAP API</i>
Administrator	<i>Employee Central API</i>	<i>Employee Central HRIS SOAP API or Employee Central Compound Employee API (restricted access)</i>

Note

Either grant the *Employee Central HRIS SOAP API* permission, to give the administrator unrestricted access to the CompoundEmployee API. Or grant the *Employee Central Compound Employee API (restricted access)* permission, to restrict the access to the data of specific employees. Don't select both permissions for the same permission role. For more information, refer to [Granting Permissions for Full Access to the CompoundEmployee API](#) and [Granting Permissions for Restricted Access to the CompoundEmployee API](#) in the *Employee Central Compound Employee API* guide.

Who's This Permission For?	Permission Location	Permission Name
Administrator	<i>Employee Central API</i>	<i>Employee Central Compound Employee API (restricted segment access)</i>
		i Note <p>With this permission, you can further restrict either the <i>Employee Central HRIS SOAP API permission</i> or the <i>Employee Central Compound Employee API (restricted access)</i> permission. The <i>Employee Central Compound Employee API (restricted segment access)</i> permission allows the user with this role to access CompoundEmployee segments according to the configuration setup only. For more information, refer to Granting Permissions for Segment Access to the CompoundEmployee API in the <i>Employee Central Compound Employee API</i> guide.</p>
Administrator	<i>Employee Central API</i>	<i>Employee Central Foundation OData API (read-only)</i>
Administrator	<i>Employee Central API</i>	<i>Employee Central HRIS OData API (read-only)</i>
Administrator	<i>Employee Central API</i>	<i>Employee Central Foundation OData API (editable)</i>
Administrator	<i>Employee Central API</i>	<i>Employee Central HRIS OData API (editable)</i>

Who's This Permission For?	Permission Location	Permission Name
Administrator	Metadata Framework	Admin access to MDF OData API

Note

This permission is required for snapshot pagination. Snapshot pagination is used in all integration flows that perform an OData query. This applies to the following integration flows:

- [Replicate Organizational Objects from SAP SuccessFactors Employee Central to SAP ERP or SAP S4HANA](#)
- [Replicate Time Off Data from SAP SuccessFactors Employee Central to SAP ERP](#)
- [Replicate Time Sheet Data from SAP SuccessFactors Employee Central to SAP ERP](#)

2.3.2 Creating Event Reasons in Employee Central

The HR processes related to the replication of employee master data from SAP ERP HCM to Employee Central require some new event reasons for handling specific cases.

Context

Here's what you need to do:

Procedure

1. Create a `PSEUDO_HIRE` event reason for the [Hire](#) event using the [Active](#) employee status as shown here:

Event Reason: Pseudo Hire (PSEUDO_HIRE)

* Effective as of * Required Fields

Blue indicates that the item changed on this date

* Event ID

Event Name

Description

* Status

* Event

Employee Status

Figure 1: PSEUDO_HIRE Event Reason

This event reason is used when the cutoff date is after the hire date of an employee. Here the date of record in Employee Central is not the actual hire date. The event reason of the starting record in Job Info will be PSEUDO_HIRE even though the action type on cutoff date is rehire.

2. Create an PSEUDO_REHIRE event reason for the [hire](#) event using the [Active](#) employee status as shown here:

This event reason is applicable when an employee is rehired after termination and when the earliest transfer date is between the termination date and rehire date. Job information records will be extracted from the rehire date with PSEUDO_REHIRE event reason. For more information see, the *HR Business Processes in the Side-by-Side Deployment Option* section in the *Integrating SAP ERP HCM with Employee Central Using the Side-by-Side Deployment Option* integration guide.

i Note

The PSEUDO_REHIRE event reason should be defined as type hire in EC.

3. Create a PSEUDO_ADDGA event reason for the [Add Global Assignment](#) event using the [Active](#) employee status as shown here:

Event Reason: Add Global Assignment (PSEUDO_ADDGA) Insert New Record

Effective as of 01/01/1990

Blue indicates that the item changed on this date

Event Reason ID	PSEUDO_ADDGA
Event Reason Name	Add Global Assignment
Description	
Status	Active
Event	Add Global Assignment
Employee Status	Active
Follow-Up Activity in Position	No Selection
Payroll Event	
Display in Internal Job History Portlet	No

Figure 2: PSEUDO_ADDGA Event Reason

This event reason is used when the earliest transfer date you've defined for data replication is later than the start date of a global assignment. The PSEUDO_ADDGA event reason implies that the start date of the Job Information record isn't the actual start date of the global assignment. Instead, the earliest transfer date (which is after the start of the host assignment) is used. For more information, see the *HR Business Processes in the Side-by-Side Deployment Option* section in the *Integrating SAP ERP HCM with Employee Central Using the Side-by-Side Deployment Option* integration guide.

4. Create a DATAVAL event reason for the *Data Change* event using the *Active* employee status as shown here:

Event Reason: Data validation (DATAVAL)

* Effective as of 01/01/1800 * Required Fields

Blue indicates that the item changed on this date

* Event ID	DATAVAL
Event Name	Data valid
Description	data again valid for EC
* Status	Active
* Event	Data Change
Employee Status	Active

Figure 3: DATAVAL Event Reason

This event reason is used when the employee master data being extracted is valid for the replication to Employee Central, based on the implementation of the *Validity Periods for Data Replication to EC* (EX_ECPAO_EMP_VALIDITY_TAB) BAdI.

5. Create a DATAINVAL event reason for the *Data Change* event using the *Furlough* employee status as shown here:

Event Reason: Data invalid (DATAINVAL)

* Effective as of * Required Fields

Blue indicates that the item changed on this date

* Event ID

Event Name

Description

* Status

* Event


Employee Status

Figure 4: DATAINVAL Event Reason

This event reason is used when the employee master data being extracted is **not** valid for the replication to Employee Central, based on the implementation of the [Validity Periods for Data Replication to EC](#) (EX_ECPAO_EMP_VALIDITY_TAB) BAdI.


6. Create a DATACHG event reason for the [Data Change](#) event using the [Active](#) employee status as shown here:


Event Reason: Data Change (DATACHG)


* **Effective as of** 01/01/2000  * **Required Fields**


Blue indicates that the item changed on this date


* **Event Reason ID** DATACHG


Event Reason Name Data Change 

Description Data Change 

* **Status** Active 

* **Event** Data Change 

Employee Status Active 

Follow-Up Activity in Position No Selection 

Payroll Event Click or focus to edit



Display in Internal Job History Portlet Yes 

Figure 5: DATACHG Event Reason

This event reason is used when there is a change in the value of a EC field but no change in actions between two consecutive records in the Job Info template.


7. Create an REHINT event reason for the *Rehire* event using the *Active* employee status as shown here:


Event Reason: REHINT (REHINT)


*** Effective as of** 01/01/1900  *** Required Fields**



Blue indicates that the item changed on this date



*** Event Reason ID** REHINT


Event Reason Name REHINT 

Description Re-Hiring for International Transfer 

*** Status** Active 

*** Event**  Rehire 

Employee Status  Active 

Follow-Up Activity in Position No Selection 

Payroll Event Click or focus to edit


Display in Internal Job History Portlet Yes 

Figure 6: DATAREHINT Event Reason

This event reason is used when there is a gap between the termination date in PERNR belonging to one country and hire date of the PERNR in next country, during international transfer. (There is a date gap of the PERNR belonging to the first country when terminated and the PERNR of the second country when hired.)

8. Create an INT_TRANSFER event reason for the *International Transfer* event using the *Active* employee status as shown here:

Event Reason: INT_TRANSFER (INT_TRANSFER)

* Effective as of

01/01/2000

* Required Fields

Blue indicates that the item changed on this date

* Event Reason ID

INT_TRANSFER

Event Reason Name

INT_TRANSFER

Description

INT_TRANSFER

* Status

Active

* Event

Transfer

Employee Status

Active

Follow-Up Activity in Position

No Selection

Payroll Event

Click or focus to edit

Display in Internal Job History Portlet

Yes

Figure 7: DATAINT_TRANSFER Event Reason

This event reason is used when there is no gap between the termination date in PERNR belonging to one country and hire date of the PERNR in next country during international transfer.

Related Information

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Implementing Business Add-Ins to Enhance the Replication \[page 211\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

[Implementing Business Add-Ins to Enhance the Replication \[page 211\]](#)

2.4 Granting Permissions for Employee Master Data Migration

Grant the business permissions to the users who run the migration of employee master data to Employee Central.

Prerequisites

You're familiar with the role administration tools in the SAP ERP HCM system. For more information about role administration, see [User and Role Administration of Application Server ABAP](#) in the SAP NetWeaver documentation.

Context

The following template roles are available for the migration of employee master data to Employee Central:

- [Employee Master Data Migration from ERP to EC - Business User](#) (SAP_HR_ECPAO_MIG_EE_PROCESSING)
This role is meant for a business user of type B ([System User](#)). It authorizes the user to carry out tasks such as the following:
 - Extract employee data and migrate it to Employee Central
 - Schedule background jobs of the employee extraction report
 - Update the old key mapping table with manually migrated employee data via csv file
 - Determination of managers and organizational management data
 - Analyze inventory of the migrated employee data
 - Delete the inventory details from the inventory tables
 - Use the application log to analyze errors

Procedure

1. Go to the [Role Maintenance](#) (PFCG) transaction in your SAP ERP HCM system.
2. Set up the business user.
 - a. Copy the template role SAP_HR_ECPAO_MIG_EE_PROCESSING to the customer namespace.
 - b. Set up permissions for the copied role to suit your specific requirements.
 - a. Assign the copied roles to the user who migrates employee master data from SAP ERP to Employee Central.

2.5 Setting of Frequency Field for Pay Components in EC

For the migration of recurring and non-recurring payment, you need to enable few rules in Employee Central for automatic calculation of the frequency field.

Context

Due to the change in the auto calculation functionality in Employee Central, you will now have to manually enable few rules for the automatic calculation of frequency field.

Procedure

1. Go to *Admin Center* and choose *Manage Permission Role*.
2. Choose the *Permission Role* for which, you want to change the permissions.
3. Choose *Permission* under *Permission settings*.
4. Choose *Employee Central Import Settings*.
5. Under *Employee Central Import Settings*, either select *Select All* or *Enable Business Rules for selected areas*.
6. Click *Finised* to save the settings.

3 Middleware Setup for Data Replication to Employee Central

Here's how to set up SAP Cloud Integration as the middleware for data replication from SAP ERP HCM to Employee Central.

i Note

For more information about which versions of the middleware content provided for this integration are still supported and which have been deprecated, refer to SAP Note [2684991](#).

⚠ Caution

You are only allowed to configure the content as described in this guide. If you make modifications not described in this guide, SAP will not provide support for the modified content.

The middleware content described in this guide is meant for use in SAP Cloud Integration. You are not allowed to deploy it in an on-premise SAP Process Orchestration system. For more information, see SAP Note [2428801](#).

[Middleware Content for Data Replication to Employee Central \[page 28\]](#)

Get an overview of the integration content that's available in SAP Cloud Integration for replicating employee and organizational data from SAP ERP HCM to Employee Central.

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

Before you start configuring SAP Cloud Integration for this scenario, make sure that the prerequisites are fulfilled.

[Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Some configuration steps are required to set up the integration flows. Their sequence depends on the communication used by the integration scenario.

[Monitoring in SAP Cloud Integration \[page 47\]](#)

Use the monitoring features of SAP Cloud Integration to check whether any issues occurred in your middleware processes.

[Reporting Middleware Issues \[page 48\]](#)

Report a case if you have issues that you can't solve using the monitoring in SAP Cloud Integration, providing information about the process run.

3.1 Middleware Content for Data Replication to Employee Central

Get an overview of the integration content that's available in SAP Cloud Integration for replicating employee and organizational data from SAP ERP HCM to Employee Central.

Replication of employee and org data from SAP ERP HCM uses the following integration packages and integration flows:

Integration Package	Contained Integration Flows
<i>SAP ERP or SAP S/4HANA Integration with SAP SuccessFactors Employee Central: Employee and Organizational Data</i>	<i>Upsert Data from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central Using the OData API</i> <i>Query Employee Key Data from SAP SuccessFactors Employee Central</i>
	<div><div>i Note</div><div>You only need the integration flow <i>Query Employee Key Data from SAP SuccessFactors Employee Central</i> if you use the version of data replication to Employee Central that is not based on the Business Integration Builder (BIB). If you're using BIB-based data replication, don't configure and deploy this integration flow.</div></div>

Here's graphical overview of how the integration flows work and how the systems interact with each other.

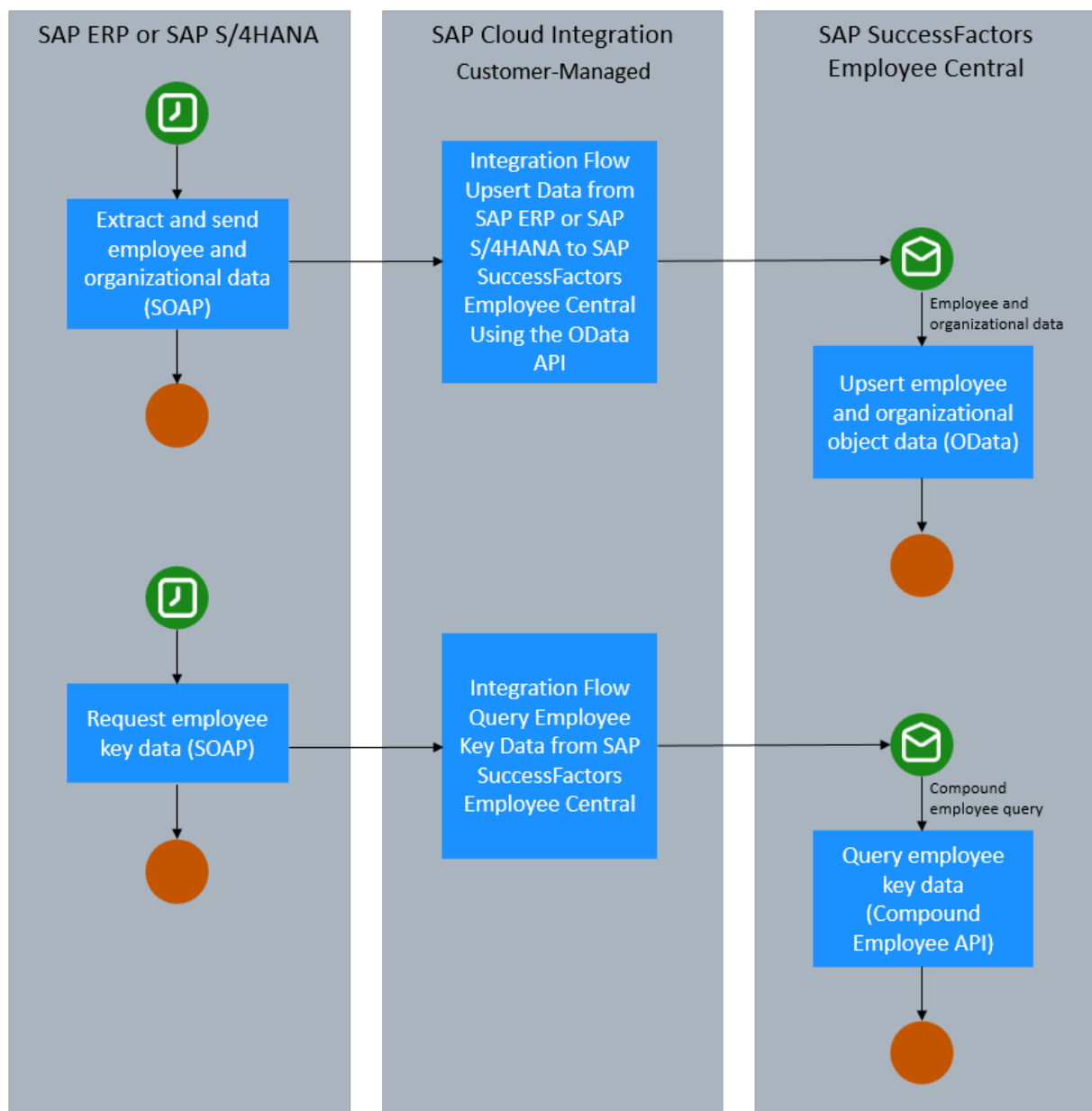


Figure 8: Replication of Employee and Organizational Data to Employee Central

Parent topic: [Middleware Setup for Data Replication to Employee Central \[page 27\]](#)

Related Information

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

[Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

[Monitoring in SAP Cloud Integration \[page 47\]](#)

[Reporting Middleware Issues \[page 48\]](#)

3.2 Prerequisites for Using SAP Cloud Integration

Before you start configuring SAP Cloud Integration for this scenario, make sure that the prerequisites are fulfilled.

Some basic things need to be in place before you can set up the integration flows in SAP Cloud Integration. For more information, refer to [Initial Setup](#).

- You've been provided with an SAP Cloud Integration account.
- You have access to the SAP Cloud Integration Web UI.
For details, refer to [Tool Access](#).
- You have access to the runtime node.
For details, refer to [Runtime in Detail](#).
- You have an SAP Cloud Integration communication user, which enables the customer system for authentication based on user credentials. SAP Community Network (SCN) users are used for this purpose.
For details, refer to the SAP Cloud Integration notification email you've received from SAP and to [Creating a User for Cloud Integration, Neo Environment](#).

Parent topic: [Middleware Setup for Data Replication to Employee Central \[page 27\]](#)

Related Information

[Middleware Content for Data Replication to Employee Central \[page 28\]](#)

[Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

[Monitoring in SAP Cloud Integration \[page 47\]](#)

[Reporting Middleware Issues \[page 48\]](#)

[Enabling the SAP ERP HCM Outbound Web Services to Set Up the Connection from SAP ERP HCM to the Middleware \[page 44\]](#)

[Finding the URL for Communication from SAP ERP HCM to the Middleware \[page 35\]](#)

3.3 Configuration of SAP Cloud Integration for Data Replication to Employee Central

Some configuration steps are required to set up the integration flows. Their sequence depends on the communication used by the integration scenario.

The deployment option for data replication from SAP ERP HCM to Employee Central consists of two integration flows

- An OData upsert process: [Upsert Data from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central Using the OData API](#)
- A key data query process: [Query Employee Key Data from SAP SuccessFactors Employee Central](#)

The communication within this scenario is as follows:

1. The SAP ERP HCM system sends data to the middleware using the OData upsert process.
2. The middleware performs the OData upsert to Employee Central.
3. The SAP ERP HCM system reads the keys generated in Employee Central for the new entities using the key data query process.

Go through the following steps to set up the integration flows.

1. [Configuring Certificates and Permissions \[page 32\]](#)
Configure certificates and permissions to enable a secure connection between your SAP ERP HCM system and SAP Cloud Integration.
2. [Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems \[page 33\]](#)
Create and deploy the credentials for the technical integration users. SAP Cloud Integration needs the credentials for communication with SAP SuccessFactors Employee Central and with SAP ERP HCM.
3. [How to Find the Endpoint URLs \[page 35\]](#)
Find the URLs you need to enter so that senders and receivers of the integration flows know which system they are to address.
4. [Copying the Integration Package to Your Workspace \[page 37\]](#)
Copy and deploy the integration content provided for replication of employee data and organizational data from SAP ERP HCM to Employee Central.
5. [Configuring the Integration Flow for Data Replication to Employee Central \[page 38\]](#)
Configure the sender, the receivers, and the process parameters of the integration flow we provide for replication of employee data and organizational data to Employee Central.
6. [Configuring the Integration Flow for Querying Employee Key Data from Employee Central \[page 41\]](#)
Configure the sender, the receivers, and the process parameter of the integration flow that queries employee key data from Employee Central.
7. [Enabling the SAP ERP HCM Outbound Web Services to Set Up the Connection from SAP ERP HCM to the Middleware \[page 44\]](#)
Activate the SAP ERP HCM outbound web services used by this integration to set up the connections for communication from the SAP ERP HCM system to SAP Cloud Integration.

Parent topic: [Middleware Setup for Data Replication to Employee Central \[page 27\]](#)

Related Information

[Middleware Content for Data Replication to Employee Central \[page 28\]](#)

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

[Monitoring in SAP Cloud Integration \[page 47\]](#)

[Reporting Middleware Issues \[page 48\]](#)

3.3.1 Configuring Certificates and Permissions

Configure certificates and permissions to enable a secure connection between your SAP ERP HCM system and SAP Cloud Integration.

Context

Even if you use basic authentication for your integration, certificates are needed to enable a secure HTTPS communication between SAP ERP HCM and SAP Cloud Integration. For more information, refer to [Connecting a Customer System to Cloud Integration](#). The SAP Cloud Integration user must also have the required permissions.

Procedure

1. Add the root certificate from SAP Cloud Integration in the [Trust Manager](#) (STRUST) transaction in your SAP ERP HCM system, for connections initiated by the SAP ERP HCM system to SAP Cloud Integration.

For more information, refer to [Trust Manager](#).

2. Add the root certificate from SAP ERP HCM in the [Keystore](#) in your SAP Cloud Integration tenant, for connections initiated by SAP Cloud Integration to the SAP ERP HCM system.

For more information, refer to:

- [Trust Manager](#) and [Exporting the AS ABAP's Public-Key Certificate](#) for the SAP ERP HCM system
- [Importing a Certificate](#) for SAP Cloud Integration

3. Make sure that the SAP Cloud Integration user that is used to trigger calls from outside the middleware to SAP Cloud Integration has the necessary permission for sending messages.

For more information, refer to [Persona](#) for the Cloud Foundry Environment or [Persona](#) for the Neo Environment.

Task overview: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Next task: [Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems \[page 33\]](#)

3.3.2 Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems

Create and deploy the credentials for the technical integration users. SAP Cloud Integration needs the credentials for communication with SAP SuccessFactors Employee Central and with SAP ERP HCM.

Prerequisites

Determine the SAP SuccessFactors credentials for the API user you want to use for the integration. The user must have the permission to call the SAP SuccessFactors `CompoundEmployee` and `OData` APIs.

Determine the SAP ERP HCM credentials for the user that you want to use for the integration.

Context

For more information about credentials artifacts and other security material in SAP Cloud Integration, refer to [Managing Security Material](#).

Procedure

1. Go to the SAP Cloud Integration Web UI and choose [Operations View](#) from the top-level menu on the left.
2. Choose [Manage Security](#) [Security Material](#).
3. To create a credentials artifact for the communication between SAP Cloud Integration and Employee Central, choose [Create](#) and select a credentials type.
 - If you want to use the [Basic](#) authentication type for the Employee Central receiver in the [Upsert Data from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central Using the OData API](#) integration flow, select [User Credentials](#) and deploy a credentials artifact with the following attributes:

Field Name	User Action and Values
Name	Enter any name.
Type	Select User Credentials .
User	Enter the name of the SAP SuccessFactors API user.
Password	Enter the password of the SAP SuccessFactors API user.
Company ID	Enter the name of your SAP SuccessFactors Employee Central instance.

- If you want to use the [Basic](#) authentication type for the Employee Central receiver in the [Query Employee Key Data from SAP SuccessFactors Employee Central](#) integration flow, select [User Credentials](#) and deploy a credentials artifact with the following attributes:

Field Name	User Action and Values
Name	Enter any name.
Type	Select SuccessFactors .
User	Enter the name of the SAP SuccessFactors API user.
Password	Enter the password of the SAP SuccessFactors API user.
Company ID	Enter the name of your SAP SuccessFactors Employee Central instance.

- If you want to use the [OAuth2 SAML Bearer Assertion](#) authentication type for Employee Central receivers, select [OAuth2 SAML Bearer Assertion](#) and deploy a corresponding credentials artifact. For more information, refer to [Deploying an OAuth2 SAML Bearer Assertion](#).
- To create a credentials artifact for the communication between SAP Cloud Integration and SAP ERP HCM, select [User Credentials](#) again.
 - Deploy a credentials artifact with the following attributes:

Field Name	User Action and Values
Name	Enter any name.
Type	Select User Credentials .
User	Enter the name of the SAP ERP HCM integration user.
Password	Enter the password of the SAP ERP HCM integration user.

Next Steps

You enter the names given to these credentials artifacts when you configure the integration flows.

Task overview: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Previous task: [Configuring Certificates and Permissions \[page 32\]](#)

Next: [How to Find the Endpoint URLs \[page 35\]](#)

Related Information

[Configuring the Integration Flow for Data Replication to Employee Central \[page 38\]](#)

[Configuring the Integration Flow for Querying Employee Key Data from Employee Central \[page 41\]](#)

3.3.3 How to Find the Endpoint URLs

Find the URLs you need to enter so that senders and receivers of the integration flows know which system they are to address.

[Finding the URL for Communication from SAP ERP HCM to the Middleware \[page 35\]](#)

Determine the endpoint URL for the middleware, to enter it in SAP ERP HCM.

[Finding the URL for Communication from the Middleware to Employee Central \[page 36\]](#)

Determine the endpoint URL for Employee Central that you need to enter in the middleware.

Parent topic: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Previous task: [Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems \[page 33\]](#)

Next task: [Copying the Integration Package to Your Workspace \[page 37\]](#)

3.3.3.1 Finding the URL for Communication from SAP ERP HCM to the Middleware

Determine the endpoint URL for the middleware, to enter it in SAP ERP HCM.

Context

SAP ERP HCM needs to know the endpoint URL that it is to call in the middleware since it triggers the integration flows there.

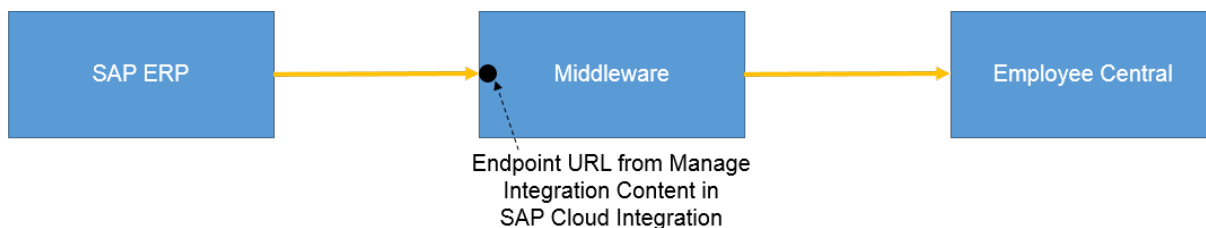


Figure 9: Endpoint URL in the Middleware

Procedure

1. Go to [Manage Integration Content](#) in SAP Cloud Integration.
2. Copy the URL shown in the [Endpoints](#) section.

For more information, refer to [Managing Integration Content](#).

The URL looks like this: `https://<runtime URL of your SAP Cloud Integration environment>/cxf/<sender address>`

i Note

The sender address is the entry that you make in the [Address](#) field of the sender in SAP Cloud Integration when configuring the integration flow.

Task overview: [How to Find the Endpoint URLs \[page 35\]](#)

Related Information

[Finding the URL for Communication from the Middleware to Employee Central \[page 36\]](#)

[Enabling the SAP ERP HCM Outbound Web Services to Set Up the Connection from SAP ERP HCM to the Middleware \[page 44\]](#)

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

3.3.3.2 Finding the URL for Communication from the Middleware to Employee Central

Determine the endpoint URL for Employee Central that you need to enter in the middleware.

Context

To be able to trigger calls to Employee Central, the middleware needs to know the OData API endpoint URL it is to call there.



Figure 10: Endpoint URL in Employee Central

Procedure

1. Check which is your data center.
2. When setting up the integration flow, choose [Select](#) next to the [Address](#) field to add the base URL of your SAP SuccessFactors system, depending on your data center.

Here are some examples of what the URL might look like:

- <https://api10.successfactors.com>
- <https://api15.sapsf.cn>
- <https://api2.successfactors.eu>

Task overview: [How to Find the Endpoint URLs \[page 35\]](#)

Related Information

[Finding the URL for Communication from SAP ERP HCM to the Middleware \[page 35\]](#)

3.3.4 Copying the Integration Package to Your Workspace

Copy and deploy the integration content provided for replication of employee data and organizational data from SAP ERP HCM to Employee Central.

Context

You use the SAP Cloud Integration Web UI to access and manage the integration content for data replication from SAP ERP HCM to Employee Central. For more information, refer to [Developing Integration Content With SAP Cloud Integration](#).

Procedure

1. Go to the SAP Cloud Integration tenant for which you want to set up the integration content.
2. Browse the content catalog to find the [SAP ERP or SAP S/4HANA Integration with SAP SuccessFactors Employee Central: Employee and Organizational Data](#) integration package.
3. Copy the content of the integration package to your workspace to be able to configure and deploy it.

Next Steps

Configure the integration flows.

Task overview: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Previous: [How to Find the Endpoint URLs \[page 35\]](#)

Next task: [Configuring the Integration Flow for Data Replication to Employee Central \[page 38\]](#)

3.3.5 Configuring the Integration Flow for Data Replication to Employee Central

Configure the sender, the receivers, and the process parameters of the integration flow we provide for replication of employee data and organizational data to Employee Central.

Context

You make the following settings for the *[Upsert Data from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central Using the OData API](#)* integration flow.

Procedure

1. Configure the [SAP_ERP](#) sender.

Table 6: Sender Configuration

Field	What to Enter
Sender	Choose SAP_ERP (no other entries are possible).
Adapter Type	Choose SOAP (no other entries are possible). For more information, refer to SOAP (SAP RM) Adapter .
Address	The default entry is /ERP_to_EC_GenericODataUpsert . You can change the default. The suffix you enter here is added to the service endpoint URL. It must be unique for each process instance. It's used to uniquely address this specific process instance.

Field	What to Enter
<i>Authorization</i>	Choose either <i>User Role</i> or <i>Client Certificate</i> . <div> Note If you choose <i>User Role</i>, you must select the <i>User ID / Password</i> authentication option when you enable the SAP ERP HCM outbound web services. If you choose <i>Client Certificate</i> here, you must select the <i>X.509 SSL Client Certificate</i> authentication option when you enable the outbound web services. </div>
<i>User Role</i> (only in case <i>User Role</i> is selected for <i>Authorization</i>)	Select the role that you've configured. For more information, refer to Connection Setup for Inbound Communication - Integration Flow Endpoints .
<i>Certificate</i> (only in case <i>Client Certificate</i> is selected for <i>Authorization</i>)	Browse to upload the certificate. For more information, see Client Certificate Authentication (Inbound) .

2. Configure the *SFSF_EC* receiver.

Table 7: Receiver Configuration

Field	What to Enter
<i>Receiver</i>	Choose <i>SFSF_EC</i> (no other entries are possible).
<i>Adapter Type</i>	Choose <i>HTTP</i> (no other entries are possible). For more information, refer to HTTP Receiver Adapter .
<i>Authentication</i>	Choose either <i>Basic</i> or <i>OAuth2 SAML Bearer Assertion</i> .
<i>Credential Name</i>	If you've selected <i>Basic</i> for <i>Authentication</i> : Enter the name of the credentials artifact with the type <i>User Credentials</i> that you created before. If you've selected <i>OAuth2 SAML Bearer Assertion</i> for <i>Authentication</i> : Enter the name of the credentials artifact with the type <i>OAuth2 SAML Bearer Assertion</i> that you created before.
<i>Timeout (in ms)</i>	Use the default value. Only change this value if you're facing issues. In that case, try a higher number.

3. Configure the process parameters.

Table 8: Process Parameters

Field	What to Enter
SFSF_EC_Base_URL	Enter the base URL of your SAP SuccessFactors system using the <code>https://</code> syntax.
ENABLE_PAYLOAD_LOGGING	<p>Enter true to transfer extended information to the process log in the middleware to be able to analyze issues more easily. You can also reset the parameter to false again if you no longer need the extended log.</p> <div> <p>⚠ Caution</p> <p>For data protection reasons, enable the extended log for troubleshooting purposes only. Make sure that you disable the parameter again afterwards.</p> <p>If you enable the extended log, the complete message payload containing all data that is to be transferred is stored in the log. Make sure that you configure permissions in a way that only authorized persons can view the payload in the log. Also ensure that you're compliant with the data protection and privacy regulations so that your data gets the highest level of protection.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> • Data Protection and Privacy • Identity and Access Management and Persona for the Cloud Foundry Environment • Managing Users and Role Assignments and Persona for the Neo Environment </div>

Task overview: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Previous task: [Copying the Integration Package to Your Workspace \[page 37\]](#)

Next task: [Configuring the Integration Flow for Querying Employee Key Data from Employee Central \[page 41\]](#)

Related Information

[Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems \[page 33\]](#)

3.3.6 Configuring the Integration Flow for Querying Employee Key Data from Employee Central

Configure the sender, the receivers, and the process parameter of the integration flow that queries employee key data from Employee Central.

Context

You make the following settings for the *Query Employee Key Data from SAP SuccessFactors Employee Central* integration flow.

Note

You only need this integration flow if you use the version of data replication to Employee Central that is **not** based on the Business Integration Builder (BIB). If you're using BIB-based data replication, don't configure and deploy this integration flow.

Procedure

1. Configure the *SAP_ERP* sender.

Table 9: Sender Configuration

Field	What to Enter
<i>Sender</i>	Choose <i>SAP_ERP</i> (no other entries are possible).
<i>Adapter Type</i>	Choose <i>SOAP</i> (no other entries are possible). For more information, refer to SOAP (SAP RM) Adapter .
<i>Address</i>	The default entry is <code>/ERP_to_EC_EmployeeKeyDataQuery</code> . You can change the default. The suffix you enter here is added to the service endpoint URL. It must be unique for each process instance. It's used to uniquely address this specific process instance.

Field	What to Enter
<i>Authorization</i>	Choose either <i>User Role</i> or <i>Client Certificate</i> . <div> i Note If you choose <i>User Role</i>, you must select the <i>User ID / Password</i> authentication option when you enable the SAP ERP HCM outbound web services. If you choose <i>Client Certificate</i> here, you must select the <i>X.509 SSL Client Certificate</i> authentication option when you enable the outbound web services. </div>
<i>User Role</i> (only in case <i>User Role</i> is selected for <i>Authorization</i>)	Select the role that you've configured. For more information, refer to Connection Setup for Inbound Communication - Integration Flow Endpoints .
<i>Certificate</i> (only in case <i>Client Certificate</i> is selected for <i>Authorization</i>)	Browse to upload the certificate. For more information, refer to Client Certificate Authentication (Inbound) .

2. Configure the *SFSF_EC* receiver.

Table 10: Receiver Configuration

Field	What to Enter
<i>Receiver</i>	Choose <i>SFSF_EC</i> (no other entries are possible).
<i>Adapter Type</i>	Choose <i>SuccessFactors</i> (no other entries are possible). For more information, refer to SuccessFactors (SOAP) Adapter .
<i>Address</i>	Choose <i>Select</i> to add the base URL of your SAP SuccessFactors system, depending on your data center. <div> ! Restriction We don't support IP addresses in URLs as part of our reference architecture. Use domain names instead. If you think you have a special case that requires IP addresses instead of domain names, contact Product Support. </div>
<i>Address Suffix</i>	The default entry is <i>/sfapi/v1/soap</i> . You can change the default. Enter the address suffix for the SOAP API endpoint.
<i>Authentication</i>	Choose either <i>Basic</i> or <i>OAuth2 SAML Bearer Assertion</i> .

Field	What to Enter
<i>Credential Name</i>	<p>If you've selected <i>Basic</i> for <i>Authentication</i>: Enter the name of the credentials artifact with the type <i>SuccessFactors</i> that you created before.</p> <p>If you've selected <i>OAuth2 SAML Bearer Assertion</i> for <i>Authentication</i>: Enter the name of the credentials artifact with the type <i>OAuth2 SAML Bearer Assertion</i> that you created before.</p>

3. Configure the process parameter.

Table 11: Process Parameter

Field	What to Enter
<i>ENABLE_PAYLOAD_LOGGING</i>	<p>Enter true to transfer extended information to the process log in the middleware to be able to analyze issues more easily. You can also reset the parameter to false again if you no longer need the extended log.</p> <div> <p>⚠ Caution</p> <p>For data protection reasons, enable the extended log for troubleshooting purposes only. Make sure that you disable the parameter again afterwards.</p> <p>If you enable the extended log, the complete message payload containing all data that is to be transferred is stored in the log. Make sure that you configure permissions in a way that only authorized persons can view the payload in the log. Also ensure that you're compliant with the data protection and privacy regulations so that your data gets the highest level of protection.</p> <p>For more information, refer to:</p> <ul style="list-style-type: none"> • Data Protection and Privacy • Identity and Access Management and Persona for the Cloud Foundry Environment • Managing Users and Role Assignments and Persona for the Neo Environment </div>

Task overview: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Previous task: [Configuring the Integration Flow for Data Replication to Employee Central \[page 38\]](#)

Next task: [Enabling the SAP ERP HCM Outbound Web Services to Set Up the Connection from SAP ERP HCM to the Middleware \[page 44\]](#)

Related Information

[Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems \[page 33\]](#)

3.3.7 Enabling the SAP ERP HCM Outbound Web Services to Set Up the Connection from SAP ERP HCM to the Middleware

Activate the SAP ERP HCM outbound web services used by this integration to set up the connections for communication from the SAP ERP HCM system to SAP Cloud Integration.





Context

You must set up connections for the communication from the SAP ERP HCM system to SAP Cloud Integration because data replication from SAP ERP HCM to SAP SuccessFactors Employee Central is triggered by the SAP ERP HCM system by sending data to and also requesting data from Employee Central using the middleware.

The replication uses the Simple Object Access Protocol (SOAP) and OData in Employee Central and SOAP in the SAP ERP HCM system.

To enable the web services, carry out the following steps:

Procedure

1. Copy the URL used for the communication from SAP ERP HCM to the middleware from  [Manage Integration Content](#)  in SAP Cloud Integration.
2. Go to the [SOA Management](#) (SOAMANAGER) transaction in your SAP ERP HCM system and choose [Web Service Configuration](#).
3. Search for these consumer proxies and select the corresponding entry in the search result:
 - CO_ECPAO_GET_GENERIC_ODATA_UPS (for data replication to Employee Central)
 - CO_ECPAO_GET_EMPLOYEE_KEY_DATA (for querying employee key data from Employee Central)Select the corresponding entry in the search result and carry out the next steps for **both** proxies.
4. Choose  [Create](#)  and create a new logical port.

5. Select either the [User ID / Password](#) or the [X.509 SSL Client Certificate](#) authentication option.

i Note

If you select the [User ID / Password](#) authentication option, the SAP Cloud Integration administrator must choose [User Role](#) when configuring authorizations for the ERP sender in the corresponding integration flow.

If you select the [X.509 SSL Client Certificate](#) authentication option, there are different options depending on whether you use SAP Cloud Integration in the Cloud Foundry or the Neo environment:

- In the Cloud Foundry environment, the SAP Cloud Integration administrator must choose [Client Certificate](#) when configuring authorizations for the ERP sender in the integration flow.
- In the Neo environment, the SAP Cloud Integration administrator can choose [Client Certificate](#) or [User Role](#) when configuring authorizations for the ERP sender in the integration flow. If the administrator selects the [User Role](#) authorization, a certificate-to-user mapping is required in addition. For more information, refer to [Setting Up Inbound HTTP Connections \(with Certificate-to-User Mapping\), Neo Environment](#).

6. If you've selected [User ID / Password](#), enter the user ID and password of your SAP Cloud Integration communication user. If you've selected [X.509 SSL Client Certificate](#), select an SSL Client Personal Security Environment (PSE).

For more information, refer to [Creating PSEs and Maintaining the PSE Infrastructure](#) in the SAP NetWeaver documentation.

7. Configure the transport settings.

Table 12: Transport Settings

Setting	What to Enter
URL components	Select this radio button.
Protocol	Select HTTPS .
Host	Enter the <runtime URL of your SAP Cloud Integration environment> part of the URL that you've copied in the first step.
Port	Enter the port number of your SAP Cloud Integration environment.
Path	Enter the /cxf/<sender address> part of the URL that you've copied in the first step, for example: /cxf/ERP_to_EC_GenericODataUpsert or /ERP_to_EC_EmployeeKeyDataQuery.
Logon language	Select Language of User Context .
Name of proxy host	If you use a proxy, enter proxy . If not, leave this field empty.

Setting	What to Enter
Port number of proxy host	If you use a proxy, enter the port number, such as 8080 . If not, leave this field empty.
Transport binding type	Select <i>SOAP 1.1</i> .
Make local call	Select <i>No Call in Local System</i> .
WSDL style	Select <i>Document Style</i> .
Optimized XML transfer	Select <i>None</i> .
Compress HTTP message	Select <i>Inactive</i> .
Compress response	Select <i>True</i> .

Leave the other fields empty.

8. Configure the SOAP protocol.

Table 13: Protocol Configuration

Setting	What to Enter
Reliable messaging protocol	Select <i>SAP RM</i>
Message ID protocol	Select <i>Suppress ID Transfer</i>
Data transfer scope	Select <i>Enhanced Data Transfer</i>
Transfer protocol	Select <i>Transfer via SOAP Header</i>

9. Leave the other fields empty and finish the *Web Service Configuration* setup.

i Note

You don't need to make any entries in the *Identifiable Business Context* and *Operation Settings* steps.

10. To set your new logical port as default port, select the entry and choose *Set Log. Port Default*.

11. Test outbound connectivity from SAP ERP HCM to SAP Cloud Integration.

- a. Press the *Ping Web Service* button.

You'll get an *HTTP ERROR 405*. Don't worry, from a technical point of view everything is fine. You get this error message because the Ping can't fill the business content of the web service.

- b. If you get this or a similar error message when you start the Ping web service, you're most probably missing one or more certificates: *SRT Framework exception: Service Ping ERROR: Error when calling SOAP Runtime functions: SRT: Processing error in Internet Communication Framework: ("ICF Error when receiving the response: ICM_HTTP_SSL_ERROR")*

This error message is generated at technical handshake between SAP ERP HCM and the middleware systems, at the level of the Internet Communication Framework (ICF).

Task overview: [Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

Previous task: [Configuring the Integration Flow for Querying Employee Key Data from Employee Central \[page 41\]](#)

Related Information

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

[Finding the URL for Communication from SAP ERP HCM to the Middleware \[page 35\]](#)

3.4 Monitoring in SAP Cloud Integration

Use the monitoring features of SAP Cloud Integration to check whether any issues occurred in your middleware processes.

SAP Cloud Integration provides a web-based monitoring UI that allows you to check the status of messages and integration content artifacts for a tenant cluster. For more information, see [Monitoring](#).

Use the log ID that you find in the monitoring to find the log of a specific process that didn't run successfully and to filter the log for detailed information.

Parent topic: [Middleware Setup for Data Replication to Employee Central \[page 27\]](#)

Related Information

[Middleware Content for Data Replication to Employee Central \[page 28\]](#)

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

[Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

[Reporting Middleware Issues \[page 48\]](#)

3.5 Reporting Middleware Issues

Report a case if you have issues that you can't solve using the monitoring in SAP Cloud Integration, providing information about the process run.

Context

If you face an issue with your SAP Cloud Integration-based integration scenario and want to report a case, enable the extended log to ensure that the data that's needed for analyzing the issue is written to the log.

⚠ Caution


For data protection reasons, enable the extended log for troubleshooting purposes only. Make sure that you disable the parameter again afterwards.

If you enable the extended log, the complete message payload containing all data that is to be transferred is stored in the log. Make sure that you configure permissions in a way that only authorized persons can view the payload in the log. Also ensure that you're compliant with the data protection and privacy regulations so that your data gets the highest level of protection.


For more information, refer to:

- [Data Protection and Privacy](#)
- [Identity and Access Management](#) and [Persona](#) for the Cloud Foundry Environment
- [Managing Users and Role Assignments](#) and [Persona](#) for the Neo Environment

Procedure

1. Set the `ENABLE_PAYLOAD_LOGGING` parameter to **TRUE** in the configuration of the integration flow.
2. Run the integration.
3. Go to [Create a Support Case](#)  and report a case for the LOD-SF-INT-CPI component.
4. Add the log ID from the payload to the case so that the support team can find the log easily.

Next Steps

For the required information that you should add in your case, refer to the SAP Knowledge Base Article (KBA) [2763716](#) .

Task overview: [Middleware Setup for Data Replication to Employee Central \[page 27\]](#)

Related Information

[Middleware Content for Data Replication to Employee Central \[page 28\]](#)

[Prerequisites for Using SAP Cloud Integration \[page 30\]](#)

[Configuration of SAP Cloud Integration for Data Replication to Employee Central \[page 30\]](#)

[Monitoring in SAP Cloud Integration \[page 47\]](#)

4 Replicating Employee Data from SAP ERP HCM to Employee Central

This section describes in detail which steps need to be carried out when you want to replicate data from SAP ERP HCM to Employee Central to use Employee Central as your system of record.

⚠ Caution

Make sure that data that is mastered in SAP ERP HCM and replicated to Employee Central can't be edited in Employee Central. Use role-based permissions to disable the edit mode in Employee Central based, for example, on country and not based on the legal entity of the employee. Filtering by Legal entity is not allowed.

i Note

Employee data with time constraint 3 (which means that any number of valid infotype records can exist at any one time) can only be replicated to Employee Central entities that also support overlapping data records.

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

By default, you can use the Employee Central entities that are listed below.

[Communication Channels for Employee Data Replication \[page 58\]](#)

You can transfer data from SAP ERP HCM to Employee Central using different communication channels.

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

If you define an earliest transfer date for a transformation template group that you use for employee data extraction, this date influences effective-dated as well as non-effective dated templates.

[Steps in the SAP ERP HCM System \[page 63\]](#)

In the next sections we'll go step by step through all activities you need to carry out in the SAP ERP HCM system to make data replication work.

[Extensibility of the Integration \[page 211\]](#)

[Data Replication and Mapping Information \[page 212\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

Read about the best practices that you should follow when you extract the employee data with additional events before the earliest transfer date.

[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)

Take a look at special use cases that can occur during data replication to Employee Central.

4.1 For Which Employee Data-Related Employee Central Entities Can I Use Data Replication?

By default, you can use the Employee Central entities that are listed below.

You can also replicate data to custom generic objects.

The number in the first column shown below defines the sequence in which employee data should be imported into Employee Central. If you import the data manually using CSV files, make sure that you follow this sequence. For more information refer to section *Working with Data Imports* in the *Implementing Employee Central Core* implementation guide. Find the most current version of this guide at http://help.sap.com/hr_ec.

Table 14: Employee Data Entities Supported by Data Replication

Sequence No.	Employee Central Entity	Template Used for CSV-Based Data Extraction in SAP ERP HCM	Template Used for Web Service-Based Data Extraction in SAP ERP HCM	Type of Entity in Employee Central
20	Biographical information	PersonInfoImportTemplate (CSV_2)	PerPerson (WS_2)	Person object
21	Biographical information (for employee's dependents)	PersonInfoImportTemplate (CSV_2_DEP)	PerPerson (WS_2_DEP)	Person object
25	Localized Biographical Information	Localized Biographical Information (CSV_2_LOC)	See Country-Specific table below	Person object
30	Personal information	PersonallInfoImportTemplate (CSV_5)	PerPerson (WS_5)	Person object
31	Personal information (for employee's dependents)	PersonallInfoImportTemplate (CSV_5_DEP)	PerPerson (WS_5_DEP)	Person object
36	Global information (for employee's dependents)	GlobalInfoImportTemplate (CSV_18_DEP)	See Country-Specific table below	Person object
40	Employment details	EmploymentInfoImportTemplate (CSV_3)	EmpEmployment (WS_3)	Employment object
50	Global assignments	GlobalAssignmentInfoImportTemplate (CSV_6)	EmpGlobalAssignment (WS_6)	Employment object
60	Job history	JobInfoImportTemplate (CSV_4)	EmpJob (WS_4)	Employment object
70	Email information	EmailInfoImportTemplate (CSV_7)	PerEmail (WS_7)	Person object

Sequence No.	Employee Central Entity	Template Used for CSV-Based Data Extraction in SAP ERP HCM	Template Used for Web Service-Based Data Extraction in SAP ERP HCM	Type of Entity in Employee Central
80	Phone information	PhoneInfoImportTemplate (CSV_8)	PerPhone (WS_8)	Person object
90	Job relationships	JobRelationsInfoImportTemplate (CSV_9)	EmpJobRelationships (WS_9)	Employment object
95	Person relationship	PersonRelationshipInfoImportTemplate (CSV_19)	PerPersonRelationship (WS_19)	Person object
100	Addresses	AddressImportTemplate (CSV_10)	PerAddressDEFLT (WS_10)	Person object
101	Addresses (for employee's dependents)	AddressImportTemplate (CSV_10_DEP)	PerAddressDEFLT (WS_10_DEP)	Person object
110	Compensation information	CompInfoImportTemplate (CSV_11)	EmpCompensation (WS_11)	Employment object
120	Recurring pay components	PayComponentRecurringImportTemplate (CSV_12)	EmpPayCompRecurring (WS_12)	Employment object
130	Non-recurring pay components	PayComponentNonRecurringImportTemplate (CSV_13)	EmpPayCompNonRecurring (WS_13)	Employment object
130	Non-recurring pay components for off-cycle payments	PayComponentNonRecurringImportTemplate (CSV_13_OC)	EmpPayCompNonRecurring (WS_13_OC)	Employment object
140	Payment information	PaymentInformation (CSV_16)	PaymentInformationV3 (WS_16)	Generic object (pay-related object)
150	Employment termination details	EmploymentTerminationInfoImportTemplate (CSV_15)	EmpEmploymentTermination (WS_15)	Employment object
160	Payment information details	PaymentInformation-Details (CSV_14)	PaymentInformationDetailV3 (WS_14)	Generic object (pay-related object)
170	National ID information	NationalIdCardImportTemplate (CSV_17)	PerNationalId (WS_17)	Person object
171	National ID information (for employee's dependents)	NationalIdCardImportTemplate (CSV_17_DEP)	PerNationalId (WS_17_DEP)	Person object
200	Alternative cost distribution	Alternative Cost Distribution (CSV_20)	EmpCostDistribution (WS_20)	Employment object

Sequence No.	Employee Central Entity	Template Used for CSV-Based Data Extraction in SAP ERP HCM	Template Used for Web Service-Based Data Extraction in SAP ERP HCM	Type of Entity in Employee Central
210	Alternative cost distribution items	Alternative Cost Distribution Items (CSV_21)	EmpCostDistributionItem (WS_21)	Employment object

Note

- In all Employee Central entities listed above there are standard mappings which are predefined by the SAP ERP HCM system. You can't configure them while defining primary mappings in the transformation template group configuration.
- Employee Central entities [WS_EE_REPL](#) and [WS_EE_WOR](#) have been delivered for the employee replication of data to ERP. These entities are not relevant when you replicate the data to Employee Central. For migration scenarios, these entities should not be configured.
- For migrating the payment information details, you will have to now configure the payment information template CSV_16/WS_16.

Table 15: Country Specific Entities Supported by Data Replication

Sequence No.	Country	Employee Central Entity	Template Used for CSV-Based Data Extraction in SAP ERP HCM	Template Used for Web Service-Based Data Extraction in SAP ERP HCM	Type of Entity in Employee Central
25	Brazil	Localized Biographical Information	CSV_2_LOC*	PerBiographicalInfoLocBRA (WS_2_BRA)	Person Object
25	Chile	Localized Biographical Information	CSV_2_LOC*	PerBiographicalInfoLocCHL (WS_2_CHL)	Person Object
25	France	Localized Biographical Information	CSV_2_LOC*	PerBiographicalInfoLocFRA (WS_2_FRA)	Person Object
25	Italy	Localized Biographical Information	CSV_2_LOC*	PerBiographicalInfoLocITA (WS_2_ITA)	Person Object
25	Venezuela	Localized Biographical Information	CSV_2_LOC*	PerBiographicalInfoLocVEN (WS_2_VEN)	Person Object
35	India	Global Information	CSV_18*	PerGlobalInfoIND (WS_18_IND)	Person Object

Sequence No.	Country	Employee Central Entity	Template Used for	Template Used	Type of Entity in Employee Central
			CSV-Based Data Extraction in SAP ERP HCM	for Web Service-Based Data Extraction in SAP ERP HCM	
161	USA	Payment information details for USA	PaymentInformationDetail- PaymentInformationDetailUSA (CSV_14_USA)	PaymentInformationDetailV3USA (WS_14_USA)	Generic object (pay-related object)

Note

Non-Country specific templates that must be used for all countries.

Here is more information about some of these entities:

Basic import / User

[Basic Import / User](#) information is generated by the data extraction program. All fields of this entity use a standard mapping, which you can't change.

Job history

If [Global Assignment Management](#) is enabled for your account and the corresponding role-based permissions are enabled, standard events are validated for global assignments. Therefore you might get a validation error when you transfer Job History data from SAP ERP HCM to Employee Central. We recommend that you set up the configuration of the missing events using a picklist entry and setting the active status for it.

If you don't use these feature, you can disable the [Global Assignment Management](#) option using the [Manage Employee Central Settings](#) admin tool in Employee Central to avoid validation errors during data replication.

Addresses

In the SAP ERP HCM system, the [Addresses](#) (0006) infotype has time constraint 2, which means that there can be gaps between address records. The Employee Central addresses entities are able to handle these gaps, but the user doesn't see them on the UI. If you maintain any subtype with time constraint 1, the gap would not be supported in the SAP ERP HCM system.

Recurring and non-recurring pay components

Each wage type is itself a subtype of the *Recurring Payments/Deductions* (0014) infotype or *Additional Payments* (0015) infotype or *One time Payment off-cycle* (0267) infotype. The wage types include directly- and indirectly-evaluated wage types. Use the cloning feature to define a field mapping for the *Recurring Payments/Deductions* infotype.

Wage types with time constraint 3 (which means that any number of valid records can exist at any one time) are not supported by Employee Central for Pay Component Recurring entity. Therefore, you can neither define a field mapping for wage types with time constraint 3 in the SAP ERP HCM system nor replicate them from SAP ERP HCM to Employee Central. In Employee Central, you can have multiple records in Non recurring payment Info for the same pay component. So wage types with time constraint 3 are supported for Pay Component Non Recurring template.

Non-recurring pay components can have a future date.

i Note

When you maintain negative values for the *Amount* field for a wage type instead of deduction wage types (which is the recommended approach), the same negative value is transferred to Employee Central. If any calculations/rules are applied on Employee Central side against this field, then you need to check the calculations and the Employee Central configurations applied on it for correctness.

Payment information

If you use CSV-based data replication, you only need the child entity *Payment Information Details*, since the parent payment information entity associated with this child entity is created automatically during CSV imports.

If you use web service-based data replication, you need the parent entity *PaymentInformationV3* as well as the associated child entity *PaymentInformationDetailV3*. In the *Define Custom Employee Central Templates* Customizing activity, the ID of the parent Employee Central template is specified in the *ID of Dependent EC Template* field of the child template.

i Note

Data replication can't handle the parent and the child entity together in one upsert. The *validateMainPaymentMethod_PaymentInfo* business rule in Employee Central, however, checks for the child entity that also the parent entity is contained in the same upsert. Therefore, we recommend that you deactivate this rule for the legal entity of the employees whose data you replicate from SAP ERP HCM to Employee Central.

Let's say the employees whose data is mastered in SAP ERP HCM and replicated to Employee Central are all assigned to the legal entity SBM. Then you would add this statement to the *validateMainPaymentMethod_PaymentInfo* rule as shown below:

```
Worker.Job Information.Company.Legal Entity ID is not equal to Text SBM
```

The screenshot shows the 'Rule' configuration page in SAP. The rule is named 'validateMainPaymentMeth' and has a Rule ID of 'validateMainPaymentMeth'. The Base Object is 'Payment Information'. The Rule Type is 'Payment Information Validation...'. The Start Date is '01/01/1900'. The Rule Description is 'Check if main payment method is entered. It can be assigned as save rule to the object Payment Information.' The rule is configured with an 'If' condition: 'and' (plus icon) 'Details' (minus icon) 'is equal to' 'Null'. Below this, there is a 'Then' section with a condition: 'Worker.Job Information.Company.Legal Entity ID' (plus icon) 'is not equal to' 'Text' 'SBM'.

The new MDF-based Payment Information in Employee Central has to be enabled in Provisioning. For more information refer to section *Setting up MDF-based Payment Information* in the *Implementing Employee Central Core* implementation guide.

→ Remember

As a customer, you don't have access to Provisioning. To complete tasks in Provisioning, contact your implementation partner or Account Executive. For any non-implementation tasks, contact Product Support.

National ID

A preconfigured mapping entity is available for mapping the country-specific Employee Central card types to country codes from the [Countries](#) (T005) table in the SAP ERP HCM system.

Global information

Since global information data is country-specific, not all global information templates delivered as standard templates are provided for the [Web Service Transfer](#) communication channel. For the file based transfer csv_18 can be used. If you want to replicate global information data from SAP ERP HCM to Employee Central using web service transfer, create an Employee CentralEmployee Central template in the customer namespace for each country version you support and select the corresponding country in the [Country](#) column. The Employee Central template name you enter must match the name of the country-specific global information OData entity as you can find it in the OData API Data Dictionary in Employee Central. Also the upsert sequence must be 35 and the dependent entity should be personal information (WS_5).

i Note

Global information is supported for all infotypes and its secondary infotypes.

WS_18_IND has been delivered as a standard entity for web service transfer communication channel for country India as mentioned in the above table.

Payment information details for USA

Payment Information details for country USA has been delivered. You can create custom template for any other countries for which you want to replicate the data.

Alternative cost distribution

If you use CSV-based data replication, you only need the child entity *Alternative Cost Distribution Items*, since the parent alternative cost distribution entity associated with this child entity is created automatically during CSV imports.

If you use web service-based data replication, you need the parent entity *EmpCostDistribution* as well as the associated child entity *EmpCostDistributionItem*. In the *Define Custom Employee Central Templates* Customizing activity, the ID of the parent Employee Central template is specified in the *ID of Dependent EC Template* field of the child template.

Some restrictions apply if you want to transfer alternative cost distribution data using repetitive structure mapping.

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[Communication Channels for Employee Data Replication \[page 58\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Steps in the SAP ERP HCM System \[page 63\]](#)

[Extensibility of the Integration \[page 211\]](#)

[Data Replication and Mapping Information \[page 212\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Defining Templates to Map Employee Data Fields \[page 141\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)

[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)
[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)
[Cloning Transformation Templates \[page 157\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)
[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)
[Cloning Transformation Templates \[page 157\]](#)
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[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)

4.2 Communication Channels for Employee Data Replication

You can transfer data from SAP ERP HCM to Employee Central using different communication channels.

- Using CSV-based template files and the manual import framework in Employee Central
To use the manual import framework, go to the Admin Center and choose the following tools:

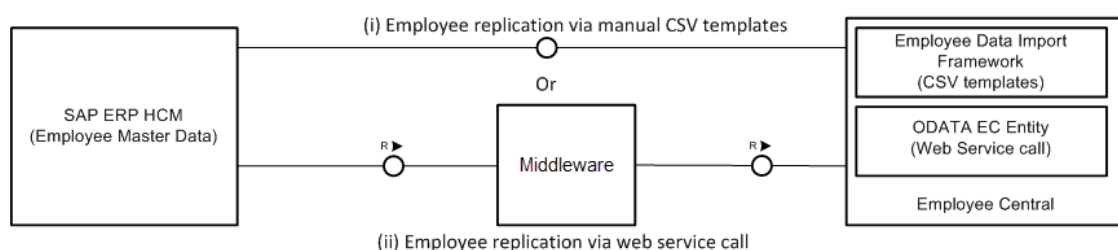
Table 16: Data Upload Tools in Employee Central

For this type of entity in Employee Central ...	You use this admin tool ...
Person and employment objects	Import Employee Data
Generic objects	Import and Export Data

- Using a synchronous Web service call and the middleware that is available for the data replication from SAP ERP HCM to Employee Central

❖ Example

This is an example of communication channels which you can use for employee data replication:



CSV File-Based Employee Data Extraction

To extract employee data from SAP ERP HCM into CSV-based templates, make these settings for the *Employee Data Extraction* (ECPAO_EMPL_EXTRACTION) program:

- Choose a template group that uses the *CSV File-Based Transfer* communication channel.
- Choose the communication channel ► *File Transfer* ► *Use Server Path* ► or ► *File Transfer* ► *Use Local Drive Path* ►.

i Note

When you schedule the program as a background job to carry out a mass data extraction, always choose the ► *File Transfer* ► *Use Server Path* ► option.

The screenshot shows the 'Employee Data Extraction' selection screen. It includes a toolbar with icons for back, forward, help, and search, along with 'OrgStructure' and 'Search Help' buttons. The main area is divided into several sections: 'Selection Criteria' with fields for Personnel Number, Action Type, Personnel area, Personnel subarea, Employee group, and Employee subgroup; 'Extraction Template' with fields for Transformation Template Group and Variant ID; 'Communication Channels' with options for Test Run, Web Service Transfer, File Transfer, and Download Payload via CSV Files; 'Message Log' with a checkbox for Detailed Message Log; and 'Other Selection Criteria' with checkboxes for Failed Employee Only and Suppress Identical Records.

Selection Criteria		
Personnel Number	<input type="text"/>	<input type="button" value="Copy"/>
Action Type	<input type="text"/>	<input type="button" value="Copy"/>
Personnel area	<input type="text"/>	<input type="button" value="Copy"/>
Personnel subarea	<input type="text"/>	<input type="button" value="Copy"/>
Employee group	<input type="text"/>	<input type="button" value="Copy"/>
Employee subgroup	<input type="text"/>	<input type="button" value="Copy"/>

Extraction Template	
Transformation Template Group	<input checked="" type="checkbox"/>
Variant ID	<input type="text"/>

Communication Channels	
<input checked="" type="checkbox"/> Test Run	
<input checked="" type="radio"/> Web Service Transfer	<input type="checkbox"/> Download Payload via CSV Files
<input type="radio"/> File Transfer	
<input type="checkbox"/> Combine into ZIP File	File Identifier <input type="text"/>
<input type="radio"/> Use Server Path	
<input type="radio"/> Use Local Drive Path	<input type="text"/>

Message Log	
<input type="checkbox"/> Detailed Message Log	

Other Selection Criteria	
<input type="checkbox"/> Failed Employee Only	<input type="checkbox"/> Suppress Identical Records

Figure 11: Selection Settings for CSV File-Based Employee Data Extraction

Web Service-Based Employee Data Extraction

To transfer employee data using a synchronous web service call, make these settings for the *Employee Data Extraction* (ECPAO_EMPL_EXTRACTION) program:

- Choose a template group that uses the *Web Service Transfer* communication channel.
- Choose the communication channel *Web Service Transfer*.

The screenshot shows the 'Employee Data Extraction' configuration window. It has a title bar with the program name and a toolbar with icons for OrgStructure and Search Help. The main area is divided into several sections: 'Selection Criteria' with input fields for Personnel Number (1234), Action Type, Personnel area, Personnel subarea, Employee group, and Employee subgroup, each with a selection icon; 'Extraction Template' with a dropdown menu set to 'SBS_MODEL_WS'; 'Communication Channels' with radio buttons for Test Run (checked), Web Service Transfer, and File Transfer, and checkboxes for Combine into ZIP File, Use Server Path, and Use Local Drive Path; 'Message Log' with a checkbox for Detailed Message Log; and 'Other Selection Criteria' with a checkbox for Failed Employee Replication.

Employee Data Extraction		
OrgStructure Search Help		
Selection Criteria		
Personnel Number	1234	[Icon]
Action Type		[Icon]
Personnel area		[Icon]
Personnel subarea		[Icon]
Employee group		[Icon]
Employee subgroup		[Icon]
Extraction Template		
Transformation Template	SBS_MODEL_WS	[Icon]
Communication Channels		
<input checked="" type="radio"/> Test Run		
<input type="radio"/> Web Service Transfer		
<input type="radio"/> File Transfer		
<input type="checkbox"/> Combine into ZIP File		
<input type="radio"/> Use Server Path		
<input type="radio"/> Use Local Drive Path		
File Identifier		
Message Log		
<input type="checkbox"/> Detailed Message Log		
Other Selection Criteria		
<input type="checkbox"/> Failed Employee Replication		

Figure 12: Selection Settings for Web Service-Based Employee Data Extraction

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Steps in the SAP ERP HCM System \[page 63\]](#)

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[Data Replication and Mapping Information \[page 212\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)

[Extracting Employee Data \[page 190\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Downloading CSV Files from the Application Server \[page 198\]](#)

4.3 How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates

If you define an earliest transfer date for a transformation template group that you use for employee data extraction, this date influences effective-dated as well as non-effective dated templates.

What happens for initial data extraction

This is what happens when you initially extract the data:

- **Effective-dated templates:**

For effective-dated templates, if the earliest transfer date is after the hire or rehire date of an employee, the employee's data is extracted starting with the earliest transfer date. (This is also true for Non-Recurring Payments.) The following situations might occur:

- The employee is active on the earliest transfer date: In this case, the data is extracted starting with the earliest transfer date for all effective-dated templates and Non-Recurring Payments.
- The employee is terminated or retired on the earliest transfer date and hired or rehired later: In this case, the data is extracted starting with the hire or rehire date for all effective-dated templates and Non-Recurring Payments.
- The employee is terminated or retired on the earliest transfer date and isn't rehired: In this case, no data will be extracted for all effective-dated templates and Non-Recurring Payments.

- **Non-effective dated templates:**

- **When an employee is hired in past/present:**

For all other non-effective dated templates when the employee is hired in the past or present, data is extracted starting with the later of the two dates – current date or the earliest transfer date. If the earliest transfer date is after the date on which you run the data extraction program (the earliest transfer date is in future), then the earliest transfer date is used for data extraction. If the earliest transfer date is before, then the date on which you run the data extraction program is used instead.

- **When an employee is hired in future:**

For all other non-effective dated templates when the employee is hired in future, the hire date is used for data extraction.

- For *Employment Termination*, the last terminated data record for an employee is extracted. This is independent of the earliest transfer date or the date on which you run the data extraction program.
- For *Global Assignment*, the last record of the employee's *Details on Global Assignment* (0710) infotype is extracted. This is independent of the earliest transfer date or the date on which you run the data extraction program. If the earliest transfer date is after the start date of the global assignment, the earliest transfer date is used. If the earliest transfer date is between the start and end date of the host

assignment, the Job Information record is extracted for the host assignment using the PSEUDO_ADDGA event reason for the [Add Global Assignment](#) event.

- If the earliest transfer date is greater than the future cutoff date, then the earliest transfer date is considered during the data extraction.

What happens for delta extraction

This is what happens for delta extraction:

- For effective-dated templates, if the earliest transfer date is after the hire or rehire date of an employee, the employee's data is extracted starting with the earliest transfer date. (This is also true for Non-Recurring Payments.) The following situations might occur:
 - The employee active on the earliest transfer date: In this case, the data is extracted starting with the earliest transfer date for all effective-dated templates and Non-Recurring Payments.
 - The employee is terminated or retired on the earliest transfer date and hired or rehired later: In this case, the data is extracted starting with the hire or rehire date for all effective-dated templates and Non-Recurring Payments.
 - The employee is terminated or retired on the earliest transfer date and isn't rehired: In this case, no data will be extracted for all effective-dated templates and Non-Recurring Payments.
- For non-effective dated templates, if the earliest transfer date is after the date on which you run the data extraction program, no data is extracted. If the earliest transfer date is before the date on which you run the data extraction program or if no earliest transfer date is defined, the data record valid on the date on which you run the data extraction program is extracted.

Note

When an employee is terminated, his or her assigned position, job code, division, department, business unit, and cost-center are persisted in Job Information in Employee Central. In the SAP ERP HCM system, however, a terminated employee is a default position assigned, and the job, organizational unit, and cost-center assignments are removed from the [Organizational Assignment](#) (0001) infotype. If this information was replicated to [Employee Central](#), the assignments are also removed there from the employee's Job Information. That's why the SAP ERP HCM system replicates the corresponding assignments from the employee's last active [Organizational Assignment](#) record instead of from the terminated one.

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Communication Channels for Employee Data Replication \[page 58\]](#)

[Steps in the SAP ERP HCM System \[page 63\]](#)

[Extensibility of the Integration \[page 211\]](#)

[Data Replication and Mapping Information \[page 212\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)
[Creating a Transformation Template Group for Employee Data \[page 139\]](#)
[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)
[Creating Event Reasons in Employee Central \[page 18\]](#)
[Implementing Business Add-Ins to Enhance the Replication \[page 211\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Defining Your Employee Central Instance \[page 68\]](#)

4.4 Steps in the SAP ERP HCM System

In the next sections we'll go step by step through all activities you need to carry out in the SAP ERP HCM system to make data replication work.

i Note

All employee infotypes (both standard PA infotype and non-standard PA infotype) are allowed to be configured in the Business Integration Builder framework. These infotypes are indicated by the PAPD field value "X" in the table T777D. In the employee migration/integration only the standard PA infotypes which has prefix "PA" in the database table names are supported. Any fields mapped to the non-standard PA infotypes will be not extracted and hence will be filtered out in the migration/integration scenario.

[Preparatory Steps \[page 64\]](#)
[Particular Mapping Types \[page 165\]](#)
[Data Extraction and Transfer \[page 189\]](#)
[Follow Up \[page 208\]](#)

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)
[Communication Channels for Employee Data Replication \[page 58\]](#)
[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)
[Extensibility of the Integration \[page 211\]](#)
[Data Replication and Mapping Information \[page 212\]](#)
[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)
[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)

4.4.1 Preparatory Steps

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

To define customer-specific settings, you use the Customizing activities and Business Add-Ins (BADIs) in the integration add-on for SAP ERP HCM and SAP SuccessFactors Employee Central (PA_SE_IN) .

[Defining Your Employee Central Instance \[page 68\]](#)

You need to define an ID in the SAP ERP HCM system, which represents your Employee Central configuration and refers to the metadata you use in Employee Central and to basic settings for data transfer between SAP ERP HCM and Employee Central.

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

If you've used the so called Talent Hybrid integration before, you need to specify that you now use employee data replication from SAP ERP HCM to SAP SuccessFactors Employee Central instead.

[Importing Metadata from Employee Central \[page 70\]](#)

You import the metadata from SAP SuccessFactors Employee Central to make Employee Central fields available in the SAP ERP HCM system so that you can use them for field mappings.

[Defining Value Mappings \[page 78\]](#)

Value mapping means that Employee Central field values are mapped to values of SAP ERP HCM fields.

[Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central \[page 99\]](#)

You can now format the Employee Central fields by using value conversion when migrating or replicating the data to Employee Central system.

[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)

What use of assignment ID (assignment_id_external) in SAP ERP HCM means for integration with an Employee Central system.

[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)

Make additional settings for the Employee Central company you've defined before in the *Define Employee Data Settings for Employee Central Company* Customizing activity (view V_ECPAO_CMPNY_EE).

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

An Employee Central entity represents an entity from Employee Central, such as a CSV data import template, an OData entity, or a generic object (also known as MDF entity). You only need to define custom Employee Central entities if you want to transfer data from SAP ERP HCM to an Employee Central entity for which SAP hasn't provided a default template.

[Handling Manager Relationships \[page 122\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

To enable the data extraction programs to extract the right SAP ERP HCM information for the right Employee Central fields, you need to map SAP ERP HCM fields to Employee Central fields.

[Cloning Transformation Templates \[page 157\]](#)

Cloning a transformation template means that you reuse the field mapping you define for an infotype and subtype in the *Primary Mapping* view of the VC_ECPAO_MAP view cluster (Define Field Mapping for Employee Data customizing activity) for some or all subtypes of this infotype.

[Copy Configuration from one EC Instance to another EC Instance \[page 159\]](#)

You can copy the configurations like transformation template group, metadata, picklists etc from one Employee Central instance to another EC instance based on a template group.

[Comparison Tool to Compare Configuration Details \[page 161\]](#)

You can now compare the transformation template group data and check if there is any difference between the configurations before even you run the data extraction tool.

[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)

An employee can be filtered out based on the employment status and this can be done during the migration of the employee master data.

[Setting the User Status in Employee Central \[page 164\]](#)

The user status in employee profile can be set to Active or Inactive based on the current employment status in ERP.

Parent topic: [Steps in the SAP ERP HCM System \[page 63\]](#)

Related Information

[Particular Mapping Types \[page 165\]](#)

[Data Extraction and Transfer \[page 189\]](#)

[Follow Up \[page 208\]](#)

4.4.1.1 Accessing the Customizing Structure in the SAP ERP HCM System

To define customer-specific settings, you use the Customizing activities and Business Add-Ins (BAIs) in the integration add-on for SAP ERP HCM and SAP SuccessFactors Employee Central (PA_SE_IN).

In your SAP ERP HCM system, go to the *Customizing: Execute Project* (SPRO) transaction and choose *SAP Reference IMG*. In the *SAP Customizing Implementation Guide* structure, open ► *Personnel Management* ► *Integration with SuccessFactors Employee Central* ► *Business Integration Builder* :

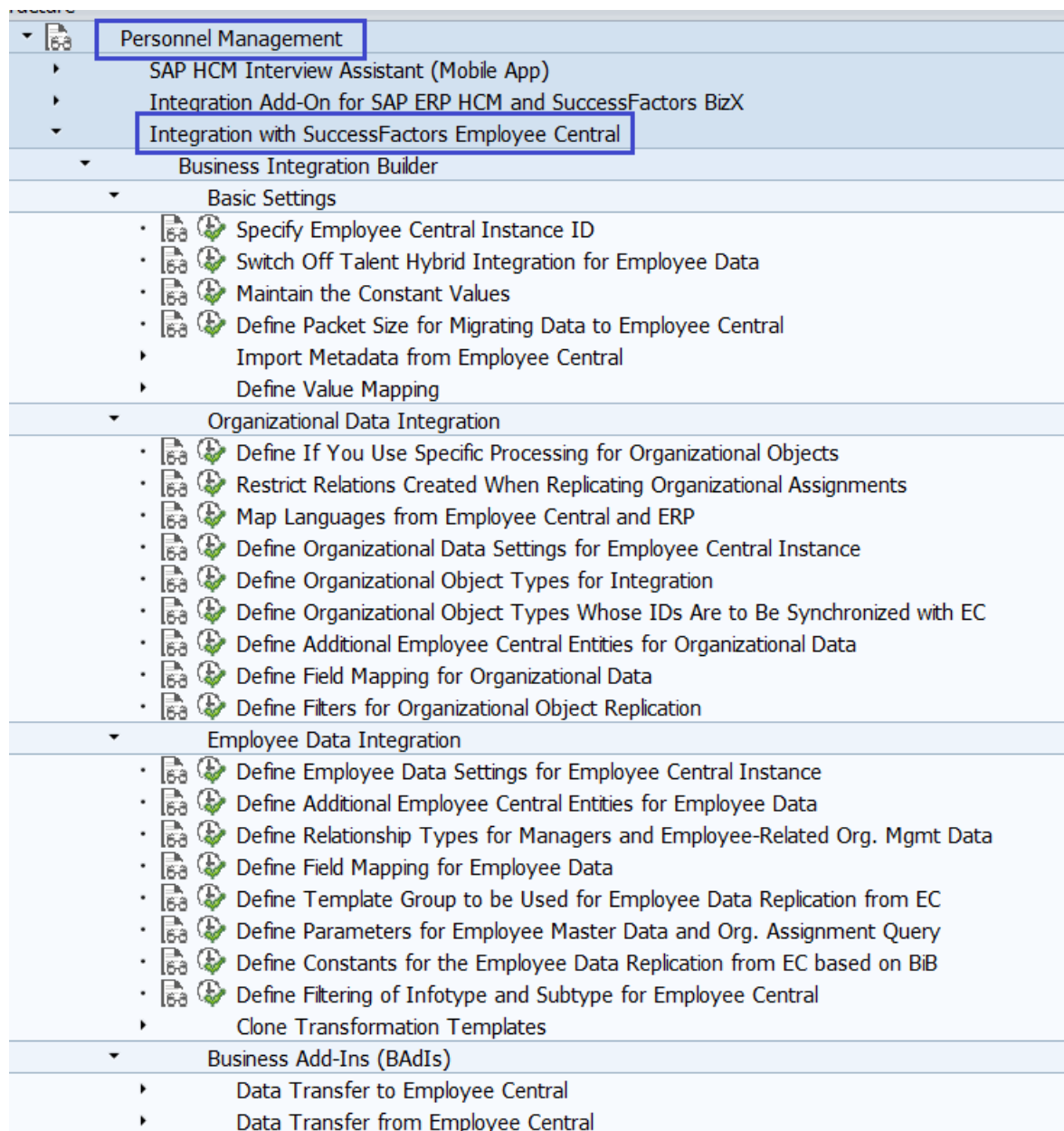


Figure 13: Overview of Customizing Structure

In the Customizing structure, you can find detailed information for each Customizing activity and BAdI:

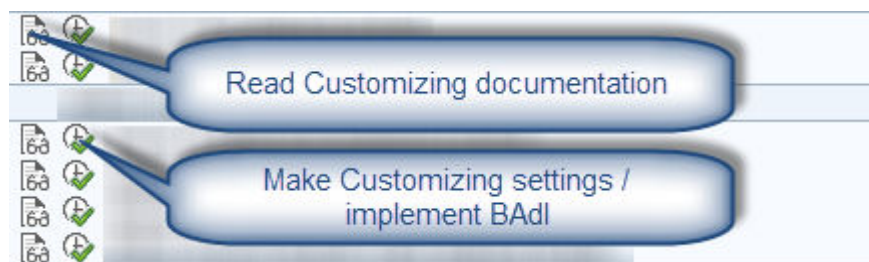


Figure 14: Details of Customizing Structure

The next sections describe the steps you need to carry out in the SAP ERP HCM system.

Parent topic: [Preparatory Steps \[page 64\]](#)

Related Information

[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

[Defining Value Mappings \[page 78\]](#)

[Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central \[page 99\]](#)

[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)

[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Handling Manager Relationships \[page 122\]](#)

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[Cloning Transformation Templates \[page 157\]](#)

[Copy Configuration from one EC Instance to another EC Instance \[page 159\]](#)

[Comparison Tool to Compare Configuration Details \[page 161\]](#)

[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)

[Setting the User Status in Employee Central \[page 164\]](#)

4.4.1.2 Defining Your Employee Central Instance

You need to define an ID in the SAP ERP HCM system, which represents your Employee Central configuration and refers to the metadata you use in Employee Central and to basic settings for data transfer between SAP ERP HCM and Employee Central.

Procedure

1. Go to the *Specify Employee Central Instance ID* Customizing activity (view `V_ECPAO_COMPANY`).
2. Enter an ID and a description.

Task overview: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

[Defining Value Mappings \[page 78\]](#)

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[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Transferring Data Deletion to Employee Central \[page 203\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Object Identification Mapping Works \[page 173\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)

4.4.1.3 Switching Off Talent Hybrid Integration for Employee Data

If you've used the so called Talent Hybrid integration before, you need to specify that you now use employee data replication from SAP ERP HCM to SAP SuccessFactors Employee Central instead.

Context

You make this setting in the [Switch Off Talent Hybrid Integration for Employee Data](#) Customizing activity (view V_ECPAO_T77S0_SFSFI_SBSER). You need to set the switch in this Customizing activity if you want to start using the employee master data replication from on-premise SAP ERP HCM systems to SAP SuccessFactors Employee Central, where you have previously used the integration add-on for SAP ERP HCM and SAP SuccessFactors HCM Suite to replicate employee data from SAP ERP HCM to the Employee Profile in the SAP SuccessFactors Talent Suite (which is also known as *Talent Hybrid* integration).

Setting the switch tells your SAP ERP HCM system that employee data is replicated to Employee Central using the [Employee Data Extraction](#) (ECPAO_EMPL_EXTRACTION) program. This has the following effects on the integration add-on for SAP ERP HCM and SAP SuccessFactors HCM Suite:

- You can no longer use the following programs:
 - [Sync Employee Data with SuccessFactors in Pre-Hire Period](#) (RH_SFI_PREHIRE_EMPL_DATA)
 - [Sync Employee Data with SuccessFactors \(with Delta and Inactive Logic\)](#) (RH_SFI_SYNCHRONIZE_EMPL_DATA)
 - [Extraction of Employee Data for SuccessFactors](#) (RH_SFI_TRIGGER_EMPL_DATA_REPL)

This is because the same data must only be transferred from one source to the SAP SuccessFactors system. Otherwise, data from different sources in SAP ERP HCM could be transferred to the same field in the SAP SuccessFactors system, which would lead to data inconsistencies.

- In the [Replication of Employee's Compensation Data](#) (RH_SFI_SYNCH_COMP_DATA) program, you can no longer select an option for transferring the user ID to SAP SuccessFactors. The [User ID Determination](#) field is removed from the selection screen.

This is because when you replicate data to Employee Central, the user ID is determined by the [Employee Data Extraction](#) (ECPAO_EMPL_EXTRACTION) program and stored in the [Employee Key Mapping](#) (PAOCFEC_EEKEYMAP) table.

Procedure

Set the value of the SFSFI SBSER switch to **x** or leave it empty.

Task overview: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)
[Defining Your Employee Central Instance \[page 68\]](#)
[Importing Metadata from Employee Central \[page 70\]](#)
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[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)
[Setting the User Status in Employee Central \[page 164\]](#)

4.4.1.4 Importing Metadata from Employee Central

You import the metadata from SAP SuccessFactors Employee Central to make Employee Central fields available in the SAP ERP HCM system so that you can use them for field mappings.

To import metadata, use one of the following programs:

- *Import of Metadata from Employee Central Using XML File* (ECPAO_ECTMPL_METADATA_WRITER)
This program is available in the *Import Metadata for Web Service-Based Data Transfer from Employee Central* Customizing activity.

i Note

You can only use this program to import metadata for web service entities. If you want to import metadata for CSV file-based entities, use the *Import of Metadata from Employee Central* program instead.

- *Import of Metadata from Employee Central* (ECPAO_ECFLD_METADATA_WRITER)
This program is available in the *Import Metadata for File-Based Data Transfer from Employee Central* Customizing activity.

i Note

You can only use this program to import metadata for CSV file-based entities. If you want to import metadata for web service entities, use the *Import of Metadata from Employee Central Using XML File* program instead.

Parent topic: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)
[Defining Your Employee Central Instance \[page 68\]](#)
[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)
[Defining Value Mappings \[page 78\]](#)
[Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central \[page 99\]](#)
[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)
[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Handling Manager Relationships \[page 122\]](#)
[Defining Field Mapping for Employee Data \[page 136\]](#)
[Cloning Transformation Templates \[page 157\]](#)
[Copy Configuration from one EC Instance to another EC Instance \[page 159\]](#)
[Comparison Tool to Compare Configuration Details \[page 161\]](#)
[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)
[Setting the User Status in Employee Central \[page 164\]](#)
[Importing Metadata for Web Service-Based Data Transfer \[page 71\]](#)
[Importing Metadata for File-Based Data Transfer \[page 75\]](#)
[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Non-Configurable \(Standard\) Employee Central Fields \[page 213\]](#)

4.4.1.4.1 Importing Metadata for Web Service-Based Data Transfer

Use the *Import of Metadata from Employee Central Using XML File* (ECPAO_ECTMPL_METADATA_WRITER) program to import metadata for web service-based data transfer.

Context

Using this program, you can import entries as well as delete entries you have imported for a specific Employee Central instance and template.

⚠ Caution

You can't delete metadata in the SAP ERP HCM system that you have already used for field mappings. Otherwise your mappings become invalid. You are shown an error message if you try to delete metadata that is used for field mappings.

Procedure

1. Download the metadata that you want to import from Employee Central.
 1. Go to the Admin Center and choose the [OData API Metadata Refresh and Export](#) tool.

OData API Metadata Refresh And Export

Refresh Metadata

Cache:

Refresh

Export Metadata to File:

Export

Figure 15: OData API Metadata Refresh and Export Tool

2. To make sure that the metadata is up to date choose [Refresh](#).
3. Choose [Export](#) for the [Export Metadata to File](#) option.
4. Store the metadata file in the XML format on a server or on your local disk.

i Note

API tools need to be enabled in Provisioning.

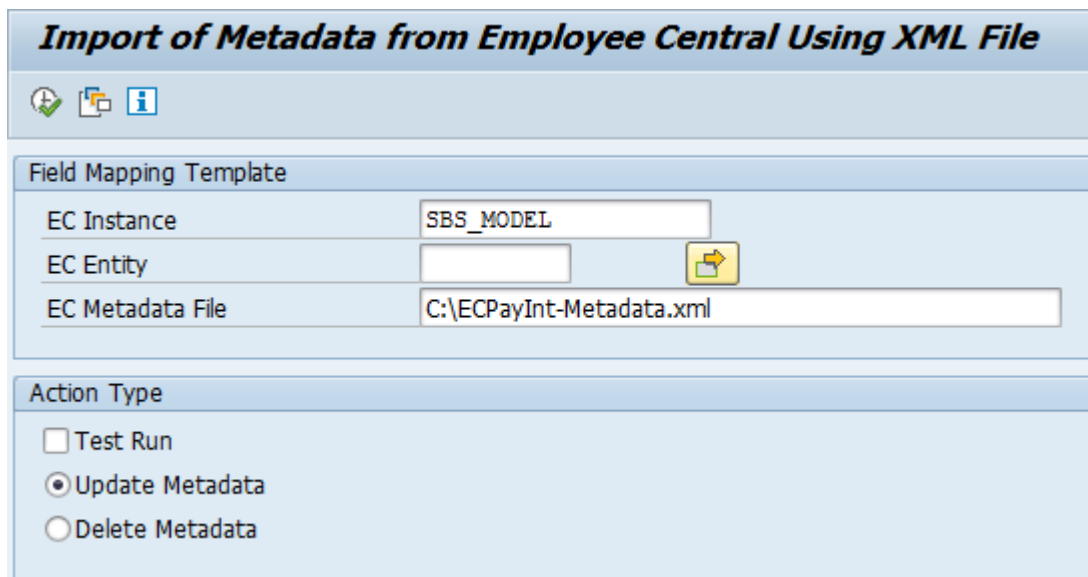
→ Remember

As a customer, you don't have access to Provisioning. To complete tasks in Provisioning, contact your implementation partner or Account Executive. For any non-implementation tasks, contact Product Support.

i Note

When a new field is added in Employee Central, you will have to re-import the metadata report and re-run the report once again.

2. On the selection screen of the program, specify which metadata you want to import to SAP ERP HCM and from which file you want to upload it:



Import of Metadata from Employee Central Using XML File

Field Mapping Template

EC Instance: SBS_MODEL

EC Entity: [Empty Text Box] [File Icon Button]

EC Metadata File: C:\ECPayInt-Metadata.xml

Action Type

☐ Test Run

☒ Update Metadata

☐ Delete Metadata

Figure 16: Selection Screen of the ECPAO_ECTMPL_METADATA_WRITER Program

i Note

If you don't specify a specific Employee Central entity, the metadata is imported for **all** Employee Central entities that are available and use the [Web Service Transfer](#) communication channel.

3. **Optional:** Carry out a test run of the program to check the data that will be uploaded to SAP ERP HCM.
4. Clear the [Test Run](#) checkbox and execute the program to upload the data from the Employee Central metadata file into the [EC Entity Field Mapping](#) (ECPAO_FLD) table.

If you run the program in a test system or client with the [Test Run](#) checkbox deselected, the program asks for a transport request, to which the imported metadata will be assigned. Using this request you can transport the entries to the productive system or client.

i Note

The standard fields are also uploaded into the [EC Entity Field Mapping](#) table. In this table, the [Is Standard Field](#) (IS_FLD_STANDARD) flag is set for these fields. Since a standard mapping is defined for them, they are not available in the Customizing of the transformation template groups.





5. Optional: To delete the entries you have imported for the Employee Central instance and template that you have specified on the selection screen, select the [Delete Metadata](#) checkbox and execute the program. This will make sure that the WS based and File based transfer will be consistent.
6. Check the metadata that you have imported in the [Transport Imported Metadata and Check Metadata for File-Based Data Transfer](#) Customizing activity.

→ Tip

For details about which information about the Employee Central fields exactly is imported by the program, see the program documentation in your SAP ERP HCM system. You'll find a link to the program documentation in the documentation of the [Import Metadata for Web Service-Based Data Transfer from Employee Central](#) Customizing step.

Display View "Metadata Imported from EC": Overview

66



EC Instance ID

SBS_MODEL

Metadata Imported from EC

EC Entity	EC Field ID	EC Field Name	EC Field Description	Required in EC	Std. Field	Deleted	Data Type	Max.Length	Picklist	Nav. Target
WS_8	20	phoneNumber	Phone Number	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	string ▼ 100		<input type="checkbox"/>	
WS_8	21	phoneType	Phone Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	string ▼ 100		<input checked="" type="checkbox"/>	
WS_9	1	userId	User ID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	string ▼ 100		<input type="checkbox"/>	
WS_9	2	startDate	Start Date	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	datetime ▼ 0		<input type="checkbox"/>	
WS_9	16	endDate	End Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	datetime ▼ 0		<input type="checkbox"/>	
WS_9	17	operation	operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	string ▼ 0		<input type="checkbox"/>	
WS_9	18	relUserId	Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	string ▼ 384		<input type="checkbox"/>	
WS_9	19	relationshipType	Relationship Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	string ▼ 100		<input checked="" type="checkbox"/>	
WS_OM_BUS	1	externalCode	Business Unit Code	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	string ▼ 128		<input type="checkbox"/>	
WS_OM_BUS	2	status	Status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	string ▼ 255		<input type="checkbox"/>	
WS_OM_BUS	3	startDate	Start Date	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	datetime ▼ 0		<input type="checkbox"/>	
WS_OM_BUS	17	cust_All_Other	All_Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	string ▼ 255		<input type="checkbox"/>	
WS_OM_BUS	18	cust_Date	Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	datetime ▼ 0		<input type="checkbox"/>	
WS_OM_BUS	19	cust_Number	Number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	referen... ▼ 0		<input type="checkbox"/>	

Figure 17: Transport Imported Metadata and Check Metadata for File-Based Data Transfer

Note

Don't make any changes to the metadata in this Customizing view. Use the metadata import program to update the entries in this view.

Caution

If the Employee Central field has *Picklist* flag is set for an imported Employee Central field, you might need to assign a value mapping entity when you define a field mapping for this Employee Central field. Otherwise the data extraction program might fail.

- You can also store entries from this view on a transport request, for example, to transport them from your SAP ERP HCM test system to your productive system. To do so, choose **Table View** **Transport**.

Related Information

[Importing Metadata from Employee Central \[page 70\]](#)

4.4.1.4.2 Importing Metadata for File-Based Data Transfer

Use the [Import of Metadata from Employee Central](#) (ECPAO_ECFLD_METADATA_WRITER) program, to import metadata for CSV file-based data transfer.

Context

Using this program, you can import entries as well as delete entries you have imported for a specific Employee Central instance and template.

⚠ Caution

You can't delete metadata in the SAP ERP HCM system that you have already used for field mappings. Otherwise your mappings become invalid. You are shown an error message if you try to delete metadata that is used for field mappings.

Procedure

1. To download the metadata that you want to import from Employee Central, go to the Admin Center and choose the following tools:

Table 17: Metadata Download from Employee Central

For this type of entity in Employee Central ...	You use this admin tool ...
Person and employment objects	Choose the Import Employee Data tool, then choose Download a blank CSV template
Foundation objects	Choose the Import Foundation Data tool, then choose Download a blank CSV template
Generic objects	Choose the Import and Export Data tool, then select the Export Data action

i Note

When a new field is added in Employee Central, you will have to re-import the metadata report and re-run the report once again.

2. On the selection screen of the program, specify which metadata you want to import to SAP ERP HCM and from which file you want to upload it:

Import of Metadata from Employee Central

Field Mapping Template

EC Instance	SBS_MODEL
EC Entity	CSV_OM_BUS
EC Metadata File	\\INBLR102\SAPALL\GLOBALIZATION_SERVICES\EC_...

Action Type

☒ Test Run

☐ Update Metadata

☐ Delete Metadata

Figure 18: Selection Screen of ECPAO_ECFLD_METADATA_WRITER Program

3. Select the [Update Metadata](#) checkbox to import the metadata.
4. **Optional:** Carry out a test run of the program to check the data that will be uploaded to SAP ERP HCM.
5. Clear the [Test Run](#) checkbox and execute the program to upload the data from the Employee Central metadata file into the [EC Entity Field Mapping](#) (ECPAO_FLD) table or delete data from this table.

If you run the program in a test system or client with the [Test Run](#) checkbox deselected, the program asks for a transport request, to which the imported metadata will be assigned. Using this request you can transport the entries to the productive system or client.

6. **Optional:** To delete the entries you have imported for the Employee Central instance and template that you have specified on the selection screen, select the [Delete Metadata](#) checkbox and execute the program.
7. Check the metadata that you have imported or deleted in the [Transport Imported Metadata and Check Metadata for File-Based Data Transfer](#) Customizing activity.

→ Tip

For details about which information about the Employee Central fields exactly is imported by the program, see the program documentation in your SAP ERP HCM system. You'll find a link to the program documentation in the documentation of the [Import Metadata for Web Service-Based Data Transfer from Employee Central](#) Customizing step.

Display View "Metadata Imported from EC": Overview

EC Instance ID:

EC Entity	EC Field ID	EC Field Name	EC Field ID Description	Required in EC	Std. Field	Deleted	Data Type	Max.Length	Picklist	Nav. Target
CSV_OM_BUS 1	externalCode	Business Unit Code		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 2	status	Status		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 3	start-date	Start Date		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 16	name	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 17	name.en_US	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 18	name.ja_JP	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 19	name.ru_RU	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 20	name.zh_CN	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 21	name.en_GB	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 22	name.de_DE	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 23	name.en_DEBUG	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 24	name.fr_FR	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 25	name.fr_CA	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 26	name.it_IT	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 27	name.es_ES	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 28	name.es_MX	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 29	name.zh_TW	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 30	name.bs_BS	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 31	name.bs_ID	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 32	name.pt_PT	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 33	name.pt_BR	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 34	name.nl_NL	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 35	name.ko_KR	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 36	name.da_DK	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	
CSV_OM_BUS 37	name.fi_FI	Business Unit Name		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	▼ 0		<input type="checkbox"/>	

Figure 19: Transport Imported Metadata and Check Metadata for File-Based Data Transfer

Note

You might need to make some changes to the uploaded metadata in this view. For example:

- If a field is a required field in your Employee Central data model and you want the SAP ERP HCM system to validate the settings for this field, select the *Is Required* checkbox.
- You might need to specify the data type for fields. For fields that contain a date, for example, choose the *datetime* data type so that the content can be identified correctly.

Caution

If you upload the metadata again, the changes you've made manually will be overwritten.

Don't select the *Standard Field* and *Deleted* checkboxes. These flags are set by the metadata import program:

- The *Standard Field* flag is set for all fields that are considered to be standard fields. This means that a standard mapping is defined and that the fields are not available in Customizing for field mapping.
- *Deleted* field means that the field has become invalid since the last run of the program. This happens, for example, if you've imported an Employee Central field and defined a mapping for it. Now you delete this field in Employee Central and run the metadata import program again. The program recognizes that the field is missing in the new metadata import run and therefore sets this flag for it. Since the field no longer exists, your mapping becomes invalid.

If you select the *EC Field Has Picklist* checkbox for an imported Employee Central field, you might need to assign a value mapping entity when you define a field mapping for this Employee Central field. Otherwise the data extraction program might fail.

- You can also store entries from this view on a transport request, for example, to transport them from your SAP ERP HCM test system to your productive system. To do so, choose **Table View** **Transport**.

Related Information

[Importing Metadata from Employee Central \[page 70\]](#)

4.4.1.5 Defining Value Mappings

Value mapping means that Employee Central field values are mapped to values of SAP ERP HCM fields.

❖ Example

Employee Central uses the value *F*, SAP ERP HCM uses the value *1* for the *Female* gender code. The values have the same meaning, but they aren't identical. Therefore they need to be mapped so that Employee Central can read the gender code that is transferred from SAP ERP HCM.

The data extraction programs use the value mappings when extracting data. They replace the SAP ERP HCM keys by the corresponding Employee Central keys if a value mapping is defined for the corresponding field mapping. Value mappings are assigned to field mappings in the *Primary Mapping* and *Secondary Mapping* views of the field mapping view cluster. Field mappings are grouped together in a transformation template group. You enter the transformation template group on the selection screen to tell the extraction program which field mappings and which value mappings it is to use.

There are standard value mappings provided by SAP. Standard value mappings are provided for values that can't be configured in the SAP ERP HCM system and in Employee Central and therefore always stay the same.

❖ Example

Language codes can't be configured. The Employee Central language code *English* always corresponds to the language code *EN* in the SAP ERP HCM system. Therefore, a standard value mapping is provided for language codes.

However, if you want to map values that **can** be configured in the SAP ERP HCM system and in Employee Central, you need to define custom value mappings.

❖ Example

Let's say you want to map event reasons from the *Job History* entity in Employee Central to action types from the *Actions* (0000) infotype in SAP ERP HCM. So you define, for example, a custom value mapping that maps the *Hire* and *Termination* event reasons from Employee Central to the SAP ERP HCM action types *Hiring* and *Leaving*.

Since no country-specific standard value mappings are available, you also need to define custom value mappings if you need to map country-specific values.

❖ Example

Pay scale areas are country specific. If you need a pay scale area mapping, you define it using the suitable ISO code. You could, for example, map the Employee Central pay scale area *BR SP BR-Sao Paulo (BRSP)* to the *SC* pay scale area from the SAP ERP HCM system using the *BR* ISO code.

i Note

After copying the new value mapping entries, don't save the entries immediately, but press the page down button to see all the entries. You must click the page down button until you see the last set of entries. Once you see the last set of entries, you can save all the newly created entries.

[Import Picklists and Picklist Values from Employee Central Using File Upload \[page 80\]](#)

You can import picklists and picklist values from Employee Central to the SAP ERP HCM system to use them in Customizing when mapping Employee Central field values to values of SAP ERP HCM fields.

[Updating the Reference Picklist Tables to Reuse Value Mappings in the Productive System Environment \[page 83\]](#)

You can store picklist entries in reference tables to reuse value mappings you've defined in your test SAP ERP HCM system in the productive system landscape.

[Defining Value Mapping Entities \[page 85\]](#)

A value mapping entity combines a set of value mappings for a specific purpose (for example, gender code value mappings).

[Converting External Code to Option ID Due to Different Option ID's in Different Employee Central Systems \[page 90\]](#)

Option ID usually varies from one Employee Central system to another system. Since the Option ID is different, you need to define the value mapping details again when you configure the data for a new system as per the Option ID's for the new system.

[Defining Value Mapping Details \[page 91\]](#)

The value mapping details actually map SAP ERP HCM values to the corresponding Employee Central values.

[Defining Value Mapping Details Depending on Employee's Country Grouping \[page 94\]](#)

Country-specific value mapping details actually map SAP ERP HCM values to the corresponding Employee Central values, depending on the country version.

[Defining Value Mapping Based on Constants \[page 95\]](#)

You can use an SAP ERP HCM field that always holds the same value to transfer a constant value to a specific Employee Central field.

[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

We provide sample value mapping entities for employee data and also value mapping details for some of the sample value mapping entities. Here's how to use them.

Parent topic: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

[Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central \[page 99\]](#)

[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)
[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Handling Manager Relationships \[page 122\]](#)
[Defining Field Mapping for Employee Data \[page 136\]](#)
[Cloning Transformation Templates \[page 157\]](#)
[Copy Configuration from one EC Instance to another EC Instance \[page 159\]](#)
[Comparison Tool to Compare Configuration Details \[page 161\]](#)
[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)
[Setting the User Status in Employee Central \[page 164\]](#)
[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)
[Cloning Transformation Templates \[page 157\]](#)

4.4.1.5.1 Import Picklists and Picklist Values from Employee Central Using File Upload

You can import picklists and picklist values from Employee Central to the SAP ERP HCM system to use them in Customizing when mapping Employee Central field values to values of SAP ERP HCM fields.

Context

To import picklists, you use the *Import of Picklists from Employee Central* (ECPAO_PICKLIST_WRITER) program. This program is available in the *Import Picklists from Employee Central* Customizing step. You can use a transport link to import the picklists from Employee Central. If you run the picklist import programs in an SAP ERP HCM test system or client system, the programs now automatically ask for a transport request, to which the imported picklist report will be assigned. You no longer need to go to a specific customizing activity to transport the entries.

Before you run the picklist writer report, you must set the mode of the picklist file in the view V_ECPAO_CONSTANT. Set "X" for *ERP to EC / EC to ERP (BIB): Mode of Picklist File* value. If the switch is set to X, then MDF picklist without Option ID is chosen. And if this switch is set to Y, then the new MDF picklist with Option ID is chosen. If you leave the field blank, then the legacy picklist would be chosen.

i Note

Before starting the migration process, you need to decide which mode of picklist file you want to use. Also you should not change the mode of picklist settings once the *Employee Central* instance has been already configured for migration.

Procedure

1. Import the picklist file from Employee Central.

Here's how you download picklist from Employee Central:

- a. Go to the Admin Center and choose the *Import and Export Data* tool.
 - b. Select the action to perform as **Export data**.
 - c. Choose *Picklist-Values* as the generic object.
 - d. Choose *No* for Include dependencies option.
 - e. Choose *External Code* for key preference.
 - f. Click *Export*.
2. Download the picklists that you want to import from Employee Central and store the picklist file in the comma-separated values (CSV) format on a server or on your local disk.

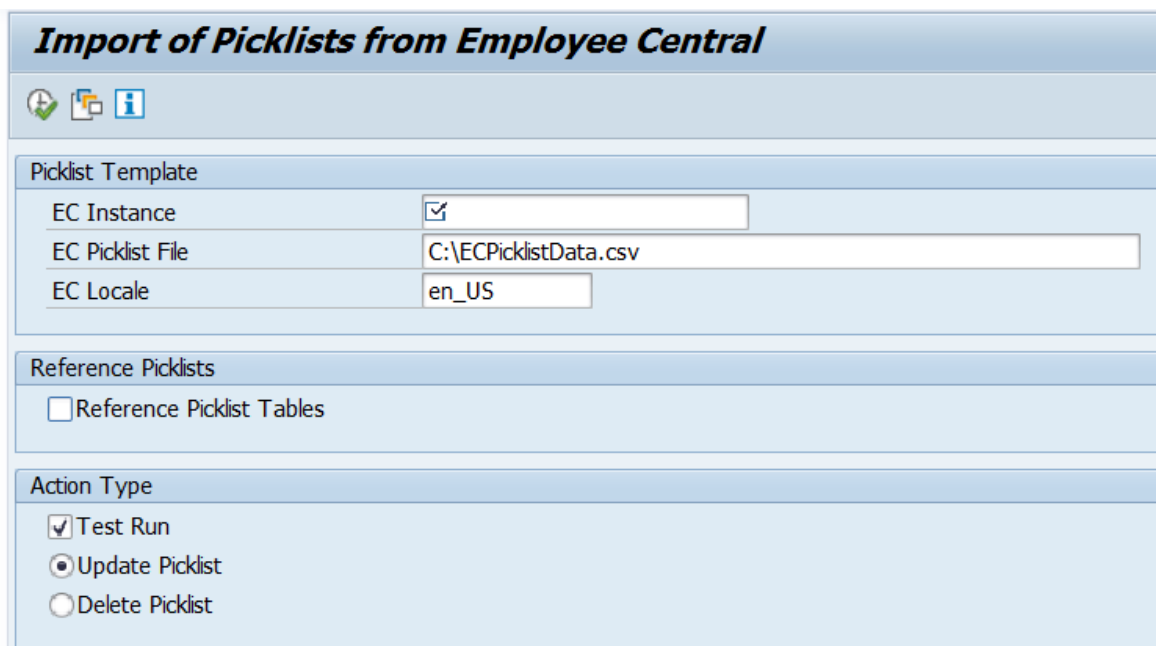
Here's how you download picklists:

- a. Go to the Admin Center and choose the *Picklists Management* tool.

Note

If you are using legacy picklist, then you will have to choose *Picklist Center*.

- b. Choose *Refresh*.
 - c. Choose *Export all picklist(s)*.
 - d. Choose *Submit*.
 - e. Save and extract the exported picklist file.
3. On the selection screen of the ECPAO_PICKLIST_WRITER program, select your Employee Central instance and the picklist file that you want to upload.



Picklist Template	
EC Instance	<input checked="" type="checkbox"/>
EC Picklist File	C:\ECPicklistData.csv
EC Locale	en_US

Reference Picklists
<input type="checkbox"/> Reference Picklist Tables

Action Type
<input checked="" type="radio"/> Test Run
<input type="radio"/> Update Picklist
<input type="radio"/> Delete Picklist

Figure 20: Selection Screen of Picklist Import Program

4. Enter the locale of the picklist labels that you want to import.

Only the labels of the locale you enter here are imported. The labels listed for other locales are ignored. You can only choose one locale.

❖ Example

If you enter **en_US**, the labels *Female* and *Male* are imported for the *gender* picklist. All other labels of this picklist, such as *Femenino* and *Masculino* for locale es_ES or *Femme* and *Homme* for locale fr_FR, are not imported.

We recommend that you use the locale of the user who logs on to Employee Central and replicates the data from SAP ERP HCM.

5. Select the *Update Picklist* checkbox to import picklists and picklist values.
6. **Optional:** Carry out a test run of the program to check the data that will be uploaded to SAP ERP HCM.
7. Clear the *Test Run* checkbox and execute the program to upload the data from the Employee Central picklist file into the following tables:
 - *Picklists Imported from Employee Central* (ECPAO_PIKLST_ENT)
 - *Picklist Values Imported from Employee Central* (ECPAO_PIKLST_VAL)

The program generates an SAP ERP HCM ID for each picklist. This ID is used as the unique key to identify each picklist without ambiguity in the SAP ERP HCM system. Now you need to maintain only the external code, and the system automatically generates the option IDs.

❖ Example

248 could be the SAP ERP HCM picklist ID that is generated for the *addressType* picklist.

8. **Optional:** To delete picklists and picklist values that you have imported to the SAP ERP HCM system, select the *Delete Picklist* checkbox and execute the program.

i Note

You can't delete picklist values in the SAP ERP HCM system that you have already used for value mappings because your value mappings might become invalid. You are shown an error message if you try to delete picklist values that are used for value mappings.

Results

You are now ready to use the picklists and picklist values in the next Customizing steps when you define value mappings.

Task overview: [Defining Value Mappings \[page 78\]](#)

Related Information

[Updating the Reference Picklist Tables to Reuse Value Mappings in the Productive System Environment \[page 83\]](#)

[Defining Value Mapping Entities \[page 85\]](#)

[Converting External Code to Option ID Due to Different Option ID's in Different Employee Central Systems \[page 90\]](#)

[Defining Value Mapping Details \[page 91\]](#)

[Defining Value Mapping Details Depending on Employee's Country Grouping \[page 94\]](#)

[Defining Value Mapping Based on Constants \[page 95\]](#)

[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

4.4.1.5.2 Updating the Reference Picklist Tables to Reuse Value Mappings in the Productive System Environment

You can store picklist entries in reference tables to reuse value mappings you've defined in your test SAP ERP HCM system in the productive system landscape.

Context

When picklists used for web service transfer are transported from the test to the productive SAP ERP HCM system or client, the option IDs can change. This means that the value mappings you've defined in the test SAP ERP HCM system or client and transported from there don't work for data transfer from the productive SAP ERP HCM system to the productive Employee Central instance.

Note

Storing the picklist entries in the reference tables to reuse in the value mapping is not applicable when the *ERP to EC / EC to ERP (BIB): Mode of Picklist File* field is set to "X" in the `V_ECPAO_CONSTANT` table.

Example

Let's say, in your test system and instance the *Marital Status* picklist uses the option ID 16696 for *Single* (which has the external code S), and 16697 for *Married* (which has the external code M). But in the productive system and instance, *Single* (S) uses the option ID 5673 and *Married* (M) uses the option ID 5674. After you've transported value mappings from your test to your productive system, data transfer to the Employee Central productive instance shows an error because the option IDs 16696 and 16697 don't exist there. 16696 needs to be converted to 5673 and 16697 needs to be converted to 5674 to make data transfer work.

To avoid this kind of error, you can store the picklist entries in the following reference tables:

- *Reference Picklists Imported from Employee Central* (ECPAO_REFPIK_ENT)
- *Reference Picklist Values Imported from Employee Central* (ECPAO_REFPIK_VAL)

Here's what you need to do in detail:

Procedure

1. Import picklists from your test Employee Central instance to your SAP ERP HCM test system or client. To do this, run the *Import of Picklists from Employee Central* (ECPAO_PICKLIST_WRITER) program with the *Reference Picklist Tables* checkbox **not** selected.

Import of Picklists from Employee Central

Picklist Template

EC Instance

EC Picklist File C:\ECPicklistData.csv

EC Locale en_US

Reference Picklists

☐ Reference Picklist Tables

Action Type

☐ Test Run

☒ Update Picklist

☐ Delete Picklist

Figure 21: No Update of the Reference Picklist Tables

2. Define your value mappings in the test system or client.
 3. Transport the value mappings from the test to the productive SAP ERP HCM system or client.
- If you now run the data extraction program, errors will be shown because now other option IDs are used.
4. Update the reference picklist tables in the productive SAP ERP HCM system or client. To do this, run the *Import of Picklists from Employee Central* program with the *Reference Picklist Tables* checkbox selected.

Reference Picklists

☒ Reference Picklist Tables

Action Type

☐ Test Run

☒ Update Picklist

☐ Delete Picklist

Figure 22: Update of the Reference Picklist Tables

Results

Now the data extraction program can compare the entries in the picklist tables with the entries in the reference picklist tables (based on the picklist ID and the external code) and replace the option IDs accordingly.

Task overview: [Defining Value Mappings \[page 78\]](#)

Related Information

[Import Picklists and Picklist Values from Employee Central Using File Upload \[page 80\]](#)

[Defining Value Mapping Entities \[page 85\]](#)

[Converting External Code to Option ID Due to Different Option ID's in Different Employee Central Systems \[page 90\]](#)

[Defining Value Mapping Details \[page 91\]](#)

[Defining Value Mapping Details Depending on Employee's Country Grouping \[page 94\]](#)

[Defining Value Mapping Based on Constants \[page 95\]](#)

[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

4.4.1.5.3 Defining Value Mapping Entities

A value mapping entity combines a set of value mappings for a specific purpose (for example, gender code value mappings).

Context

You define value mapping entities in the [Define Value Mapping Entities](#) Customizing step (view `V_ECPAO_VALUENTITY`). The easiest way to create value mapping entities is to copy the sample entities by choosing the [Copy Sample Value Mapping](#) pushbutton. You can also create country specific value mapping entries and create a new value mapping entity using the [Create Value Mapping Entity](#) and [Define Ctry. Spec. Value Mapping Entries](#) pushbuttons from the primary mapping details screen.

Change View "Value Mapping Entity": Overview

New Entries

EC Instance:

Value Mapping Entity	Description	Value Mapping Type	EC Picklist ID

Figure 23: Copy Sample Value Mapping

→ Tip

If you want to check first which sample value mapping entities are available, choose the [Show Sample Value Mapping](#) pushbutton.

Value Mapping

Value Mapping Entity:

Figure 24: Create Value Mapping Entity/Define Country Specific Value Mapping Entries

You'll get a list of all standard entities provided for the integration, which you can adjust to your needs.

Change View "Value Mapping Entity": Overview			
New Entries Copy Sample Value Mapping Show Sample Value Mapping			
EC Instance <input type="text" value="SBS_MODEL"/>			
Value Mapping Entity			
Value Mapping Entity	Description	Value Mapping Type	EC Picklist ID
ADDRESS_TYPE	ADDRESS_TYPE	Picklist - Option ID ▼	248
ADDRESS_TYPE_CSV		Picklist - Label ▼	
ADDRESS_TYPE_WS		Picklist - Option ID ▼	
ASSIGNMENT_TYPE_CSV		Picklist - Label ▼	
ASSIGN_TYPE	Assignment type	Picklist - Option ID ▼	299
ASSIGN_TYPE_CSV	Assignment type	Picklist - Label ▼	
Assign_type	Assignment type	Picklist - Option ID ▼	
BANK_COUNTRY	BANK_COUNTRY	Picklist - Label ▼	
BUSINESS_UNIT_WS		Organizational Obje... ▼	
BUSSINESSUNIT	Bussinessunit	Organizational Obje... ▼	
COMPANY	Company code	Foundation Object K... ▼	
COMPANY_CODE_CSV		Foundation Object K... ▼	
COST_CENTER	Cost Center	Foundation Object K... ▼	
COST_CENTER_CSV		Foundation Object K... ▼	
COUNTRY_CODE_CSV		Picklist - Label ▼	
COUNTRY_CODE_WS	Country code	Picklist - Option ID ▼	
COUNTRY_CSV	Country	Picklist - Label ▼	
COUNTRY_WS	Country	Picklist - Option ID ▼	
CURRENCY_CSV		Picklist - Label ▼	
CURRENCY_WS	Currency	Picklist - Option ID ▼	
Company CSV	Company CSV	Picklist - Label ▼	

Figure 25: Copied Standard Value Mapping Entities

During the employee replication from Employee Central, the value mapping type *Organizational Object Keys from Mapping Table* is considered for mapping of organizational objects like Position, Departments, Divisions etc. When these types are maintained in the value mapping entity, the data replication uses the mapping from *SFIOM_KMAP_OSI* key mapping table. This table maps the keys of organizational objects (such as divisions or job classifications) from Employee Central to organizational object IDs (such as organizational unit IDs or job IDs) from ERP. For value mapping entities with this mapping type, you need not enter the Employee Central and ERP values that are to be mapped in the *Define Value Mapping Details* Customizing activity. Instead, the replication uses the mapping that is defined in the key mapping table. When this value mapping type is assigned, the type of the related object (for example, Business Unit) also needs to be specified (column 'EC Org. Object Type' in the maintenance view).

Procedure

- To create a value mapping entity from scratch, enter a name and description. If you want to use a standard entity, you need to keep its name, but you can adjust the description.
- Specify how the values are to be mapped. If you want to use a standard entity, we recommend that you use the suggested mapping types.
 - Picklist mapping using the *Organization* field from the picklist
Use this type if the picklist value you want to map is an external code. This is the case, for example, for Employee Central fields such as *Department* and *Division*.
 - Picklist mapping using the *External Code* field from the picklist

Use this type if the picklist value you want to map is an External Code. This is the case for most of the picklists.

- Picklist mapping using the [Label](#) field from the picklist
Use this type if the picklist value you want to map is the picklist label.
- Foundation Object Key mapping
Use this type to map, for example, Employee Central event reasons to personnel actions from SAP ERP HCM.

❖ Example

You want to map the Employee Central event reason DATAREORG to the personnel action 02 ([Organizational Reassignment](#)).

- Generic Object Key mapping
Use this type to map keys of generic objects from Employee Central to the corresponding SAP ERP HCM keys.

❖ Example

You want to map payment methods such as [Bank Transfer](#) or [Check](#) from Employee Central to the corresponding payment methods in SAP ERP HCM.

- Standard mapping
Use this type for a standard mapping of Employee Central and SAP ERP HCM values, for which no picklist ID is required. Standard mappings are predefined in the SAP ERP HCM system and can't be changed.
- To make available picklist values you've imported to the SAP ERP HCM system from Employee Central in the value mapping details, assign a picklist to the value mapping entity.

Change View "Value Mapping Entity": Overview

EC Instance: SBS_MODEL

Value Mapping Entity	Description	Value Mapping Type	EC Picklist ID	EC Picklist Name	EC Or
ADDRESS_TYPE_WS		Picklist - Option ID			
ASSIGNMENT_TYPE_CSV		Picklist - Label			
ASSIGN_TYPE	Assignment type	Picklist - Option ID			
ASSIGN_TYPE_CSV	Assignment type	Picklist - Label			
Assign_type	Assignment type	Picklist - Option ID			
BANK_COUNTRY	BANK_COUNTRY	Picklist - Label			
BUSINESS_UNIT_WS		Organizational Obje.			
BUSSINESSUNIT	Bussinessunit	Organizational Obje.			
COMPANY	Company code	Foundation Object K.			
COMPANY_CSV	Company CSV	Picklist - Label			
COMPANY_CODE_CSV		Foundation Object K.			
COMP_CODE_CSV		Foundation Object K.			

ERP and EC Picklist IDs (3) 370 Entries found

Restrictions

EC	EC Picklist Name
0000000001	ACADEMICDEGREE_ARE
0000000002	ACADEMICDEGREE_KEN
0000000003	ACADEMICDEGREE_NGA
0000000004	ACADEMICDEGREE_QAT
0000000005	ACADEMIC TITLE

Figure 26: Choose Picklist for Value Mapping Entity

Change View "Value Mapping Entity": Overview

EC Instance: SBS_MODEL

Value Mapping Entity	Description	Value Mapping Type	EC Picklist ID	EC Picklist Name
ADDRESS_TYPE_WS		Picklist - Option ID	240	Vete
ASSIGNMENT_TYPE_CSV		Picklist - Label		

Figure 27: Picklist Assigned to Value Mapping Entity

This enables you to choose the imported picklist values in the *Employee Central Key* field when you actually map the values. If you don't assign a picklist, you can still enter keys in the *Employee Central Key* field, but you can't choose from the imported picklist values.

4. To make available input help values from an infotype field in the value mapping details, specify the SAP ERP HCM value help.

This is a combination of the technical name of the infotype table (such as PA0002) and the technical name of the infotype field (such as GESCH), connected with a hyphen (as in PA0002-GESCH). This means that you can choose the input help values from the *Gender Key* (GESCH) field of the *Personal Data* (0002) infotype in the *ERP Key* field when you actually map the values. It does not mean that you can only use the value mapping entity for the GESCH field. If you want to use a sample entity, we recommend that you use the suggested SAP ERP HCM value helps.

EC Instance		SBS_MODEL			
Value Mapping Entity					
Value Mapping Entity	Description	EC Picklist ID	EC Picklist Name	EC Org. Obj...	ERP Value Help
ADDRESS_TYPE_WS		240	VeteranStatus		PA0006-ANSSA
ASSIGNMENT_TYPE_CSV					PA0710-ASSIGN_T

Figure 28: SAP ERP HCM Value Help Assigned to Value Mapping Entity

Results

You are now ready to map the actual Employee Central and SAP ERP HCM values in the next Customizing steps, where you define the value mapping details.

Task overview: [Defining Value Mappings \[page 78\]](#)

Related Information

[Import Picklists and Picklist Values from Employee Central Using File Upload \[page 80\]](#)

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4.4.1.5.4 Converting External Code to Option ID Due to Different Option ID's in Different Employee Central Systems

Option ID usually varies from one Employee Central system to another system. Since the Option ID is different, you need to define the value mapping details again when you configure the data for a new system as per the Option ID's for the new system.

Context

Value mapping entities are defined based on the type of the communication channel that you use (Web service or csv mode). If you use Web service-based replication, the suitable mapping type is usually the Option ID. Since the Option ID varies from one EC instance to another EC instance, you can use the following approach:

- Value mapping entities of type External Code would be converted to Option ID for web service mode of replication. So you can define the value mapping entity of type Picklist-external code in the view `V_ECPAO_VALUENTY` and then define the external code in the EC keys for the corresponding SAP ERP HCM values in the view `V_ECPAO_VALUENTY` which can be used across different Employee Central systems.
- If the external code is same on SAP ERP HCM and Employee Central systems then you can just define the value mapping entity of type Picklist external code in view `V_ECPAO_VALUENTY` leaving the value mapping details view `V_ECPAO_VALUENTY` empty. Internally Option ID would be fetched based on the external code of the picklist and sent to Employee Central.

Note

Option ID is not applicable with the concept of replacing option id's with external code.

Procedure

1. Execute the picklist writer report `ECPAO_PICKLIST_WRITER` with the option "Update picklist" on the test system
2. Configure the value mapping entity table `V_ECPAO_VALUENTY` as per your requirement. You can configure the entity with the mapping mode Picklist -external code where the original mapping mode expected is Picklist-option ID. Enter the EC picklist ID using the search help.
3. Enter the values in the value mapping details view `V_ECPAO_VALUENTY`. You can skip this step if the external code is same on SAP ERP HCM and Employee Central systems for the value mapping entities with the mapping mode picklist-external code.
4. Transport all these changes to production system.
5. Execute the picklist writer report `ECPAO_PICKLIST_WRITER` by selecting the [Reference Picklist](#) table check box with the option [Update picklist](#) on the production system.

i Note

The value for *ERP to EC / EC to ERP (BIB): Mode of Picklist File* field should not be set as "X" in the view V_ECPAO_CONSTANT.

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4.4.1.5.5 Defining Value Mapping Details

The value mapping details actually map SAP ERP HCM values to the corresponding Employee Central values.

Procedure

1. Go to the *Define Value Mapping Details* Customizing activity (view V_ECPAO_VALENTY).
2. Map SAP ERP HCM keys and the corresponding Employee Central keys.

If the value mapping entity has a picklist ID and a SAP ERP HCM value help assigned, you can select suitable picklist values in the *EC Key* field and corresponding input help values in the *ERP Key* field.

Value Mapping Entity: VETERAN_STATUS

Value Mapping Details

Sequence No.	ERP Key	EC Key
1		

Veteran status 34 Entries

Country Grouping 10

V Text

1 Special Disabled Veteran

Figure 29: Choose SAP ERP HCM Key for Value Mapping

Value Mapping Entity: VETERAN_STATUS

Value Mapping Details

Sequence No.	ERP Key	EC Key
1	1	

EC picklist values 6 Entries

Option ID	EC Label
0000011239	Disabled Vet
0000011237	Not Applicable
0000011241	Other Covered Vet

Figure 30: Choose Employee Central Key for Value Mapping

You can also enter the wildcard * in the [ERP Key](#) field. If only the wildcard is defined in the value mapping details, any SAP ERP HCM value will be mapped to the Employee Central key for the field that uses this value mapping entity. If the wildcard is defined in addition to specific SAP ERP HCM keys, the system first checks for the specific keys. If an Employee Central key is mapped to a specific SAP ERP HCM key, this mapping is used. For all other SAP ERP HCM values, the Employee Central key mapped to the wildcard is used.

Display View "Value Mapping Details": Overview

EC Instance

SBS_MODEL

Value Mapping Entity

JOB_CODE

Value Mapping Details		
Sequence No.	ERP Key	EC Key
1	00	WORKER
2	U1	VP-SALES
3	*	Professionals

Figure 31: Example: Using a Wildcard for the SAP ERP HCM Key

In this example, the SAP ERP HCM key 00 (*Unlimited Contract*) will be transferred as *WORKER* to Employee Central. The SAP ERP HCM key U1 (*Fulltime*) will be transferred as *VP-SALES*. All other SAP ERP HCM keys will be transferred as *Professionals*.

Results

The data extraction programs can now use the value mappings. When extracting data, they will replace the SAP ERP HCM keys by the assigned Employee Central keys if a value mapping is defined for the corresponding field mapping. If no value mapping is available, they won't map any values for the specific field and use the values from SAP ERP HCM as they are.

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4.4.1.5.6 Defining Value Mapping Details Depending on Employee's Country Grouping

Country-specific value mapping details actually map SAP ERP HCM values to the corresponding Employee Central values, depending on the country version.

Procedure

1. Go to the [Define Value Mapping Details Depending on Employee's Country Grouping](#) Customizing activity (view V_ECPAO_VALENTYC).
2. Map SAP ERP HCM keys and the corresponding Employee Central keys as described in the previous section, and additionally assign ISO codes.

Display View "Value Mapping Details (Country-Specific)": Overview

EC Instance ID: 

Value Mapping Entity:

Value Mapping Details (Country-Specific)				
	Seq. No.	ISO Code	ERP Key	EC Key
	1	US	US01	payroll

Figure 32: Value Mapping Depending on Employee's Country Grouping

Results

The data extraction programs can now use the value mappings. When extracting data, they will replace the SAP ERP HCM keys by the assigned Employee Central keys if a value mapping is defined for the corresponding field mapping. If a suitable country-specific value mapping is defined for the ISO code that corresponds the employee's country grouping (MOI_GA), they will use this mapping. If no country-specific value mapping is available, they'll use the country-independent value mapping. If no value mapping is available, they won't map any values for the specific field and use the values from SAP ERP HCM as they are.

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4.4.1.5.7 Defining Value Mapping Based on Constants

You can use an SAP ERP HCM field that always holds the same value to transfer a constant value to a specific Employee Central field.

Context

❖ Example

An infotype field from SAP ERP HCM always returns an empty value. You use this to always set the mapped field to *true* in Employee Central.

It doesn't matter which SAP ERP HCM field you use – the important point is to know that the field will always hold the same value.

Procedure

1. Define a suitable field mapping in the *Primary Mapping* view of the *Define Field Mapping for Employee Data* Customizing step.

❖ Example

You know that the *Object Identification* (OBJPS) field of the *Communication* (0105) infotype (subtype *Private Phone* (CELL)) will always be empty. You map this field to the *isPrimary* Employee Central field because you want the *isPrimary* fields to always hold the value *true*.

Display View "Primary Mapping": Details

Dialog Structure

- Transformation Template Group
 - Transformation Template
 - Primary Mapping
 - Secondary Mapping
 - Generic Value Conversion
 - Country Specific Value

Transf.Templ Group: SBS_MODEL_WS (Model Template for Web Service)
 Transf.Template: ERP_PHONE_WS (Phone Template)
 EC Entity: WS_8 (Phone Info Template for Web Service)

EC Field Attributes

EC Field: 17 isPrimary
 EC Field Description: Is Primary
☐ Field Deleted in EC
☐ Required in EC

ERP Field Mapping

Mapping Mode: Infotype Mapping

Infotype

Infotype: 0105 Communication
 Subtype: CELL Private Phone
 Infotype Field: OBJPS Object Identification

Secondary Mapping

Linking Field:

Preconfigured Mapping

Preconfigured Entity:

Value Mapping

Value Mapping Entity: IS_PRIMARY Is primary

Define Value Mapping Entries

Figure 33: Primary Mapping for Constant

2. Define a value mapping entity in the [Define Value Mapping Entities](#) Customizing step.
3. Define the value mapping details for this entity in the [Define Value Mapping Details](#) Customizing step.

❖ Example

You define an IS_PRIMARY value mapping entity and map the SAP ERP HCM key *blank* to the Employee Central key *true*.

Display View "Value Mapping Details": Overview

EC Instance: SBS_MODEL
 Value Mapping Entity: IS_PRIMARY

Value Mapping Details

Sequence No.	ERP Key	EC Key
1		true

Figure 34: Value Mapping Details for Constant

Results

Since the mapped SAP ERP HCM field has a constant value, data replication will always transfer the same value to the Employee Central field.

❖ Example

The *Object Identification* (OBJPS) field is always blank in SAP ERP HCM, so the mapped *isPrimary* field will always be set to *true* in Employee Central.

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4.4.1.5.8 How to Use the Sample Value Mapping for Employee Data Integration

We provide sample value mapping entities for employee data and also value mapping details for some of the sample value mapping entities. Here's how to use them.

Value mapping entities are assigned to field mappings in the [Define Field Mapping for Employee Data](#) Customizing step (view cluster VC_ECPAO_MAP). The sample content provided there contains some sample value mapping entities. Some of these sample value mapping entities, such as GENDER_CODE_CSV, are provided together with sample value mapping details. But most of the sample value mapping entities, such as ADDRESS_TYPE_CSV, don't have any details assigned. In the second case, you need to define the value

mapping details. Otherwise the value mapping entity isn't usable. Here are more details about how to handle these situations:

Use case 1: A sample value mapping entity is available together with value mapping details

Let's say the value mapping entity `GENDER_CODE_CSV` is assigned to the field mapping of the *gender* Employee Central field in the `VC_ECPAO_MAP` view cluster. A sample value mapping entity with this name is provided, as you can see in the `V_ECPAO_VALENT_S` view. (To display this view, go to the *Define Value Mapping Entities* Customizing activity and choose *Show Sample Value Mapping*). Sample value mapping details are assigned to the `GENDER_CODE_CSV` value mapping entity in the `V_ECPAO_VALMAP_S` view. For example, for the *Female* gender code, the Employee Central key **F** and the SAP ERP HCM key **1** are mapped here.

Since you want to use this sample value mapping entity and the assigned sample value mapping details, you go to the *Define Value Mapping Entities* Customizing activity and copy the sample value mapping. This copies the entity to the `V_ECPAO_VALUENTITY` view – but the details are **not** copied to the `V_ECPAO_VALENTY` view (which is contained in the *Define Value Mapping Details* Customizing activity). To check the details, you can go to the `V_ECPAO_VALMAP_S` view using the *Edit Table Views* (SM30) transaction and display the details for the `GENDER_CODE_CSV` value mapping entity from there. If you want to use them, make the same entries in the `V_ECPAO_VALENTY` view.

When extracting data for the *gender* field, the data extraction program first checks if a suitable `GENDER_CODE_CSV` custom value mapping entity exists in the `V_ECPAO_VALENTY` view. Since this is the case, it uses this entity and the assigned value mapping details. If no custom value mapping entity exists, the program can still use the sample value mapping entity from the `V_ECPAO_VALMAP_S` view together with the assigned sample value mapping details as a fallback.

Use case 2: Sample value mapping entity is available without sample value mapping entries

Let's say the value mapping entity `ADDRESS_TYPE_CSV` is assigned to the field mapping of the *address-type* Employee Central field in the `VC_ECPAO_MAP` view cluster. A sample value mapping entity with this name is provided, as you can see in the `V_ECPAO_VALENT_S` view. But no sample value mapping entries are assigned to the `ADDRESS_TYPE_CSV` value mapping entity in the `V_ECPAO_VALMAP_S` view. Since you want to use this value mapping entity, you go to the *Define Value Mapping Entities* Customizing activity and copy the sample value mapping. In addition, you need to go to the *Define Value Mapping Details* Customizing activity and map Employee Central keys and SAP ERP HCM keys. For example, for the address type *Home Address*, you map the Employee Central key **Home** and the SAP ERP HCM key **3**. If you forget to define the details, you are shown a warning message in the `VC_ECPAO_MAP` view cluster for the field mapping of the *address-type* Employee Central field.

When extracting data for the *address-type* field, the data extraction program first checks if a suitable `ADDRESS_TYPE_CSV` custom value mapping entity exists in the `V_ECPAO_VALENTY` view. Since this is the case, it uses this entity and the assigned value mapping details. If no custom value mapping entity exists, the program cannot use the sample value mapping entity from the `V_ECPAO_VALMAP_S` as a fallback, because this entity doesn't have any value mapping details assigned.

Note

If you choose [Copy Sample Value Mapping](#), all entities that are available in the `v_ECPAO_VALENT_S` (S table) view are copied to the `v_ECPAO_VALUENTY` (C table) view. This includes the value mapping entities for organizational data as well as employee data. If you only need some of the sample value mapping entities, choose [Copy Sample Value Mapping](#) and then remove all entities that you don't need from the `v_ECPAO_VALUENTY` view.

Once you've made entries in the `v_ECPAO_VALUENTY` view (either by copying or by entering them manually), you can no longer copy the sample value mapping entities. Either remove all entries from the `v_ECPAO_VALUENTY` view and copy again, or show the sample value mapping entities and use them as an example for making the entries manually.

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[Define Types of Manager Relationships \[page 123\]](#)

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4.4.1.6 Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central

You can now format the Employee Central fields by using value conversion when migrating or replicating the data to Employee Central system.

Before you migrate the data to Employee Central, you might have to format the ERP field for the transformation template group to convert this value to a valid Employee Central value. Value conversion enables you to

format the value of the Employee Central fields by maintaining a sequence of supported operations. This value conversion is performed for the Employee Central fields after the field mapping and the value mapping is done for the Employee Central fields based on the configurations. The conversion supports a set of arithmetic and string operations which can be used in a sequence. You can define the sequence at which the different value conversion operations that needs to be executed. There are two customizing views available, one will be generic value conversion view and the other view is based on country or linking field. The customizing view can be maintained at each Employee Central field level for a particular transformation template.

Note

There are standard value conversion rules provided by SAP. Currently only country-specific value conversion content is provided by SAP.

The value conversion for a field is configured in the view cluster under *Generic Value Conversion* and *Country Specific Value Conversion*. You can now see if a generic conversion rule or country specific conversion rule is already configured for any EC field from the primary mapping screen. If the generic conversion rule or country specific conversion rule is already applied for any EC field, then the *Gen. Value Conv.* and *Country Spec. Value Conv.* checkboxes would be selected. Following fields to be maintained while using the conversion logic:

Field	Description
Country Grouping	Value of Employee Central linking field (required only in case of country-specific value conversion)
Seq No	Sequence number for multiple actions, order of actions is based on this number
CONV_RULE	Supported value conversion rules
PARAMETER_1	Parameter 1 for rule (function of parameter depends on rule selected)
PARAMETER_2	Parameter 2 for rule (function of parameter depends on rule selected)
PARAMETER_EC_FLD	Parameter for Employee Central field ID
DIRECTION	<i>ERP-EC/EC-ERP</i> indicator

The Employee Central field after the formatting based on the value conversion would be migrated to the corresponding EC field.

Note

If you want to enter a single-space character in the view cluster, you must use `<nbsp>`.

Operations supported for value conversion:

Arithmetic operations - Multiplication with a number

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
Value to be multiplied with.	Nil	Nil	Multiply with a constant value.

Replace using patterns with string/Employee Central field

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
Pattern (any standard Regular expression)	Constant string	Employee Central field Id	Replace the characters in Employee Central field value matching the pattern entered in Parameter 1 with the constant string or the value of another Employee Central field

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
First_Middle-Surname	1	Replace using patterns with string/EC field	_	/	First/Middle-Surname
	2	Replace using patterns with string/EC field	-	\	First/Middle\Surname
	3	Replace using patterns with string/EC field	Middle	<nbsp>	First/ \Surname

→ Tip

For more information on Regular Expression, see ► [ABAP - By Theme](#) ► [Process Internal Data](#) ► [Byte String and Character String](#) ► [Regular Expressions](#) in the ABAP keyword documentation. For testing the regular expression, you can use the report program DEMO_REGEX_TOY.

Append with string/EC field

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
String/Character to be used as separator	Constant String	Employee Central field Id	Concatenate the Employee Central field value with the constant string/ EC field in parameter 2 by suffixing the Employee Central field separated by the characters in Parameter 1

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Parameter for EC Field	Result
ABCD	1	Append with string/EC field		1234		ABCD1234
	2	Append with string/EC field	-	Test		ABCD1234-Test
	3	Append with string/EC field	/		10	ABCD1234-Test/string1

i Note

Assuming that the value for the EC field is string1.

Adjust string to length

Parameter 1	Parameter 2	Parameter for EC field	Description
Length to be adjusted to	Filler characters to be used in case the EC value length is less than the parameter1	Nil	Adjust the Employee Central field value to a fixed length, which can be either shorter or greater than the original length and fill with characters in-case the length of the value is less than the fixed length.

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
ABCD	1	Adjust string to length	10	X	ABCDXXXXXX

Prepend with string/Employee Central field

Parameter 1	Parameter 2	Parameter for EC field	Description
String/Character to be used as separator	Constant String	EC field Id	Concatenate the Employee Central field value with the constant string/ Employee Central field in parameter 2 by prefixing the Employee Central field separated by the characters in Parameter 1.

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
ABCD	1	Prepend with string/EC field	-	Test	Test-ABCD

Replace with string/EC field

Parameter 1	Parameter 2	Parameter for EC field	Description
Nil	Constant string	EC field Id	Replace the Employee Central field string value irrespective of the content with the constant string or the value of another EC field.

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
ABCD	1	Replace with constant/EC field		Test	Test

Split before string/character

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
String/character to be used for splitting	Nil	Nil	Split at the first occurrence of the string/character in parameter 1 and return the substring before parameter 1.

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
ABCD-Test	1	Split before string/character	-		ABCD

Split after string/character

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
String/character to be used for splitting	Nil	Nil	Split at the first occurrence of the string/character in parameter 1 and return the substring after parameter 1.

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
ABCD-Test	1	Split after string/character	-		Test

Edit using pattern

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
Mask	Nil	Nil	Simple insertion of characters/strings at specific positions of Employee Central field string Eg:- AAABBBCCC, to convert this into a string like – AAA-BBB/CCC, mask can be given as : __-__/_ Each underscore represents a character of the incoming string and final output string will have the additional characters given in mask .

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Result
AABBCCDD	1	Edit using pattern	__:__/_+__		AA:BB/CC+DD

Check and Replace

Parameter 1	Parameter 2	Parameter for Employee Central field	Description
String to be compared with	String to be used for replacement	ID of the Employee Central field to be used for comparison	Replace the value of the Employee Central field with the string in Parameter 2, only if the value of EC fields mentioned in Parameter for EC field (another field from the same Employee Central entity) is same as string mentioned in Parameter 1.

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Parameter for EC Field	Result
ABCD	1	Check and replace	true	TEST	10	TEST

i Note

Assuming that the Employee Central field 10 is a boolean number.

i Note

Check and Remove and *Check and Remove when doesn't match* rules are not supported in the ERP to EC direction.

Sample scenario with multiple operations

❖ Example

EC field value	Sequence number	Operation	Parameter1	Parameter2	Parameter for Employee Central field	Result
AA-BB/CC Test_string	1	Split before string/character	<nbsp>			AA-BB/CC
	2	Replace using patterns with string/EC field	/CC\$			AA-BB
	3	Append with string/EC field	+		10	AA-BB+string1

i Note

Assuming that the value for the EC field is **string1**.

EC field value	Sequence number	Operation	Parameter1	Parameter2	Parameter for Employee Central field	Result
	4	Prepend with string/EC field	/	Constant		Constant/AA-BB+string1

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4.4.1.7 Using Assignment ID in SAP ERP HCM Integration with Employee Central

What use of assignment ID (assignment_id_external) in SAP ERP HCM means for integration with an Employee Central system.

Using assignment ID is helpful if you have a heterogeneous system landscape with multiple cross-system business processes. For example, if you integrate Employee Central with an ERP system for Payroll and also integrate SAP Concur with Employee Central and an ERP system for Financials. All integrated systems run business processes around employees and therefore generate system-specific employee IDs. But you want to use one unique identifier to be able to easily identify employee data that belongs to the same business context. Such as determine which accruals in the ERP Payroll system belong to which Financials vendor and which employment in Employee Central.

For more information, see [Assignment ID](#) in *Managing User Information*.

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Related Information

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4.4.1.7.1 Important Notes About Assignment ID in Employee Central Integration with an ERP System

If you plan to integrate Employee Central with your SAP S/4HANA on-premise or SAP ERP system, consider the following before you enable use of assignment ID in Employee Central.

Data Migration to Employee Central

Before you migrate employees from your SAP S/4HANA on-premise or SAP ERP system to Employee Central, make sure that the following prerequisites are fulfilled:

- To include the assignment ID during the migration process, you need to enable the switch [ERP to EC/EC to ERP \(BIB\): Activate Assignment ID External](#) in the view V_ECPAO_CONSTANT using the [Maintain the Constant Values](#) Customizing activity.
- If the [ERP to EC/EC to ERP \(BIB\): Activate Assignment ID External](#) field is switched on, the [Assignment ID External](#) field is included in the [User](#), [Employment](#), and [Global Assignment](#) entities during the migration of the employee data.

- Assignment ID must be enabled in the following entities:

- [User](#)
- [Employment Details](#)
- [Global Assignment Details](#)

Use the [Manage Business Configuration](#) admin tool to do so.

Data Replication from Employee Central

Before you replicate employee data from Employee Central to your SAP S/4HANA on-premise or SAP ERP system, make sure that the following prerequisites are fulfilled:

- You can only use assignment ID if you set up a **new** integration project for the *Core Hybrid HXM* deployment option. You can't switch a running integration to using assignment ID.
- You must set up a business rule to generate assignment IDs in Employee Central. Assignment IDs generated by this business rule must comply with the format used for personnel numbers in the SAP S/4HANA on-premise or SAP ERP system. The business rule must also be able to handle error situations.
- In the [Employment Settings Configuration](#) object you create in Employee Central, [Activate "Generate Assignment ID External" by Using a Business Rule](#) must be set to *Yes*.
For more information, refer to [Creating the Employment Settings Configuration Object](#) in *Implementing Employee Central Core*.
- The [Assignment ID](#) field must be set up in your Employee Central data model in a way that complies with the format used for personnel numbers in the SAP S/4HANA on-premise or SAP ERP system. That is, it must be eight characters long and can only contain numeric values, no letters.
- You must ensure that the behavior for creating new employments in Employee Central is the same as for creating new personnel numbers in the SAP S/4HANA on-premise or SAP ERP system. For example, you must have a new employment created when transferring an employee to a new country/region in Employee Central. If you perform an international transfer using the same employment, the SAP S/4HANA on-premise or SAP ERP system raises an error message and aborts replication of employee data from Employee Central.
- Once you've enabled the use of assignment ID in Employee Central integration with an SAP S/4HANA on-premise or SAP ERP system, ensure that no function import changes the assignment IDs in Employee Central.
- Once you've enabled the use of assignment ID in Employee Central and replicated employee data to the SAP S/4HANA on-premise or SAP ERP system, we recommend that you don't disable assignment ID again. Otherwise, you must also disable use of assignment ID in your SAP S/4HANA on-premise or SAP ERP system and adjust the number ranges you use for creating personnel numbers there. That is, reverting to the previous behavior causes major administration effort.

4.4.1.7.2 Configuring Assignment ID for Employee Central Integration with SAP ERP HCM and Migrating to Employee Central

Set up assignment ID for integration of Employee Central with an SAP ERP HCM system. Once assignment ID is set up, migrate your employees to Employee Central, using personnel numbers from SAP ERP HCM as assignment IDs in Employee Central.

Prerequisites

You enabled use of assignment ID in Employee Central. And you made sure that the requirements listed in the important notes section for assignment ID in Employee Central integration with SAP ERP HCM are met.

Here's an overview of the setup and migration process:

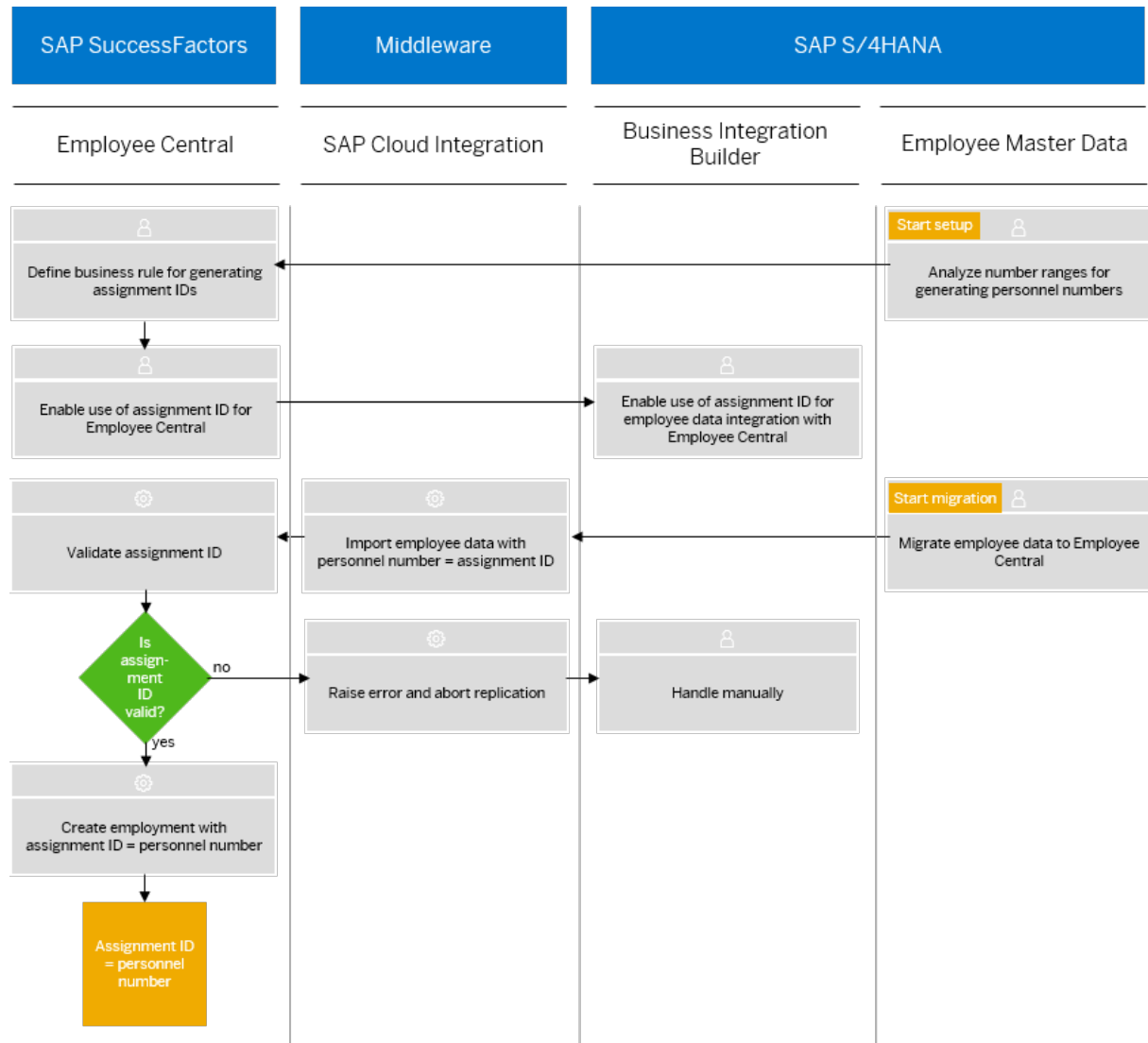


Figure 35: Setting Up and Migrating Assignment ID for Employee Central Integration With SAP ERP HCM

Procedure

1. Analyze the number ranges you defined in the SAP ERP HCM system from which you plan to migrate employee master data to Employee Central.

When doing so, consider that the SAP ERP HCM number range logic will be replaced by business rules in Employee Central. Most probably you're currently using an internal number range so that personnel numbers are assigned by the SAP ERP HCM system automatically. Once assignment ID is turned on, you can no longer use this internal number range. You must use an external number range because only then personnel numbers can be assigned by an external system (that is, by Employee Central).

2. Define a business rule in Employee Central for generating assignment IDs, to replace the number range logic you currently use in your SAP ERP HCM system for generating personnel numbers.

3. Enable use of assignment ID in Employee Central. Make sure that the [Assignment ID](#) field is an 8-digit field in your Employee Central data model.
4. Enable use of assignment ID in SAP ERP HCM.

To do so, go to Customizing of Business Integration Builder and choose ► [Basic Settings](#) ► [Maintain the Constant Values](#) ►. Add the constant [ERP to EC/EC to ERP \(BIB\): Activate Assignment ID External](#) and set the constant value to **x**.

5. Migrate employee data from your SAP ERP HCM system to Employee Central.

The migrated employees are allocated the personnel number from the SAP ERP HCM system as assignment ID.

Results

You successfully set up assignment ID and migrated your personnel numbers from SAP ERP HCM to Employee Central, to use them as assignment IDs.

Next Steps

You can now run an initial load and then start the regular replication of assignment IDs either from SAP ERP HCM to Employee Central or from Employee Central to SAP ERP HCM.

4.4.1.8 Defining Employee Data-Related Settings for Your Employee Central Company

Make additional settings for the Employee Central company you've defined before in the [Define Employee Data Settings for Employee Central Company](#) Customizing activity (view `V_ECPAO_CMPNY_EE`).

Procedure

1. Choose your Employee Central company ID.
2. Specify how the following Employee Central fields are to be mapped to SAP ERP HCM:

- [user_id](#)

You can choose from the following mapping modes:

- Standard mapping (PERNR): The [user_id](#) field is mapped to the [Personnel Number](#) (PERNR) field in SAP ERP HCM.
- BAdI mapping: If you have specific requirements, you create a Business Add-In (BAdI) implementation of the [Mapping of User ID, Person ID, User Name, and Object ID](#) (EX_ECPAO_EMP_USYID_PRN_UNM_MAP) BAdI to define the mapping.

- [person_id_external](#)

You can choose from the following mapping modes:

- Standard mapping (CP): The [person_id_external](#) field is mapped to the central person (CP) in SAP ERP HCM.
- Infotype mapping (0709): The [person_id_external](#) field is mapped to the SAP ERP HCM infotype [Person ID](#) (0709).
- BAdI mapping: If you have specific requirements, you create a Business Add-In (BAdI) implementation of the [Mapping of User ID, Person ID, User Name, and Object ID](#) (EX_ECPAO_EMP_USYID_PRN_UNM_MAP) BAdI to define the mapping.

i Note

If you have the PERNR (P) and Central Person (CP) with similar number range in your ERP setup, then it is required to use BAdI mapping for either the [person_id_external](#) field or the [user-id](#) field. This is because the Employee Central UserAPI takes the person external id to be the same value as user id. The person external id field is later then updated via the [PerPerson](#) upsert call. In case of same number range in ERP, a situation might occur when User API fails when for a new user person external id field is assigned with the user id which is same as the actual person external id of a different person. To avoid this issue, it is required that you use BAdI mapping for the person external field so that the user ids and person external id's do not overlap and cause errors.

- [username](#)

You can choose from the following mapping modes:

- Standard mapping (PERNR): The [username](#) field is mapped to the [Personnel Number](#) (PERNR) field in SAP ERP HCM.
- Infotype mapping (0105/001): The [username](#) field is mapped to the SAP ERP HCM infotype [Communication](#) (0105), subtype [System User Name \(SY-UNAME\)](#) (0001).
- BAdI mapping: If you have specific requirements, you create a Business Add-In (BAdI) implementation of the [Mapping of User ID, Person ID, User Name, and Object ID](#) (EX_ECPAO_EMP_USYID_PRN_UNM_MAP) BAdI to define the mapping.

3. Decide how employments are to be handled in Employee Central when an employee is transferred from one country to another in SAP ERP HCM.

When you transfer an employee in SAP ERP HCM from one country to another, the employee gets a new personnel number (PERNR), which is assigned to the same central person (CP). When extracting data, the employee data extraction program analyzes the personnel numbers assigned to one central person. You can decide how these personnel numbers are to be handled in Employee Central:

- [Create New Employment for International Transfer](#)

This means that the personnel numbers are handled separately and their data is transferred to separate employments in Employee Central. Note that creating a new employment in Employee Central means that a new user is created as well. If no employees are migrated using the re-use employment in the company, then the [Create New Employment for International Transfer](#) option would be enforced during the international transfer by throwing an error message during the execution of the employee extraction report.

i Note

You should always create new employment for international transfer in order to streamline the end-to-end replication process of a person having multiple contracts.

- [Reuse Existing Employment for International Transfer](#)

This means that the personnel numbers are handled together and the data of both is transferred to one employment in Employee Central. This option is supported only when some employee in the company is already been migrated using the re-use employment option and the employees belonging to the same central person are already migrated using the re-use employment option. In addition, the re-use employment option would be enforced even if the EC instance setting is set to [Create New Employment for International Transfer](#) when some employees belonging to the same central person are already migrated using re-use employment and current EC instance setting is [Create New Employment for International Transfer](#).

i Note

This option is not applicable if you are using side-by-side deployment option. Also if you are a new customer starting the migration process, you should not use this option. In both these cases, you will have to use the [Create New Employment for International Transfer](#) option.

If neither of the options are chosen, then by default reuse existing employment is considered for an employee in international transfer.

Task overview: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

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[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)

4.4.1.9 Defining Custom Employee Central Entities for Employee Data Entities

An Employee Central entity represents an entity from Employee Central, such as a CSV data import template, an OData entity, or a generic object (also known as MDF entity). You only need to define custom Employee Central entities if you want to transfer data from SAP ERP HCM to an Employee Central entity for which SAP hasn't provided a default template.

Context

In the [Define Employee Central Templates for Additional Employee Data Entities](#) Customizing activity (view `V_ECPAO_ECTEMPL`) you can also see the default templates defined by SAP. If the default templates suit your requirements, there's no need to define any custom templates.

Display View "Employee Central Entity for Employee Data": Details

EC Entity WS_2 Biographical Info Template for Web Service

Basic Settings

Entity Name in EC

PerPerson

Comm. Channel

Web Service Transfer

☐ Multiple Use

☐ Effective Dated

☐ Is Generic Object

Inherit Metadata

Standard EC Fields

Object ID in EC

Start Date in EC

startDate

End Date in EC

endDate

CE API Segment

person

Integration to EC

Upsert Sequence

20

Dependent Entity

Country Version

Deletion Supported

☐ Deletion Permitted

HRIS Element ID

Infotype-Specific Settings

Required Infotype

0002

Special Mapping Infotype

Specific Mapping

Processing Mode

Processing Infotype

OBJID Field

Repet.Struct.

Figure 36: Details of an Employee Central Entities

To define custom Employee Central entities carry out the steps described below for each template that you add.

Procedure

1. Define the basic settings.
 - a. Enter a unique template ID and a description. The ID has to be in the customer namespace, which means that it has to start with a number (0* - 9*). You can enter any description.

- b. Enter the entity name. You must use the exact name of the corresponding entity in Employee Central.

To find out about the name for OData entities and generic objects, go to the Admin Center and choose the [OData API Data Dictionary](#) tool. For CSV data import templates, go to the Admin Center and choose the [Import Employee Data](#) tool.

- c. If you want to be able to assign your Employee Central entity to several transformation templates, select the [Multiple Use](#) checkbox.
- d. Specify if the Employee Central entity is effective dated.

i Note

If you define a earliest transfer date for a transformation template group in the [Define Field Mapping for Employee Data](#) Customizing step, this date influences effective-dated and non-effective dated templates in different ways.

- e. If your template refers to a generic object in Employee Central, select the [Is Generic Object in EC](#) checkbox.
- f. If your template should inherit the metadata that you upload for another Employee Central entity, specify the template that is to be used as the metadata basis.

i Note

If you make an entry in this field for an Employee Central entity, you can't import metadata for this template. You can only import metadata for the Employee Central entity that you've entered, meaning the template from which the metadata is to be inherited.

❖ Example

The [Dependent Biographical Information](#) template inherits metadata from the [Biographical Information](#) template. This means it uses the same data model comprising fields such as [date-of-birth](#), [country-of-birth](#), or [place-of-birth](#). You need to import the metadata for the [Biographical Information](#) template only and can then reuse it for the [Dependent Biographical Information](#) template. You can't import metadata for the [Dependent Biographical Information](#) template.

- g. If your template refers to a generic object in Employee Central, make an entry in the [Object ID Field in EC](#) field. Here you enter the name of the field that contains the external code of the generic object in Employee Central and to which the employee ID from SAP ERP HCM is to be transferred.

The field must have the [User](#) data type assigned in Employee Central so that the employee ID information from SAP ERP HCM can be transferred to this field. Which ID is transferred depends on the mapping that you have defined in the [Define Employee Central Instance](#) Customizing step. In the standard mapping, the personnel number (PERNR) is used as the employee ID.

- h. For the SAP delivered templates start date field is already maintained. For the templates that you want to be defined, specify the Employee Central field (such as [effectiveStartDate](#)) in which the start date is stored for the corresponding entity and which is to be mapped to the [Start Date](#) (BEGDA field in SAP ERP HCM system).

For standard effective dated templates if the start date is specified, then the start date would be considered as a standard field. For standard MDF templates and custom MDF templates, start date would not be considered as a standard field even if it is maintained for a template.

CSV & WS Template	IS_MDF	Standard Field (start-date)	Standard Field (end-date)
Standard EE Templates		X	X
Standard EE MDF Templates	X		
Custom EE Templates	X		
Standard OM Templates		X	X
Standard OM MDF Templates	X	X	
Custom OM Templates	X		

- i. For the SAP delivered templates end date field is already maintained. For the templates that you want to be defined, specify the Employee Central field (such as [endDate](#)) in which the end date is stored for the corresponding entity and which is to be mapped to the [END Date](#) (`ENDDA`) field in SAP ERP HCM system.

For standard effective dated templates if the end date is specified, then the end date would be considered as a standard field. For standard MDF templates and custom MDF templates, end date would not be considered as a standard field even if it is defined for a template.

i Note

If the start and end date fields are configured in the field mapping table then they will be considered for the template configuration. If they are not defined in field mapping, then it will be read from the templates table.

2. Define the settings for data replication from SAP ERP HCM to Employee Central.

- a. Enter a unique sequence number.

The sequence in which the Employee Central entities delivered by SAP are transferred from SAP ERP HCM to Employee Central is defined by SAP. You can't change this sequence. If you define your own template, we recommend to use a sequence number that is higher than the numbers assigned to the Employee Central entities that are delivered by SAP.

- b. If the entity has a parent entity in Employee Central, enter the ID of the parent EC entity in the [ID of Dependent EC Template](#) column. [PaymentInformationV3](#), for example, is entered in the [ID of Dependent EC Template](#) column of [PaymentInformationDetailV3](#)
- c. If your template refers to a country-specific entity in Employee Central, specify the country version. If you'd create an Employee Central entity for the [PerGlobalInfoUSA template](#) entity, for example, you would specify the **10** (USA) country version.
- d. The settings in the [Deletion Supported](#) section are only available for Employee Central templates that are defined by SAP in the SAP namespace. You can't make any entries in the following fields:
 - The [Deletion Permitted](#) flag specifies that data deletion can be replicated for the Employee Central template from SAP ERP HCM to Employee Central.
 - The [HRIS Element ID](#) is used by the [Compound Delete](#) or [SFODData.HrisCompoundDeletion](#) template when replicating the deletion of data from SAP ERP HCM to Employee Central. The

HRIS element ID is only needed for Employee Central templates that support the replication of data deletion to Employee Central.

3. Define infotype-specific settings.

- a. Specify the SAP ERP HCM infotype that is required for your Employee Central template to be able to use it for a proper field mapping. The infotype you specify in this field is used by the SAP ERP HCM system to check if the necessary field mapping is defined.

❖ Example

The *Personal Data* (0002) infotype is required for the *Personal Information* entity in Employee Central. You can't transfer any data from SAP ERP HCM to this entity if you haven't defined a mapping for any of the infotype fields.

- b. Only for Employee Central entities defined by SAP: An infotype can be specified that requires a special mapping (such as the *Date Specifications* (0041) infotype).
- c. If you need a special processing for the Employee Central entity, specify the processing mode you need. The processing mode refers to the infotype you enter in the next step. The following processing modes are available:
 - *Repetitive Structure Mapping*
 - *Object Identification Mapping*
 - Only for Employee Central entities defined by SAP: *Time Constraint 3 Mapping*
- d. Enter the SAP ERP HCM infotype for which a special processing is needed.
- e. If you've selected the *Object Identification Mapping* processing mode, specify the object identification (OBJID) field for which a unique key needs to be generated.
- f. If you've selected the *Repetitive Structure Mapping* processing mode, specify a structure that contains the fields for which you want to use the repetitive mapping.

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Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

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[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)

[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)

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[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)
[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)
[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)
[Transferring Data Deletion to Employee Central \[page 203\]](#)
[Defining Field Mapping for Employee Data \[page 136\]](#)
[How Repetitive Structure Mapping Works \[page 166\]](#)
[How Object Identification Mapping Works \[page 173\]](#)
[How Time Constraint 3 Mapping Works \[page 175\]](#)
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[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)
[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)
[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)
[How Date Type Mapping Works \[page 179\]](#)
[How Object Identification Mapping Works \[page 173\]](#)
[How Repetitive Structure Mapping Works \[page 166\]](#)
[Repetitive Structure Mapping of Basic Pay Data \[page 167\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)
[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)
[Importing Metadata from Employee Central \[page 70\]](#)
[Defining Field Mapping for Employee Data \[page 136\]](#)
[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)
[Preparing Employee Central for Employee Data Integration \[page 15\]](#)
[Defining Field Mapping for Employee Data \[page 136\]](#)

4.4.1.9.1 Supporting Country Specific Payment Information Details

For any specific country, you can create country specific templates (ex: USA) and for other countries, you can define the custom templates. When you want to replicate country specific payment information details for a non-USA country, you will have to create a custom transformation template in the view `V_ECPAO_ECTMPL`. While creating the new custom transformation template, you should enter `WS_16` as the dependent entity and `161` in the upsert sequence field. After creating the new transformation template, you will have to do the field mapping in the configuration.

Change View "Employee Central Entity for Employee Data": Details

EC Entity: 1WS_14_COL Payment Information DetailsTemplate for Web Service

Basic Settings

Entity Name in EC: PaymentInformationDetailV3COL

Comm. Channel: 2 Web Service Transfer

☒ Multiple Use ☒ Effective Dated

☒ Is Generic Object

Inherit Metadata:

Standard EC Fields

Object ID in EC: PaymentInformationV3_worker

Start Date in EC: PaymentInformationV3_effectiveStartDate

End Date in EC:

CE API Segment:

Integration to EC

Upsert Sequence: 161

Dependent Entity: WS_16

Country Version:

Deletion Supported

☐ Deletion Permitted

HRIS Element ID:

Infotype-Specific Settings

Required Infotype: 0009

Special Mapping Infotype:

Specific Mapping

Processing Mode: T Time Constraint 3 Mapping

Processing Infotype: 0009

Processing Field: externalCode

Repet.Struct.:

In the field mapping you will have to perform the filtering of the country specific records based on the BANK country key (BANKS field of Infotype 0009) as a linking field. If an employee has bank details for a certain country in a particular time segment, then the country specific payment details will be replicated only for that BANK country in that period.

❖ Example

If an employee has a bank account from 1-1-2012 to 31-12-2013 in USA and another bank account from 1-1-2014 to 31-12-2015 in Mexico, then USA specific payment information details will be replicated only for the period (1-1-2012 - 31-12-2013). For this period 1-1-2014 to 31-12-2015, only the Mexico specific details would be replicated.

While running the country specific payment information details, you will have to include the generic payment information details mandatorily in the same session.

4.4.1.10 Handling Manager Relationships

[Define Types of Manager Relationships \[page 123\]](#)

You define different types of employee-manager relationships (such as a line manager or a matrix manager relationship) and the corresponding evaluation paths in the [Define Relationship Types for Managers and Employee-Related Org. Mgmt Data](#) Customizing activity (view `V_ECPAO_MNGRTYPE`).

[Determine the Employees' Managers \[page 125\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

The *User ID* field assigned to a manager's personnel number in the *Managers and Org. Mgmt Fields for Employee Replication* table is updated from the corresponding *User ID* field in the employee key mapping table. Here's how this update happens.

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

See where SAP ERP HCM and Employee Central differ regarding manager assignments.

[Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central \[page 129\]](#)

Managers whose data is mastered in Employee Central don't have a personnel number in the SAP ERP HCM system, that's why they need special handling.

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

You can create supervisor relationships for the *Job History* entity in Employee Central by replicating position relationships from SAP ERP HCM, without replicating the manager from SAP ERP HCM explicitly to the *Supervisor* field of the employee's Job History.

Parent topic: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

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4.4.1.10.1 Define Types of Manager Relationships

You define different types of employee-manager relationships (such as a line manager or a matrix manager relationship) and the corresponding evaluation paths in the *Define Relationship Types for Managers and Employee-Related Org. Mgmt Data* Customizing activity (view `V_ECPAO_MNGRTYPE`).

Context

The *Determination of Managers and Organizational Management Data* (`ECPAO_MNGR_TYPES_EXTRACTION`) program (transaction `ECPAO_MNGR_EXTR`) uses the types of manager relationships you define here to determine the different types of managers for a given selection of employees.

In the `VC_ECPAO_MAP` view cluster, you can use the types of manager relationships you define here to map managers from SAP ERP HCM to Employee Central, for example, to use them in the *Job Relationship* template.

For each type of manager relationship you want to use, carry out the steps described below.

Procedure

1. Enter a unique ID and a description of the relationship type.

Relationship Types for Managers and Organizational Mgmt Data						
Rel. ID	Relationship Type	Evaluation Path	Technical depth	Is Active	Use BAdI	
LMNG	Line Manager	B012	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

You can enter any description. The ID you enter here is used in the `VC_ECPAO_MAP` view cluster, in the *Primary Mapping* view. In this view cluster, you enter the ID in the *Subtype* field.

Primary Mapping							
EC Field	EC Field Description	Mapping Mode	Infotype	Subtype	Infotype Field	Is Required	Has Sec. Mapping
3	Supervisor	Infotype Mapping	MNGR	LMNG	MNGR_USER_ID	<input type="checkbox"/>	<input type="checkbox"/>

2. Select the evaluation path that is to be used to determine the managers for this type of relationship.
The evaluation path describes a chain of relationships between objects in a hierarchical structure, such as ► *organizational unit* ► *position* ► *person* ►. The SAP ERP HCM system evaluates the structure along this evaluation path and takes into account the objects that it finds using this path. You can use evaluation paths that start with the object types * (any), O (organizational unit), S (position), or P (person).
3. Enter the structure depth.
This is a number of one to six digits. The number corresponds with the different levels of an organizational structure, with 1 being the highest level in a structure, and all subsequent numbers representing lower levels. The level number determines how much of a structure is processed. For example, if the structure depth is 3, the SAP ERP HCM system processes down three levels of the structure, beginning from the

object that you select as the root object. If you don't want to limit processing, leave the structure depth blank.

4. To define whether the type of manager relationship is currently active and used by the manager extraction report or not, select or clear the *Is Active* checkbox.

Results

Display View "Relationship Types for Managers and Organizational Mgmt"						
Relationship Types for Managers and Organizational Mgmt Data						
Rel. ID	Relationship Type	Evaluation Path	Technical depth	Is Active	Use BAdI	
CUMG	Custom Manager	B012	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
HMG	HR Manager	A010	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
HRMG	Secondary Manager2	BOSS_OE	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
LMG	Line Manager	B012	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
MMG	Matrix Manager	BOSS_OE	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Task overview: [Handling Manager Relationships \[page 122\]](#)

Related Information

[Determine the Employees' Managers \[page 125\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

[Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central \[page 129\]](#)

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

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[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

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[Defining Field Mapping for Employee Data \[page 136\]](#)

[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)

4.4.1.10.2 Determine the Employees' Managers

Context

You can determine different types of managers for a given selection of employees, based on the types of manager relationships you have defined in the *Relationship Types for Managers and Organizational Mgmt Data* (V_ECPAO_MNGRTYPE) view (see section [Define Types of Manager Relationships \[page 123\]](#)). The managers are stored in the *Managers and Org. Mgmt Fields for Employee Replication* (ECPAO_EE_MGMR) table so that manager relationships can be transferred to Employee Central. Employee Central uses the manager relationships, for example, in the *Job Relationships* and the *Job Information* templates to identify different types of managers, such as matrix managers, second managers, custom managers, or HR managers.

Procedure

1. Go to the *Define Background Job* (SM36) transaction.
2. Schedule the *Determination of Managers and Organizational Management Data* (ECPAO_MNGR_TYPES_EXTRACTION) program as a regular background job.

The screenshot shows the SAP selection screen for the program 'Determination of Managers and Organizational Management Data'. The screen has a title bar with the program name and a toolbar with icons for help, save, print, and search. Below the toolbar is a 'Selection Criteria' section with several input fields: 'Personnel Number' (empty), 'Action Type' (empty), 'Personnel area' (DE01), 'Personnel subarea' (empty), 'Employee group' (empty), and 'Employee subgroup' (empty). To the right of each field is a yellow folder icon. Below this is a 'Relationship Types' section with a 'Relationship Types' field (empty) and a yellow folder icon. At the bottom is a 'Test Run' section with a checkbox labeled 'Test Run'.

3. On the selection screen, specify the personnel numbers for which you want to determine the managers.
4. The program reads the active types of manager relationships from the V_ECPAO_MNGRTYPE view and uses the evaluation paths stored there to determine the managers for the given selection of employees.
5. To check the messages issued by the program, go to the *Analyze Application Log* (SLG1) transaction.
6. Enter the ECPAO object and ECPAO_MANAGER subobject, optionally specify additional selection criteria, and click *Execute*.

Next Steps

The *Employee Data Extraction* program reads the information about the managers from the `ECPAO_EE_MGNR` table. If it finds the manager for an employee, it transfers this information to Employee Central. Otherwise, the entry *NO_MANAGER* is transferred.

Task overview: [Handling Manager Relationships \[page 122\]](#)

Related Information

[Define Types of Manager Relationships \[page 123\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

[Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central \[page 129\]](#)

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

4.4.1.10.3 How the Manager's User ID Is Updated

The *User ID* field assigned to a manager's personnel number in the *Managers and Org. Mgmt Fields for Employee Replication* table is updated from the corresponding *User ID* field in the employee key mapping table. Here's how this update happens.

Let's assume the following:

An `MMNG` (*Matrix Manager*) relationship type is defined in the *Define Relationship Types for Managers and Employee-Related Org. Mgmt Data* Customizing activity.

The following mapping is defined in primary mapping of the *Define Field Mapping for Employee Data* Customizing activity for the *manager-id* field:

- *Infotype*: `MNGR` (*Manager Table*)
- *Subtype*: `MMNG` (*Matrix Manager*)
- *Infotype Field*: `MNGR_USER_ID` (from table `ECPAO_EE_MGNR`)

And this mapping is defined in primary mapping for the *user-id* field:

- *Infotype*: `0105` (*Communication*)
- *Subtype*: `SY-UNAME` (`0001`)
- *Infotype Field*: `USRID` (*Communication ID/Number*)

Then this is how the manager's user ID is updated:

1. The *Determination of Managers and Organizational Management Data* (`ECPAO_MNGR_TYPES_EXTRACTION`) program determines an employee's manager from the organizational structure in SAP ERP HCM and stores his or her personnel number in the *Personnel Number of*

Related Manager (RELATED_PERNR) field of the *Managers and Org. Mgmt Fields for Employee Replication* (ECPAO_EE_MGNR) table.

2. Based on the mapping defined for the *manager-id* field, the *Employee Data Extraction* (ECPAO_EMPL_EXTRACTION) program reads the content from the MNGR_USER_ID field in the ECPAO_EE_MGNR table during employee extraction and transfers it to Job Information in Employee Central. Based on the mapping defined for the *user-id* field, it also determines the manager's user ID and transfers this to Employee Central.
3. The *Employee Key Mapping* (PAOCFEC_EEKEYMAP) table is updated. The *User ID* (USER_ID) field of this table is filled with the ID that was determined from the *Communication* (0105) infotype and transferred to the *user-id* field Employee Central.
4. The user ID stored for a personnel number in the USER_ID field of the employee key mapping table is written to the MNGR_USER_ID field assigned to this same personnel number in the ECPAO_EE_MGNR table.

Parent topic: [Handling Manager Relationships \[page 122\]](#)

Related Information

[Define Types of Manager Relationships \[page 123\]](#)

[Determine the Employees' Managers \[page 125\]](#)

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

[Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central \[page 129\]](#)

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

[Extracting Employee Data \[page 190\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Downloading CSV Files from the Application Server \[page 198\]](#)

[Extracting Employee Data \[page 190\]](#)

[Updating the Employee Key Mapping Table \[page 209\]](#)

4.4.1.10.4 Manager Extraction Logic for Different Types of Managers

See where SAP ERP HCM and Employee Central differ regarding manager assignments.

In the SAP ERP HCM system, an employee can be assigned to different types of managers as well as to multiple managers of the same type in overlapping periods. In Employee Central, an employee can only be assigned to one manager of the same type (for example, to one matrix manager) at a specific point in time. If the employee is assigned to multiple types of managers, the assignment periods must match. The extraction logic adapts the manager assignments in the two cases described below.

Employee is assigned to multiple types of managers in overlapping periods in SAP ERP HCM

In this case, the extraction logic modifies the time slices so that the assignment periods of the same employee to different types of managers match.

Note

To make this work, you need to map the end date field of the *Job Relationships* Employee Central entity to the SAP ERP HCM field `ENDDA`.

Example

An employee has the following manager assignments in SAP ERP HCM:

- 01/01/2010 to 12/31/2014: Custom manager C
- 01/01/2013 to 12/31/2015: Matrix manager M

The manager assignments are replicated to Employee Central as follows:

- 01/01/2010 to 12/31/2012: Custom manager C
- 01/01/2013 to 12/31/2014: Custom manager C and matrix manager M
- 01/01/2015 to 12/31/2015: Matrix manager M

Employee is assigned to multiple managers of the same type in overlapping periods in SAP ERP HCM

In this case, the extraction logic delimits the records accordingly.

Example

An employee has the following manager assignments in SAP ERP HCM:

- 01/01/2010 to 12/31/2014: Supervisor M1
- 01/01/2012 to 12/31/9999: Supervisor M2

The manager assignments are replicated to Employee Central as follows:

- 01/01/2010 to 12/31/2014: Supervisor M1
- 01/01/2015 to 12/31/9999: Supervisor M2

The second manager assignment starts after the first assignment has ended.

Parent topic: [Handling Manager Relationships \[page 122\]](#)

Related Information

[Define Types of Manager Relationships \[page 123\]](#)

[Determine the Employees' Managers \[page 125\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

[Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central \[page 129\]](#)

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

4.4.1.10.5 Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central

Managers whose data is mastered in Employee Central don't have a personnel number in the SAP ERP HCM system, that's why they need special handling.

Context

To be able to transfer the manager relationships of employees who are assigned to these managers from SAP ERP HCM to Employee Central, you must create users for these managers in SAP ERP HCM. The *Determination of Managers and Organizational Management Data* (ECPAO_MNGR_TYPES_EXTRACTION) program then stores these managers' users instead of the personnel numbers in the *Managers and Org. Mgmt Fields for Employee Replication* (ECPAO_EE_MGMR) table.

Procedure

1. Go to the *User Maintenance* (SU01) transaction.
2. Create a user for each manager whose data is mastered in Employee Central and who has employees assigned whose data is mastered in SAP ERP HCM.
3. Maintain an alias for each user that corresponds to the unique identifier of this employee in Employee Central.

User Maintenance: Initial Screen

User:

Alias:

! Restriction

The managers' users have to be absolutely identical in SAP ERP HCM and in Employee Central. In the SAP ERP HCM system, user names can only have 40 characters and have to be in uppercase. Therefore, this approach only works for new Employee Central customers who make sure that their user names in Employee Central comply with the SAP ERP HCM user definition.

4. Go to the [Organization and Staffing \(PPOME\)](#) transaction and assign the user to the corresponding organizational structure.
5. Go to the [Define Relationship Types for Managers and Employee-Related Org. Mgmt Data](#) Customizing activity and select an appropriate evaluation path for the *User (US)* object type.

Task overview: [Handling Manager Relationships \[page 122\]](#)

Related Information

[Define Types of Manager Relationships \[page 123\]](#)

[Determine the Employees' Managers \[page 125\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)

[Define Types of Manager Relationships \[page 123\]](#)

4.4.1.10.6 Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central

You can create supervisor relationships for the *Job History* entity in Employee Central by replicating position relationships from SAP ERP HCM, without replicating the manager from SAP ERP HCM explicitly to the *Supervisor* field of the employee's Job History.

Prerequisites

Position Management must be enabled for your account using the *Manage Employee Central Settings* admin tool in Employee Central.

The *Parent Position* field must **not** be a required field in the Employee Central data model during data replication.

Make sure that the *Multiple Use* checkbox is selected for the Employee Central entities that you use for organizational data so that you can assign one Employee Central entity to multiple transformation templates.

Display View "Employee Central Entity for Employee Data": Overview										
Employee Central Entity for Employee Data										
EC Entity ID	Entity Name in EC	EC Entity Description	Import Object Type	Object Type	EC ...	Is Gen...	Object L...	Effective ...	Country	Multiple Use
CSV_OM_DEP	DEPARTMENTImportTemplate	Department Template for CSV fi...	CSV Data Import Entity	Organizat...		<input type="checkbox"/>	externalCo...	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
CSV_OM_JOB	JOB_CLASSIFICATIONImportTemplate	Job Template for CSV files	CSV Data Import Entity	Job		<input type="checkbox"/>	externalCo...	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
CSV_OM_POS	Position	Position Template for CSV files	CSV Data Import Entity	Position		<input checked="" type="checkbox"/>	code	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Within the transformation template group that you use for organizational data extraction, create two transformation templates for positions, one that maps the *Parent* field and one that doesn't. Assign the same Employee Central template to both transformation templates.

❖ Example

Let's say, you create the transformation templates POSITION_WO_PARENT and POSITION_W_PARENT for mapping SAP ERP HCM fields to Employee Central fields. You assign the Employee Central entity *Position* to both of the transformation templates and map the fields as shown below.

Table 18: POSITION_WO_PARENT

Employee Central				
Field	Mapping Mode	Infotype	Subtype	SAP ERP HCM Field
defaultValue	Infotype Mapping	1000		STEXT
Position Title	Infotype Mapping	1000		STEXT

Table 19: POSITION_W_PARENT

Employee Central Field	Mapping Mode	Infotype	Subtype	SAP ERP HCM Field
defaultValue	Infotype Mapping	1000		STEXT
Position Title	Infotype Mapping	1000		STEXT
Position.Higher-Level Posit	Infotype Mapping	1001	A002	SOBID

Procedure

1. Replicate the child position P1 and its parent position P2 - but **without** the relationships between them - from SAP ERP HCM to Employee Central. To do so:
 - a. In the transformation template group that you use for organizational data extraction, select the *Is Active* checkbox for the transformation template that you use for mapping position fields and that does **not** map the *Parent* field. Deselect this checkbox for the other transformation template that you use for mapping positions (the one that contains the *Parent* field).

❖ Example

In the example above, the POSITION_WO_PARENT template would be active, the POSITION_W_PARENT template would be inactive.

- b. Replicate the positions using the *Organizational Data Extraction* (ECPAO_OM_OBJECT_EXTRACTION) program. On the selection screen of the program, specify the transformation template group that you use for organizational data extraction. The *Organizational Data Extraction* program uses the transformation template that doesn't map the *Parent* field since you've set the *Is Active* checkbox for this transformation template. The other transformation template, which maps the *Parent* field, isn't used since this is not active.
2. Replicate the employee-position assignments from SAP ERP HCM to Employee Central. To do so:
 - a. Create the employees E1 and E2 in the SAP ERP HCM system. Assign employee E1 to position P1 and employee E2 to position P2.
 - b. Don't extract the employee's managers - make sure that you don't run the *Determination of Managers and Organizational Management Data* (ECPAO_MNGR_TYPES_EXTRACTION) program for these employees.
 - c. Replicate the employees' data using the *Employee Data Extraction* (ECPAO_EMPL_EXTRACTION) program.
 - d. In Employee Central, the *Supervisor* field of employee E2 remains empty since no supervisor information was replicated from SAP ERP HCM.
 3. Replicate the position relationships from SAP ERP HCM to Employee Central. To do so:
 - a. In the transformation template group that you use for organizational data extraction, select the *Is Active* checkbox for the transformation template that you use for mapping position fields and that maps the *Parent* field. Deselect this checkbox for the other transformation template that you use for mapping positions (the one that doesn't contain the *Parent* field).

❖ Example

In the example above, the `POSITION_W_PARENT` template would be active, the `POSITION_WO_PARENT` template would be inactive.

- b. Replicate the positions using the [Organizational Data Extraction](#) (`ECPAO_OM_OBJECT_EXTRACTION`) program. On the selection screen of the program, specify the transformation template group that you use for organizational data extraction. The [Organizational Data Extraction](#) program uses the transformation template that maps the *Parent* field since you've set the *Is Active* checkbox for this transformation template. The other transformation template, which doesn't map the *Parent* field, isn't used since this is not active. For more information position replication, see *Replicating Organizational Data from SAP ERP HCM to Employee Central* integration guide.
- c. The parent-child associations are created for the positions in Employee Central.
4. Check employee E2's Job History in Employee Central. The *Supervisor* field should now show an entry for employee E1.

Task overview: [Handling Manager Relationships \[page 122\]](#)

Related Information

[Define Types of Manager Relationships \[page 123\]](#)

[Determine the Employees' Managers \[page 125\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

[Handle Managers in the SAP ERP HCM System Whose Data Is Mastered in Employee Central \[page 129\]](#)

[Preparing Employee Central for Employee Data Integration \[page 15\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

4.4.1.11 Transferring Additional Organizational Management Data for Employees to Employee Central

4.4.1.11.1 Map Organizational Management Fields from SAP ERP HCM to Employee Central

You can transfer additional data from Organizational Management, such as the functional area or job family, from SAP ERP HCM to *custom-string#* fields in Employee Central.

Prerequisites

You have created suitable *custom-string#* fields in Employee Central (# means a number). The *custom-string#* fields can be contained in any employee-related entity in Employee Central. The Human Resource Information System (HRIS) synchronization process provides the information from these fields to the employee profile.

Context

To map the Organizational Management fields to *custom-string#* fields in Employee Central, make these settings:

Procedure

1. Define a relationship type for Organizational Management data.
To do so, go to the *Define Relationship Types for Managers and Employee-Related Org. Mgmt Data* Customizing activity and define a relationship type for which you select the *Use BAdI Implementation* checkbox. You don't need to select an evaluation path or enter a structure depth for this relationship type.
2. Add the fields to the *Managers and Org. Mgmt Fields for Employee Replication* table.
To do so, create a custom structure containing the fields that you want to map and add it to the `ECPAO_EE_MGNR` table using the `CI_EE_PD_DATA` include.
3. Implement the *Extraction of Organizational Management Data* Business Add-In (BAdI).
Create an implementation of the `EX_ECPAO_ERP_MNGR_TYP_PDDATA` BAdI that retrieves the content for the fields you want to map. The *Determination of Managers and Organizational Management Data* (`ECPAO_MNGR_TYPES_EXTRACTION`) program calls your BAdI implementation, extracts the content based on this implementation, and stores it in the corresponding fields that you have defined in the custom structure included in the `ECPAO_EE_MGNR` table.
4. Map the Organizational Management fields to the *custom-string#* fields.

To do so, go to the [Define Field Mapping for Employee Data](#) Customizing activity. In the [Primary Mapping](#) view, carry out the following steps for each [custom-string#](#) field from Employee Central to which you map an Organizational Management field from SAP ERP HCM:

1. Select the [Infotype Mapping](#) mapping mode.
2. In the [Infotype](#) field, select [MNGR](#).
3. In the [Subtype](#) field, select the relationship type that you have defined in the `V_ECPAO_MNGRTYPE` view.
4. Select the suitable field from the include in the `ECPAO_EE_MGNR` table.

Example

Let's say that you use the Employee Central field [custom-string12](#) to store the employee's functional area. You want to fill this field with content from the `FKBER` field from the [Functional Areas](#) (`V_TFKB`) view in the SAP ERP HCM system. In this view, in Customizing for [Financial Accounting](#), you can define different functional areas. In SAP ERP HCM Organizational Management, the functional area corresponds to the object type `IE`.

Therefore, you define the relationship type [FCTL](#) in the [Define Relationship Types for Managers and Employee-Related Org. Mgmt Data](#) Customizing activity and select the [Use BAdI Implementation](#) checkbox for it. You create a custom structure containing the `FKBER` field and add it to the `ECPAO_EE_MGNR` table. You create a suitable implementation of the `EX_ECPAO_ERP_MNGR_TYP_PDDATA` BAdI. The `ECPAO_MNGR_TYPES_EXTRACTION` program retrieves the content from the `FKBER` field based on your BAdI implementation and stores it in the `ECPAO_EE_MGNR` table. In the [Define Field Mapping for Employee Data](#) Customizing activity, you select the [custom-string12](#) field and map it to the [MNGR](#) infotype, the [FCTL](#) subtype, and the [FKBER](#) field from the `ECPAO_EE_MGNR` table.

The content from the `FKBER` field is then read from the `ECPAO_EE_MGNR` table during employee extraction and transferred to the [custom-string12](#) field in Employee Central.

Related Information

[Implementing Business Add-Ins to Enhance the Replication \[page 211\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

[Extract Organizational Management Data \[page 136\]](#)

[Define Types of Manager Relationships \[page 123\]](#)

4.4.1.11.2 Extract Organizational Management Data

You can extract Organizational Management data, such as the functional area or job family, from SAP ERP HCM, which you want to transfer to a *custom-string* field in Employee Central.

Context

The *Determination of Managers and Organizational Management Data* (ECPAO_MNGR_TYPES_EXTRACTION) program extracts the data for a given selection of employees, based on the relationship types you have defined in the *Relationship Types for Managers and Organizational Mgmt Data* (V_ECPAO_MNGRTYPE) view (see section [Define Types of Manager Relationships \[page 123\]](#)). The data is stored in the *Managers and Org. Mgmt Fields for Employee Replication* (ECPAO_EE_MGMR) table. The *Employee Data Extraction* (ECPAO_EMPL_EXTRACTION) program then reads data from this table and transfers it to Employee Central.

Procedure

Proceed as described in section [Determine the Employees' Managers \[page 125\]](#).

Related Information

[Map Organizational Management Fields from SAP ERP HCM to Employee Central \[page 134\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

4.4.1.12 Defining Field Mapping for Employee Data

To enable the data extraction programs to extract the right SAP ERP HCM information for the right Employee Central fields, you need to map SAP ERP HCM fields to Employee Central fields.

To map fields, you go to the *Define Field Mapping for Employee Data* Customizing step, which has the VC_ECPAO_MAP view cluster assigned. The configuration in this view cluster is done in several steps:

1. You create at least one transformation template group. A transformation template group bundles all field mappings that you want to use when running the data extraction program. This is the entity that you specify on the program selection screen. From the transformation template group the data extraction program determines all information it needs to extract data from SAP ERP HCM fields and map it to Employee Central field IDs.
2. You create at least one transformation template for your transformation template group. The transformation template groups information from the SAP ERP HCM system that belongs together logically. It is the SAP ERP HCM counterpart of the Employee Central entity.

- You define a primary mapping for each of your transformation templates. This means you choose Employee Central fields from the Employee Central template assigned to the transformation template, and you map suitable SAP ERP HCM fields to these Employee Central field IDs.
- If you need an additional field mapping, for example for country-specific fields, you also define a secondary field mapping.

❖ Example

The following sample transformation template groups are defined for the Employee Central company SBS_MODEL in the delivered sample Customizing:

- SBS_MODEL_CSV

This is an example for the replication of employee data using the [CSV File-Based Transfer](#) communication channel.

Transformation Template Group	SBS_MODEL_CSV	Model Template for CSV Data Import
Transformation Template	ERP_JOBINFO_CSV	JOBINFO TEMPLATE
EC Entity	CSV_4	Job History Info Template for CSV Files

Primary Mapping									
EC Field ID	Field ID Description	Mapping Mode	Infotype	Subt...	Infotype Field	Required Field	Has Sec. Mapping	To EC	From EC
25	Classification	Infotype Mapping	0001		ANSVH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Employee Type	Infotype Mapping	0001		PERSK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	Department	Infotype Mapping	0001		ORGEH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	Division	Infotype Mapping	0001		GSBER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Location	Infotype Mapping	0001		WERKS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Company	Infotype Mapping	0001		BUKRS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Business Unit	BAdI Mapping				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	Cost Center Account	Preconfigured Mapping				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	Standard Weekly Hours	Infotype Mapping	0007		WOSTD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	Holiday Calendar	BAdI Mapping				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	Time Profile	BAdI Mapping				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45	Work Schedule	BAdI Mapping				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 37: Sample CSV Template for Job Information

Transformation Template Group	SBS_MODEL_CSV	Model Template for CSV Data Import
Transformation Template	ERP_PERSONAL_CSV	PERSONAL INFO TEMPLATE
EC Entity	CSV_5	Personal Info Template for CSV Files

Primary Mapping							
EC Field ID	Field ID Description	Mapping Mode	Infotype	Subtype	Infotype Field	Required	
16	Preferred Name	Infotype Mapping					
21	First Name	Infotype Mapping	0002		VORNA		
22	Last Name	Infotype Mapping	0002		NACHN		
24	Middle Name	Infotype Mapping	0002		MIDNM		
26	Suffix	Infotype Mapping	0002		NAM2U		
27	Gender	Infotype Mapping	0002		GESCH		
28	Marital Status	Infotype Mapping	0002		FAMST		
31	Native Preferred Language	Infotype Mapping	0002		SPRSL		
38	Nationality	Preconfigured Mapping					

Figure 38: Sample CSV Template for Personal Information

Transformation Template Group	SBS_MODEL_CSV	Model Template for CSV Data Import
Transformation Template	ERP_PERSON_CSV	BIOGRAPHICAL/PERSON TEMPLATE
EC Entity	CSV_2	Biographical Info Template for CSV Files

Primary Mapping							
EC Field ID	Field ID Description	Mapping Mode	Infotype	Subtype	Infotype Field	Required	
16	Preferred Name	Infotype Mapping	0002		GBDAT		
17	Country Of Birth	Preconfigured Mapping					
18	Place Of Birth	Infotype Mapping	0002		GBORT		
19	Birth Name	Infotype Mapping	0002		NAME2		

Figure 39: Sample CSV Template for Biographical Information

- SBS_MODEL_WS

This is an example for data replication using the [Web Service Transfer](#) communication channel.

You can copy the transformation template group to your Employee Central instance and change the field mapping of the transformation templates to suit your requirements.

i Note

We also provide sample content, which contains configurable standard field mappings, in *Primary Mapping* of the *Define Field Mapping for Employee Data* Customizing step. When you define a field mapping there, you can easily copy these standard field mappings using a pushbutton and then adapt them if necessary. This is a different kind of sample content than the transformation template groups, templates, and field mappings contained in the delivered sample Customizing.

[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

A template group bundles all field mappings that you want to use when transferring data from SAP ERP HCM to Employee Central.

[Defining Templates to Map Employee Data Fields \[page 141\]](#)

The transformation template is the counterpart of the Employee Central entity. You can map fields from the transformation template to fields from the assigned Employee Central entity.

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

You can choose Employee Central fields from the Employee Central metadata that you've uploaded to the SAP ERP HCM system, and you map suitable SAP ERP HCM fields to these Employee Central fields and define additional transformations if needed.

[If Needed, Define a Secondary Field Mapping \[page 150\]](#)

If you need an additional field mapping, for example for country/region-specific fields, define a secondary mapping.

[How to Use the Sample Content for Employee Data \[page 153\]](#)

We provide sample content for different use cases in the *Define Field Mapping for Employee Data* Customizing step, which you can copy and adapt to your needs.

Parent topic: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

[Defining Value Mappings \[page 78\]](#)

[Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central \[page 99\]](#)

[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)

[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Handling Manager Relationships \[page 122\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Copy Configuration from one EC Instance to another EC Instance \[page 159\]](#)

[Comparison Tool to Compare Configuration Details \[page 161\]](#)

[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)

[Setting the User Status in Employee Central \[page 164\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Defining Your Employee Central Instance \[page 68\]](#)
[Extracting Employee Data \[page 190\]](#)
[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)
[Downloading CSV Files from the Application Server \[page 198\]](#)
[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)
[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)
[Map Organizational Management Fields from SAP ERP HCM to Employee Central \[page 134\]](#)
[Extract Organizational Management Data \[page 136\]](#)
[Define Types of Manager Relationships \[page 123\]](#)
[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Use Position Relationships from SAP ERP HCM to Create Supervisor Relationships in Employee Central \[page 131\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

4.4.1.12.1 Creating a Transformation Template Group for Employee Data

A template group bundles all field mappings that you want to use when transferring data from SAP ERP HCM to Employee Central.

Context

To define template groups, you go to the *Transformation Template Groups* view of the VC_ECPAO_MAP view cluster.

Display View "Transformation Template Group": Overview

Transf. Template Group	Description	EC Instance
DS_POC_PMAP_UPLOAD2	Template mapping from MDF configured in EC	Company for testing S tabl...
DS_PR_JOB_INFITY_0041	Job info template with infotype 0041 mapping	Company for testing S tabl...
DS_RECUR_LOOP_STRU	Test cloning for Recurr payment IT0008 LOOP structure	EC Model Company for Side ..
DS_RECUR_LOOP_STRU	Test cloning for Recurr payment IT0008 LOOP structure	EC Model Company for Side ..
DS_RECUR_LOOP_STRU1	Test cloning for Recurr payment IT0008 LOOP structure	EC Model Company for Side ..
DS_RECUR_LOOP_STRUC	Test cloning for Recurr payment IT0008 LOOP structure	EC Model Company for Side ..
DS_REF_PICKL	Test reference picklist	QACAND C table picklist
DS_STABLE_MODEL_CSV	Model Template for CSV Data Import	Company for testing S tabl...

Figure 40: Creating a Transformation Template Group: Overview Screen

Transformation Template Group		SBS_MODEL_WS	Model Template for Web Service
Basic Settings			
EC Instance	SBS_MODEL	EC Model Company for Side by Side	
Communication Channel	Web Service Transfer		
Sample Content	EE_WS_3	Employee Data EC to ERP: Replication	
ERP/EC Integration			
Earliest Transfer Date	01.01.2014		
<input checked="" type="checkbox"/> Enable for Delta Replication			

Figure 41: Creating a Transformation Template Group: Details Screen

Procedure

1. Enter a name and description for the transformation template group.
2. Assign it to the Employee Central instance defined in the [Specify Employee Central Instance ID](#) Customizing activity.

i Note

[EC Instance](#) is a read only field when you are editing or copying the transformation template group. You will be able to modify or choose the EC instance only when you are creating a new transformation template group.

3. Choose one of these communication channels for the transformation template group:
 - [CSV File-Based Transfer](#)
Choose this communication channel if you want to use the transformation template group for the CSV file-based data extraction.
 - [Web Service Transfer](#)
Choose this communication channel if you want to use the transformation template group to transfer data using a Web service call.
4. Select the sample content that you want to use for your transformation template group. We provide sample content for different use cases.
5. **Optional:** Define an Earliest Transfer date.

You can specify this date to start employee data replication at a specific point in time. This prevents the complete history of data records being replicated from SAP ERP HCM to Employee Central. If you define an earliest transfer date for a transformation template group, this date influences effective-dated and non-effective dated templates in different ways.

6. Define if the transformation template group is available for delta replication.

i Note

You can only use transformation template groups with the [Web Service Transfer](#) communication channel for delta replication. To make sure that the delta replication works, use a transformation template group with the [Web Service Transfer](#) communication channel **and** for which the [Enable for Delta Replication](#) checkbox is selected. There can only be one transformation template group for which the [Enable for Delta Replication](#) checkbox is selected.

Results

You are now ready to define templates for your transformation template group.

Task overview: [Defining Field Mapping for Employee Data \[page 136\]](#)

Related Information

[Defining Templates to Map Employee Data Fields \[page 141\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[If Needed, Define a Secondary Field Mapping \[page 150\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

4.4.1.12.2 Defining Templates to Map Employee Data Fields

The transformation template is the counterpart of the Employee Central entity. You can map fields from the transformation template to fields from the assigned Employee Central entity.

Context

To define a set of transformation templates for each transformation template group, you go to the [Transformation Templates](#) view of the VC_ECPAO_MAP view cluster.

Display View "Transformation Template": Overview

Transformation Template Group: SBS_MODEL_WS Model Template for Web Service

Transformation Template	Transformation Template Description	EC Entity	Is Active
ERP_ADDRESS_WS	ADDRESS BY WS	WS_10	<input checked="" type="checkbox"/>
ERP_ADDRESS_WS_MAIL	ADDRESS BY WS	WS_10	<input checked="" type="checkbox"/>
ERP_COMPENSATION_1	ERP_COMPENSATION_1	WS_11	<input type="checkbox"/>
ERP_COST_DIST	Cost distribution	WS_20	<input checked="" type="checkbox"/>
ERP_COST_DIST_ITEMS	Cost distribution items	WS_21	<input checked="" type="checkbox"/>
ERP_EMAIL_WS	EMAIL INFO TEMPLATE	WS_7	<input checked="" type="checkbox"/>
ERP_EMPLOYMENT_WS	EMPLOYMENT INFO	WS_3	<input checked="" type="checkbox"/>
ERP_GLOBALASSIGN_WS	Global assignment	WS_6	<input type="checkbox"/>
ERP_JOBINFO_WS	JOB INFO	WS_4	<input checked="" type="checkbox"/>
ERP_JOBREL_CUSTOM_WS	Job Relationship Template - Custom Manag	WS_9	<input type="checkbox"/>
ERP_JOBREL_MATRIX_WS	Job Relationship Template - Matrix Manag	WS_9	<input type="checkbox"/>

Figure 42: Transformation Templates Assigned to a Transformation Template Group

Display View "Transformation Template": Details

Transformation Template Group: SBS_MODEL_WS Model Template for Web Service

Transformation Template: ERP_JOBINFO_WS JOB INFO

Transformation Template

☒ Is Active

☐ Based on Hire Date

☐ Don't Merge Records

EC Integration Services

EC Entity: WS_4 Job Info Template for Web Service

Communication Channel: Web Service Transfer

Entity Name in EC: EmpJob

☒ Effective Dated

Figure 43: Details of an Transformation Template

Note

If you want to map managers from SAP ERP HCM to the *Job Relationship* template in Employee Central, you need a separate transformation template for each type of manager. You could, for example, define the transformation templates ERP_JOBREL_CUSTOM (*Job Relationship - Custom Manager*) and ERP_JOBREL_MATRIX (*Job Relationship - Matrix Manager*).

These are the settings that you need to make for each transformation template you define:

Procedure

1. Enter a name and description for the template.
2. Select the *Is Active* checkbox to define that the template is to be used for data extraction.
3. Specify if the template data to be extracted is from the hire date of the employee.

If you select this checkbox, the employee data to be extracted based on the transformation template is retrieved using the hire date of the employee as the start date for the data records. Hire date will take precedence of the cutover date. If both the *Is Active* and *Based on Hire Date* options are selected, then hire date would take precedence.

i Note

Based on Hire Date option is disabled and made invisible for non-effective dated type of records. For non-effective dated template, see *How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates*.

- Specify for effective-dated entities, if infotype records that contain the same data for the same employee but refer to different time periods are to be merged for data transfer between SAP ERP HCM and Employee Central.

If you have included global information template in your transformation template group, then you need to ensure:

- The start date and the end date labels of the entity is maintained in the view `V_ECPAO_ECTMPL`.
- The country version is included in the view `V_ECPAO_ECTMPL`.
- The **Don't Merge Records** option is selected for personal information entity and all country specific global information entities in the *Transformation Template Details* screen of the View Cluster.
- The entity order sequence of all the country specific global information templates defined in the view `V_ECPAO_ECTMPL` should be the same value 35.
- The dependent entity for country specific global information should be maintained as personal information entity.

❖ Example

Let's say the following records of the *Recurring Payments/Deductions* (0014) infotype exist for an employee:

Table 20: Recurring Payments/Deductions Records – Without Data Merge

Start Date	End Date	Wage Type	Amount	Currency
January 1, 2015	June 31, 2015	MW00	500	USD
July 1, 2015	December 31, 2015	MW00	500	USD

If you select this checkbox, these infotype records are transferred separately. If you don't select this checkbox, these infotype records are merged and the following record is transferred:

Table 21: Recurring Payments/Deductions Records – With Data Merge

Start Date	End Date	Wage Type	Amount	Currency
January 1, 2015	December 31, 2015	MW00	1000	USD

- Assign one of the default Employee Central entities or a custom Employee Central entity that you've created before.

Task overview: [Defining Field Mapping for Employee Data \[page 136\]](#)

Related Information

[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[If Needed, Define a Secondary Field Mapping \[page 150\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[Define Types of Manager Relationships \[page 123\]](#)

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

4.4.1.12.3 Defining the Primary Field Mapping for Employee Data

You can choose Employee Central fields from the Employee Central metadata that you've uploaded to the SAP ERP HCM system, and you map suitable SAP ERP HCM fields to these Employee Central fields and define additional transformations if needed.

Context

To define a field mapping for each transformation template, you go to the *Primary Mapping* view of the VC_ECPAO_MAP view cluster. An easy way to define your field mapping is to copy the sample content we provide and adapt it to your requirements. You can use the sample content that you've selected for your transformation template group.

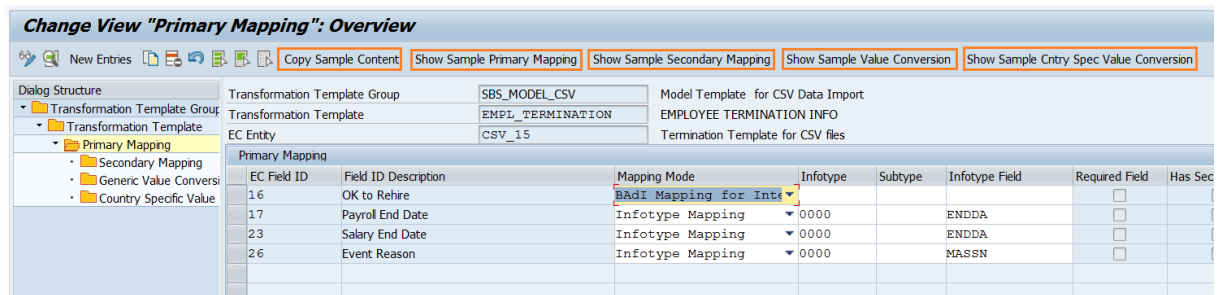


Figure 44: Sample Content Options in Primary Mapping View

Choose *Show Sample Primary Mapping* to check which sample content is available.

Display View "Standard Primary Mapping Entries": Overview

EC Entity ID

Address Template for Web Services

Version ID

Version 101

Standard Primary Mapping Entries

EC Field	EC Field Name	Mapping Mode	Infotype	Subtype	Field name	Evaluato...	Linking Field	Is Req Field	Value Mapping Entity
17	address1	Infotype Mapping	▼ 0006	1	STRAS		LAND1	<input checked="" type="checkbox"/>	
18	address2	Infotype Mapping	▼ 0006	1			LAND1	<input type="checkbox"/>	
19	address20	Infotype Mapping	▼ 0006	1			LAND1	<input type="checkbox"/>	
20	address3	Infotype Mapping	▼ 0006	1			LAND1	<input type="checkbox"/>	
21	address4	Infotype Mapping	▼ 0006	1			LAND1	<input type="checkbox"/>	
22	address5	Infotype Mapping	▼ 0006	1			LAND1	<input type="checkbox"/>	

Figure 45: Sample Content for Addresses Template

Note

In addition to the sample content shown here, there are also predefined standard mappings, which are automatically added to the templates you use and aren't available for configuration in this Customizing activity.

Choose [Copy Sample Content](#) to copy the sample field mappings. This includes primary mappings as well as secondary mappings (if available).

If you want to define your own field mapping, here's how to do this:

Procedure

1. Choose an Employee Central field from the assigned Employee Central entity.

Note

Make sure that you have imported the metadata for this Employee Central entity to the SAP ERP HCM system using the metadata import program. Otherwise no fields are available here.

2. Map each Employee Central field to an SAP ERP HCM field using a suitable mapping mode:
 - When you select the mapping mode [Infotype Mapping](#), you assign an infotype or subtype field in the primary mapping. You can use fields from the Personnel Administration infotypes for field mapping. Some infotypes require a special processing such as:
 - Repetitive mapping: If you enter an infotype such as [Basic Pay](#) (0008), for which a repetitive mapping is needed, you can't make entries in the [Infotype Field](#) field. Instead, the [Repetitive Field](#) field is displayed. Here you can select the infotype field for which you want to use a repetitive mapping.
 - Date type mapping: If you enter the [Date Specifications](#) (0041) infotype, you can't make entries in the [Infotype Field](#) field either. Instead, the [Date Type](#) field is displayed. Here you can select the date type that you want to map.
 - When you select the mapping mode [Preconfigured Mapping](#), you can use mappings that were defined by SAP in the [Preconfigured Mapping](#) tables (ECPAO_PREMAPPING, ECPAO_PREMAP_TT).
 - When you select the mapping mode [BAdI Mapping](#), you can use an implementation of the [Mapping of EC and ERP Data for Data Replication to EC](#) (EX_ECPAO_EMP_DATA_EXTRACT_OUT) BAdI to define the field mapping.

i Note

User ID field of the Employment Information (WS_3) and Person ID External of Biographical Information (WS_2) are configurable for Business Integration Builder based SAP ERP HCM replication from Employee Central. This field should not be mapped for replicating the date to Employee Central.

3. To map managers from SAP ERP HCM to Employee Central, carry out the following steps for each transformation template that defines a type of manager:
 1. In the *Infotype* field, select *MNGR*.
 2. In the *Subtype* field, select the suitable type of manager relationship that you have defined in the *V_ECPAO_MNGRTYPE* Customizing view as described in section [Define Types of Manager Relationships](#) [page 123].

Rel. ID	EvalPath	Relationship Type
ABCD	P-S-O	ABCD
CMNG		Custom Manager
LMNG	B012	Line Manager
MMNG	BOSS_OE	Matrix Manager
PTOP	S-O	test
VERD	A010	Verdifresh

3. Select one of the following fields from the *Manager Assignments for Employee Replication* (ECPAO_EE_MGNR) table as the infotype field to be mapped:
 - **RELATION_CODE**
 You can map the *relation-type* field in the *Job Relationships* template to the *RELATION_CODE* field. You also need to define a value mapping entity for the *relation-type* field using the type of manager relationship that you have defined in the *V_ECPAO_MNGRTYPE* Customizing view as the SAP ERP HCM key.

Display View "Value Mapping Details": Overview

EC Instance:
 Value Mapping Entity:

Sequence No.	ERP Key	EC Key
2	MMNG	Matrix Manager
6	CMNG	Custom Manager
9	0009	HR Manager
10	0010	HR Manager

- EC_MGNR_USER**
 If the manager's data is mastered in Employee Central, you can map the *manager-id* field in the *Job Information* template or the *rel-user-id* field in the *Job Relationships* template to the EC_MGNR_USER field.
- MNGR_USER_ID**
 If the manager's data is mastered in SAP ERP HCM, you can map the *manager-id* field in the *Job Information* template or the *rel-user-id* field in the *Job Relationships* template to the MNGR_USER_ID field.
- ENDDA**
 If an employee has assignments to different types of managers in SAP ERP HCM in overlapping time slices, you need to map the end date field of the *Job Relationships* template to the ENDDA field.

Transformation Template Group	SBS_MODEL_CSV	Model Template	for CSV Data Import
Transformation Template	ERP_JOBREL_MATRIX	Job Relationship template	
EC Entity	CSV_9	Job Relationship Template for CSV files	

Primary Mapping					
EC Field ID	Field ID Description	Mapping Mode	Infotype	Subtype	Infotype Field
16	End Date	Infotype Mapping	MNGR	MMNG	ENDDA
17	Relationship Type	Infotype Mapping	MNGR	MMNG	RELATION_CODE
18	Name	Infotype Mapping	MNGR	MMNG	MNGR_USER_ID
19	Operation	BAdI Mapping			

❖ Example

You want to map the Employee Central field *Supervisor* in the *Job Information* template with a suitable manager from SAP ERP HCM. Therefore, you select the MNGR infotype, the 0001 subtype (which is defined in the V_ECPAO_MNGRTYPE Customizing view with an evaluation path that determines the supervisor of an employee), and the MNGR_USER_ID infotype field. The content from the MNGR_USER_ID field is then read from the ECPAO_EE_MGNR table during employee extraction and transferred to *Job Information* in Employee Central.

- To map additional Organizational Management fields (such as the functional area or job family) for employees from SAP ERP HCM to *custom-string#* fields in Employee Central, carry out the steps described in section [Map Organizational Management Fields from SAP ERP HCM to Employee Central \[page 134\]](#).
- Specify if the Employee Central field is a required field based on the Succession Data Model configured in your Employee Central instance.

If an Employee Central field is set to *Required*, the data extraction programs must extract data from the SAP ERP HCM system for this field. If there is no data available, the program writes an error message to the application log.

6. If the value from the SAP ERP HCM field needs to be converted into an Employee Central value, enter the value mapping entity that you have defined in the *Define Value Mapping Entities* Customizing step.

❖ Example

You might want to map the SAP ERP HCM address type *Home Address* to the Employee Central address type *Home*.

⚠ Caution

If the *EC Field Has Picklist* flag is set for the Employee Central field that you have imported to SAP ERP HCM in the *Import Metadata from Employee Central* Customizing step, you need to assign a value mapping entity. Otherwise the data extraction program might fail.

i Note

You can define the value mappings for this entity directly from here by choosing *Define Value Mapping Entries*.

The screenshot shows a software interface titled "Value Mapping". It features a light blue background. At the top, there is a header bar with the text "Value Mapping". Below this, on the left, is a label "Value Mapping Entity" next to a white rectangular text input field. To the right of the input field, there are three yellow rectangular buttons stacked vertically. The top button is labeled "Create Value Mapping Entity", the middle button is labeled "Define Value Mapping Entries", and the bottom button is labeled "Define Ctry. Spec. Value Mapping Entries".

Figure 46: Define Value Mapping Entries Pushbutton

Results

If you don't have any specific requirements, such as mapping country-specific fields, you are now ready to use your field mapping when running the data extraction report. Otherwise, define a secondary field mapping in addition.

Display View "Primary Mapping": Details

Dialog Structure

- Transformation Template Group
 - Transformation Template
 - Primary Mapping**
 - Secondary Mapping
 - Generic Value Conversion
 - Country Specific Value Conversion

Transf.Templ Group: SBS_MODEL_WS Model Template for Web Service

Transf.Template: ERP_ADDRESS_WS ADDRESS BY WS

EC Entity: WS_10 Address Template for Web Services

EC Field Attributes

EC Field: 54 zipCode

EC Field Description: zipCode

☐ Field Deleted in EC

☐ Required in EC

ERP Field Mapping

Mapping Mode: Infotype Mapping

Infotype

Infotype: 0006 Addresses

Subtype: 1 Permanent residence

Infotype Field: PSTLZ Postal Code

Secondary Mapping

Linking Field: LAND1 Country Key

Figure 47: Primary Mapping Example: Address Type Field

Task overview: [Defining Field Mapping for Employee Data \[page 136\]](#)

Related Information

[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

[Defining Templates to Map Employee Data Fields \[page 141\]](#)

[If Needed, Define a Secondary Field Mapping \[page 150\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)

[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)

[Defining Value Mappings \[page 78\]](#)

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Date Type Mapping Works \[page 179\]](#)

[Preparing the Systems for Employee Data Replication \[page 10\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Defining Value Mapping Based on Constants \[page 95\]](#)

[How to Map Additional Actions \[page 185\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

[Implementing Business Add-Ins to Enhance the Replication \[page 211\]](#)

4.4.1.12.4 If Needed, Define a Secondary Field Mapping

If you need an additional field mapping, for example for country/region-specific fields, define a secondary mapping.

Context

⚠ Caution

When a secondary mapping is defined for an SAP transformation template, you cannot clone this template.

To define an additional field mapping for an SAP transformation template, you go to the [Secondary Mapping](#) view of the `VC_ECPAO_MAP` view cluster. An easy way to define a custom secondary mapping is to copy the sample secondary mappings that are provided by SAP and adapt them to your requirements. Sample secondary mappings are available for the following country/regions:

- Argentina
- Australia
- Austria
- Brazil
- Canada
- Chile
- China
- Colombia
- Finland
- France
- Germany
- Hong Kong
- India
- Ireland
- Italy
- Japan
- Malaysia
- Mexico
- Netherlands
- New Zealand
- Russia
- Saudi Arabia
- Singapore
- South Korea
- Spain
- Sweden

- Switzerland
- United Kingdom
- United States of America
- Venezuela

If you need to define field mappings for other countries, you can also copy and adapt the sample content provided for one of these countries.

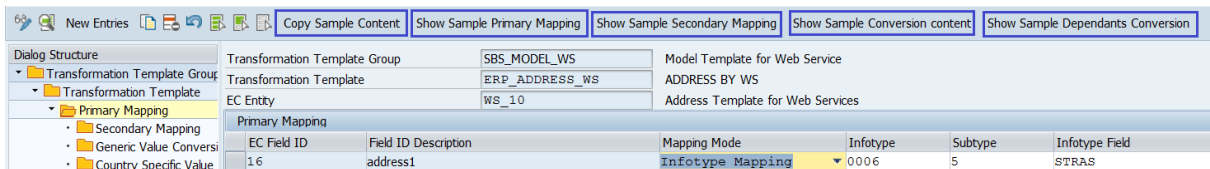


Figure 48: Sample Content Options in Primary Mapping View

Choose *Show Sample Secondary Mapping* in the *Primary Mapping* view to check which sample content is available.

Display View "Standard Secondary Mapping Entries": Overview

EC Entity ID

Address Template for Web Services

Version ID

Version 101

Standard Secondary Mapping Entries

	EC Field	EC Field Name	Country	Infotype	Subtype	Field name	Value Map
	17	address1	CL	0006	1	NAME2	
	17	address1	CN	0006	1	LOCAT	
	17	address1	FR	0006	1	HSNMR	
	17	address1	HK	0006	1	LOCAT	
	17	address1	JP	0006	1	ORT01	
	17	address1	KR	0006	1	ORT01	
	17	address1	NL	0006	1	LOCAT	
	17	address1	NZ	0006	1	NAME2	
	17	address1	SA	0006	1	NAME2	
	18	address2	AR	0006	1	HSNMR	
	18	address2	AU	0006	1	HSNMR	
	18	address2	BR	0006	1	HSNMR	
	18	address2	CA	0006	1	LOCAT	
	18	address2	CH	0006	1	LOCAT	
	18	address2	CL	0006	1	STRAS	
	18	address2	CN	0006	1	STRAS	
	18	address2	CO	0006	1	LOCAT	
	18	address2	DE	0006	1	STRAS	
	18	address2	ES	0006	1	HSNMR	
	18	address2	FI	0006	1	HSNMR	
	18	address2	FR	0006	1	STRAS	
	18	address2	GB	0006	1	LOCAT	
	18	address2	HK	0006	1	STRAS	

Figure 49: Sample Secondary Mapping for Address Field

Choose *Copy Sample Content* to copy the sample field mappings. This includes primary mappings as well as secondary mappings.

If you want to define your own field mapping, here's how to do this. You have two options:

Procedure

1. You can use a linking field.

This is one of the fields from the infotype or subtype that you have defined in the primary mapping. You can choose the linking field from the value help in the [Secondary Mapping](#) view. The linking field is dynamically populated based on the infotype or subtype you have specified in the [Primary Mapping](#) view.

ERP Field Mapping

Mapping Mode: **Infotype Mapping**

Infotype

Infotype: **0006** Addresses

Subtype: **1** Permanent residence

Infotype Field:

Secondary Mapping

Linking Field: **LAND1** Country Key

Figure 50: Linking Field Country Key

Country Key	Description	Infotype	Subtype	Infotype Field	Value Mapping Entity
CL	Chile	0006	5	NAME2	
CN	China	0006	5	LOCAT	
FR	France	0006	5	HSNMR	
HK	Hong Kong	0006	5	LOCAT	
JP	Japan	0006	5	ORT01	
KR	South Korea	0006	5	ORT01	
NL	Netherlands	0006	5	LOCAT	
NZ	New Zealand	0006	5	NAME2	
SA	Saudi Arabia	0006	5	NAME2	

Figure 51: Defining Secondary Mapping for Linking Field Country Key

2. You can use the [Country Grouping](#) (MOLGA) field.

Change View "Secondary Mapping": Overview

Description	Infotype	Subtype	Infotype Field	Value Mapping Entity
Chile	0006	5	NAME2	
China	0006	5	LOCAT	
France	0006	5	HSNMR	
Hong Kong	0006	5	LOCAT	
Japan	0006	5	ORT01	

Figure 52: Defining Secondary Mapping for Country Grouping Field

Task overview: [Defining Field Mapping for Employee Data \[page 136\]](#)

Related Information

[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

[Defining Templates to Map Employee Data Fields \[page 141\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[Cloning Transformation Templates \[page 157\]](#)

4.4.1.12.5 How to Use the Sample Content for Employee Data

We provide sample content for different use cases in the *Define Field Mapping for Employee Data* Customizing step, which you can copy and adapt to your needs.

Use cases

Sample content is available for all employee-related templates apart from: *Job Relationships*, *Payment Information Details USA*, *Dependent Address*, *Dependent National ID*, and *Dependent Global Information*.

Sample content is available for these use cases:

Employee Data ERP to EC: Mini Master Scope (EE_WS_1)

Provides field mappings for the employee mini master records to be replicated from the SAP ERP HCM system to SAP SuccessFactors. The mini master is a subset of infotypes containing data that is needed for the Employee Profile in SAP SuccessFactors.

Use this sample content to set up a regular web service-based replication of employee mini master data for the Employee Profile when using the side-by-side deployment option.

i Note

This sample content includes field mappings only for the entities and fields that are needed for the Employee Profile.

Employee Data ERP to EC: Integration or Migration (EE_WS_2)

Provides field mappings for employee master data to be regularly replicated or to be migrated from the SAP ERP HCM system to Employee Central. You can use this sample content in two scenarios:

- Either to set up a regular web service-based replication of employee data from the SAP ERP HCM system to Employee Central when using the side-by-side deployment option.
- Or to set up a delta-enabled migration to initially move your employee data from the SAP ERP HCM system to Employee Central if you want to transition to the side-by-side or the core hybrid deployment option.

i Note

This sample content includes field mappings for all entities supported by the standard delivery.

Employee Data ERP to EC: CSV File-Based Migration (EE_CSV_1)

Provides field mappings for employee master data to be migrated from the SAP ERP HCM system to Employee Central. Use this sample content to set up a CSV file-based migration to initially move your employee data from the SAP ERP HCM system to Employee Central if you want to transition to the side-by-side or the core hybrid deployment option.

i Note

This sample content includes field mappings for all entities supported by the standard delivery.

i Note

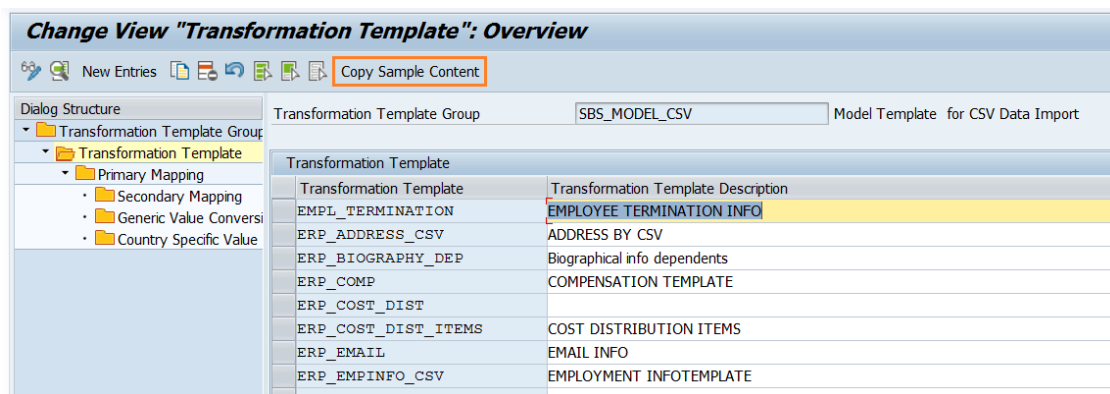
The sample content for the *Pay Component Recurring* and *Pay Component Non Recurring* entities does not contain any entries in the *Subtype* column since each subtype corresponds to a wage type. Wage types are customer specific, therefore no sample mapping can be provided for them. The sample content for the *Dependent ...* templates contains entries for the *Family Member/Dependents* (0021) infotype, but the *Subtype* column is also empty here. If you want to use the sample content for these entities, copy it and fill in the subtypes.

You can use the cloning feature to define a field mapping for these entities. But make sure that you don't add a secondary mapping in this case, since templates for which a secondary mapping is defined cannot be cloned.

How to proceed

Here is how to use the sample content provided in the *Define Field Mapping for Employee Data* Customizing activity:

1. Create a transformation template group and select the sample content that you want to use for it.
2. Create transformation templates for all entities you want to use and assign the corresponding Employee Central entities. You can create the transformation templates using two methods:
 - Using the *Copy Sample Content* button at the transformation template group level.



You can use the Copy Sample Content button to save all the configurations like: Primary Mapping, Secondary Mapping, Generic Value Conversion, and Country Specific Value Conversion configuration details for the relevant EC entities based on the chosen sample content version at each transformation template group level. You need to click on the save button after you click the Copy Sample Content button to save all the configurations

Note

In case when the primary mapping is not maintained in the S table (ECPAO_FLDMAP_S) for a template, that template will not be available in the Transformation Template view of the View Cluster. You should manually add the template in the View Cluster. For example for Employment Info and Payment Information template, you need to manually add the template after copying the sample content.

- Using the [Copy Sample Content](#) button at the transformation template level.

Note

Use this function only if you have not copied the sample content at the transformation template group level.

Change View "Primary Mapping": Overview

65 New Entries Copy Sample Content Show Sample Primary Mapping Show Sample Secondary Mapping Show Sample Value Conversion Show Sample Cntry Spec Value Conversion

Dialog Structure

- Transformation Template Group
 - Transformation Template
 - Primary Mapping
 - Secondary Mapping
 - Generic Value Convers
 - Country Specific Value

Transformation Template Group: SBS_MODEL_CSV
Transformation Template: EMPL_TERMINATION
EC Entry: CSV_15

Model Template: for CSV Data Import
EMPLOYEE TERMINATION INFO
Termination Template for CSV files

EC Field ID	Field ID Description	Mapping Mode	Infotype	Subtype	Infotype Field	Required Field	Has Sec
16	OK to Rehire	Bad Mapping for Int				<input type="checkbox"/>	
17	Payroll End Date	Infotype Mapping	0000		ENDDA	<input type="checkbox"/>	
23	Salary End Date	Infotype Mapping	0000		ENDDA	<input type="checkbox"/>	
26	Event Reason	Infotype Mapping	0000		MASSN	<input type="checkbox"/>	

Which field mappings are copied depends on the sample content you have selected for the transformation template group. After you copy the sample content for each transformation template, all the details of the primary mapping, secondary mapping, generic value conversion, and country specific value conversion will get copied. You need to click on the save button after you click the Copy Sample Content button to save all the configurations.

- If needed, adapt the copied sample content to suit your requirements. You can, for example, delete mappings you don't need, change the mapped field, or add new mappings.
- Make the following additional settings:
 - If sample value mapping entities are assigned to the sample content you use, but no value mapping details are provided, you need to create corresponding custom value mapping entities and define a suitable value mapping for them.

❖ Example

You use the sample content provided for the [Address](#) template. The ADDRESS_TYPE_CSV value mapping entity is assigned to the mapping of the address-type field. A sample value mapping entity with this name is provided. But no value mapping details are assigned to the ADDRESS_TYPE_CSV value mapping entity. Therefore you go to the [Define Value Mapping Entities](#) Customizing activity and create an ADDRESS_TYPE_CSV custom value mapping entity. Then you go to the [Define Value Mapping Details](#) Customizing activity and define the values to be mapped for this value mapping entity.

- The sample content provided for the Job History template contains a mapping for the [Supervisor](#) (*manager-id*) field from Employee Central that uses the LMNG relationship type.
 - If you want to use this mapping, copy the sample content for the Job History template. Then go to the [Define Relationship Types for Managers and Employee-Related Org. Mgmt Data](#) Customizing activity, create the LMNG relationship type, and make the appropriate settings for it. Run the [Determination of Managers and Organizational Management Data](#)

- (ECPAO_MNGR_TYPES_EXTRACTION) program to extract the manager information. Otherwise, the NO_MANAGER entry will be replicated to the [Supervisor](#) field in the employee's Job History.
- If you want to use this mapping, but don't want to use the LMNG relationship type, copy the sample content for the Job History template and change the mapping mode for the [manager-id](#) Employee Central field to [BAdI Mapping](#). Then implement the [Mapping of EC and ERP Data for Data Replication to EC](#) (EX_ECPAO_EMP_DATA_EXTRACT_OUT) Business Add-In (BAdI).
 - If you don't want to use this mapping, copy the sample content for the Job History template and remove the entry for the [manager-id](#) Employee Central field ID.

i Note

Once you have made custom entries in the [Primary Mapping](#) view (either by copying and adapting the sample content or by making your custom entries from scratch), you can no longer copy the sample content. If you have defined custom mappings and decide that you want to use the mappings provided by the sample content instead, delete the transformation template and create a new template.

If you have already defined field mappings in the previous releases, you can continue to use them without any changes. However, if you want to replace your custom mappings with mappings provided with the sample content, create new transformation templates for all entities for which you want to use the sample mapping. Then continue as described above. Remove your existing transformation templates for the same entities from the transformation template group or clear the [Is Active](#) checkbox for them so that the new transformation templates are used instead.

You can also copy SAP delivered sample template groups [SBS_MODEL_CSV](#) and [SBS_MODEL_WS](#), which is contained in the SAP reference client (000). You can execute this by creating an RFC connection from client 000 (the comparison client) to your working client and copying the view and view cluster entries from client 000 to your working client.

Parent topic: [Defining Field Mapping for Employee Data \[page 136\]](#)

Related Information

[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

[Defining Templates to Map Employee Data Fields \[page 141\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[If Needed, Define a Secondary Field Mapping \[page 150\]](#)

[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[Define Types of Manager Relationships \[page 123\]](#)

[How to Use the Sample Value Mapping for Employee Data Integration \[page 97\]](#)

[If Needed, Define a Secondary Field Mapping \[page 150\]](#)

[Cloning Transformation Templates \[page 157\]](#)

4.4.1.13 Cloning Transformation Templates

Cloning a transformation template means that you reuse the field mapping you define for an infotype and subtype in the *Primary Mapping* view of the VC_ECPAO_MAP view cluster (Define Field Mapping for Employee Data customizing activity) for some or all subtypes of this infotype.

Prerequisites

Define the field mapping for the transformation template using VC_ECPAO_MAP view cluster.

Context

You can define the infotypes to be cloned and their subtypes in the *Clone SAP Transformation Templates* Customizing section.

❖ Example

This is useful for the *Recurring Payments/Deductions* (0014) and *Additional Payments* (0015) infotypes since each wage type is itself a subtype of these infotypes. Using the cloning feature, you can use the same field mapping for all or some of these wage types. The cloning feature is also useful for infotypes such as *Addresses* (0006), which has, for example, subtypes for the home or mailing address, or *Communication* (0105), which has, for example, subtypes for the business phone number or private phone number.

Procedure

1. Define which infotypes are relevant for cloning transformation templates and for which subtypes of these infotypes you want to clone the corresponding templates in the *Define Infotypes and Subtypes for Cloning Transformation Templates* Customizing activity (V_ECPAO_CLN_INTY view).
 - a. Select the transformation template group and transformation template.
 - b. Enter the infotype and subtype. Repeat this for all subtypes for which you want to clone the corresponding transformation template.
2. Define which infotypes (primary or secondary) are relevant for cloning transformation templates and for which country-specific subtypes of these infotypes (primary or secondary) you want to clone the corresponding transformation templates in the *Define Country-Specific Infotypes and Subtypes for Cloning Transformation Templates* Customizing activity (V_ECPAO_CLN_CINT view).
 - a. Select the transformation template group and transformation template.
 - b. Enter the country grouping, the infotype, and the subtype. Repeat this for all subtypes for which you want to clone the corresponding transformation template.

i Note

While performing cloning for the dependent template, make sure that the number of clone subtypes defined for Person Relationship (WS_19) should be the same as the number of clone

subtypes for Biographical Info for dependents (WS_2_DEP). For more information on dependent template, see *How Object Identification Mapping Works*. Cloning will not be successful for all dependents if all the subtypes of infotype 21 are not cloned for all the dependent related EC entities.

❖ Example

In the view cluster you can now configure a transformation template using both primary infotype and the corresponding secondary infotype. Consider the primary infotype 0021 and secondary infotype 0106 (secondary infotype of 0021 for US). You can now clone this in the `V_ECPAO_CLN_CINT` view for the required subtypes using the primary infotype 0021, which would clone the transformation template for all the fields (fields using both 0021 and 0106 would be cloned).

Results

Once a transformation template group has been configured for a subtype cloning using the views `ECPAO_CLON_INTY` and `ECPAO_CLON_CINTY`, then the *Clone Infty* and *Ctry Clone Infty* will be enabled at the transformation template level. This will help you to identify which type of clone infotype was configured for that transformation template without going into the primary mapping details screen.

Next Steps

If you want to define a different field mapping for a specific subtype of an infotype, don't enter it in the Customizing activities listed above. Instead, define a separate transformation template for this combination of infotype and subtype in the `VC_ECPAO_MAP` view cluster.

Task overview: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

[Defining Value Mappings \[page 78\]](#)

[Formatting the Employee Central Fields by Value Conversion during the Migration of Data to Employee Central \[page 99\]](#)

[Using Assignment ID in SAP ERP HCM Integration with Employee Central \[page 107\]](#)

[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)

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[Copy Configuration from one EC Instance to another EC Instance \[page 159\]](#)
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[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)
[Setting the User Status in Employee Central \[page 164\]](#)
[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)
[How to Use the Sample Content for Employee Data \[page 153\]](#)
[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)
[Manager Extraction Logic for Different Types of Managers \[page 127\]](#)
[Defining Value Mappings \[page 78\]](#)
[How Repetitive Structure Mapping Works \[page 166\]](#)
[How Date Type Mapping Works \[page 179\]](#)
[Preparing the Systems for Employee Data Replication \[page 10\]](#)
[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)
[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)
[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)
[How Object Identification Mapping Works \[page 173\]](#)
[If Needed, Define a Secondary Field Mapping \[page 150\]](#)
[How to Use the Sample Content for Employee Data \[page 153\]](#)

4.4.1.14 Copy Configuration from one EC Instance to another EC Instance

You can copy the configurations like transformation template group, metadata, picklists etc from one Employee Central instance to another EC instance based on a template group.

Context

When you are setting up the basic configuration activities in your ERP system for the replication of employee master data and organization data, you can run this report to speed-up the process. After choosing the source EC instance and transformation template group and entering the target EC instance and transformation template group, the target EC instance and transformation template group is first created and then the configurations are copied into them when you execute the report.

Procedure

1. Run the *Copy configuration from one EC instance to another EC instance* (ECPAO_COPY_CONFIGURATION) program. You can also use the ECPAO_COPY_CONFIG transaction to run the program.

The program copies the configuration (Transformation Template Group, Metadata, Picklists etc) from one EC instance to another EC instance based on your selection criteria.

2. On the selection screen, choose the source EC instance and transformation template group.
3. Choose the target EC instance and transformation template group.
4. Choose [Copy Replication Direction](#) if you want to create a copy for the same replication direction as the source (ERP to EC or EC to ERP). If this field is unchecked, the new copied transformation template group is created without setting the replication direction. You could go to `V_ECPAO_TTG_EE` or `V_ECPAO_TT_OM` views to set the required replication direction again.
5. In the action type, choose [Test Run](#) to carry out a test run of the program to check the data that will be copied.

If you run the program in a test system or client with the Test Run checkbox deselected, the program asks for a transport request.

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[Defining Your Employee Central Instance \[page 68\]](#)

[Switching Off Talent Hybrid Integration for Employee Data \[page 69\]](#)

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[Setting the User Status in Employee Central \[page 164\]](#)

4.4.1.15 Comparison Tool to Compare Configuration Details

You can now compare the transformation template group data and check if there is any difference between the configurations before even you run the data extraction tool.

Context

You can run the comparison tool to check the metadata fields, settings at the instance level between two EC instances. In addition, the primary field mapping, secondary field mapping, and the value mappings between two transformation template groups can be compared. The report displays the information at both the instance level and could also be used to check if there is any difference between the two data.

In the result screen, a hierarchical tree structure is displayed, showing the data of the source and targets in the left and right side panes respectively. The results are shown at the entity level, showing how the configurations are configured in both the source and target elements. You can expand each node to see the details within it. Using the above view, you can identify the difference between the source and target transformation templates and make the necessary corrections if needed using the corresponding IMG activity.

Procedure

1. Go to the comparing the configuration (ECPAO_COMPARE_CONFIG) transaction to run the Report for Comparing the configuration (ECPAO_COMPARE_CONFIGURATION) program.

The program compares the configuration (Transformation Template Group, Field Mappings, Primary and Secondary Mappings and Conversion rules, etc.) from one EC instance to another EC instance based on your selection criteria.

2. On the selection for comparison, choose the option which you want to compare.
3. Enter the details based on the selected option.
 - Metadata - Choose the source EC instance, target instance, and the EC entity.
 - Transformation Template Group - Choose if you are going to compare the transformation template groups of employee data or organizational data type. After you choose the relevant option (employee data or organizational data), choose the EC instance, source and target transformation template group, and the EC entity.
 - EC Instance/Company - Choose the source EC instance and target EC instance.
4. In *Other Selection Criteria*, choose **Show Only Differences** if you want to display only the difference in the result.

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Related Information

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4.4.1.16 Filtering of Employees During Migration based on Employment Status

An employee can be filtered out based on the employment status and this can be done during the migration of the employee master data.

Filtering of employees would be applicable when you set **x** for the constant *ERP to EC: Filter based on Employment status* in the `V_ECPAO_CONSTANT` view. When the filtering of the employee master data is done based on the employment status, then the complete extraction of the data will be stopped irrespective of whether the template is effective-dated or non-effective dated after the earliest transfer date. For more information on how the earliest transfer works in the BIB replication mode, refer to the *Replicating Employee Master Data and Organizational Assignments from Employee Central to SAP ERP HCM* guide.

i Note

When you are setting the value **x** for the constant *ERP to EC: Filter based on Employment status* in the `ECPAO_CONSTANTS` table, you should not set the switch for *ERP to EC: Additional Event Records* for additional events. If you don't have a requirement where you have to set the switch *ERP to EC: Additional Event Records* to X, then we would recommend you to set the *ERP to EC: Filter based on Employment status* switch to X.

Employment Status on earliest transfer date is... (and no change in the future until 31.12.9999)

...Is considered for integration/migration

Active	Yes
Inactive	No

Employment Status on earliest transfer date is... (and no change in the future until 31.12.9999)

	...Is considered for integration/migration
Retired	No
Withdrawn	No

Employment Status on earliest transfer date is...(and no change in the future until 31.12.9999)

	Use cases	...Is considered for integration/migration
Active	Employee was active during initial load and is still active.	Yes
	Employee was inactive during initial load and changed to active state after initial load.	Yes
	Employee was retired during initial load and changed to active state after initial load.	Yes
Inactive	Employee was active during initial load but was changed to inactive state after initial load.	Yes
	Employee was inactive during initial load and is still inactive.	No
Retired	Employee was active during initial load but now changed to retired state after initial load.	Yes (Default position is not transferred, but the last valid position would be transferred to Employee Central.)
	Employee was withdrawn during initial load and changed to retired state after initial load.	No
	Employee was inactive during initial load and changed to retired state after initial load.	No
Withdrawn	Employee was active during initial load and changed to withdrawn state after initial load.	Yes (Default position is not transferred, but the last valid position would be transferred to Employee Central.)
	Employee was inactive during initial load and changed to withdrawn state after initial load.	No
	Employee was moved from retired to withdrawn state.	No

The above logic for filtering the PERNR's based on the employment status and the earliest transfer date is also applicable for an employee having multiple PERNR's as part of the International Transfer, Global Assignment, and Concurrent employment. In this case, individual PERNR's will be filtered out completely if it satisfies the above filtering criteria's. For example, in international transfer if the earliest transfer date is after the termination date of the PERNR 1, then the PERNR 1 will be completely filtered out and PERNR 2 will be migrated to Employee Central with single employment.

Parent topic: [Preparatory Steps \[page 64\]](#)

Related Information

[Accessing the Customizing Structure in the SAP ERP HCM System \[page 66\]](#)
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4.4.1.17 Setting the User Status in Employee Central

The user status in employee profile can be set to Active or Inactive based on the current employment status in ERP.

Prerequisites

For employee data migration, you will have to use CPI as the middleware.

Context

For terminated employee the user status was previously set to inactive in EC by the HRIS synchronization process, which was executed after the upsert of the job info entity. Now you can directly set the user status to Active or Inactive based on the current employment status on the current date with upsert of user entity (WS_1) or import of basic info template (CSV_1).

This can be enabled by setting the switch *ERP to EC: Set Inactive User Status w/ SAP Cloud Integration* in the V_ECPAO_CONSTANT view.

Procedure

1. Go to the customizing activity *Maintain the Constant Values* (view V_ECPAO_CONSTANT).
2. Set **x** for *ERP to EC: Set Inactive User Status w/ SAP Cloud Integration* switch.

Task overview: [Preparatory Steps \[page 64\]](#)

Related Information

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[Filtering of Employees During Migration based on Employment Status \[page 162\]](#)

4.4.2 Particular Mapping Types

[How Repetitive Structure Mapping Works \[page 166\]](#)

Repetitive structure mapping is used for infotypes such as *Basic Pay* (0008) or *Cost Distribution* (0027) that use a repetitive structure.

[How Object Identification Mapping Works \[page 173\]](#)

Object identification mapping is used for infotypes such as *Family Member/Dependents* (0021) that use the *Object Identification* (OBJPS) field to make a distinction between data records with the same infotype, subtype, lock indicator, start date, and end date.

[How Time Constraint 3 Mapping Works \[page 175\]](#)

Time constraint 3 mapping is used for the infotypes *Bank Details* (0009), *Additional Payments* (0015), *Additional Off-Cycle Payments* (0267), and *Additional Actions* (0302), which can have overlapping records.

[How Date Type Mapping Works \[page 179\]](#)

The *Date Specifications* (0041) infotype can't use a straightforward field mapping, but has special requirements.

[How to Map Event Reasons for Data Migration \[page 181\]](#)

Learn how to map event reasons for data migration.

[How to Map Additional Actions \[page 185\]](#)

The *Additional Actions* (0302) infotype allows you to execute several personnel action types for an employee on one day.

Parent topic: [Steps in the SAP ERP HCM System \[page 63\]](#)

Related Information

[Preparatory Steps \[page 64\]](#)

[Data Extraction and Transfer \[page 189\]](#)

[Follow Up \[page 208\]](#)

4.4.2.1 How Repetitive Structure Mapping Works

Repetitive structure mapping is used for infotypes such as *Basic Pay* (0008) or *Cost Distribution* (0027) that use a repetitive structure.

In this kind of infotype, data is entered in table form. The user can enter the data such as wage types or cost distribution items several times. The input line for the data is available several times on the input screen. The structure of the input line is stored in the infotype structure, and the individual fields are numbered.

Without repetitive structure mapping you would have to create a separate SAP transformation template for each repetitive field (for example, for each wage type or cost distribution item that can be entered) to map the fields separately to the corresponding Employee Central field ID's.

If you use repetitive structure mapping, you only need a single SAP transformation template, which maps the repetitive fields once. There's no need to create several SAP transformation templates. The data extraction program extracts the wage types or cost distribution items that are stored in an employee's infotype using the field mapping you have defined once.

Parent topic: [Particular Mapping Types \[page 165\]](#)

Related Information

[How Object Identification Mapping Works \[page 173\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)

[How Date Type Mapping Works \[page 179\]](#)

[How to Map Event Reasons for Data Migration \[page 181\]](#)

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[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
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[Repetitive Structure Mapping of Basic Pay Data \[page 167\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)
[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)
[Repetitive Structure Mapping of Basic Pay Data \[page 167\]](#)
[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)

4.4.2.1.1 Repetitive Structure Mapping of Basic Pay Data

Repetitive structure mapping is used for the *Basic Pay* (0008) infotype, which has a repetitive structure.

In this infotype, you can enter up to forty different wage types and their amounts. The structure of the wage type line is stored in the infotype structure (P0008), and the individual fields are numbered from one to forty.

Without repetitive structure mapping you would have to create a transformation template for each wage type to map the infotype fields such as LGA01 separately to the corresponding Employee Central fields.

❖ Example

You'd create an ERP_RECURRING_1 template to map the LGA01 and BET01 fields. You'd create an ERP_RECURRING2 template to map the LGA02 and BET02 fields. And so on – up to forty templates.

If you use repetitive structure mapping, you only need a single transformation template, which maps the repetitive fields once. A repetitive structure is needed for this, which comprises the infotype fields to be mapped. This structure needs to be entered in the *Repetitive Structure* field in the *Define Employee Central Templates for Additional Employee Data Entities* Customizing step. We provide the default repetitive structure ECPAO_REPETITIVE_ST_IT0008. This structure contains the following fields:

- *Wage Type* (LGA01)
- *Wage Type Amount for Payments* (BET01)
- *Number* (ANZ01)
- *Time/Masurement Unit* (EIN01)
- *Operation Indicator for Wage Types* (OPK01)

Display View "EC Templates": Details

EC Template ID CSV_12 Pay Component Recurring Template for CSV files

Basic Settings

EC Template Name

PayComponentRecurringImportTemplate

Object Type

Person

☒ Multiple Use

☐ Is Generic Object

Inherit Metadat

Standard EC Fields

Object ID in EC

Start date in EC

End Date in EC

Outbound Integration

EC Import Type

CSV Data Import Entity

Upsert Sequence

120

EC DepTempl ID

CSV_11

Country Version

Deletion supported

☐ Deletion

HRIS Element ID

Employee Integration

☒ Effective Dated

Required Infotype

Specific Mapping

Processing Mode

Repetitive Structure Mapping

Processing Infotyp

0008

Repet.Struct.

ECPAO_REPETITIVE_ST_IT0008

Figure 54: Recurring Pay Components Template

In the [Define Field Mapping for Employee Data](#) Customizing step, you can now create a transformation template for the mapping of recurring pay components. If you assign the [Pay Component Recurring](#) Employee Central

entity to this transformation template, the *Repetitive Field* entry field is added to the *Primary Mapping* view. Here you can select a field from the repetitive structure such as *Wage Type* (LGA01) and map it to the Employee Central field such as *pay-component*.

Display View "Primary Mapping": Details

Dialog Structure

- Template Group
 - ERP Templates
 - Primary Mapping
 - Secondary Mapping

EC Field Attributes

EC Field	19	pay-component
EC Field Description	pay-component	
<input type="checkbox"/> EC Metadata: Is Invalid		
<input type="checkbox"/> Is Required		

ERP Field Mapping

Mapping Mode: Infotype Mapping

Infotype

Infotype	0008	Basic pay
Subtype	0	Basic contract
Infotype Field		
Repetitive Field	LGA01	Wage Type
Linking Field		

Preconfigured Mapping

Preconfigured Entity: [Dropdown]

Value Mapping

Value Mapping Entity	PAY_COMPONENT_CODE	PAY_COMPONENT_CODE
----------------------	--------------------	--------------------

Define Value Mapping Entries

Figure 55: Primary Mapping of Recurring Pay Components Fields

There's no need to create multiple transformation templates. The data extraction program extracts all wage types that are stored in an employee's *Basic Pay* infotype using the field mapping you have defined once.

Related Information

[How Repetitive Structure Mapping Works \[page 166\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[How Repetitive Structure Mapping Works \[page 166\]](#)

[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)

4.4.2.1.2 Repetitive Structure Mapping of Cost Distribution Data

Repetitive structure mapping is used for the *Cost Distribution* (0027) infotype, which has a repetitive structure.

In principle, repetitive structure mapping for this infotype works the same way as for the *Basic Pay* (0008) infotype, but it uses some other objects:

- The Employee Central template provided for cost distribution is the *Alternative Cost Distribution Items* template.
- The repetitive structure ECPAO_REPETITIVE_ST_IT0027 is entered in the *Repetitive Structure* field of this template is. This structure contains the following fields:
 - *Company Code* (KBU01)
 - *Business Area* (KGB01)
 - *Cost Center* (KST01)
 - *Cost center percentage* (KPR01)

In the *Define Field Mapping for Employee Data* Customizing step, in your transformation template for the mapping of cost distribution items, you can map these fields as shown in this example:

❖ Example

Table 22: Primary Mapping of Alternative Cost Distribution Fields

Employee Central Field ID	Mapping Mode	SAP ERP HCM Info- type	Subtype	Repetitive Structure Field
items.costCenter.ex- ternalCode	Infotype Mapping	0027	01	KST01
items.percentage	Infotype Mapping	0027	01	KPR01

ERP Template	ERP_COST_DIST_ITEMS	Cost distribution items
EC Field Attributes		
EC Field	17	items.costCenter.externalCode
EC Field Description	items.costCenter.externalCode	
<input type="checkbox"/> EC Metadata: Is Invalid		
<input type="checkbox"/> Is Required		
ERP Field Mapping		
Mapping Mode	Infotype Mapping	
Infotype		
Infotype	0027	Cost Distribution
Subtype	01	Wage/salary
Infotype Field		
Repetitive Field	KST01	Cost Center
Linking Field		

Figure 56: Mapping External Code Field of Cost Distribution Item

Note

You can only transfer cost distribution to cost centers. Other cost distribution items are currently not supported. Employee Central doesn't accept more than 12 cost distribution items per employee. If an employee's *Cost Distribution* infotype contains more than 12 entries, the data extraction program shows an error message. No data is extracted for this employee.

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[How Repetitive Structure Mapping Works \[page 166\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[How Repetitive Structure Mapping Works \[page 166\]](#)

[Repetitive Structure Mapping of Basic Pay Data \[page 167\]](#)

4.4.2.2 How Object Identification Mapping Works

Object identification mapping is used for infotypes such as *Family Member/Dependents* (0021) that use the *Object Identification* (OBJPS) field to make a distinction between data records with the same infotype, subtype, lock indicator, start date, and end date.

With object identification mapping, you have two options to define a field mapping for this kind of infotype:

- **Option 1:** You map the necessary fields once for each type of relationship. The mapping includes country-independent as well as country-specific fields. The relationships are represented by subtypes such as *Spouse* (subtype 1), *Child* (subtype 2), or *Mother* (subtype 12). You can create one transformation template per type of relationship, such as ERP_PERSONAL_SPOUSE, ERP_PERSONAL_CHILD, ERP_PERSONAL_MOTHER. You specify the subtype in the *Primary Mapping* view of the *Define Field Mapping for Employee Data* Customizing step. You only need one ERP_PERSONAL_CHILD transformation template group for the *Child* subtype, even if an employee has several children. The SAP ERP HCM system creates the additional transformation templates that are needed for the data records that are identified by the OBJPS field.

❖ Example

Let's say an employee has three children. This means that three records of the *Family Member/Dependents* infotype with the *Child* subtype exist for this employee, each with a different OBJPS entry (01, 02, and 03). You have created a transformation template to map the fields of the *Child* subtype. This transformation template is used for the data record with the OBJPS entry 01. The SAP ERP HCM system creates two additional transformation templates for the data record with the OBJPS entries 02 and 03.

- **Option 2:** If no country-specific field mapping is needed, you can also create one single transformation template, such as ERP_PERSONAL_DEPEND, for **all** dependents (meaning for all subtypes). In this case you don't enter the subtypes in the *Primary Mapping* view. Instead you use the *Clone Transformation Templates* Customizing steps to reuse the field mapping you define for the *Family Member/Dependents* infotype for the subtypes of this infotype. So you enter, for example, the *Family Member/Dependents* infotype and the subtypes 01 and 02 in the *Define Country-Specific Infotypes and Subtypes for Cloning Transformation Templates* Customizing step.

i Note

You can't use the cloning feature for transformation templates that use the secondary field mapping. The *Addresses*, *National ID*, and *Global Information* templates for an employee's dependents, for example, comprise country-specific fields and therefore need a secondary mapping. Use option 1 for these templates. This means you create, for example, an ERP_ADDR_CHILD transformation template. For this template, you can use primary as well as secondary field mapping.

For both options an additional logic is needed to generate a unique key for the entities defined by the OBJPS entry. This logic is applied to the Employee Central field that is entered in the *Object Identification Field* field in the *Define Employee Central Templates for Additional Employee Data Entities* Customizing step.

i Note

The number of clone subtypes defined for Person Relationship should be the same as the number of clone subtypes for Biographical Info for dependents.

❖ Example

Object identification mapping is used for the *Biographical Information* Employee Central template. Therefore, *person-id-external* is specified in the *Object Identification Field* for this template. This means, a unique key is generated that can be transferred to the *person-id-external* field in Employee Central to identify the employee's dependents.

We provide a standard logic that concatenates the employee's personnel number (PERNR) with the subtype of the *Family Member/Dependents* infotype, and, where applicable, with the OBJPS entry.

❖ Example

Let's say the employee with the personnel number 00000250 has a spouse and two children. Then the following keys are generated for the employee's dependents: 250_1 (Spouse), 250_2_01 (Child 1), 250_2_02 (Child 2).

To store the key mapping information for OBJPS-relevant infotype replication we use the ECPAO_OBJPS_KMAP table. This table is relevant for all templates having GENERATOR_MODE as O in the ECPAO_ECTEMPL table. The external and the internal value of the generator field are part of the table. In case of infotype 21 replication, the internal generator field signifies the person ID of the dependents (this is an Employee Central-internal value) and the external generator field value will store the person ID external of the dependent. This key mapping table is populated only for those subtypes that are OBJPS-relevant subtypes.

Table 23: ECPAO_OBJPS_KMAP table

Fields	Description
PERNR	Personnel Number
INFTY	Infotype
SUBTY	Subtype
OBJPS	Object Identification
EXT_GEN_FLD_VAL	External value for generator field for OBJPS replication
INT_GEN_FLD_VAL	Internal value for generator field for OBJPS replication

During replication of data to Employee Central, personnel number, infotype, subtype, and object identification fields would be populated.

Parent topic: [Particular Mapping Types \[page 165\]](#)

Related Information

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)

[How Date Type Mapping Works \[page 179\]](#)

[How to Map Event Reasons for Data Migration \[page 181\]](#)

[How to Map Additional Actions \[page 185\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Cloning Transformation Templates \[page 157\]](#)

4.4.2.3 How Time Constraint 3 Mapping Works

Time constraint 3 mapping is used for the infotypes *Bank Details* (0009), *Additional Payments* (0015), *Additional Off-Cycle Payments* (0267), and *Additional Actions* (0302), which can have overlapping records.

Time constraint 3 means that any number of valid records of an infotype can exist at any one time. If several infotype records with the same start date and end date exist, they are assigned different sequence numbers in the *Number of Infotype Record With Same Key* (SEQNR) field.

Fields from infotypes that have time constraint 3 can be mapped to fields from Employee Central entities that also support overlapping data records. The infotypes listed above, for example, can be mapped to these entities:

Table 24: Entities Supporting Time Constraint 3

SAP ERP HCM Infotype	Employee Central Entity
<i>Bank Details</i> (0009)	Payment Information Details
<i>Additional Payments</i> (0015)	Non-Recurring Pay Component
<i>Additional Off-Cycle Payments</i> (0267)	Non-Recurring Pay Component
<i>Additional Actions</i> (0302)	Job History

The *Time Constraint 3 Mapping* processing mode and the corresponding infotype are assigned to the Employee Central templates that can have overlapping data. This enables the employee data extraction program to extract the overlapping data records.

❖ Example

Let's say, these records of the *Bank Details* (0009) infotype exist for an employee:

Table 25: An Employee's Bank Details in SAP ERP HCM

Start Date	End Date	Seq.No.	Payment Method	Amount	Currency	Standard Percentage	Type of Bank Details Record
January 1, 2016	December 31, 9999	0	Check	0,00	USD	0,00	Main Bank

Start Date	End Date	Seq.No.	Payment Method	Amount	Currency	Standard Percentage	Type of Bank Details Record
January 1, 2015	December 31, 2015	0	Check	0,00	USD	0,00	Main Bank
January 1, 2016	December 31, 9999	1	Check	0,00	USD	10,00	Other Bank
January 1, 2016	December 31, 9999	0	Bank Transfer	1.500,00	USD	0,00	Other Bank
January 1, 2015	December 31, 2015	1	Check	0,00	USD	10,00	Other Bank
January 1, 2015	December 31, 2015	0	Bank Transfer	1.500,00	USD	0,00	Other Bank
January 1, 2016	December 31, 9999	0	Check	0,00	USD	25,25	Other Bank Details for Off-Cycle
January 1, 2015	December 31, 2015	0	Check	0,00	USD	25,25	Other Bank Details for Off-Cycle

Overview Bank details

Find by: Person

- Collective search help
- Search Term
- Free search

Pers. No. 10896 Pers.Assign 99999999 00010896

Personnel No 10896 Name Mrs

EE group 1 Active Personnel ar US01 United States Headquarter

EE subgroup U3 Tariff pay Status Active

Choose 01.01.1800 To 31.12.9999 STy.

End Date	Payee	Payment method	Bank key	Name of bank	BDTy...
31.12.9999	Mrs	Check	US		0
31.12.2015	Mrs	Check	US		0
31.12.9999	Mrs	Check	US		1
31.12.9999	Mrs	Bank transfer (ACH PPD)	US	Bank of America	1
31.12.2015	Mrs	Check	US		1
31.12.2015	Mrs	Bank transfer (ACH PPD)	US	Bank of America	1
31.12.9999	Mrs	Check	US		6
31.12.2015	Mrs	Check	US		6

Figure 57: Example: Employee's Bank Details in SAP ERP HCM

Using the *Time Constraint 3 Mapping* processing mode, this *Bank Details* information can be transferred to Employee Central:

Back to: Payment Information

Manage Data

History «

01/01/2015 **Take Action** ▼

Payment Information : Record created

Payment Information Insert New Record

* **Pay Type** **Bonus**

* **Payment Method** **Check (06)** [X]

Account Type (USA) **No Selection**

Amount

Percent **25.25**

Currency **US Dollar (USD)** [X]

* **Pay Type** **Payroll**

* **Payment Method** **Check (06)** [X]

Account Type (USA) **No Selection**

Amount

Percent **10**

Currency **US Dollar (USD)** [X]

* **Pay Type** **Payroll**

* **Payment Method** **Bank Transfer (05)** [X]

Bank Country **United States (USA)** [X]

Bank **USA Bank** [X]

Account Owner **Mrs indus 00010896**

Account Type (USA) **No Selection**

Routing Number **011000138**

Account Number **123456**

Business Identifier Code

IBAN

Amount **1.500**

Percent

Currency **US Dollar (USD)** [X]

* **Pay Type** **Main Payment Method**

* **Payment Method** **Check (06)** [X]

Account Type (USA) **No Selection**

Currency **US Dollar (USD)** [X]

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Figure 58: Example: Employee's Payment Information Details in Employee Central

And here's another example showing the records of the *Additional Payments* (0015) infotype:

Table 26: Example: Employee's Additional Payments in SAP ERP HCM

Start Date	End Date	Seq.No.	Wage Type	Amount	Currency
July 31, 2015	July 31, 2015	0	M114	1.250,00	USD
July 31, 2015	July 31, 2015	0	M116	250,00	USD
January 15, 2015	January 15, 2015	0	M114	1.000,00	USD
January 15, 2015	January 15, 2015	1	M114	250,00	USD
January 15, 2015	January 15, 2015	2	M114	1.000,00	USD

Overview Additional payments					
<div> <div> <div>Find by</div> <div> <div>Person</div> <ul style="list-style-type: none"> Collective search help Search Term Free search </div> </div> <div> <div>Pers. No.</div> <div>10897</div> </div> <div> <div>Pers.Assign</div> <div>99999999 00010897</div> </div> </div>					
<div> <div>Personnel No.</div> <div>10897</div> </div> <div> <div>Name</div> <div>Mr</div> </div>					
<div> <div>EE group</div> <div>1 Active</div> </div> <div> <div>Personnel ar</div> <div>US01 United States Headquarter</div> </div>					
<div> <div>EE subgroup</div> <div>U3 Tariff pay</div> </div> <div> <div>Status</div> <div>Active</div> </div>					
<div> <div>Choose</div> <div>01.01.1800 to 31.12.9999</div> </div> <div> <div>STy.</div> <div></div> </div>					
Wage type	Wage type long text	Date	Amount	Crcy	
M114	Uniform allowance	31.07.2015	1.250,00	USD	
M116	Car allowance	31.07.2015	250,00	USD	
M114	Uniform allowance	15.01.2015	1.000,00	USD	
M114	Uniform allowance	15.01.2015	250,00	USD	
M114	Uniform allowance	15.01.2015	1.000,00	USD	

Figure 59: Example: Employee's Additional Payments in SAP ERP HCM

This information is transferred to as shown here:

Employee Central

Spot Bonus								
Amount	Issue Date	Pay Component	Currency	Alternative Cost Center	Sequence Number	Number	Unit of Measure	Calculated Amount
250 %	07/31/2015	Car allowance (IT0015) (US_M116)	USD		5			0
1.250	07/31/2015	Uniform allowance (IT0015) (US_M114)	USD		4			1.250
1.000	01/15/2015	Uniform allowance (IT0015) (US_M114)	USD		3			1.000
250	01/15/2015	Uniform allowance (IT0015) (US_M114)	USD		2			250
1.000	01/15/2015	Uniform allowance (IT0015) (US_M114)	USD		1			1.000
Advance								
No data for Advance available or you do not have the necessary permission.								

Figure 60: Example: Employee's Spot Bonuses in Employee Central

Parent topic: [Particular Mapping Types \[page 165\]](#)

Related Information

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Object Identification Mapping Works \[page 173\]](#)

[How Date Type Mapping Works \[page 179\]](#)

[How to Map Event Reasons for Data Migration \[page 181\]](#)

[How to Map Additional Actions \[page 185\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[How to Map Additional Actions \[page 185\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

4.4.2.4 How Date Type Mapping Works

The *Date Specifications* (0041) infotype can't use a straightforward field mapping, but has special requirements.

This infotype allows you to enter a user-defined combination of data. It uses a combination of *Date Type* fields (DAR01, DAR02, and so on) and *Date for Date Type* fields (DAT01, DAT02, and so on). You can select any date type, such as *First Working Day*, in any DARnn field and store the corresponding date in the corresponding DATnn field. For another employee, you can use the same combination of DARnn and DATnn fields to store a different type of date. Or you can store the same type of date in a different combination of DARnn and DATnn fields.

This means that you can't map the actual *Date Type* infotype field, such as DAR01, to an Employee Central field, such as *initial-entry-date*, because the infotype field can have different meanings. Instead, you need to be able to map the actual date types, such as *First Working Day*, to the Employee Central field. To support this, a special mapping makes available an additional *Date Type* field in the *Primary Mapping* view of the *Define Field Mapping for Employee Data* Customizing step.

Template Group							
ERP Template	ERP_EMPLOYMENT	ERP_EMPLOYMENT					
Primary Mapping							
EC Field	EC Field Name	Mapping Mode	Infotype	Subtype	Infotype Field	Required Field	Has Sec. Mapping
19	sourceOfRecord	Preconfigured Mapping				<input type="checkbox"/>	<input type="checkbox"/>
20	seniorityDate	Infotype Mapping	0041			<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	professionalServiceDate	Infotype Mapping	0041			<input type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 61: Primary Mapping for Employment Details Template – Overview Screen

ERP Template	ERP_EMPLOYMENT	ERP_EMPLOYMENT
--------------	----------------	----------------

EC Field Attributes		
EC Field	24	professionalServiceDate
EC Field Description	professionalServiceDate	
<input type="checkbox"/> EC Metadata: Is Invalid		
<input type="checkbox"/> Is Required		

ERP Field Mapping		
Mapping Mode	Infotype Mapping	
Infotype		
Infotype	0041	Date specifications
Date Type		
Linking Field		

Preconfigured Mapping	
Preconfigured Entity	

Value Mapping	
Value Mapping Entity	
<input type="button" value="Define Value Mapping Entries"/>	

Figure 62: Primary Mapping for Employment Details Template – Details Screen

This field provides the input help entries defined for the *Date Type* infotype field so that you can use them for field mapping. The input help is populated from the *Date Types* (T548Y) table that contains standard date types as well as date types defined in Customizing (for example, in Customizing for *Personnel Management* under ► *Personnel Administration* ► *Evaluation Basis* ► *Date Specifications* ► *Define Date Type* ►).

Date type mapping can also be used for country-specific fields. Meaning, for SAP ERP HCM templates that use the secondary field mapping.

❖ Example

Let's say you want to map the *professionalServiceDate* field from Employee Central to different country-specific date types, such as:

- The *Adjust service date* (U2) date type for the US
- The *Probation Expire - NZ* (32) date type for New Zealand

Transformation Template	ERP_EMPLOYMENT	EMPLOYMENT				
EC Field	22	professionalServiceDate				
Secondary Mapping						
Country grouping	Description	Infotype	Subtype	Infotype Field	Date Type	Value Mapping Entity
10	USA	0041		DAT01	02	[
43	New Zealand	0041		DAT01	32	

Figure 63: Secondary Mapping for Employment Details Template

The mapping of date types is currently used for the *Employment Details* and *Job History* Employee Central entities.

You can specify a mapping between the employment details date fields and Job information date fields in Employee Central to infotype date specification (IT0041) date types. If dates are relevant for payroll, we recommend that you use corresponding job information date fields in Employee Central. In particular, we recommend using event-based job information date fields. For example, if event-based date job information fields are used, these are filled automatically by the Employee Central events. In Employee Central, this also saves a history of the data and hence ensures data consistency with historical IT0041 data in SAP ERP HCM system.

Parent topic: [Particular Mapping Types \[page 165\]](#)

Related Information

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Object Identification Mapping Works \[page 173\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)

[How to Map Event Reasons for Data Migration \[page 181\]](#)

[How to Map Additional Actions \[page 185\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

4.4.2.5 How to Map Event Reasons for Data Migration

Learn how to map event reasons for data migration.

Context

In Employee Central any change of data of an employee happens based on an event. The event can be a salary hike, promotion or a change in the department information etc. The information about each event is stored in the Event reason field of Job information entity. In ERP, event reason can be mapped to either *Action Type* (MASSN) or *Reason of Action* (MASSG) in infotype 0000.

Procedure

In the *Define Field Mapping for Employee Data* Customizing step, when defining the primary mapping for the SAP transformation template that has the Job History Employee Central entity assigned, map the *eventReason* Employee Central field to the *Action Type* (MASSN) field of the *Actions* (0000) infotype.

Event reason data can be migrated based on the *Action Type* or *Reason of Actions*.

- Method 1: Event reason data is migrated based on the *Action Type* (MASSN)

❖ Example

IT0000 is maintained - Actions based on the *Action Type* (MASSN) and *Reason of Action* is not mandatory (MASSG).

The screenshot displays the 'List Actions' screen in SAP. On the left, there is a 'Find by' sidebar with options for 'Person', 'Collective search help', 'Search Term', and 'Free search'. The main area contains search criteria: 'Pers. No.' 70000001, 'Name' 70000001 indus, 'EE group' 1 Active, 'EE subgroup' U3 Standard salary, and a date range from 01.01.1800 to 31.12.9999. Below this, a table lists actions. The first row is highlighted in yellow and shows a hiring action.

Start Date	End Date	Act.	Action Type	ActR	Reason for action	Cus....	Empl...	Spec...
01.01.2013	31.12.9999	01	Hiring				3	1

Field mapping for Event Reason field: Based on the primary mapping configurations, event reason field extracted data with respective action type.

Change View "Primary Mapping": Details

New Entries

Dialog Structure

- Transformation Template
 - Transformation Template
 - Primary Mapping
 - Secondary Mapping
 - Generic Value Mapping
 - Country Specific Mapping

Transf. Templ Group: ECPAYINT_QA ECPayInt QA Testing

Transf. Template: ERP_WS_4 Job Info Template for Web Service

EC Entity: WS_4 Job Info Template for Web Service

EC Field Attributes

EC Field: 57 eventReason

EC Field Description: Event Reason

☐ Field Deleted in EC

☒ Required in EC

ERP Field Mapping

Mapping Mode: Infotype Mapping

Infotype: 0000 Actions

Subtype:

Infotype Field: MASSN Action Type

Secondary Mapping

Linking Field:

Preconfigured Mapping

Preconfigured Entity:

Value Mapping

Value Mapping Entity: EVENT_REASON Event Reason

Create Value Mapping Entity

Define Value Mapping Entries

Define Ctry. Spec. Value Mapping Entries

Note

In this case, Value Mapping entries are updated with the respective action types MASSN (for ex: ERP Key 01 (Hiring) – EC Key HIRENEW). If you have enabled additional actions (IT0302), then change only the infotype field mapping as "0302" instead of "0000".

- Method 2: Event reason data is migrated based on the *Reason of Actions* (MASSG) with reference of linked field MASSN.

Example

IT0000 is maintained - Actions based on the Action Type (MASSN) and Reason of Action (MASSG) as mandatory fields.

List Actions

Find by: Person

- Collective search help
- Search Term
- Free search

Pers. No. 70000001 Pers. Assign 70000001 99999999 70000001

Name Mr. indus 70000001

EE group 1 Active Personnel ar US01 United States Headquarter

EE subgroup U3 Standard salary

Choose 01.01.1800 to 31.12.9999

Start Date	End Date	Act.	Action Type	ActR	Reason for action	C...	E...	S...
01.01.2013	31.12.9999	01	Hiring	01	Expansion		3	1

Field mapping for Event Reason field:

Change View "Primary Mapping": Details

New Entries

Dialog Structure

- Transformation Template
 - Transformation Template
 - Primary Mapping
 - Secondary Mapping
 - Generic Value
 - Country Specific

Transf. Templ Group ECPAYINT_QA

Transf. Template ERP_WS_4

EC Entity WS_4 Job Info Template for Web Service

EC Field Attributes

EC Field 57 eventReason

EC Field Description Event Reason

☐ Field Deleted in EC

☒ Required in EC

ERP Field Mapping

Mapping Mode Infotype Mapping

Infotype

Infotype 0000 Actions

Subtype

Infotype Field MASSN Action Type

Secondary Mapping

Linking Field MASSN Action Type

Preconfigured Mapping

Preconfigured Entity

Value Mapping

Value Mapping Entity EVENT_REASON Event Reason

Create Value Mapping Entity

Define Value Mapping Entries

Define Ctry. Spec. Value Mapping Entries

Based on the linked field MASSN configurations, secondary mapping field will be dynamically listing the values (for ex: Linked field is used as MASSN and secondary mapping screen first column will display the Action type). With this system configuration, event reason field extracts the data based on the *Reason of Action* condition instead of *Action Type*.

Action Type	Description	Infotype	Subtype	Infotype Field	Value Mapping Entity
01	Hiring	0000		MASSG	EVENT_REASON_01
02	Organizational reassignment	0000		MASSG	EVENT_REASON_02
10	Leaving	0000		MASSG	EVENT_REASON_10
12	Reentry into company	0000		MASSG	EVENT_REASON_12

With the above system configuration, event reason field extracted the data based on the *Reason of Action* condition instead of *Action* type.

Note

In this case, value mapping entries are updated with the respective reason of actions MASSG (for ex: ERP Key 01 (Expansion) – EC Key : HIRENEW). If you have enabled additional actions (IT0302), then change only the infotype field mapping as “0302” instead of “0000”.

Task overview: [Particular Mapping Types \[page 165\]](#)

Related Information

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Object Identification Mapping Works \[page 173\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)

[How Date Type Mapping Works \[page 179\]](#)

[How to Map Additional Actions \[page 185\]](#)

4.4.2.6 How to Map Additional Actions

The *Additional Actions* (0302) infotype allows you to execute several personnel action types for an employee on one day.

Prerequisites

To enable the use of the *Additional Actions* (0302) infotype, run the *Activation of Additional Actions* (RPUEVSUP) program in your SAP ERP HCM system for the required employees. This program carries out the following steps:

- It activates the *Additional Actions* infotype by setting the value of the ADMIN EVSUP switch in the T77S0 table to **1**.

- It sets the *Update Infotype 0302 When Executing an Action* (P0302) indicator for all personnel action types in the T529A table. This means that the system logs all personnel action types that are executed for an employee and their related reasons in the *Additional Actions* infotype.
- It creates an *Additional Actions* (0302) record for each *Actions* (0000) infotype record on the specified key date.

Context

The *Additional Actions* (0302) infotype enables automatic logging of all personnel action types performed for an employee for a specified key date. You can display and edit the records stored in the *Additional Actions* infotype (0302) on the *Actions* (0000) infotype list screen.

Note

You can't display or edit *Additional Actions* records directly.

Here's how you define the mappings the mappings needed to enable replication of additional actions to Employee Central:

Procedure

1. Since the *Additional Actions* (0302) infotype can have overlapping records, the *Time Constraint 3 Mapping* processing mode needs to be assigned to the Employee Central template. This step was already carried out for the Job History (Job Info) default template:

EC Template ID	CSV_4	Job History Info Template for CSV Files
Basic Settings		
EC Template Name	JobInfoImportTemplate	
EC Org. Object Type		
EC Import Type	CSV Data Import Entity	
<input type="checkbox"/> Multiple Use	<input checked="" type="checkbox"/> Effective Dated	
<input type="checkbox"/> Is Generic Object		
Inherit Metadata		
Standard EC Fields		
Object ID in EC		
Start date in EC	start-date	
End Date in EC	end-date	
Outbound Integration		
Upsert Sequence	60	
EC DepTempl ID		
Country Version		
Deletion supported		
<input type="checkbox"/> Deletion		
HRIS Element ID		
Employee Integration		
Required Infotype	0001	
Special Mapping Infotype	0041	
Specific Mapping		
Processing Mode	Time Constraint 3 Mapping	
Processing Infotype	0302	
OBJID Field		
Repet.Struct.		

Figure 64: Job History Employee Central Template Uses Time Constraint 3 Mapping

- In the *Define Field Mapping for Employee Data* Customizing step, when defining the primary mapping for the SAP transformation template that has the Job History Employee Central entity assigned, map the *eventReason* Employee Central field to the *Action Type* (MASSN) field of the *Additional Actions* (0302) infotype. (Previously, the field was mapped to the *Action Type* (MASSN) field of the *Actions* (0000) infotype.)

ERP Template		ERP_JOBINFO_CSV	JobInfo Template
EC Field Attributes			
EC Field	62	event-reason	
EC Field Description	event-reason		
<input type="checkbox"/> EC Metadata: Is Invalid			
<input type="checkbox"/> Is Required			
ERP Field Mapping			
Mapping Mode	Infotype Mapping		
Infotype			
Infotype	0302	Additional Actions	
Subtype			
Infotype Field	MASSN	Action Type	
Linking Field			
Preconfigured Mapping			
Preconfigured Entity			
Value Mapping			
Value Mapping Entity	EVENT_REASON	Event Reason	
<input type="button" value="Define Value Mapping Entries"/>			

Figure 65: eventReason Employee Central Field Mapped to Additional Actions Infotype Field

Results

If you now run the employee data extraction program, the content of the *Action Type* field from the *Additional Actions* (0302) infotype is extracted for the *eventReason* Employee Central field. If for an employee there is no *Additional Actions* entry, the corresponding entry from the *Actions* (0000) infotype is extracted as a fallback.

Task overview: [Particular Mapping Types \[page 165\]](#)

Related Information

[How Repetitive Structure Mapping Works \[page 166\]](#)

[How Object Identification Mapping Works \[page 173\]](#)

[How Time Constraint 3 Mapping Works \[page 175\]](#)
[How Date Type Mapping Works \[page 179\]](#)
[How to Map Event Reasons for Data Migration \[page 181\]](#)
[How Time Constraint 3 Mapping Works \[page 175\]](#)
[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

4.4.3 Data Extraction and Transfer

[Extracting Employee Data \[page 190\]](#)

Here is how to extract employee data from the SAP ERP HCM system to transfer it to Employee Central.

[Extracting Employee Data in Multiple Steps \[page 196\]](#)

Here is how to extract the employee data from the SAP ERP HCM system to transfer it to Employee Central in multiple steps without having to change and transport the template group configuration..

[Downloading CSV Files from the Application Server \[page 198\]](#)

If you've stored the data extracted to CSV files on the application server, here's how to transfer the data from the application server location to a local drive.

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

After the initial run of the employee data extraction program, changed data is replicated using delta replication. Here's how you need to set this up.

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

Here's an overview of the steps involved when you want to transfer data from SAP ERP HCM to a custom entity in Employee Central.

[Transferring Data Deletion to Employee Central \[page 203\]](#)

For some Employee Central templates, a deletion of data can be transferred from SAP ERP HCM to Employee Central.

[Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#)

For migrating a large number of employee data to Employee Central you can use the Job Scheduler report. This report will automatically divide the load into smaller batches and schedule multiple background jobs, which can be executed in parallel.

Parent topic: [Steps in the SAP ERP HCM System \[page 63\]](#)

Related Information

[Preparatory Steps \[page 64\]](#)
[Particular Mapping Types \[page 165\]](#)
[Follow Up \[page 208\]](#)

4.4.3.1 Extracting Employee Data

Here is how to extract employee data from the SAP ERP HCM system to transfer it to Employee Central.

Procedure

1. Go to the [Employee Data Extraction](#) (ECPAO_EE_EXTR) transaction to run the [Employee Data Extraction](#) (ECPAO_EMPL_EXTRACTION) program (Infoporter tool).

The program extracts employee data from the SAP ERP HCM system based on your selection criteria.

The screenshot shows the 'Employee Data Extraction' selection screen. It has a title bar with icons for back, forward, and search, and buttons for 'OrgStructure' and 'Search Help'. The screen is divided into several sections: 'Selection Criteria' with fields for Personnel Number, Action Type, Personnel area, Personnel subarea, Employee group, and Employee subgroup; 'Extraction Template' with fields for Transformation Template Group and Variant ID; 'Communication Channels' with options for Test Run, Web Service Transfer, and File Transfer, and a checkbox for Download Payload via CSV Files; 'Message Log' with a checkbox for Detailed Message Log; and 'Other Selection Criteria' with checkboxes for Failed Employee Only and Suppress Identical Records.

Selection Criteria	
Personnel Number	<input type="text"/>
Action Type	<input type="text"/>
Personnel area	<input type="text"/>
Personnel subarea	<input type="text"/>
Employee group	<input type="text"/>
Employee subgroup	<input type="text"/>

Extraction Template	
Transformation Template Group	<input checked="" type="checkbox"/>
Variant ID	<input type="text"/>

Communication Channels	
<input checked="" type="checkbox"/> Test Run	
<input checked="" type="radio"/> Web Service Transfer	<input type="checkbox"/> Download Payload via CSV Files
<input type="radio"/> File Transfer	
<input type="checkbox"/> Combine into ZIP File	File Identifier <input type="text"/>
<input type="radio"/> Use Server Path	
<input type="radio"/> Use Local Drive Path	<input type="text"/>

Message Log	
<input type="checkbox"/> Detailed Message Log	

Other Selection Criteria	
<input type="checkbox"/> Failed Employee Only	<input type="checkbox"/> Suppress Identical Records

Figure 66: Selection Screen of the ECPAO_EMPL_EXTRACTION Program

On the selection screen:

- Select the transformation template group to be used for the data extraction.
- Select the variant ID that you have created before in the [Define the Variant IDs for Data Migration](#) customizing activity (view V_ECPAO_VARIANT). Once you have created the variant ID, you should have

assigned the required transformation templates to the variant ID using the [Define the Transformation Templates for a Variant ID](#) customizing activity (view V_ECPOA_TEMP_VAR).

i Note

This is not a mandatory field. You can choose the Variant ID if you want to perform the extraction in multiple steps. For more information, see: [Extracting Employee Data in Multiple Steps \[page 196\]](#).

For example, a transformation template group consists of the 5 transformation templates (ERP1, ERP2, ERP3, ERP4, and ERP5). In these templates if you want to choose only ERP1, ERP3, and ERP5, you can create a variant ID for these transformation templates. And when you choose this variant ID for migration process, only these transformation templates (ERP1, ERP3, and ERP5) would be considered.

i Note

You can configure the EC templates, which should be filtered out for a given country using the customizing activity [Filter EC Entities for Migrating Employee Data to EC based on Country](#) (view V_ECPOA_ECTM_FIL). More information on country filtering in side-by-side deployment option, see the [How to Use Country Filtering for the Side-by-Side Deployment Option](#) topic in the [Integrating SAP ERP HCM with Employee Central Using the Side-by-Side Deployment Option](#) guide.

- Specify how you would like to transfer the data:
 - By Web services, using the middleware that is available for the data replication from SAP ERP HCM to Employee Central. You can only use this option if the transformation template group you specify uses the Web Service Transfer communication channel. On selecting the test run option in the web service mode, you can download a file with all the employee data information and mapping details. Thus before the actual upload of the data, you can see the data mappings and configurations done in SAP ERP HCM and make the necessary corrections in the system if required.
 - You can download the payload file via csv format to see all the configurations and mapping details before you actually run the report. By this you can verify if the employee data information and mapping details are correct and avoid any errors while executing the extraction report.
 - Using comma-separated values (CSV) files.
If you select the [File Transfer](#) and [Use Server Path](#) options, you can later transfer the data from the application server location to a local drive.
If you select the [File Transfer](#) and [Use Local Drive Path](#) options, you must specify where the CSV file is to be stored.

i Note

When you schedule the program as a background job to carry out a mass data extraction, always choose the [File Transfer](#) > [Use Server Path](#) option.

For both options you can specify an addition to the file name to prevent existing files from being overwritten by new files. If you don't enter a file identifier, the same file name is used for each download so that existing files are overwritten.

If you want to combine several CSV files into a .zip file, select the [Combine into ZIP file](#) checkbox. Please note that CSV files that you create for generic objects can't be zipped. They are stored separately, even if you select the [Combine into ZIP file](#) option.

⚠ Caution

While using local drive to save the CSV file, make sure that you are storing the files in a secure folder, which will have access only the users having HR administrator role.

- Select the [Detailed Message Log](#) checkbox if you want to get a detailed log containing all warning and error messages for each employee.
- Select the [Failed Employee Replication](#) checkbox if you want to re-run the replication for only those employees for which the replication status is failed.

i Note

File transfer mode is not supported for this selection.

- Select the [Suppress Identical Records](#) checkbox if you want to migrate records only when there is a change in the existing data or to migrate all records, regardless of whether the data has been changed or not.

i Note

With the beginning of SP 36, even if you don't select this option Employee Central will have the default behaviour of suppressing the identical record. For more information, refer to the [Deprecation of Suppress Switch in Company System and Logo Settings](#) topic.

i Note

You can carry out a test run of the program first to check if the data can be extracted from SAP ERP HCM without errors.

2. If you carry out a productive run, the program extracts the data.
3. The program updates the following tables:
 - [Inventory of Data Replicated for Employees and Org. Objects](#) (ECPAO_EE_INVT)
This table holds information about when the data of which employee was replicated to Employee Central, such as:

Table 27: Sample Entry in the ECPAO_EE_INVT Table

Employee Central Instance	SAP ERP HCM Object Type	Employee's Personnel Number in SAP ERP HCM	Data Successfully Replicated to Employee Central	Time Stamp (Universal Coordinated Time)
SBS_MODEL	P (= Person)	00000561	X	20.150.325.063.810, 4298650 = 2015 March 25, 6:38 (plus seconds, milliseconds, microseconds, and the first decimal of the nanoseconds)

- [Inventory of Data Replicated for Employee Central Templates](#) (ECPAO_INVT)

This table holds information about when the data of which Employee Central template was replicated to Employee Central, such as:

Table 28: Sample Entry in the ECPAO_INVT Table

Employee Central Instance	SAP ERP HCM Object Type	Employee's Personnel Number in SAP ERP HCM	Employee Central Template	Data Successfully Replicated to Employee Central	Data Replicated in Last Replication Run	Data Deletion Repliated	Time Stamp (Universal Coordinated Time)
SBS_MODE L	P (= Person)	55261454	WS_6	X	X		20.160.704.082.354,7129620 = 2016 July 04, 8:23 (plus seconds, milliseconds, microseconds, and the first decimal of the nano-seconds)
SBS_MODE L	P (= Person)	55261454	WS_7		X	X	20.160.704.082.354,7129620 = 2016 July 04, 8:23 (plus seconds, milliseconds, microseconds, and the first decimal of the nano-seconds)

- [Inventory of Replicated Data: Error Messages](#) (ECPAO_INVT_MSG)

This table holds the error messages issued for the replication by Employee Central or by SAP ERP HCM, per Employee Central template, such as:

Table 29: Sample Entry in the ECPAO_INVT_MSG Table

Employee Central Instance	SAP ERP HCM Object Type	Employee's Personnel Number in SAP ERP HCM	Employee Central Template	Sequence Number	Message Text
SBS_MODEL	P (= Person)	55261454	WS_6	1	<i>02157601 is an invalid Person Id External [...]</i>
SBS_MODEL	P (= Person)	55261454	WS_6	2	<i>user-id is invalid.,#Employee 55261454 does not have valid Job Information data [...]</i>

→ Tip

Use the [Analyze Inventory of Replicated Employee Data](#) (ECPAO_EMPL_INVENTORY_ALV) program to check these tables.

- The program writes messages to the application log.

The application log would contain the warning, error, or success messages. Here you can see for how many employees the data has been successfully extracted or replicated and for how many employees the extraction or the replication process has failed. Even when the EC entity is successfully replicated from ERP, there could be some warning messages from EC. You can see these messages here. If you have chosen to get a detailed log, the personnel numbers and transformation templates in question are listed with the relevant error or warning messages from EC. All messages are also stored in the application log.

- To check the messages, go to the [Analyze Application Log](#) (SLG1) transaction.

→ Tip

You can also run SLG1 transaction to display data in text format and export the data into an excel file or in other formats. After executing the transaction go to ► [List](#) ► [Save/Send](#) ► [Local File...](#) and choose the required format in which you want to export the log file.

- Enter the ECPAO object and subobject. To check for a specific employee, enter the employee's personnel number in the [External ID](#) field. Optionally specify additional selection criteria, then choose [Execute](#).

Analyze Application Log

Object	<input type="text" value="ECPAO"/>	<input type="checkbox"/> Employee outbound ERP to EC
Subobject	<input type="text" value="ECPAO"/>	<input type="checkbox"/> Employee Outbound SAP ERP to Employee Central
External ID	<input type="text" value="*"/>	

Time Restriction

From (Date/Time)	<input type="text" value="06.08.2014"/>	<input type="text" value="00:00:00"/>	
To (Date/Time)	<input type="text" value="06.08.2014"/>	<input type="text" value="23:59:59"/>	

Log Triggered By

User	<input type="text" value="*"/>	<input type="checkbox"/>
Transaction code	<input type="text" value="*"/>	<input type="checkbox"/>
Program	<input type="text" value="*"/>	

Log Class

- ☐ Only very important logs
- ☐ Only important logs
- ☐ Also less important logs
- ☒ All logs

Log Creation

- ☒ Any
- ☐ Dialog
- ☐ In batch mode
- ☐ Batch input

Log Source and Formatting

- ☒ Format Completely from Database
- ☐ Format Only Header Data from Database
- ☐ Format Completely from Archive

Figure 67: Selection Screen of the SLG1 Transaction

i Note

You can use the `V_ECPAO_PACKSIZE` view to set the packet size for an Employee Central instance template. This view can be maintained directly in the production system and thus a transport is not mandatorily required for this configuration in the production system. Packet size defines the maximum number of records for an Employee Central entity that gets replicated in a single session. The configured data is stored in the table `ECPAO_PACKSIZE`. The Employee Extraction Report (`ECPAO_EMPL_EXTRACTION`) use this table data while creating the packets on the extracted data from the SAP ERP HCM system. By setting the packet size, you can now avoid the time out errors while using complex API's like payment information, Position, EmpCostDistribution etc. If you are not setting the packet size, then the default packet size of 100 is considered during the replication process. The packet size should be in-between 20 and 100. You can set the packet size only when you are using web service mode while replicating the employee data or organizational objects to Employee Central.

Next Steps

Make sure that the data of employees who are mastered in SAP ERP HCM can't be edited in Employee Central. Use role-based permissions to disable the edit mode in Employee Central based, for example, on the country of the employee.

After the initial run of the program, changed data is replicated using delta replication. For more information, refer to section [Extracting Changed Employee Data Using Delta Replication \[page 199\]](#). You can still run the *Employee Data Extraction* program to extract data for selected employees.

Task overview: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data in Multiple Steps \[page 196\]](#)
[Downloading CSV Files from the Application Server \[page 198\]](#)
[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)
[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)
[Transferring Data Deletion to Employee Central \[page 203\]](#)
[Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#)
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[Defining Field Mapping for Employee Data \[page 136\]](#)
[How the Manager's User ID Is Updated \[page 126\]](#)
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[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)
[Downloading CSV Files from the Application Server \[page 198\]](#)
[How the Manager's User ID Is Updated \[page 126\]](#)

4.4.3.2 Extracting Employee Data in Multiple Steps

Here is how to extract the employee data from the SAP ERP HCM system to transfer it to Employee Central in multiple steps without having to change and transport the template group configuration..

Prerequisites

In order to do a step wise employee data migration using a single transformation template group, you should have already created a transformation template group using the view cluster VC_ECPAO_MAP. For more information see: [Creating a Transformation Template Group for Employee Data \[page 139\]](#).

Context

When you are using the regular extraction process, you need to transport from configuration system to production system, which is time consuming. By using this multiple step migration, you avoid the transport from the configuration system to the production system.

When you are migrating data in steps, you don't need to perform the time-consuming process of changing the template group configuration for each step in the test system and then transporting the same to the production system. And for delta replication via change pointers, all the templates in the same template group can be used. This can be done using the same template group by grouping the relevant templates of a step in a variant ID. The relevant variant ID for a step must be selected in the selection screen of the Extraction report or the Job Scheduler report.

When you are migrating the employee data, you can first migrate only the minimum set of templates like Biographical Info, Personal Info, Employment Info, and Job Info etc. This will make sure that you are not migrating other templates, which are dependent on a template, where if the migration of that template fails, the subsequent templates need not be migrated.

For ex: If Job Info template migration fails, then you really don't need to migrate Compensation, Recurring, Spot bonus, Payment Information etc.

Once the initial migration process is successful, you can then migrate the remaining templates (ex Compensation, Recurring, Spot bonus, Payment Information). Lastly you can execute the migration process only for the changed data. For more information on migrating only the changed data, see: [Extracting Changed Employee Data Using Delta Replication](#).

Here you can use a single transformation template group (by creating different variant ID's for a single transformation template group) to cater different scenarios without changing any configurations in the transformation template group.

→ Tip

You can create a single transformation template group with all the required transformation templates and enable it for delta replication.

Procedure

1. Create the variant ID using the customizing activity: [Define the Variant IDs for Data Migration](#) (view V_ECPAO_VARIANT).
2. Once you create the variant ID, you will have to add the transformation template to the variant ID using the customizing activity: [Define the Transformation Templates for a Variant ID](#) (view V_ECPAO_TEMP_VAR).
3. Choose the variant ID when you run the employee extraction report. For more information see: [Extracting Employee Data \[page 190\]](#).

i Note

You can also choose the variant ID when you run the job scheduler report. For more information on job scheduler report, see: [Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#).

i Note

Also make sure that all entities having dependencies should be included in the same variant. For ex: Compensation with Recurring and Payment Information with Payment Information details and country specific Payment Information details.

Task overview: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data \[page 190\]](#)

[Downloading CSV Files from the Application Server \[page 198\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Transferring Data Deletion to Employee Central \[page 203\]](#)

[Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#)

4.4.3.3 Downloading CSV Files from the Application Server

If you've stored the data extracted to CSV files on the application server, here's how to transfer the data from the application server location to a local drive.

Prerequisites

- The logical file path `ECPAO_TMPL_DIR` is defined in the [Logical File Path Definition \(FILE\)](#) transaction.
- You have selected the [File Transfer using Server Path](#) option on the selection screen of the data extraction program, executed the program, and received a success message.

Procedure

1. Go to the [SAP Directories \(AL11\)](#) transaction.
2. Double-click [DIR_GLOBAL](#) to see the files in this directory and note the name of the file that you want to download, such as [BASIC_IM](#).
3. Go to the [Download File \(CG3Y\)](#) transaction.
4. Enter the source file, such as `/usr/sap/<SYSTEM>/SYS/global/BASIC_IM`.
5. Enter the target folder and file name, such as `C:\temp\BASIC_IM`, and add the file format `.csv`.
6. Choose [Download](#).

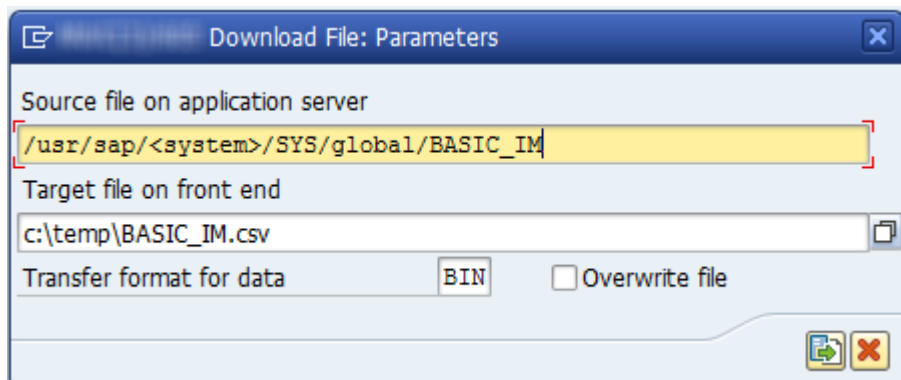


Figure 68: Download File from Application Server

The file is downloaded to the folder you have specified.

Task overview: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data \[page 190\]](#)

[Extracting Employee Data in Multiple Steps \[page 196\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Transferring Data Deletion to Employee Central \[page 203\]](#)

[Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#)

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[Communication Channels for Employee Data Replication \[page 58\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

[How the Manager's User ID Is Updated \[page 126\]](#)

[Deprecation of Suppress Switch in Company System and Logo Settings](#)

4.4.3.4 Extracting Changed Employee Data Using Delta Replication

After the initial run of the employee data extraction program, changed data is replicated using delta replication. Here's how you need to set this up.

Prerequisites

You can only use template groups with the *Web Service Transfer* communication channel for delta replication.

Context

When HR administrator change employee data in the SAP ERP HCM system, change pointers are created. You can use the [Job Scheduler report](#) to extract the data for the changed employees. In addition you can now replicate the employees who will be hired in future using the change pointers. By using the job scheduler report, you can run the extraction process for a larger load and also schedule the extraction process in batches. SAP recommends to use the [Job Scheduler report](#) as it is more efficient. For more information see: [Parallelization of Employee Data Extraction Via Job Scheduler Report](#) topic.

Data extraction program choose the transformation template group from the VC_ECPAO_MAP view cluster. In the view cluster, while creating the transformation template group or after creating, the transformation template group can be enabled for delta replication. You need to choose [Enable for Delta Replication](#) option to enable the delta replication. For more information see: [Creating a Transformation Template Group for Employee Data](#) topic. Additionally, you can choose a subset of transformation templates from the group for delta replication by enabling the [Enable for Delta Replication](#) option in the V_ECPAO_VARIANT view.

The [Creating IDoc Type from Change Pointers](#) (RBDMIDOC) program (or BD21 transaction) reads the change pointers with the ECPAO message type, replicates the changed data using the data extraction program, and marks the change pointers as processed.

Note

The data replication does **not** use Application Link Enabling (ALE) or IDocs. The RBDMIDOC program uses the ECPAO message type to trigger the replication of changed employee data to Employee Central using a synchronous Web service call.

In SAP ERP HCM, all infotype data is effective dated. In Employee Central, some data, such as email or phone information, isn't effective dated. If you change data in SAP ERP HCM for the future that isn't effective dated in Employee Central, the corresponding change pointers will only be executed at this future date.

To ensure that the change pointers are not captured in PA_SE_IN integration when the message type ECPAO and ECPAO_OM are not active in BD50 transaction, you must install the SAP Note: [2552346](#).

→ Tip

For larger loads of data, we recommend you to run the delta replication using the job scheduler report instead of RBDMIDOC program or BD21 transaction.

To run the RBDMIDOC program, follow the below mentioned steps. To run the [Job Scheduler report](#) see: [Parallelization of Employee Data Extraction Via Job Scheduler Report](#) topic.

Procedure

1. Go to the [Define Background Job](#) (SM36) transaction.
2. Schedule the [Creating IDoc Type from Change Pointers](#) (RBDMIDOC) program as a regular background job using the ECPAO message type.

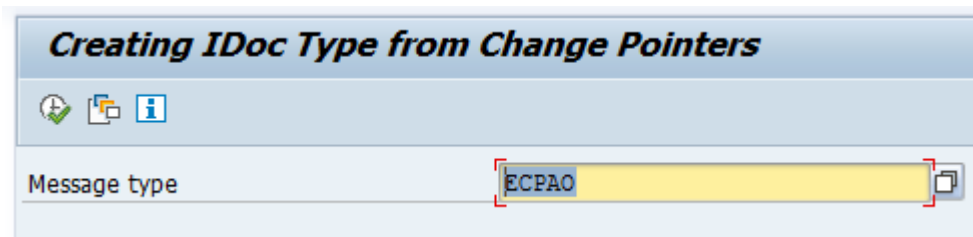


Figure 69: Change Pointers for the ECPAO Message Type

Task overview: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data \[page 190\]](#)

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[Creating a Transformation Template Group for Employee Data \[page 139\]](#)

[How to Use the Sample Content for Employee Data \[page 153\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Extracting Employee Data \[page 190\]](#)

[Communication Channels for Employee Data Replication \[page 58\]](#)

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[How the Manager's User ID Is Updated \[page 126\]](#)

[Deprecation of Suppress Switch in Company System and Logo Settings](#)

4.4.3.5 Replicating Employee Data to Custom Entities in Employee Central

Here's an overview of the steps involved when you want to transfer data from SAP ERP HCM to a custom entity in Employee Central.

Prerequisites

You have created a custom generic object in Employee Central. You can do this in the Admin Center by choosing the [Configure Object Definitions](#) tool. When you create your entity, make sure to set the [API Visibility](#) option to [Editable](#).

Procedure

1. Import the data model for your custom entity from Employee Central into the SAP ERP HCM system.
 - a. Download the metadata from your custom entity in Employee Central.
 - To download metadata of the *CSV File-Based Transfer* type:
 1. Go to the Admin Center and choose the *Import and Export Data* tool.
 2. In the *Select the action to perform* field choose *Download Template*.
 3. Select your object definition in the *Select Generic Object* field and choose *Download*.
 - To download metadata of the *Web Service Transfer* type:
 1. Go to the Admin Center and choose the *OData API Data Dictionary* tool.
 2. A list of entities is displayed.
If your custom entity isn't shown here, go back and choose the *OData API Metadata Refresh and Export* tool, then choose *Refresh*.

OData API Metadata Refresh And Export

Refresh Metadata

Cache:

Refresh

Export Metadata to File:

Export

Figure 70: OData API Metadata Refresh and Export Tool

3. Expand your custom entity and copy the complete content of the table displayed below *Fields*, including the table header.
 4. Paste the content to a spreadsheet and save the spreadsheet using the *.csv* file extension.
- b. Import the metadata into the SAP ERP HCM system using one of the metadata import programs.
2. Define an Employee Central entity for your custom entity.
3. Map the fields of your Employee Central entity to a transformation template.

Task overview: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data \[page 190\]](#)

[Extracting Employee Data in Multiple Steps \[page 196\]](#)

[Downloading CSV Files from the Application Server \[page 198\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Transferring Data Deletion to Employee Central \[page 203\]](#)

[Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#)

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Non-Configurable \(Standard\) Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 228\]](#)

[Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields \[page 235\]](#)

[Repetitive Structure Mapping of Cost Distribution Data \[page 171\]](#)

[Importing Metadata from Employee Central \[page 70\]](#)

[Defining Field Mapping for Employee Data \[page 136\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

4.4.3.6 Transferring Data Deletion to Employee Central

For some Employee Central templates, a deletion of data can be transferred from SAP ERP HCM to Employee Central.

This means if you delete infotype data (such as an employee's phone number) in the SAP ERP HCM system, this data deletion can be transferred to Employee Central. To transfer the deletion, the compound delete Employee Central entities are used. For CSV file-based data transfer, this is the [Compound Delete](#) CSV data import entity. For Web service-based data transfer, this is the [SFOData.HrisCompoundDeletion](#) OData entity.

Note

Use of the [Compound Delete](#) or [SFOData.HrisCompoundDeletion](#) entities needs to be enabled in Provisioning using the [Enable Compound Delete](#) option.

→ Remember

As a customer, you don't have access to Provisioning. To complete tasks in Provisioning, contact your implementation partner or Account Executive. For any non-implementation tasks, contact Product Support.

The appropriate entity is filled with the employee's user ID and the HRIS element ID from the Employee Central data model that corresponds to the Employee Central entity (such as [phoneInfo](#)). When the compound delete entity is transferred to Employee Central, the corresponding data is deleted there for the specific employee.

To determine if data deletion is to be triggered, the employee data extraction program checks if the key field of the corresponding Employee Central template is empty. If this is the case, it issues a warning message. If you then transfer the deletion to Employee Central, the data is actually deleted there.

The following Employee Central entities support transfer of data deletion:

CSV Data Import Entity	Web Service Entity	HRIS Element ID	Key Field
Email Info	PerEmail	emailInfo	email-address
Phone Info	PerPhone	phoneInfo	phone-number
Job Relationships	EmpJobRelationships	jobRelationsInfo	rel-user-id
Addresses	PerAddressDEFLT	homeAddress	address-type

CSV Data Import Entity	Web Service Entity	HRIS Element ID	Key Field
Pay Component Non Recurring	EmpPayCompNonRecurring	payComponentNonRecurring	pay-component-code
NationalIdCardImportTemplate	PerNationalId	nationalIdCard	national-id

Note

Data deletion is currently supported only by Employee Central entities defined by SAP. You can't use it for custom Employee Central entities.

Example

Let's say you use the [PhoneInfoImportTemplate](#) Employee Central entity for CSV file-based data replication. The employee data extraction program extracts phone info data using the field mapping that is defined for the transformation template to which the [PhoneInfoImportTemplate](#) Employee Central entity is assigned. Since the corresponding infotype record was deleted, the data extracted for employee 12345 doesn't contain an entry in the [phone-number](#) field. Therefore, the extraction program issues the message that deletion of the phone info data is triggered for this employee. It fills the employee ID 12345 and the HRIS element ID [phoneInfo](#) into the [Compound Delete](#) template. Once you upload this information to Employee Central, the phone information for employee 12345 is deleted there.

Parent topic: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data \[page 190\]](#)

[Extracting Employee Data in Multiple Steps \[page 196\]](#)

[Downloading CSV Files from the Application Server \[page 198\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Parallelization of Employee Data Extraction Via Job Scheduler Report \[page 205\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

4.4.3.7 Parallelization of Employee Data Extraction Via Job Scheduler Report

For migrating a large number of employee data to Employee Central you can use the Job Scheduler report. This report will automatically divide the load into smaller batches and schedule multiple background jobs, which can be executed in parallel.

Prerequisites

You should have already configured the settings for running the employee extraction report.

Context

When you execute the report, it will automatically divide the load into smaller batches and schedule multiple background jobs for each batch. The program extracts all employee data for the selected employees that you have defined using the transformation template group specified on the selection screen of the program. At any point of time there will be a set of parallel jobs running. Once a particular job is completed, the next job would start immediately. This will ensure that the total processing time to complete the employee migration for all the employees is shorter.

Procedure

1. Go to the *Job Scheduler for Employee Data Migration* (ECPAO_JOB_SCHED_EE) transaction to run the *Job Scheduler for Employee Data Migration* (ECPAO_EMPL_DMT_JOB_SCHEDULER) program.

The program extracts employee data from the SAP ERP HCM system based on your selection criteria.

2. Specify for which employees the data is to be extracted. To do so, either specify the personnel numbers of the employees or use organizational assignment criteria to select a group of employees.
3. Select the *Modified Employees Only* checkbox if you want to extract the data only for the modified employees and then schedule the extraction process in the background. When you choose this option, you can only use the *Job Selection Criteria* fields to execute the report. This option should be chosen when you want to perform delta replication via change pointers. For more information see: [Extracting Changed Employee Data Using Delta Replication \[page 199\]](#) topic.
4. Specify the number of employees that need to be replicated per job and the number of jobs that has to be performed in parallel.

i Note

The maximum number of *Employees Per Job* is 100 and the *Max No. of Jobs* is 50. The default *Max No. of Jobs* is 10. If the number of employees per job and the maximum number of jobs exceeds the limit, you would receive a warning message.

5. Select the transformation template group to be used for the data extraction. Transformation template groups are defined in the VC_ECPAO_MAP view cluster.
6. Select the variant ID that you have created before in the [Define the Variant IDs for Data Migration](#) customizing activity (view V_ECPAO_VARIANT). Once you have created the variant ID, you should have assigned the required transformation templates to the variant ID using the [Define the Transformation Templates for a Variant ID](#) customizing activity (view V_ECPAO_TEMP_VAR).

i Note

This is not a mandatory field. You can choose the Variant ID if you want to perform the extraction in multiple steps. For more information, see: [Extracting Employee Data in Multiple Steps \[page 196\]](#).

For example, a transformation template group consists of the 5 transformation templates (ERP1, ERP2, ERP3, ERP4, and ERP5). In these templates if you want to choose only ERP1, ERP3, and ERP5, you can create a variant ID for these transformation templates. And when you choose this variant ID for migration process, only these transformation templates (ERP1, ERP3, and ERP5) would be considered.

i Note

You can configure the EC templates, which should be filtered out for a given country using the customizing activity [Filter EC Entities for Migrating Employee Data to EC based on Country](#) (view V_ECPAO_ECTM_FIL). More information on country filtering in a side-by-side deployment option, see the [How to Use Country Filtering for the Side-by-Side Deployment Option](#) topic in the [Integrating SAP ERP HCM with Employee Central Using the Side-by-Side Deployment Option](#) guide.

7. Specify how you would like to transfer the data:
 - By Web Services, using the middleware that is available for the Employee data migration from SAP ERP HCM to Employee Central .
 - Using an application server.
If you select the [File Transfer](#) and [Use Server Path](#) options, you can later transfer the data from the application server location to a local drive.

i Note

When you schedule the program as a background job to carry out a mass data extraction where the data would be imported to Employee Central, choose the ► [File Transfer](#) ► [Use Server Path](#) ► option.

If you want to combine several CSV files into a .zip file, select the [Combine into ZIP file](#) checkbox. Please note that CSV files that you create for generic objects can't be zipped. They are stored separately, even if you select the [Combine into ZIP file](#) option.

8. Select the [Detailed Message Log](#) checkbox if you want to get a detailed log containing all warning and error messages.
9. You can also choose other selection criteria based on for which employees the data is to be extracted:
 - Select the [Failed Employees Only](#) checkbox if you want to re-run the replication for only those employees for which the replication status is failed. The number of jobs created will be based on the number of failed employees.

i Note

[Failed Employees Only](#) is supported only for Web Service Transfer mode.

- Select the [Supress Identical Records](#) checkbox if you want to migrate records only when there is a change in the existing data or to migrate all records, regardless of whether the data has been changed or not.

i Note

With the beginning of SP 36, even if you dont select this option Employee Central will have the default behaviour of suppressing the identical record. For more information, refer to the [Deprecation of Suppress Switch in Company System and Logo Settings](#) topic.

Results

After all the jobs are completed in the background, all the Employee data will be migrated to Employee Central via web service transfer or downloaded via csv files in the application server.

i Note

If multiple PERNR's are linked to one Central Person (CP), then the PERNR's belonging to the same Central Person will be processed in the same job. If the employees per job is 100, then there might be a chances of having more than 100 PERNR's being executed in a single job due to the PERNR's been linked to the same CP.

Task overview: [Data Extraction and Transfer \[page 189\]](#)

Related Information

[Extracting Employee Data \[page 190\]](#)

[Extracting Employee Data in Multiple Steps \[page 196\]](#)

[Downloading CSV Files from the Application Server \[page 198\]](#)

[Extracting Changed Employee Data Using Delta Replication \[page 199\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Transferring Data Deletion to Employee Central \[page 203\]](#)

4.4.3.7.1 Monitoring Employee Migration Status using Job Scheduler Report

You can monitor the Employee migration status using the Job Scheduler Report.

You can check the intermediate status of the current set of completed and running jobs using the SM37 transaction. You can check the output using the SM37 transaction by entering "*" in the job name and user name field. You can enter the user name who will be executing the operation.

Since employee migration has been executed in multiple batches, the ongoing migration status analysis is possible based on the already completed jobs. Once a single job is completed, the migration status information for those PERNR's and the relevant templates will be stored in the inventory tables (ECPAO_INVT & ECPAO_INVT_MSG). And you can execute the ALV report (ECPAO_EMPL_INVENTORY_ALV) to get the status of all the employees for which extraction has already happened. Here you can see status messages, which shows the success, success with detailed warning messages from Employee Central or the failed process with a detailed error message.

When you now run the employee inventory report, you can now choose the "Filtered Employee List" option to list only the filtered employees during the replication process. The SLG log file will display the information of personnel number, reason message and the last execution date

Note

When you choose *Filtered Employee List* option, other selection criteria's would be disabled.

Job Overview								
<div> Refresh Release Spool Job Log Step Application Servers </div>								
Job overview from: 31.07.2017 at: : : to: 31.07.2017 at: : : Selected job names: * Selected user names:								
<input type="checkbox"/> Scheduled <input checked="" type="checkbox"/> Released <input checked="" type="checkbox"/> Ready <input checked="" type="checkbox"/> Active <input checked="" type="checkbox"/> Finished <input checked="" type="checkbox"/> Canceled <input type="checkbox"/> Event-Driven Event ID: _____ <input type="checkbox"/> ABAP program Program name : _____								
JobName	Spool	Job doc	Job CreatedB	Status	Start date	Start Time	Duration(sec.)	Delay (sec.)
<input checked="" type="checkbox"/> DM_RUN_JOB_1			C5202039	Finished	31.07.2017	10:43:31	1.648	0
<input type="checkbox"/> DM_RUN_JOB_10			C5202039	Active	31.07.2017	11:11:28	1.437	0
<input type="checkbox"/> DM_RUN_JOB_2			C5202039	Finished	31.07.2017	10:43:30	1.678	0
<input type="checkbox"/> DM_RUN_JOB_3			C5202039	Finished	31.07.2017	10:43:31	1.651	0
<input type="checkbox"/> DM_RUN_JOB_4			C5202039	Finished	31.07.2017	10:43:30	1.610	0
<input type="checkbox"/> DM_RUN_JOB_5			C5202039	Finished	31.07.2017	10:43:31	1.601	0
<input type="checkbox"/> DM_RUN_JOB_6			C5202039	Active	31.07.2017	11:10:11	1.514	0
<input type="checkbox"/> DM_RUN_JOB_7			C5202039	Finished	31.07.2017	11:10:21	1.466	0
<input type="checkbox"/> DM_RUN_JOB_8			C5202039	Active	31.07.2017	11:10:59	1.466	0
<input type="checkbox"/> DM_RUN_JOB_9			C5202039	Active	31.07.2017	11:11:03	1.462	0
*Summary							15.533	0

The naming convention of the jobs would be like: DM_RUN_SB_JOB_1, DM_RUN_SB_JOB_2, DM_RUN_SB_JOB_3 etc, where "SB" is the *File Identifier* that you have mentioned in the report screen.

Note

After executing the report when you view the jobs using the SM37 transaction, do not cancel the jobs, which are in process. This denotes the migration of the employees belonging to that job is still in process.

4.4.4 Follow Up

[Updating the Employee Key Mapping Table \[page 209\]](#)

The *Employee Key Mapping* (PAOCFEC_EEKEYMAP) table must be updated after employee data was replicated from SAP ERP HCM to Employee Central.

Parent topic: [Steps in the SAP ERP HCM System \[page 63\]](#)

Related Information

[Preparatory Steps \[page 64\]](#)

[Particular Mapping Types \[page 165\]](#)

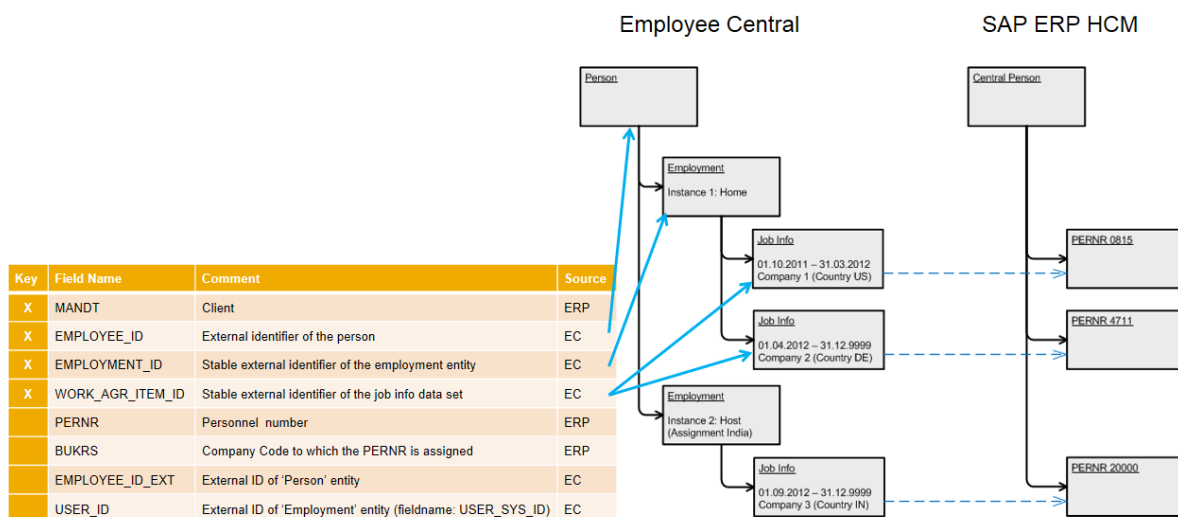
[Data Extraction and Transfer \[page 189\]](#)

4.4.4.1 Updating the Employee Key Mapping Table

The *Employee Key Mapping* (PAOCFEC_EEKEYMAP) table must be updated after employee data was replicated from SAP ERP HCM to Employee Central.

Context

This is necessary to prevent new personnel numbers being created during the next data replication from Employee Central to SAP ERP HCM for employees whose data was migrated or replicated from SAP ERP HCM to Employee Central. The table maps an employee's unique identifiers from the SAP ERP HCM system and from Employee Central. This key mapping table is updated when User ID, Personnel Number, and Third Party Employee ID are populated during the replication of data to Employee Central. When the BiB is disabled, the replication process use the PAOCFEC_EEKEYMAP key mapping table.



When you enable the BiB mode in the `v_ECPAO_CONSTANT` view, the `ECPAO_EE_KMAP` and `ECPAO_OBJPS_KMAP` key mapping tables are used. The update of the key mapping table `ECPAO_EE_KMAP` does not depend on the actual replication status. The key mapping tables are updated irrespective of the replication status of any entities. If the employee already has records in the old key mapping table (PAOCFEC_EEKEYMAP), then the new key mapping table `ECPAO_EE_KMAP` will not be populated (even when BiB switch is set to X). If there is no key mapping in the old table, only then the new key mapping table will be populated. For example: Even if the user entity replication fails, the key mapping table will be updated if the User ID and Person ID external are available.

If you use the Web service-based data replication (when BIB mode is disabled), the employee key mapping table is updated automatically. If you use the CSV file-based data replication, you must update the table manually. To do so, carry out the steps described below. This is procedure is applicable only if the BIB mode is disabled.

i Note

When BIB is enabled, the new key mapping table is updated automatically by the infoporter for both web service and csv based replication.

Procedure

1. Go to the [Update Employee Key Mapping Table](#) (ECPAO_KEYMAP_UPD) transaction to run the [Update Key Values Mapping Table with Manually Replicated Employee Data](#) (ECPAO_EEREPCSV_EEKEYMAP_UPDATE) program.

i Note

This program uses the web service communication channel and the [Upsert Data from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central Using the OData API](#) middleware process. For more information about this process refer to section [Copying the Integration Package to Your Workspace](#) [page 37].

2. On the selection screen, specify the employee and Employee Central instance for which the employee key mapping table is to be updated, then click [Execute](#).

Report to update key value map. table with emps replicated manually

OrgStructure Search Help

Selection Criteria

Personnel Number

Selection Criteria

EC Instance

3. The program updates the employee key mapping table with the following key values:
 - Employee ID from Employee Central
 - Employment ID from Employee Central
 - Work agreement ID from Employee Central
 - User ID from Employee Central
 - Personnel number from SAP ERP HCM
 - Company code from SAP ERP HCM
 - Central person from SAP ERP HCM

Task overview: [Follow Up](#) [page 208]

Related Information

[How the Manager's User ID Is Updated \[page 126\]](#)

4.5 Extensibility of the Integration

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Communication Channels for Employee Data Replication \[page 58\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Steps in the SAP ERP HCM System \[page 63\]](#)

[Data Replication and Mapping Information \[page 212\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)

4.5.1 Implementing Business Add-Ins to Enhance the Replication

You can use Business Add-Ins (BADIs) to adapt the data replication from SAP ERP HCM to Employee Central to your specific requirements.

Procedure

1. **Optional:** If you want to define segments of employees whose data is to be replicated to Employee Central, implement the *Validity Periods for Data Replication to EC* (EX_ECPAO_EMP_VALIDITY_TAB) BAdI. Implement *Validity Periods for Data Replication to EC* (EX_ECPAO_EMP_VALIDITY_TAB) BAdI to exclude the employee/organizational object data that is extracted from the ERP system, based on a specific criteria. This BAdI can be used only for excluding data after cut-off date. For details, refer to the BAdI documentation at [Business Integration Builder > Business Add-Ins \(BADIs\) > BAdI: Validity Periods for Data Replication to EC](#).

Using the GET_EMP_VALIDITY_SEGMENTS method of this BAdI, you can classify employee master data extracted from the SAP ERP HCM system as relevant or not relevant for the replication to Employee

Central, based on country or specific time segments. To do so, you define periods in which the data is valid for the replication. In this case, a [Data Change](#) event with the `DATAVAL` event reason is triggered in Employee Central. Data that is outside these periods is classified as invalid for the replication. Here, a [Data Change](#) event with the `DATINVAL` event reason is triggered in Employee Central.

⚠ Caution

Filtering of the employee data for extraction should be done only for country.

2. If you have selected the [BAdI Mapping](#) mapping mode in the [Define Employee Data Settings for Employee Central Instance](#) Customizing activity for the [User ID Mapping](#), [User Name Mapping](#), or [Person ID Mapping](#) field, you need to implement the [Mapping of User ID, Person ID, Username, and Object ID](#) (`EX_ECPAO_EMP_USYID_PRN_UNM_MAP`) BAdI.
Your BAdI implementation must provide the mapping for **all** fields for which you have selected this mapping mode. You can also use this BAdI to map organizational object IDs from the SAP ERP HCM system to the [external code](#) field of Employee Central entities.
3. If you have selected the [BAdI Mapping](#) mapping mode in the [Define Field Mapping for Employee Data](#) Customizing activity, you must implement the [Mapping of EC and ERP Data for Data Replication to EC](#) (`EX_ECPAO_EMP_DATA_EXTRACT_OUT`) BAdI.
Your BAdI implementation must provide the mapping for **all** fields for which you have selected this mapping mode. Using this BAdI, you read the relevant SAP ERP HCM data based on any condition or calculation you define and map it to an Employee Central field ID.
4. **Optional:** If you want to overwrite the data that is extracted from the SAP ERP HCM system, implement the [Change of Mapping Result for Data Replication to EC](#) (`EX_ECPAO_ERP_EMP_DATA_MODIFY`) BAdI.
5. **Optional:** If you want to transfer additional Organizational Management data (such as the functional area or job family) for employees from SAP ERP HCM to [custom-string](#) fields in Employee Central, implement the [Extraction of Organizational Management Data](#) (`EX_ECPAO_ERP_MNGR_TYP_PDDATA`) BAdI.

Related Information

[Creating Event Reasons in Employee Central \[page 18\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Creating Event Reasons in Employee Central \[page 18\]](#)

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[Map Organizational Management Fields from SAP ERP HCM to Employee Central \[page 134\]](#)

4.6 Data Replication and Mapping Information

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Communication Channels for Employee Data Replication \[page 58\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Steps in the SAP ERP HCM System \[page 63\]](#)

[Extensibility of the Integration \[page 211\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)

4.6.1 Non-Configurable (Standard) Employee Central Fields

Standard fields aren't available for configuration in Customizing, independent of which communication channel you use.

A default mapping is defined for these fields, which you can't change.

Table 30: Standard Fields for CSV File-Based Entities

Entity	Standard Fields								
Basic Import	STATUS	USERID	FIRST-NAME	LAST-NAME	MI	HR	Onboarding_ID	USER-NAME	Assignment ID External
									<p>i Not e</p> <p>Applicable only when the switch ERP to ER/EC to ERP (BIB): Activate Assignment ID External in the view V_EC-PAO-CONSTANT is enabled.</p>
Biographical Information	user-id	person-id-external							

Entity	Standard Fields		
Personal Information	person-	start-date	end-date
	Info.person-id-external	<div> <div>i Not e</div> <div>The start date is now a configurable field and the data can be extracted.</div> </div>	

Entity	Standard Fields					
Employment Details	user-id	start-date	person-id-external	original-StartDate	Assignment ID External	isRehire
						Set to <i>True</i> for the consecutive employments (except the first employment) in an international transfer scenario when the <i>Centralized Services</i> switch is activated in SuccessFactors Employee Central. <i>False</i> for all other cases.

i Not e

Applicable only when the switch *ERP to ER/E C to ERP (BIB): Activate Assignment ID External* in the view V_EC-PAO-CONSTANT is enabled.

Entity	Standard Fields				
Global Assignment	user-id	person-id-	start-date	planned-	Assign-
		external		end-date	ment ID
					External
					<p>i Note</p> <p>Applicable only when the switch <i>ERP to ER/EC to ERP (BIB): Activate Assignment ID External</i> in the view <i>V_EC-PAO-CONSTANT</i> is enabled.</p>

Entity	Standard Fields			
Job History	user-id	start-date	end-date	seq-number
				<p>i Note</p> <p>The standard field Sequence number is populated by default. If multiple records of job information entity for an user on a same day exist then sequence number will be incremented for each record.</p>

Entity	Standard Fields		
Email Info	person- Info.per- son-id-ex- ternal		
Phone Info	person- Info.per- son-id-ex- ternal		
Job Relationships	user-id	start-date	end-date
Addresses	person-id- external	start-date	end-date

Entity	Standard Fields			
Compensation Info	user-id	start-date	end-date	seq-number
				<p>i Note</p> <p>The standard field Sequence number is populated by default. If multiple records of job information entity for an user on a same day exist then sequence number will be incremented for each record.</p>

Entity	Standard Fields
	<p>This field is available only in the parent entity.</p> <p>This field is not supported for the corresponding child entities (Pay Component Recurring, Pay Component Non Recurring, Pay Component Non Recurring Off</p>

Entity	Standard Fields		
			Cy- cle).
Pay Component Recurring	user-id	start-date	end-date
Pay Component Non Recurring	user-id		
Pay Component Non Recurring Off Cycle	user-id		
Payment Information Details	Payment Information.Worker	toPaymentInformationDetailV3.external-Code	
Payment Information Detail USA	worker	PaymentInformationDetail.externalCode	
NationalizedCarImportTemplate	person-id-external		
GlobalImportTemplate	person-id-external	Start Date	End Date
Alternative Cost Distribution	usersY-sId		
Alternative Cost	usersY-sId		

Entity	Standard Fields			
Distribu- tion Items				
Termina- tion	user-id	person-id- external	Termina- tion Date	
Depend- ent Bio- graphical	user-id	person-id- external		
Depend- ent Per- sonal	person-id- external	start-date	end-date	
Depend- ent Ad- dress	person-id- external	start-date	end-date	
Depend- ent Na- tional id	person-id- external			
Depend- ent Global Info	person-id- external	start-date	end-date	
Person Relation- ship	person- Info.per- son-id-ex- ternal	related- person-id- external	start-date	end-date

Table 31: Standard Fields for Web Service-Based Entities

Employee Central Entity		Standard Fields				
User	status	userId	firstName	lastName	username	Assignment ID External
						i Note Applicable only when the switch <i>ERP to ER/EC to ERP (BIB): Activate Assignment ID External</i> in the view V_EC-PAO_CONSTANT is enabled.
PerPerson	userId	personIdExternal				
PerPersonal	startDate	personIdExternal	endDate			
EmpEmployment	userId	startDate	personIdExternal	originalStartDate	Assignment ID External	isRehire
					i Note Applicable only when the switch <i>ERP to ER/EC to ERP (BIB): Activate Assignment ID External</i> in the view V_EC-PAO_CONSTANT is enabled.	Set to <i>True</i> for the consecutive employments (except the first employment) in an international transfer scenario when the <i>Centralized Services</i> switch is activated in SuccessFactors Employee Central. <i>False</i> for all other cases.

Employee Central Entity

Standard Fields

EmpGlobalAssignment

userId

personIdExternal

startDate

plannedEndDate

Assignment ID External

i Note

Applicable only when the switch *ERP to ER/EC to ERP (BIB): Activate Assignment ID External* in the view V_EC-PAO_CONSTANT is enabled.

EmpJob

userId

startDate

seq-number

endDate

i Note

The standard field Sequence number is populated by default. If multiple records of job information entity for an user on a same day exist then sequence number will be incremented for each record.

PerEmail

personIdExternal

Employee Central Entity	Standard Fields			
PerPhone	personIdExternal			
EmpJobRelationships	userId	startDate	endDate	
PerAddress-DEFLT	personIdExternal	startDate	endDate	
EmpCompensation	userId	startDate	endDate	seq-number
				i Note The standard field Sequence number is populated by default. If multiple records of job information entity for an user on a same day exist then sequence number will be incremented for each record.
EmpPayCompRecurring	userId	startDate	endDate	
EmpPayCompNonRecurring	userId			
PaymentInformationDetailV3	PaymentInformationV3_worker	externalCode		
PaymentInformationDetailV3USA	PaymentInformationDetailV3_external-Code	PaymentInformationV3_worker		

Employee Central Entity	Standard Fields			
PerNationalId	personIdExternal			
EmpCostDistribution	usersSysId			
EmpCostDistributionItem	EmpCostDistribution_usersSysId			
Job Relationship	userId	startDate	endDate	
Non Recurring Offcycle	userId	payDate		
Payment Information	worker			
Termination	userId	personIdExternal	Termination Date	
Dependent Biographical	userId	personIdExternal		
Dependent Personal	personIdExternal	startDate	endDate	
Dependent Address	personIdExternal	startDate	endDate	
Dependent National id	personIdExternal			
Person Relationship	personIdExternal	relatedPersonIdExternal	startDate	endDate
Global Info India	personIdExternal	startDate	endDate	

Note

If any new or existing fields in Employee Central are declared as standard fields in Business Integration Builder, then you need to update the metadata by running the metadata reports.

Related Information

[Importing Metadata from Employee Central \[page 70\]](#)

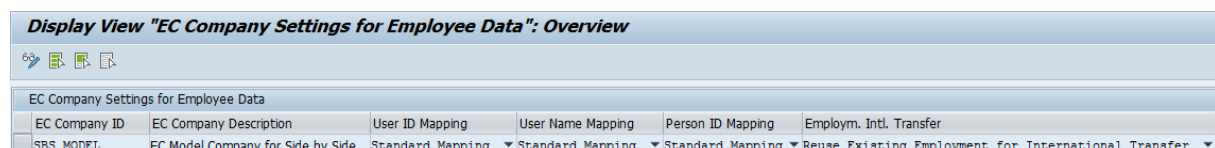
4.6.2 Non-Configurable (Standard) Mapping of SAP ERP HCM Fields to Employee Central Fields

Standard mappings aren't available for configuration in Customizing, independent of which communication channel you use. They are automatically added to the mappings you define.

Mappings defined for Employee Central company

Employee Central Field	SAP ERP HCM Field
user-id	Personnel number (PERNR) of the employee
username	Personnel number (PERNR) of the employee
person-id-external	Central person (CP) of the employee

The mappings listed above are used if you select *Standard Mapping* in the *User ID Mapping*, *User Name Mapping*, and *Person ID Mapping* columns in the *Define Employee Data Settings for Employee Central Company* Customizing activity as shown here:



Display View "EC Company Settings for Employee Data": Overview					
EC Company Settings for Employee Data					
EC Company ID	EC Company Description	User ID Mapping	User Name Mapping	Person ID Mapping	Empl. Intl. Transfer
SBS_MODEL	EC Model Company for Side by Side	Standard Mapping	Standard Mapping	Standard Mapping	Reuse Existing Employment for International Transfer

Figure 71: User ID, User Name, and Person ID Mapping for Employee Central Company

Mappings defined for Basic Import / User entity

Employee Central Field	SAP ERP HCM Field
status	ERP always sends the value as <i>Active</i> if the <i>ERP to EC: Set inactive User Status Using SAP Cloud Platform Integration</i> switch is disabled or not used. (Later on the HRIS synchronization process in Employee Central set the status from the event reason of the relevant Job Info record.). When switch <i>ERP to EC: Set inactive User Status Using SAP Cloud Platform Integration</i> is set, it sends the value as per the current employee status.

Employee Central Field	SAP ERP HCM Field
user-id	See Mappings defined for Employee Central company above
firstName	First Name (VORNA) field in the Personal Data (0002) info-type
lastName	Last Name (NACHN) field in the Personal Data (0002) info-type
middle-name	Middle Name (MIDNM) field in the Personal Data (0002) info-type
manager-id	Taken from the Supervisor field in Job History, which is mapped using the Define Relationship Types for Managers and Employee-Related Org. Mgmt Data Customizing activity (view V_ECPAO_MNGRTYPE)
username	See Mappings defined for Employee Central company above

i Note

You can't configure the [Basic Import / User](#) entity in the SAP ERP HCM system. All fields of this entity use a standard mapping, which you can't change.

Mappings defined for Biographical Information entity

Employee Central Field	SAP ERP HCM Field
user-id	See Mappings defined for Employee Central company above
person-id-external	See Mappings defined for Employee Central company above

Mappings defined for Personal Information entity

Employee Central Field	SAP ERP HCM Field
start-date	Start Date (BEGDA) field of the Personal Data (0002) info-type
personInfo.person-id-external	See Mappings defined for Employee Central company above

Mappings defined for Employment Details entity

Employee Central Field	SAP ERP HCM Field
<i>user-id</i>	See Mappings defined for Employee Central company above
<i>start-date</i>	Max (Cutt-off Date, First Hire Date) <div> <p>i Note</p> <ul style="list-style-type: none"> Start date field is a standard field and is a configurable field for WS_3 and CSV_3 entity. But from the ERP to EC direction, start date field does not consider field mapping. By default, data extraction process logic is triggered. The start date field is automatically derived from the first record of the job information entity and the field does not carry the value sent from ERP. Therefore, whatever value the infoporter tool sends will be overwritten in Employee Central. </div>
<i>person-id-external</i>	See Mappings defined for Employee Central company above
<i>originalStartDate</i>	First hire date of the employee <div> <p>i Note</p> <p>In SAP ERP HCM, you can define how the hire date is determined using the Rule for Determining Entry Date (ENTRY) feature. The employee's hire date provided by this feature is replicated to Employee Central.</p> </div>
<i>assignmentExternalId</i>	Personnel number (PERNR) of the employee <div> <p>i Note</p> <p>Assignment ID external field will be extracted based on the switch ERP to EC/EC to ERP (BIB): Activate Assignment ID External in the view <code>V_ECPAO_CONSTANT</code>. You can enable or disable the switch using the Maintain the Constant Values customizing activity. If the switch is activated then the assignment ID external field will be extracted as PERNR.</p> </div>
<i>isRehire</i>	Set to True for the consecutive employments (except the first employment) in an international transfer scenario when the Centralized Services switch is activated in SuccessFactors Employee Central. False for all other cases.

i Note

Original start date is now available for mapping in the view cluster (VC_ECPAO_MAP). If these fields are mapped at the view cluster level, then the mapping would be considered from the view cluster level. If you have not defined at the view cluster level then the standard mapping would be considered. Derived Dates in Employee central, even if it is mapped and extracted through BIB mapping, would be overwritten in EC when the Centralized Service Layer switch is ON. For more information refer to *Job Information topic from the Data Object Tables in Employee Central guide*.

Mappings defined for Global Assignment entity

Employee Central Field	SAP ERP HCM Field
user-id	See Mappings defined for Employee Central company above
person-id-external	See Mappings defined for Employee Central company above
start-date	Hire date of the employee
planned-end-date	End Date of Assignment (TERMINATION_DATE) field of the Details on Global Assignment (0710) infotype

Mappings defined for Job History entity

Employee Central Field	SAP ERP HCM Field
start-date	Start Date (BEGDA) field of the Actions (0000) infotype
user-id	See Mappings defined for Employee Central company above
seq-number	Filled with numbers 1..n for subsequent records with same start date (multiple changes per day). For single records on a day the seqnumber remains as 1.

Mappings defined for Email Information and Phone Information entities

Employee Central Field	SAP ERP HCM Field
personInfo.person-id-external	See Mappings defined for Employee Central company above

Mappings defined for Job Relationships entity

Employee Central Field	SAP ERP HCM Field
<i>user-id</i>	See Mappings defined for Employee Central company above
<i>start-date</i>	<i>Start Date</i> (BEGDA) field of the <i>Actions</i> (0000) infotype

Mappings defined for Addresses entity

Employee Central Field	SAP ERP HCM Field
<i>person-id-external</i>	See Mappings defined for Employee Central company above

Mappings defined for Compensation entity

Employee Central Field	SAP ERP HCM Field
<i>user-id</i>	See Mappings defined for Employee Central company above
<i>seq-number</i>	Filled with numbers 1..n for subsequent records with same start date (multiple changes per day). For single records on a day the seqnumber remains as 1. <div>i Note<p>This field is available only in the parent entity. This field is not supported for the corresponding child entites (Pay Component Recurring, Pay Component Non Recurring, Pay Component Non Recurring Off Cycle).</p></div>

Mappings defined for Pay Component Recurring and Pay Component Non Recurring entities

Employee Central Field	SAP ERP HCM Field
<i>user-id</i>	See Mappings defined for Employee Central company above

Mappings defined for Payment Information-Details entity

Employee Central Field	SAP ERP HCM Field
Payment Information.worker	See Mappings defined for Employee Central company above (Payment Information.worker corresponds to user-id)

If the payment currency and standard currency are different in terms of decimal values, then the amount is converted as per the decimal places of the payment currency. If the payment currency is not maintained, then the amount is converted as per the decimal place value of the standard currency. Eg: When EUR4 is the payment currency having 4 decimals and EUR is the standard currency having 2 decimals, then during the migration the amount value is converted to have 4 decimals and transferred to Employee Central.

Mappings defined for National ID Card entity

Employee Central Field	CM Field
person-id-external	See Mappings defined for Employee Central company above

You can now replicate the temporary national ID via value mapping entities. You can create new country specific value mapping entities for the temporary national ID with value mapping type as "Standard Mapping".

Mappings defined for Global Information entity

Employee Central Field	SAP ERP HCM Field
person-id-external	See Mappings defined for Employee Central company above
Event Date	Start Date (BEGDA) field of the Personal Data (0002) info-type
End Date	End Date (ENDDA) field of the Personal Data (0002) info-type

Mappings defined for Termination entity

Employee Central Field	SAP ERP HCM Field
user-id	See Mappings defined for Employee Central company above

Employee Central Field	SAP ERP HCM Field
person-id-external	See Mappings defined for Employee Central company above
Termination Date	Termination date of the employee

Mappings defined for Dependent Biographical, Dependent Personal, Dependent Address, Dependent National ID, and Dependent Global Info

Employee Central Field	SAP ERP HCM Field
user-id	See Mappings defined for Employee Central company above
person-id-external	See Mappings defined for Employee Central company above
start date	<i>Start Date</i> (BEGDA) field of the <i>Personal Data</i> (0002) info-type
end date	<i>End Date</i> (ENDDA) field of the <i>Personal Data</i> (0002) infotype

Related Information

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Your Employee Central Instance \[page 68\]](#)

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Defining Employee Data-Related Settings for Your Employee Central Company \[page 112\]](#)

[Define Types of Manager Relationships \[page 123\]](#)

<https://help.sap.com/viewer/213711b5e5a847e2a20dfdd465346252/latest/en-US/66aaa0bd5de04c858a42b16fb3018dad.html>

4.6.3 Preconfigured Mapping of SAP ERP HCM Fields to Employee Central Fields

The following mappings of SAP ERP HCM entities and Employee Central entities are preconfigured. This means that the mapping is defined by SAP in the *Preconfigured Mapping* tables (ECPAO_PREMAPPING, ECPAO_PREMAP_TT).

Table 32: Preconfigured Mapping

Employee Central Entity	SAP ERP HCM Entity
Cost Center in Job Information	Concatenation of <i>Controlling Area</i> (KOKRS) and <i>Cost Center</i> (KOSTL) fields from <i>Organizational Assignment</i> (0001) infotype
Source of Record* in Employment Information	<i>Logical System</i> (LOGSYS) field in <i>Clients</i> (T000) table
Country Code**, for example, in National ID entity	Country codes from <i>Countries</i> (T005) table

* You use the *Source of Record* field to define which is the leading system for the employee's data. If an employee's data is mastered in SAP ERP HCM, the *Source of Record* field should indicate the corresponding SAP ERP HCM system. Also make sure that you have created the picklist for the *Source of Record* field in the Employee Central system.

Source of Record field is now used for license auditing. For more information see *User Types in Employee Central/Classifying Users in Employee Central for License Compliance* topics in the Related Information section. With this field, you will be able to classify your users which are still mastered in an ERP HCM system, as functional vs. full user.

If a country that used to be mastered in SAP ERP HCM is now mastered in Employee Central, you need to change the *Source of Record* field for all employments assigned to this country.

❖ Example

Let's say, the data of all your employees in France is mastered in SAP ERP HCM and replicated to Employee Central. So the *Source of Record* field of all employments assigned to France contains the logical system ID of the corresponding SAP ERP HCM system, indicating that this data is mastered in SAP ERP HCM. Now you switch the system of record for employees in France so that their data is mastered in Employee Central. Therefore, the entry in the *Source of Record* field of all employments assigned to France needs to be changed so that it now indicates Employee Central as the master system. For employees who have employments in several countries, only the employment assigned to France needs to be changed. The other employments should stay as they are. After having changed the *Source of Record* field, you stop replicating the data of your employees in France from SAP ERP HCM to Employee Central.

To do so, download the *Employment Information* data for all affected employments from SAP ERP HCM as a CSV file and upload it to Employee Central. Make sure that you have filled the *Source of Record* field with the entry *EC* from the external code of the *SourceOfRecord* picklist and the *user_id* field with the correct user IDs of the affected employees. If you want to leave the other fields empty, use the NO_OVERWRITE notation. For more information, see the FAQs: *Importing Data* section in the *Implementing Employee Central Core* implementation guide. Find the most current version of this guide in SAP Help Portal at http://help.sap.com/hr_ec.

** This is used, for example, for mapping the mandatory *Card Type* field from the *National ID* entity in Employee Central to the *Personnel ID Number* (PERID) field from the *Personal Data* (0002) infotype in SAP ERP HCM.

Since there is no card type information provided by the SAP ERP HCM system, the `TM_USMIGRATION` value mapping entity is used for the `PERID` field, which maps the country-specific Employee Central card types to country codes from the *Countries* (`T005`) table in the SAP ERP HCM system.

Display View "Value Mapping Details (Country-Specific)": Overview

EC Company ID

TM_USMIGRATION

Value Mapping Entity

NatioanalIDCardType

Value Mapping Details (Country-Specific)

Seq. No.	ISO code	ERP Key	EC Key
1	US	USA	ssn
2	IN	IND	PAN
3	CA	CAN	sin
4	MX	MEX	PR
5	KR	KOR	RGN
6	VE	VEN	RIF
7	AR	ARG	DNI
8	AU	AUS	TFN
9	BR	BRA	RG
10	ES	ESP	DNI

Figure 72: TM_USMIGRATION Value Mapping Entity

You can also use this preconfigured mapping for other entities where it suits your requirements.

Related Information

[Defining the Primary Field Mapping for Employee Data \[page 144\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Replicating Employee Data to Custom Entities in Employee Central \[page 201\]](#)

[Cloning Transformation Templates \[page 157\]](#)

[Defining Custom Employee Central Entities for Employee Data Entities \[page 115\]](#)

[Classifying Users in Employee Central for License Compliance](#)

[User Types in Employee Central](#)

4.7 Extracting Employee Data with Additional Events Before Earliest Transfer Date

Read about the best practices that you should follow when you extract the employee data with additional events before the earliest transfer date.

Prerequisites

Activate the switch (*ERP to EC: Additional Event Records*) for additional event in the view `V_ECPAO_CONSTANT` using the *Maintain the Constant Values* Customizing activity.

i Note

When you are setting the value **x** for the constant *ERP to EC: Additional Event Records* in the `ECPAO_CONSTANTS` table, you should not set the switch for *ERP to EC: Filter based on Employment status* for filtering the employees based on the employment status. For more information refer to *Migrating Data from SAP ERP HCM to Employee Central Using Infoporter* guide.

Context

The employee extraction report extracts (when *ERP to EC: Additional Event Records* switch is disabled) the employee data from or after the earliest transfer date that you have defined at the transformation template group. Hence the records are extracted with the earliest transfer date or after the earliest transfer date with pseudo hire date as the first event reason. During this process:

- Employee records before the earliest transfer date are not extracted which might lead to different hire date in Employee Central (Employment information). Hire date in Employee Central is derived from the first job information record. Hence the start date of the pseudo hire event reason might be considered as the actual hire date in the Employee Central (Employment information) system.
- Terminated employees and the employees on long-term absences are not migrated before cut off date.

To overcome these problems, as a best practice, it is recommended to use the additional events feature. Through this additional events feature, employee extraction report migrate the records (Job Information and Personnel Information) before the earliest transfer date with an additional data along with the records after the earliest transfer date. For such additional records of job information created before the cut-off date you have an option to migrate a constant or an actual database value based on the validity period.

i Note

Migration of additional events is not supported for global information template.

This is valid only for migration scenario and not applicable for the integration of data to Employee Central (side by side).

If the switch is not activated, employee data migrates the data as shown here:



Figure 73: Employee Data Migration Without "ERP to EC: Additional Event Records" Switch Being Set

By enabling the switch (*ERP to EC: Additional Event Records*) in the `V_ECPAO_CONSTANT` view:

- Employee records before the earliest transfer date would be migrated (Job Information and Personal Information) with the configured additional events maintained in the `V_ECPAO_PLHD_ACT` view. Here you have an option to maintain the constant value (even an empty constant value can be set and migrated) or an actual database value for the Employee Central field available in the additional event records through the view `V_ECPAO_PLHD_CON`. If no entries are maintained in this view, then system will copy the actual record values (after the earliest transfer date) for the additional event records.
- Employee would have correct hire date in Employee Central.
- Terminated employees and the employees on long term absences can be migrated.

i Note

Transformation Template Group cutover date should be same as the middleware full transformation start date.

Procedure

1. Configure additional event types.

Country Group- ing	Action Type	Reason for Ac- tion	Event Reason	Disable Cut Off Split	Termination Start Date
	01		PSEUDO_HIRE		
	02		DATAREORG		
	10		TEROTH		
	12		REHREH		
	16		DATAACHG		

Country Grouping	Action Type	Reason for Action	Event Reason	Disable Cut Off Split	Termination Start Date
01	01		PSEUDO_HIRE		
01	02		DATAAREORG		
01	10	01	TEROTH		
01	10	02	TEROTH	X	
01	10	03	TEROTH		01.01.2014
01	12		REHREH		
01	16		DATAACHG		
01	82		ADDGA		
01	-		ENDGA		

Note

Action Type depends on Event Reason.

- Go to the [Define Additional Event Types Configuration](#) Customizing activity (view V_ECPAO_PLHD_ACT) and maintain the action type with event reasons to create the additional event types before the earliest transfer date and if there is a record with the start date as same as the earliest transfer date.
- Choose the Transformation Template Group, for which you want to maintain the additional event types.
- Choose the country for which you want to maintain the action types and the reason for action.
 - In this view, you can maintain the set of action types with or without the country grouping. If you do not provide any country grouping, then the action types would be applicable for all the available countries for which the configuration is not maintained in this view

Example

- Personnel Number: 1 – Belongs to US
- Personnel Number: 2 – Belongs to DE
- Personnel Number: 3 – Belongs to IN

Country Grouping	Action Type	Reason for Action	Event Reason	Disable Cut Off Split	Termination Start Date
	01		PSEUDO_HIRE		
	10		TEROTH		

Country Grouping	Action Type	Reason for Action	Event Reason	Disable Cut Off Split	Termination Start Date
	12		REHREH		
01	01		PSEUDO_HIRE		
01	10		TEROTH		
01	12		REHREH		

If the above mentioned configuration is available, then for Personnel number 1 & 3 system will consider the below configuration for the processing. Because there is no country specific configurations available for these country groupings.

Country Grouping	Action Type	Reason for Action	Event Reason	Disable Cut Off Split	Termination Start Date
	01		PSEUDO_HIRE		
	10		TEROTH		
	12		REHREH		

For Personnel number 2 system will consider the below configuration for processing. Because there is Germany specific configurations available for this country grouping.

Country Grouping	Action Type	Reason for Action	Event Reason	Disable Cut Off Split	Termination Start Date
01	01		PSEUDO_HIRE		
01	10		TEROTH		
01	12		REHREH		

- Combination of different country grouping action types for a single PERNR is not allowed.

❖ Example

As per the configuration mentioned in the above table, for the country Germany a set of action types are created with their country grouping as same as the action types with blank country grouping. So in this case, German employee will only consider the set of action types, which is configured for their corresponding country grouping. It won't consider the set of action types with blank country grouping. Same rule is applicable for the other countries where as per the configuration mentioned in the above table, blank country groupings action types will be considered ignoring the set of action types with Germany country grouping.

- d. Choose the action type.

In general maintain the action type like Hire, Termination, and Re-Hire in the view for that particular template group. If the termination action type is not maintained, then a warning message would be displayed for the terminated employees. In this case, this employee would be ignored during the employee migration. If no action type is maintained in this view, then an error would be displayed during the employee extraction process.

i Note

All the status-changing actions have to be defined to ensure correct status changes are extracted.

- e. Choose the reason for the action type.

If the reason for action is left blank, then all the combination of that particular action type would be considered for additional event migration.

❖ Example

Country Group- ing	Action Type	Reason for Ac- tion	Event Reason	Disable Cut Off Split	Termination Start Date
	01		PSEUDO_HIRE		
	10		TEROTH		
	12		REHREH		

In this case the above mentioned action types will consider all the combination of reason for action for migration.

Country Group- ing	Action Type	Reason for Ac- tion	Event Reason	Disable Cut Off Split	Termination Start Date
	01	01	PSEUDO_HIRE		
	10	01	TEROTH		
	12	S1	REHREH		

In this case the above mentioned action types will consider only the combination of reason for action maintained in the configuration view for the migration.

- f. Enter the event reason.

You need to maintain the corresponding Employee Central event reason based upon the combination of [Action Type](#) and [Reason for Action](#).

- g. [Disable Cut Off Split](#) option is applicable for the Action Type whose employment status is not active. If the option is not enabled, an additional record is created as off the earliest transfer date. If the option [Disable Cut Off Split](#) is enabled, an additional record as off earliest transfer date won't be created. Instead earlier record will be extended to the actual end date.
- h. Maintain the [Termination Start Date](#) if the terminated employees are to be considered from the termination start date. This is valid only if the Termination Action is the last action performed for an employee.

Note

Termination start date should be always less than the earliest transfer date. Termination start date is not applicable for the Global Transfer - REUSE existing employment (if more than one contract is present).

2. Configure additional event data

Country Grouping	Transformation Template	EC Field ID	EC Field ID Description	Value Type	Constant
	ERP_JO-BINFO_WS	86	<i>Supervisor</i>	<i>Constant Value</i>	NO_MANAGER
	ERP_JO-BINFO_WS	39	<i>Department</i>	<i>ERP Database Value</i>	
01	ERP_JO-BINFO_WS	86	<i>Supervisor</i>	<i>Constant Value</i>	NO_MANAGER
01	ERP_JO-BINFO_WS	41	<i>Division</i>	<i>ERP Database Value</i>	

- Go to the [Define Additional Event Data Configuration](#) Customizing activity (view V_ECPAO_PLHD_CON) and maintain the additional event infotype data. Here you can set the constant value or database value for an Employee Central field available in the Job information or the Personal information.
- Choose the Transformation Template Group, for which you want to maintain the additional event infotype data.
- Choose the country for which you want to maintain the additional event infotype data.
 - As default Employee Central field data configuration with blank country grouping would be considered if country- specific Employee Central field configuration is not maintained for additional events.

❖ Example

- Personnel Number: 1 – Belongs to US
- Personnel Number: 2 – Belongs to DE
- Personnel Number: 3 – Belongs to IN

Country Grouping	Transformation Template	EC Field ID	EC Field ID Desc	Value Type	Constant
	ERP_JO-BINFO_WS	86	<i>Supervisor</i>	<i>Constant Value</i>	NO_MANAGER
	ERP_JO-BINFO_WS	39	<i>Department</i>	<i>ERP Database Value</i>	

Country Grouping	Transformation Template	EC Field ID	EC Field ID Desc	Value Type	Constant
01	ERP_JO-BINFO_WS	86	<i>Supervisor</i>	<i>Constant Value</i>	NO_MANAGER
01	ERP_JO-BINFO_WS	41	<i>Division</i>	<i>ERP Database Value</i>	

If the above mentioned configuration is available, then for Personnel number 1 & 3 system will consider the below configuration for the processing. Because there is no country specific configurations available for these country groupings.

Country Grouping	Transformation Template	EC Field ID	EC Field ID Desc	Value Type	Constant
	ERP_JO-BINFO_WS	86	<i>Supervisor</i>	<i>Constant Value</i>	NO_MANAGER
	ERP_JO-BINFO_WS	39	<i>Department</i>	<i>ERP Database Value</i>	

For Personnel number 2 system will consider the below configuration for processing. Because there is Germany specific configurations available for this country grouping.

Country Grouping	Transformation Template	EC Field ID	EC Field ID Desc	Value Type	Constant
01	ERP_JO-BINFO_WS	86	<i>Supervisor</i>	<i>Constant Value</i>	NO_MANAGER
01	ERP_JO-BINFO_WS	41	<i>Division</i>	<i>ERP Database Value</i>	

- Combination of different country grouping Employee Central field configuration for a single employee is not allowed.
- d. Choose the Transformation Template (Job information & Personal information). Here you need to select the transformation template for which the data should be set as *Constant Value* or *ERP Database Value*.
- i Note**

Only active transformation template would be displayed in the search help.
- e. Choose the Employee Central field ID from the above mentioned transformation template. Once the Employee Central field ID is selected, corresponding description is populated in the Employee Central field description field.
- f. Choose the Value Type from the drop down box. From the value type, you can maintain whether the selected Employee Central field should hold a constant value or a database value.

Constant Value Constant value type can be used for preconfigured mapping and infotype mapping Employee Central fields available in the Job information and Personnel information template. For constant value type, Constant column should be maintained. Even a blank value can be considered as a Constant value.

ERP Database Value Database value type can be used only for infotype mapping Employee Central fields, which is part of a valid Personal Administration infotype. Constant column should not be maintained for this infotype. This database value cannot be used for the infotype mapping fields whose value depend on the another field.

i Note

BAdi mapping fields are not supported for both value types.

Configured Employee Central field values which are migrated through the above mentioned value types should be available in Employee Central. If the values are not maintained in Employee Central, then during the migration process, an error message would be generated during the data transfer process (CSV upload or middleware).

- g. Enter a value if the value type is set as **Constant Value**. Even a blank value can be considered as a Constant value.

i Note

This field is not supported for the value type **ERP Database Value**.

If there is no configuration data maintained in this view, then the additional event records will have the same data as the first record after the earliest transfer date. To migrate an empty data for a particular Employee Central field, configure the Employee Central field as constant value type with a blank constant value.

i Note

- When an employee is having multiple assignments like Global Transfer, Global Assignments, Concurrent Employment and based on the additional event termination start date condition (V_ECPAO_PLHD_ACT), employment 1 is filtered. All the employee data is not extracted but only User, Biographical and Personnel info entity data based on the employment 1 are extracted.
- Termination start date limit is not applicable for the users whose home assignment is not considered. If this is considered, then the replication process will fail. This is because we would not be able to migrate the data to Employee Central without home assignment employment information details. This is applicable only for Global Assignment scenario.
- Additional event records via conversion rules are not supported.
- Termination start date limit and disable cut off split is not supported for REUSE Employment scenarios.
- On the earliest transfer date if the employee is not active, then the system will try to extract the data of Position ID, Department, Division, Business Unit, Job Code, and Cost Center fields as available in the ERP system during the inactive status of that earliest transfer period. Hence to get the active record data, you need to modify the earlier transfer date through a BAdi process. You can also maintain the default position ID in Employee Central.

- During an international transfer once a PERNR is terminated from the first country a new second PERNR is created in the second country. Now if the employee is transferred back to the old country a new third PERNR should be created. In case the first PERNR is re-hired in the first country due to the second international transfer, then this use case is not supported currently. We are also not supporting the following scenarios:

- Two different combinations of contracts for an employee through Re-hire concept.

❖ Example

- There is a global assignment from PERNR 1 to PERNR 2 (host PERNR is terminated when global assignment starts) followed by an international transfer from PERNR 2 to PERNR 1.
- There is an international transfer from PERNR 1 to PERNR 2 followed by an international transfer back from PERNR 2 to PERNR 1.
- If the switch (*ERP to EC: Additional Event Records*) is in-active then during the normal extraction process, if there are more than two contracts involving 2 PERNRs.
- If the switch (*ERP to EC: Additional Event Records*) is active then during the extraction process if there are more than two contracts involving 2 PERNRs.

Example

Scenario 1: Additional Event on Hire

Earliest Transfer Date 01.01.2017

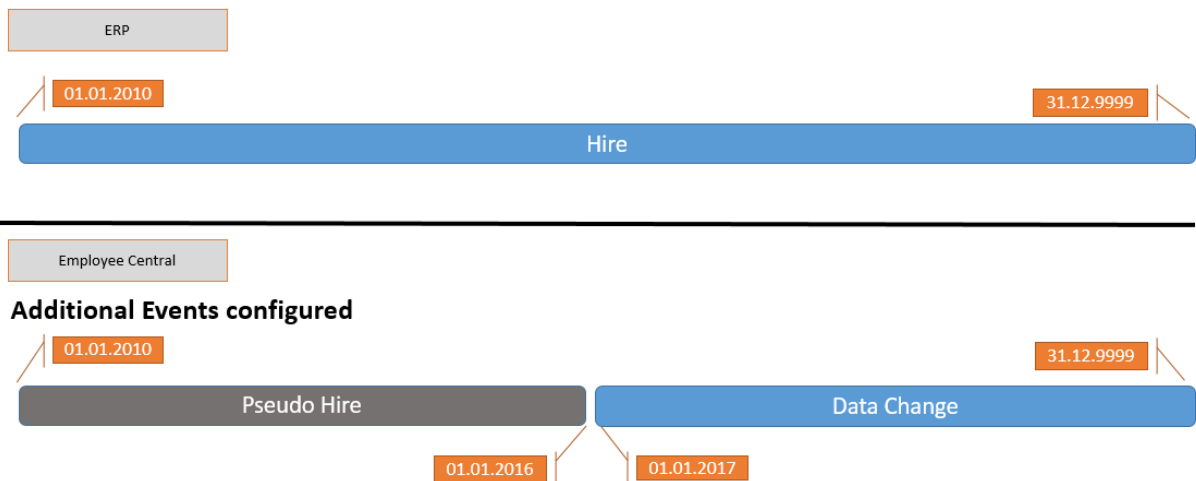


Figure 74: Additional Event on Hire

Scenario 2: Additional Event on Termination

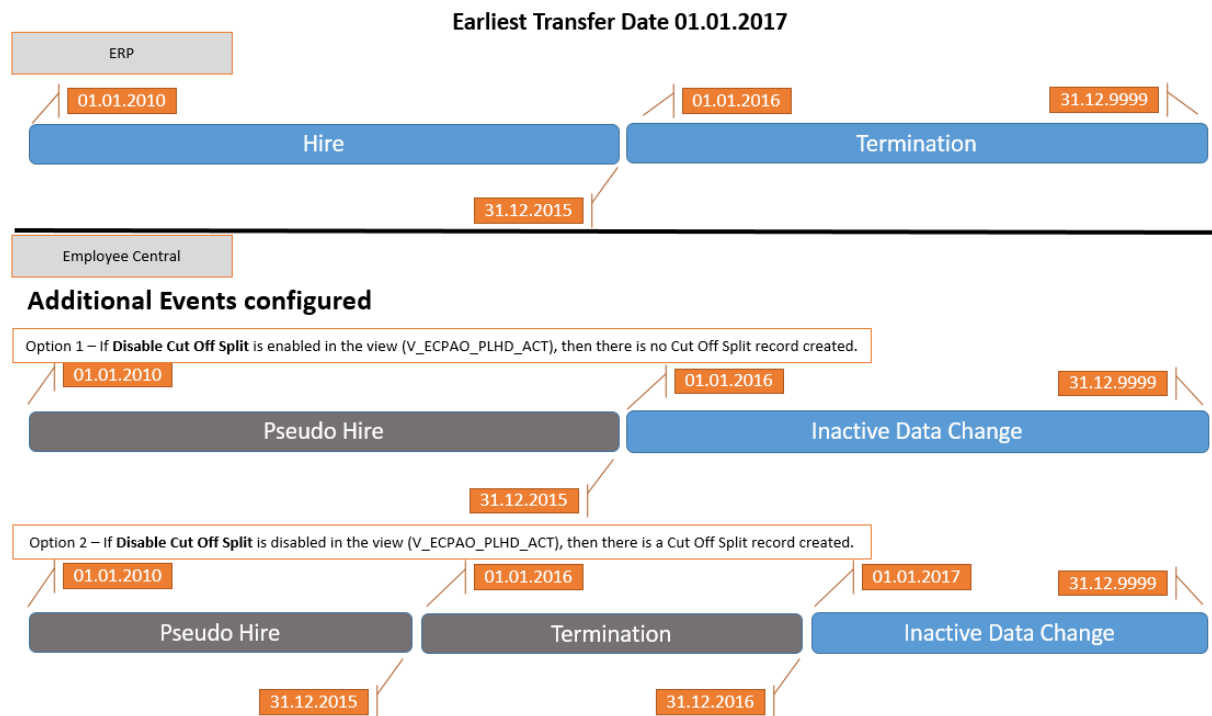


Figure 75: Additional Event on Termination

Note

If you are performing the migration from SAP ERP HCM to Employee Central and replication from Employee Central to SAP ERP HCM in a full cycle, then SAP would recommend you to use the Option 2. If only migration of data from SAP ERP HCM to Employee Central is performed, then you can use Option 1 or 2.

Scenario 3: Additional Event on Re-Hire

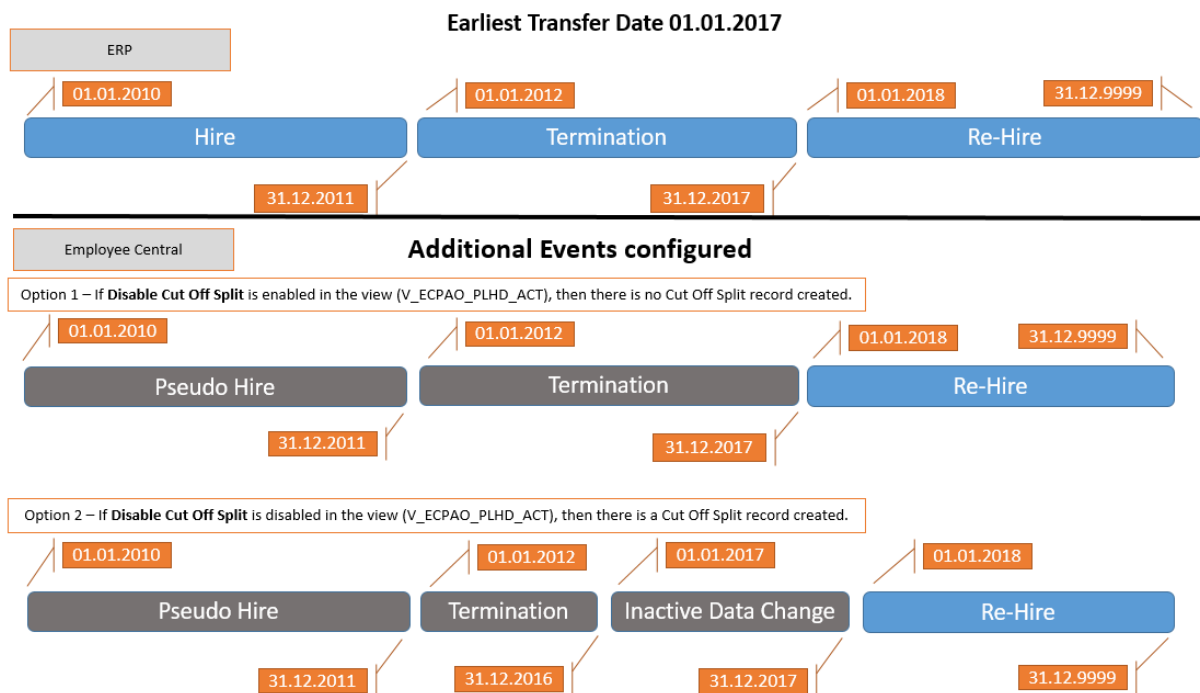


Figure 76: Additional Event on Re-Hire

Scenario 4: Additional Event on Leave of Absence

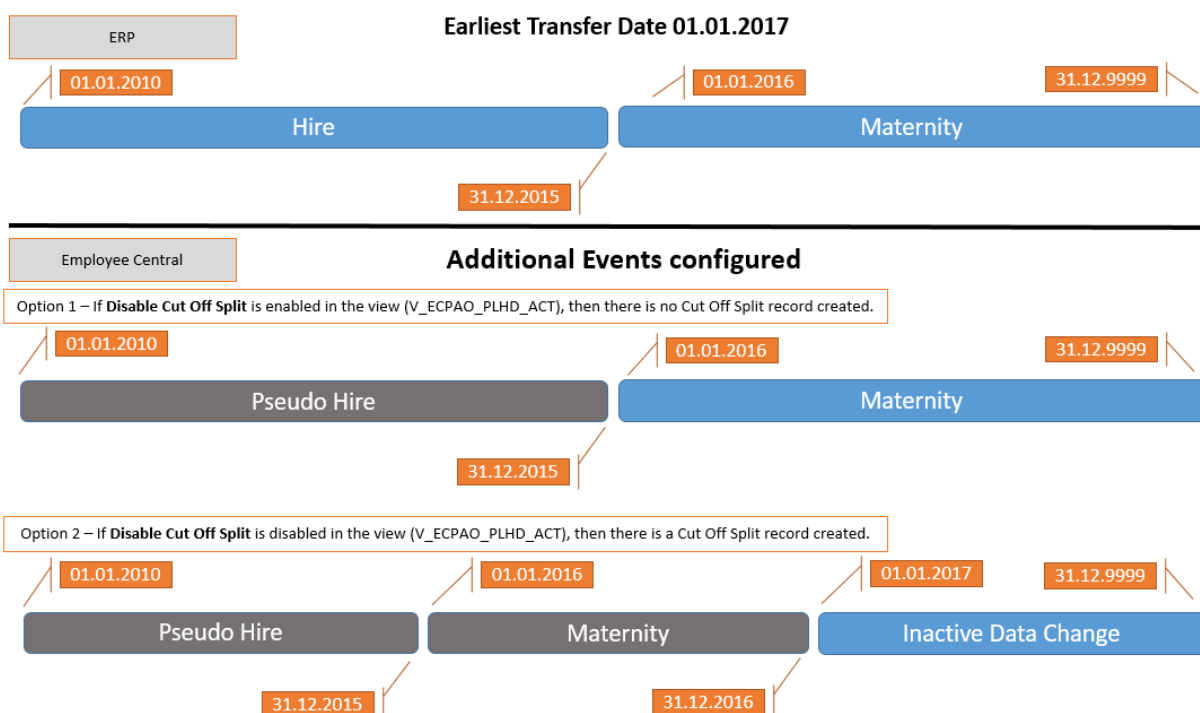


Figure 77: Additional Event on Leave of Absence

i Note

If you are performing the migration from SAP ERP HCM to Employee Central and replication from Employee Central to SAP ERP HCM in a full cycle, then SAP would recommend you to use the Option

2. If only migration of data from SAP ERP HCM to Employee Central is performed, then you can use Option 1 or 2.

Scenario 5: Additional Event on Concurrent Employment

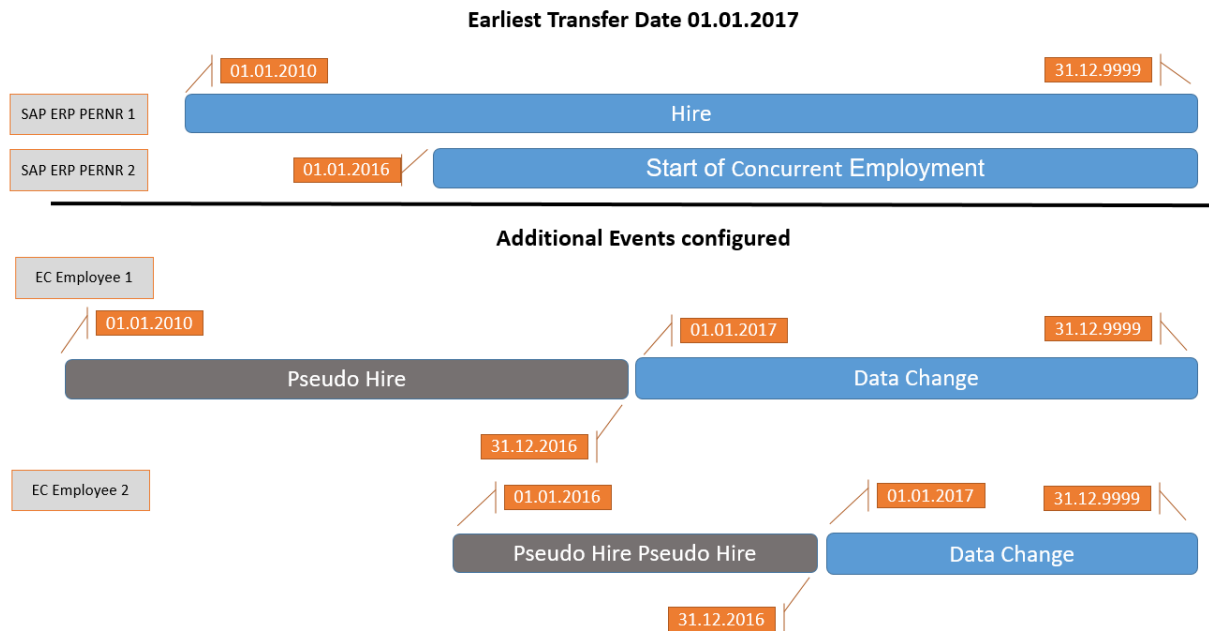


Figure 78: Additional Event on Concurrent Employment

Scenario 6: Additional Event on Global Assignment

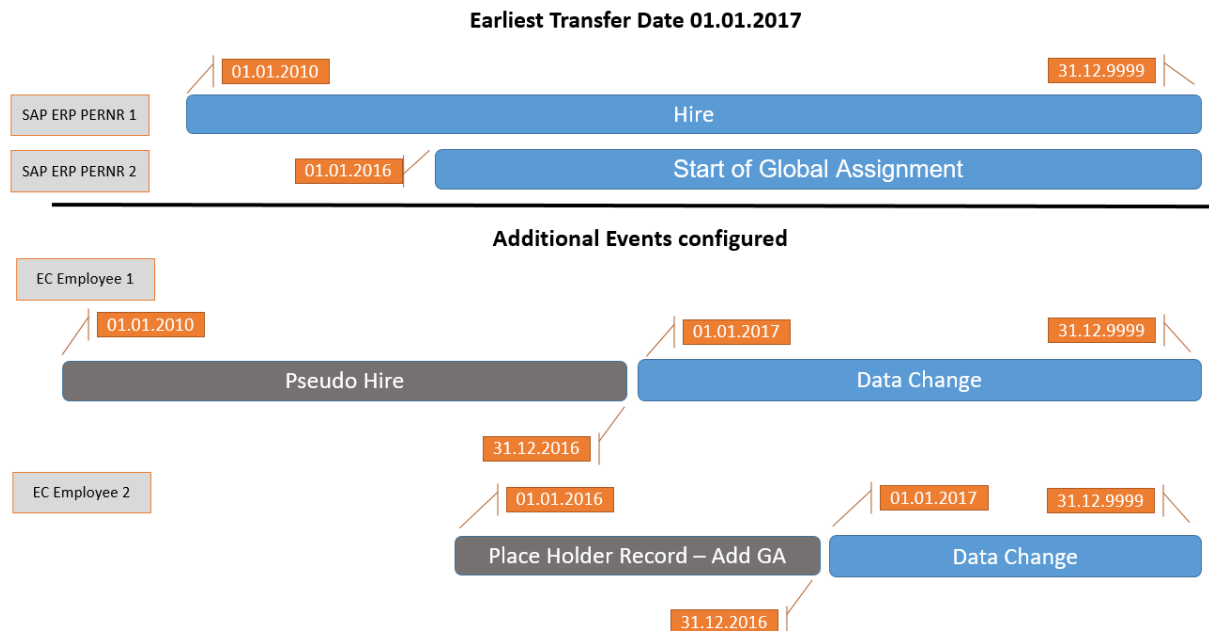


Figure 79: Additional Event on Global Assignment

Scenario 7: Additional Event on International Transfer

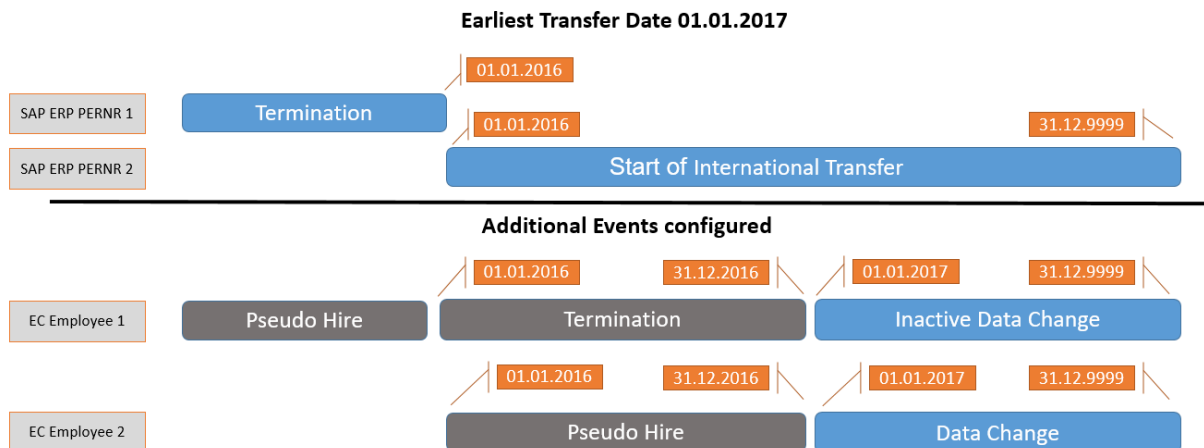


Figure 80: Additional Event on International Transfer - Non Glue Approach

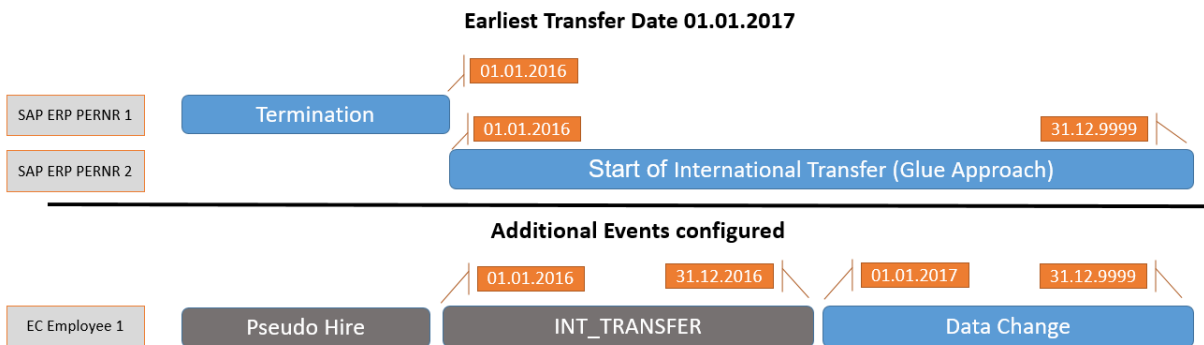


Figure 81: Additional Event on International Transfer - Glue Approach

Task overview: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)
[Communication Channels for Employee Data Replication \[page 58\]](#)
[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)
[Steps in the SAP ERP HCM System \[page 63\]](#)
[Extensibility of the Integration \[page 211\]](#)
[Data Replication and Mapping Information \[page 212\]](#)
[Special Use Cases in Data Replication to Employee Central \[page 250\]](#)
[Creating Event Reasons in Employee Central \[page 18\]](#)

4.7.1 Recommended Configurations while Using Additional Events

Here you can read about the recommended configurations that you can use to use the additional events feature.

- If you are performing the migration from SAP ERP HCM to Employee Central and replication from Employee Central to SAP ERP HCM in a full cycle, then we would recommend you to disable (Option 2) the *Disable Cut Off Split* option in the view `V_ECPAO_PLHD_ACT`. If only migration of data from SAP ERP HCM to Employee Central is performed, then you can either enable (Option 1) or disable (Option 2) the *Disable Cut Off Split* option in the view `V_ECPAO_PLHD_ACT`.
- Action types mentioned in the view `V_ECPAO_PLHD_ACT` will be considered only for the records, which are migrated before the earliest transfer date and if there is a record in SAP ERP HCM with the start date as same as the earliest transfer date, then the action types mentioned in the same view would be considered for that record.
- SAP ERP HCM database value type in the view `V_ECPAO_PLHD_CON` can be used only for the Employee Central fields, which are part of the Personnel Administration infotypes.
- SAP ERP HCM database value type can be used only for the direct field mapping field value.
- Transformation template group cutover date should be same as the middleware full transformation start date.

4.8 Special Use Cases in Data Replication to Employee Central

Take a look at special use cases that can occur during data replication to Employee Central.

Parent topic: [Replicating Employee Data from SAP ERP HCM to Employee Central \[page 50\]](#)

Related Information

[For Which Employee Data-Related Employee Central Entities Can I Use Data Replication? \[page 51\]](#)

[Communication Channels for Employee Data Replication \[page 58\]](#)

[How the Earliest Transfer Date Influences Effective-Dated and Non-Effective Dated Templates \[page 61\]](#)

[Steps in the SAP ERP HCM System \[page 63\]](#)

[Extensibility of the Integration \[page 211\]](#)

[Data Replication and Mapping Information \[page 212\]](#)

[Extracting Employee Data with Additional Events Before Earliest Transfer Date \[page 237\]](#)

4.8.1 Supporting the Migration of Long Term Absence Records

Learn how to configure the migration of the long term absence leave record.

Prerequisites

You will have to create two new event reasons of event type DATACHG and status paid or un-paid leave in Employee Central.

❖ Example

- PSEUDO_DATACHG_LOA_START
- PSEUDO_DATACHG_LOA_END

Context

Irrespective of the switch (*When Time Off or Time Off for Leave of Absence Only*) status the job info records with event reason corresponding to leave of absence (LOA) cannot be imported to Employee Central. You need to use the MDF object EmployeeTime and create the leave of absence dates and time period for a particular user through the *Import and Export data* tool. This will in turn create the LOA events (LOA start and LOA end) in the job information as per configurations. These events will be appearing in the job info as part of sync jobs from EmployeeTime Object (parent object).

For more information, refer to [3228287](#) .

Procedure

1. In your SAP ERP HCM system, go to the (SPRO) transaction and choose *SAP Reference IMG*. In the *SAP Customizing Implementation Guide* structure, open ► *Personnel Management* ► *Integration with SuccessFactors Employee Central* ► *Business Integration Builder* ► *Data Migration and Replication to Employee Central* ► *Employee Data* ► *Define Field Mapping for Employee Data* ►.
2. Choose the transformation template group that you are using.
3. Choose transformation template corresponding to Job Info (WS_4).
4. In the Primary mapping screen, double click the *Event reason* field.
5. In the value mapping section, click the *Define value mapping entries* button.
6. In the *Value Mapping Details* view, for the ERP value corresponding to Leave of Absence and Return to work, maintain the new event reasons (Eg: PSEUDO_DATACHG_LOA_START and PSEUDO_DATACHG_LOA_END) created in Employee Central.

7. Save the changes.
8. Run the migration report for the employee. Run the migration as often as needed until the final run before the Go-live. After all the migration is done, you can use the Import and Export Data tool to create the Employee Time Object containing the leave of absence information. After the import, as per configurations in your system, the job info shall show the PSEUDO_DATACHG_LOA_START and the actual LOA START events.

i Note

- If you run the migration again after importing the absent data, there is a problem. Infoporter always runs in the full purge, hence it would be overwritten and the generated LOA events will be erased. Hence you should always complete the migration runs and import the absences post migration only.
- In case you are running a replication from EC to ERP again, you need to follow the below steps when doing the replication to ERP:
 1. The value mapping details for MASSN configured for EC to ERP replication has to be changed. For this direction of replication, the actual event reason LOA_START has to be mapped to the action with semantic *Start of LOA* and the event reason LOA_END has to be mapped to the action with the semantic *End of LOA*. With this there should be no change in IT 0000.
 2. The two pseudo event reason that was created PSEUDO_LOA_DATACHG_START and PSEUDO_LOA_DATACHG_END should not be mapped (delete them from value mapping details). This will skip these records in replication. This will ensure that both IT 0000/IT 0302 are not changed when replicating the data back to ERP. If you donot skip and still do a mapping for this as well, then an additional record would be created in IT0302.

4.8.2 Supporting the Replication of an Employee Who Had a Prehire Record in SAP S/4HANA

Learn how to migrate employees who have prehire record in ERP.

Prerequisites

- You will have to create a new event reason PSEUDO_HIRE_AFTER_PREHIRE of event type HIRE with the status *Active*.
- Prehire action type in ERP should have employment status as 1.

Context

In ERP, you can use a prehire record before the actual hiring happens. This is to ensure that the newly hired employees are only considered in the payroll run if they complete the hiring or joining process. In Employee Central, hiring is always considered as the first event. The extraction report has a specific logic to identify

and filter the prehire record of the employee and migrate rest of the employee information using special event reasons. Additionally, the extraction report also updates the personal full transmission start date (FTSD) for the PERNR with the actual hire date for end-to-end process to work without any issues.

Procedure

1. In your SAP ERP HCM system, go to the (SPRO) transaction and choose *SAP Reference IMG*. In the *SAP Customizing Implementation Guide* structure, open ► *Personnel Management* ► *Integration with SuccessFactors Employee Central* ► *Business Integration Builder* ► *Data Migration and Replication to Employee Central* ► *Employee Data* ► *Define Field Mapping for Employee Data* ►.
2. Choose the transformation template group that you are using.
3. Choose transformation template corresponding to Job Info (WS_4).
4. In the Primary mapping screen, double click the *Event reason* field.
5. In the value mapping section, click the *Define value mapping entries* button.
6. In the Value Mapping Details view, for the ERP value corresponding to the action type denoting the HIRE after the prehire action type, maintain any new custom event reasons of type HIRE.

Note

This event reason should be different from the regular HIRE event reason to distinguish between the two types of hire event reasons when replicating the data back to ERP.

Example

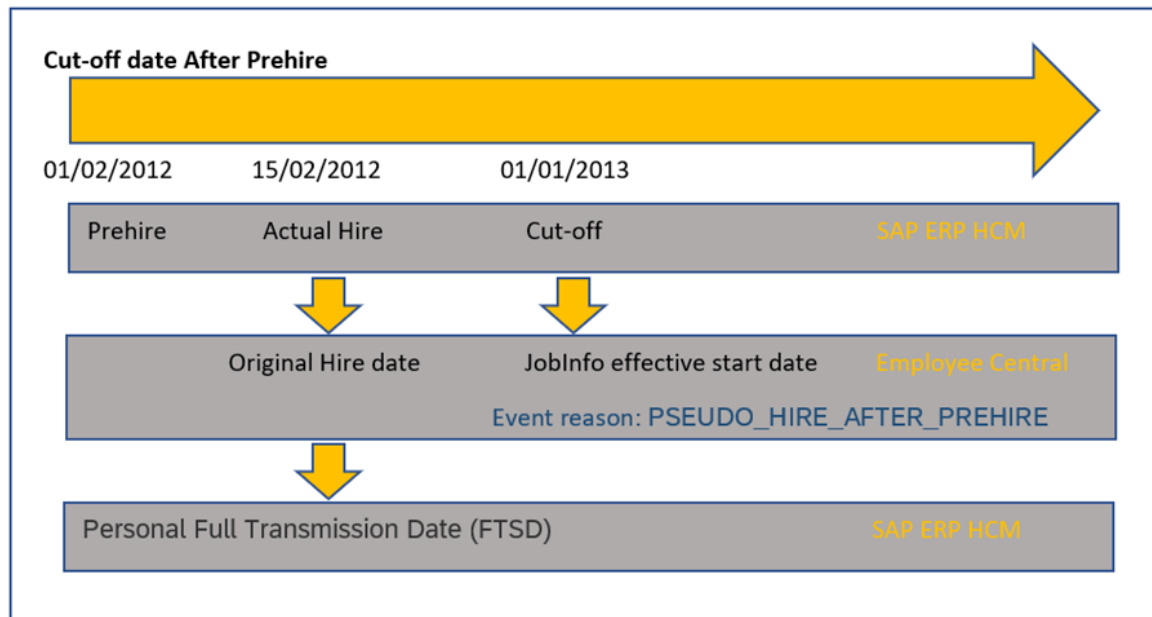
If *UR* is your action for the hire and you have a event reason for this case as *HIRE_AFTER_PREHIRE*, then maintain the value mapping details as below example:

Value Mapping Details		
Sequence No.	ERP Key	EC Key
21	UR	HIRE_AFTER_PREHIRE

7. Save the changes.
8. Run the migration report for the employee.

Behaviour of Infoporter for an employee who has prehire and the hire action types before earlier transfer date, during the migration without using the concept of additional events:

- On the cutoff date, the new event reason *PSEUDO_HIRE_AFTER_PREHIRE* to be sent to Employee Central.
- The personal FTSD date is updated with the original hire date.



Behaviour of Infoporter for an employee who has prehire and the hire action types after earlier transfer date, during the migration without using the concept of additional events:

- The event reason for the hire records are fetched as per the configuration maintained in step 6.
- The personal FTSD date is updated with the original hire date.

Behaviour of Infoporter for an employee who has prehire and the hire action types before the earlier transfer date, during the migration using the concept of additional events:

- The event reason for the hire records are fetched as per the configuration maintained in additional events configuration table V_ECFAO_PLHD_ACT.
- The personal FTSD date is updated with the original hire date.

As seen in the above cases, the extraction report updates the table PAOCFEC_PN_FTSD with the actual hire date as the personal FTSD date. This is done so that while replicating back to ERP, the replication process should not fail because of the existing prehire records in Action Infotype(PA0000). Updating the personal FTSD ensures that the replication back to ERP happens only beyond this date.

Note

- During replication the constant switch *EC to ERP (BIB): Ignore Action If T529A Feature Raises Error* should be enabled to avoid replication error thrown by PA framework based on the settings of T529A.
- For replication the event PSEUDO_HIRE_AFTER_PREHIRE should be mapped to the action type corresponding to the hire action that is allowed to take place after the prehire action type. As per our example in point 6, the PSEUDO_HIRE_AFTER_PREHIRE should also be mapped to action type UR.

4.8.3 Supporting Migration of Work Permit Entity

Read about the configurations that are done to migrate the work permit entity.

Work permit entity is not a standard entity that is supported with Infoporter tool. However you could configure this and use the work permit entity. With service layer, work permit has Country, Document Type, Document Number, User ID, and Issue date field as business key.

Following ERP configurations are valid when the below settings are enabled in Employee Central.

Configuration changes:

- Employee Central settings:
 - Go to ► [Admin Center](#) ► ► [Company System and Logo Settings](#) ►.
 - Disable [Exclude Issue Date from Work Permit Business Keys in OData API EmpWorkPermit](#).
 - Enable [Enable Centralized Services for Work Permit to save changes on Editing UI](#).
 - Enable [Enable validations on the Work Permit Editing UI](#).
- ERP configurations:

Workpermit in general is non-effective dated. However with issue date coming as part of business key, it is possible to have date specific information.

As per standard integration code when effective date checkbox is unchecked at the entity configuration (V_ECPAO_ECTMPL), it is treated as non effective dated and always fetches only one record that is active as of the system date.

Inorder to fix the work-permit with multiple issue dates, we had to configure as Effective dated. Only then all the date records (past) will be fetched.

Display View "Employee Central Entity for Employee Data": Details

EC Entity: [2WS_WP_TC3] Work Permit_Mig testing Time Constraint 3

Basic Settings

Entity Name in EC: EmpWorkPermit

Comm. Channel: Web Service Transfer

☐ Multiple Use ☒ Effective Dated

☐ Is Generic Object

Inherit Metadata

Standard EC Fields

Object ID in EC: []

Start Date in EC: []

End Date in EC: []

CE API Segment: personal_documents_information

Integration to EC

Upsert Sequence: 65

Dependent Entity: []

Country Version: []

Deletion Supported

☐ Deletion Permitted

HRIS Element ID: []

Infotype-Specific Settings

Required Infotype: 0094

Special Mapping Infotype: []

Specific Mapping

Processing Mode: Time Constraint 3 Mapping

Processing Infotype: 0094

☐ Deletion Permitted
 HRIS Element ID

Infotype-Specific Settings
 Required Infotype
 Special Mapping Infotype
 Specific Mapping
 Processing Mode
 Processing Infotype
 Processing Field
 Repet.Struct.

Once you do the above mentioned configurations in the field mapping, the migration of the work permit could be done successfully.

4.8.4 Extracting Third Gender

Learn how third gender is supported when migrating the data to EC using infoporter tool .

Context

Employee Central now supports a new country-specific gender field for employees and dependents based on legal requirement of specific countries. Hence you will have to configure the metadata, picklists, and the BIB mapping to send the gender field IT0002-GESCH to the gender field of global information entity.

If the gender value in Infotype 0002 is Male or Female, then this value should be populated to both the gender field in Personal Info and country specific gender field in the Global Info entity for the corresponding country.

For example: If the gender value in Info type 2 is a country-specific gender value like *Transgender* for India, then this value should be sent to the new gender field in the Global Info and in Personal Info it will be shown as *Others*.

You can check on view `V_T77PAD_GENDER` for the support of third gender in ERP for the countries in scope of migration. Based on this information, you could configure to use this setup.

Table 33: Employee Central supports third gender for the following countries.

No	Supported Countries
1	Argentina
2	Austria
3	Brazil
4	Canada
5	Chile
6	France

No	Supported Countries
7	Germany
8	India
9	Italy
10	New Zealand
11	USA
12	Venezuela

Procedure

1. Import the metadata of the global info entity of the required country.

Update metadata of global info entity (PerGlobalInfoIND entity).

Note

WS_18_IND is provided as a standard entity for country India. You can create custom EC entities for the required countries.

2. Import the picklist corresponding to the countryspecificgender field into ERP.
3. Configure the value mapping entities in the [Define Value Mapping Entities Customizing](#) step (view V_ECPAO_VALUENTY).

Primary mapping details - WS5. In the below example for country India, for the Personal Info Entity, the mapping of the gender shall be either Male or Female and for all other values it could be marked as Others.

Transf.Templ Group	ZHC_EE_HCIMode_WS	Employee Master data extraction Via HCI
Transf.Template	ERP_PERSONAL	Personal Information - IT0002
EC Entity	WS_5	Personal Info Template for Web Service

EC Field Attributes

EC Field	32	gender
EC Field Description	Gender	
<input type="checkbox"/> Field Deleted in EC		
<input type="checkbox"/> Required in EC		

ERP Field Mapping

Mapping Mode	Infotype Mapping	
Infotype		
Infotype	0002	Personal data
Subtype		
Infotype Field	GESCH	Gender

Secondary Mapping

Linking Field	
---------------	--

Preconfigured Mapping

Preconfigured Entity	
----------------------	--

Value Mapping

Value Mapping Entity	GENDER_WS	GENDER
----------------------	-----------	--------

Create Value Mapping Entity

Define Value Mapping Entries

Define Ctry. Spec. Value Mapping Entries

Value mapping details - WS5

Display View "Value Mapping Details": Overview

EC Instance

ECPAYINTHCI

Value Mapping Entity

GENDER_WS

Value Mapping Details

Sequence No.	ERP Key	EC Key
1	1	M
2	2	F
3	*	O

Primary mapping details - WS18. For the global information entity, the country-specific gender could provide the actual value of third gender as in the below screenshots. The same infotype field IT0002-GESCH is mapped and a different value mapping entity is used to differentiate the gender mapping of Personal Info Entity and Global Info Entity.

Transf.Templ Group	ZHC_EE_HCIMode_WS	Employee Master data extraction Via HCI
Transf.Template	ERP_GLOBALINFO_IND	Global Information for India
EC Entity	WS_18_IND	Global Info India Template for Web Service

EC Field Attributes

EC Field	70	genderCountrySpecific
EC Field Description	Gender Country Specific - IND	
<input type="checkbox"/> Field Deleted in EC		
<input type="checkbox"/> Required in EC		

ERP Field Mapping

Mapping Mode	Infotype Mapping	
Infotype		
Infotype	0002	Personal data
Subtype		
Infotype Field	GESCH	Gender

Secondary Mapping

Linking Field	
---------------	--

Preconfigured Mapping

Preconfigured Entity	
----------------------	--

Value Mapping

Value Mapping Entity	GENDER_COUNTRY_SPEC_IND	Country Specific Gender - Indi
<div>Create Value Mapping Entity</div>		
<div>Define Value Mapping Entries</div>		
<div>Define Ctry. Spec. Value Mapping Entries</div>		

Value mapping details - WS18

Display View "Value Mapping Details": Overview

EC Instance

ECPAYINTHCI

Value Mapping Entity

GENDER_COUNTRY_SPEC_IND

Value Mapping Details

Sequence No.	ERP Key	EC Key
1	1	M
2	2	F
3	A	IND-T

4.8.5 How to Update the Time Profile Fields in Job Information

In this section, you will find the steps to be followed if you would want to update the time profile fields of job information when you migrate the employee data.

Some prerequisites need to be fulfilled if you want to use replication of absence data from Employee Central to SAP ERP HCM together with Employee Central Time Off. For more information refer the *Replicating Employee Time Data from Employee Central to SAP ERP HCM* integration guide.

[Creating a Business Rule \[page 262\]](#)

Learn how to create a business rule.

[Assigning the Business Rules \[page 263\]](#)

The Business Configuration UI (BCUI) allows you to assign rules to HRIS elements and fields to trigger events.

[Checking the Company Code Mapping \[page 264\]](#)

Cross check if the rule is configured with the company code that you are dealing in migration.

[Configuring the Transformation Template Group for Adding Time Profile Fields \[page 266\]](#)

Learn how to configure the transformation template group to add the time profile fields sent from ERP.

4.8.5.1 Creating a Business Rule

Learn how to create a business rule.

Context

You create a business rule in Employee Central to fill the following fields of the Job Information entity with default values when the rule is successfully executed for an employee:

- Holiday Calendar
- Work Schedule
- Time Profile
- Time Recording Variant
- Time Recording Profile
- Time Recording Admissibility
- Default Overtime Compensation Variant

Procedure

1. Go to the [Admin Center](#) and choose the [Configure Business Rules](#) tool.
2. Create a business rule based on your requirements.

Ex:

UpdateTimeProfile (UpdateTimeProfile)

Scenario: Basic [Change Scenario](#)

Basic Information		Parameters	
Start Date	01/01/1900	Name	Object
Rule Type	onSave (onSave)	Context	System Context
Description	Update Time Profile fields based on country	Job Information	Job Information

Variables

If

Job Information.Company is equal to Country Template DE (DE01)

Then

Set Job Information.Holiday Calendar to be equal to Holidays (Holidays)

Set Job Information.Time Profile to be equal to TIMBA TIME PROFILE DE (TIMBA_PROFILE)

Set Job Information.Time Recording Variant to be equal to Duration

Task overview: [How to Update the Time Profile Fields in Job Information \[page 261\]](#)

Related Information

[Assigning the Business Rules \[page 263\]](#)

[Checking the Company Code Mapping \[page 264\]](#)

[Configuring the Transformation Template Group for Adding Time Profile Fields \[page 266\]](#)

[Integrating SAP ERP HCM with Employee Central Using the Side-by-Side Deployment Option](#)

4.8.5.2 Assigning the Business Rules

The Business Configuration UI (BCUI) allows you to assign rules to HRIS elements and fields to trigger events.

Context

In order to trigger the rule, you will have to assign the previously created business rule.

Procedure

1. Go to ► [Admin Center](#) ► [Manage Business Configuration](#) ►.
2. Go to ► [Employee Central](#) ► [HRIS Elements](#) ► and choose the HRIS element *jobInfo* for Job Information to assign the rule as a *OnSave* rule.

Base Object	Event Type *	Rules *	Enabled	(1) More Actions
Job Information ▼	onSave ▼	UpdateTimeProfile (UpdateTimeP... ▼	Yes ▼	Details

3. Save our changes.

Task overview: [How to Update the Time Profile Fields in Job Information \[page 261\]](#)

Related Information

[Creating a Business Rule \[page 262\]](#)

[Checking the Company Code Mapping \[page 264\]](#)

4.8.5.3 Checking the Company Code Mapping

Cross check if the rule is configured with the company code that you are dealing in migration.

Procedure

1. In your SAP ERP HCM system, go to the [Maintain HR Master Data](#) (PA30) transaction.
2. Search for the employee whose data you want to replicate to Employee Central.

Figure 82: Maintain HR Master Data Transaction

3. Display the [Organizational Assignment](#) (0001) infotype and check the value stored in the [Company Code](#) field.

Display Organizational Assignment

Org Structure

Find by: Person

- Collective search help
- Search Term
- Free search

Pers. No. 402 Pers.Assign 99999999 00000402

Personnel No. 402 Name Kumar Sameer

EE group 1 Active Pers.area DE01 Personnel area DE01

EE subgroup 00 Salaried employees Cost Center 4711 Sample cost centre

Start 01.01.2013 to 31.12.9999 Chng 19.06.2014 DEEPAA

Enterprise structure

CoCode DE01 Country Template DE Leg.person 0001

Pers.area DE01 Personnel area DE01 Subarea 0001 Walldorf

Cost Ctr 4711 Sample cost centre Bus. Area 0001 Business area 0001

Personnel structure

EE group 1 Active Payr.area 01 Monthly

EE subgroup 00 Salaried employees Contract Comm. Employee

Organizational plan

Percentage 100,00 Integration: default p...

Position 99999999

Job key 00000000

Org. Unit 00000000

Org.key DE01

Administrator

Group DE01

PersAdmin 001 Sachbearbeiter 1

Time

PayrAdmin

Supervisor

Figure 83: Company Code in the Organizational Assignment Infotype

- Go to the *Define Value Mapping Details* Customizing activity and check if this company code (stored in the *ERP Key* field) is mapped to the company (stored in the *EC Key* field) that is configured in your business rule.

For more information about value mapping, see the *Replicating Employee Data from SAP ERP HCM to Employee Central* integration guide. Find the most current version of this guide at http://help.sap.com/hr_ecintegration.

Display View "Value Mapping Details": Overview

EC Company ID SBS_MODEL

Value Mapping Entity COMPANY

Value Mapping Details			
	Sequence No.	ERP Key	EC Key
	1	DE01	ACE_DEU
	2	US01	ACE_USA

Figure 84: Company Codes Mapping

⚠ Caution

In Employee Central, the company is represented by an instance of the *Legal Entity* foundation object. Make sure that both the legal entity code in Employee Central and the Employee Central key that you specify in the value mapping Customizing are in upper case.

Task overview: [How to Update the Time Profile Fields in Job Information \[page 261\]](#)

Related Information

[Creating a Business Rule \[page 262\]](#)

[Assigning the Business Rules \[page 263\]](#)

[Configuring the Transformation Template Group for Adding Time Profile Fields \[page 266\]](#)

4.8.5.4 Configuring the Transformation Template Group for Adding Time Profile Fields

Learn how to configure the transformation template group to add the time profile fields sent from ERP.

Context

Procedure

1. Go to the *Define Field Mapping for Employee Data* Customizing activity.

For more information about the Customizing settings, refer the *Replicating Employee Data from SAP ERP HCM to Employee Central* integration guide.

2. Go to the *Primary Mapping* view of your transformation template corresponding to WS_4 (Job information) and add the time profile fields sent from ERP.

i Note

- You don't have to fill other fields with content from SAP ERP HCM since the business rule you have created in Employee Central provides the values for these fields.
- You can map the Work Schedule to IT0007 - SCHKZ to map from ERP or else you can consider this field as well in your business rule and assign as like other fields.
- We recommend you not to activate the business rules during the initial load. Delta migration shall be carried out to enable the business rules to be run.

Task overview: [How to Update the Time Profile Fields in Job Information \[page 261\]](#)

Related Information

[Creating a Business Rule \[page 262\]](#)

[Assigning the Business Rules \[page 263\]](#)

[Checking the Company Code Mapping \[page 264\]](#)

5 You're done! What's Next?

You've set up data replication to Employee Central – now go through the follow-up steps.

[Checking the Data Replication Results \[page 268\]](#)

You can monitor outgoing messages for the data replication in your SAP ERP HCM system.

[Optimizing the Performance of This Integration \[page 269\]](#)

Here are some best practices to help you improve the performance of data replication from SAP ERP HCM to Employee Central.

5.1 Checking the Data Replication Results

You can monitor outgoing messages for the data replication in your SAP ERP HCM system.

Procedure

1. Go to the [SOA Management](#) (SOAMANAGER) transaction.
2. On the [Logs and Traces](#) tab, click [SOA Runtime Log/Trace Viewer](#) or [SOA Runtime Error Log](#).

i Note

Depending on the release of your SAP ERP HCM system, this option can have different names.

3. Specify which calls and which time frame you would like to see.
4. Check the entries for the CO_ECPAO_SFSFGENERIC_UPSERT_RE and CO_ECPAO_GET_EMPLOYEE_KEY_DATA interfaces.

Task overview: [You're done! What's Next? \[page 268\]](#)

Related Information

[Optimizing the Performance of This Integration \[page 269\]](#)

5.2 Optimizing the Performance of This Integration

Here are some best practices to help you improve the performance of data replication from SAP ERP HCM to Employee Central.

This integration comprises two integration processes: A generic OData upsert and an employee key query. Both are synchronous processes. This means, the SAP ERP HCM system will wait for a response from Employee Central.

Package Size

Since this integration is synchronous, you may face timeouts if a lot of data is sent from the SAP ERP HCM system and the processing takes long in Employee Central. That's why you need to define a suitable package size for the generic OData upsert. (The employee key query has a fixed package size, which you can't change.) You can configure the number of records to be transferred per package in your SAP ERP HCM system. To do this, go to Customizing for Personnel Management and choose ► [Integration with SuccessFactors Employee Central](#) ► [Business Integration Builder](#) ► [Basic Settings](#) ► [Define Packet Size for Migrating Data to Employee Central](#) . Since the entities to be replicated to Employee Central differ from each other regarding performance and the performance also depends on the configuration of your Employee Central instance, it is difficult to give a general recommendation here. You need to find package sizes that best suit your specific requirements.

i Note

Configuration of the timeout setting in the middleware isn't available for the processes. If timeouts occur, please reduce the package size in SAP ERP HCM.

Timeout

For the generic OData upsert, a timeout of ten minutes (600000 ms) is predefined for the HTTP connection between the middleware and Employee Central. That is, if Employee Central doesn't reply within ten minutes after SAP ERP HCM has requested the data, data transfer is terminated with an error message. You can change this setting to suit your requirements. Since this integration is synchronous, you may also need to adjust the timeout settings in your SAP ERP HCM system.

Logging

We recommend to disable payload logging in the middleware for both processes. Only enable payload logging if an issue occurs in data replication to Employee Central, to be able to analyze the problem.

General Recommendations

Check your firewall and proxy for restrictions on the maximum package size. If necessary, adjust the firewall and proxy settings or the package size according to your integration.

Deactivate integration processes that you no longer use.

By the latest when you switch from your development and test environment to your production environment, disable all integrations that you have set up for development and testing purposes. Trigger them only on demand.

Check whether an integration really needs to run 24/7. For some data types it might be sufficient to replicate only from time to time. You can increase the time interval for the affected processes to replicate this data less frequently.

If an error occurs during the integration, stop the scheduler. It does not make sense to continue a replication that constantly generates error messages. Running the replication merely overloads the logs and makes error analysis more difficult.

Parent topic: [You're done! What's Next? \[page 268\]](#)

Related Information

[Checking the Data Replication Results \[page 268\]](#)

Change History

Learn about changes to the documentation for Replicating Employee Data from SAP ERP HCM to SAP SuccessFactors Employee Central in recent releases.

2H 2023

Type of Change	Description	More Info
Changed	We have moved the Change History to the end of the guide.	Introduction [page 4]
Changed	<p>We've removed the following versions of the <code>SAP_BASIS</code> software component from the required components:</p> <ul style="list-style-type: none">• 710 with SP15 or a higher SP• 711 with SP10 or a higher SP• 730 with SP03 or a higher SP <p>These versions are no longer supported. For more information, refer to SAP Note 1648480.</p>	Checking the Minimum Setup Required for Your Systems [page 11]
Added	In the configuration of the SAP ERP HCM outbound web services, we've added information about which settings are available in the corresponding integration flow for which authentication option, depending on whether you use SAP Cloud Integration in the Cloud Foundry or the Neo environment.	Enabling the SAP ERP HCM Outbound Web Services to Set Up the Connection from SAP ERP HCM to the Middleware [page 44]

2H 2022



Type of Change	Description	More Info
New	The Employee Central receiver of the <i>Upsert Data from SAP ERP or SAP S4HANA to SAP SuccessFactors Employee Central Using the OData API</i> integration flow now supports the <i>OAuth2 SAML Bearer Assertion</i> authentication type.	Configuring Credentials for Communication Between SAP Cloud Integration and the Integrated Systems [page 33] Configuring the Integration Flow for Data Replication to Employee Central [page 38]

Type of Change	Description	More Info
New	We now support the migration of work permit entities.	Supporting Migration of Work Permit Entity [page 255]
Changed	How leave of absence event records are migrated to Employee Central is changed.	Supporting the Migration of Long Term Absence Records [page 251]
Changed	We centralized all information about data purge in the guide <i>Implementing and Managing Data Protection and Privacy</i> and removed it from this document.	Purge of Employee Central Data Replicated to the Enterprise Resource Planning (ERP) System and Purge of Data Related to Data Replication to Employee Central in the Enterprise Resource Planning (ERP) System in <i>Implementing and Managing Data Protection and Privacy</i>

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