



PUBLIC

Employee Central Core Hybrid: Handling Employee Identifiers

Document Details

Name	Objective	Audience
Employee Central Core Hybrid: Handling Employee Identifiers	Recommendations on mapping employee ids between SAP SuccessFactors Employee Central and SAP On-Premise HCM in a Core Hybrid deployment.	SAP SuccessFactors Customers: IT and HR professionals; SAP SuccessFactors Implementation Partners: Consultants, solution architects and project managers

Change Log

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Contribution

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The recommendations in this document are based on the functionality available up to SAP SuccessFactors release mentioned above. Future functionality can impact the recommendations provided by this document. We strive to keep these recommendations up-to-date, however, in case you find that recent new functionality has not yet been considered in the latest version of this document, please reach out to your Customer Success Manager / Partner Delivery Manager or send an email to SAPSuccessFactorsIDPDoc@sap.com.

Implementation Design Principles (IDPs) for SuccessFactors solutions are delivered by SAP for helping customers and partners on how to choose the most appropriate strategy and solution architecture for SuccessFactors implementations. IDPs are compiled taking into consideration the experience of many implementation projects and addressing frequent business requirements as well as real-life implementation challenges. They are continuously reviewed and updated as product functionality evolves. In addition, the reader is advised to read and familiarize with essential and additional product-related documentation which includes Implementation Guides, SAP Notes, SAP Knowledge Base Articles, and additional assets as referenced in this document, see chapter 7.

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1 TERMINOLOGY

The following table explains some abbreviations used in this document.

Abbreviation	Description
EC	SAP SuccessFactors Employee Central
SAP ERP / SAP HCM	SAP Enterprise Resource Planning often referred in the document SAP HCM on premise system
MDF	Meta Data Framework
RBP	Role Based Permissions
Talent Suite / BizX	SuccessFactors Talent Suite without Employee Central
PERNR	Personnel Number in SAP ERP HCM
CP	Central Person Object belonging to SAP ERP HCM
BIB	Business Integratio Builder
IAS	Identity Authentication Service
IDP	Implementation Design Principles for SAP SuccessFactors Solutions

2 ABSTRACT

Employee Identifiers play a key role in an integrated system landscape. Different requirements such as multiple employments, global assignment, single or multiple employee talent profiles adds complexity to the landscape. This IDP describes in detail the key employee identifiers that exists in EC, Talent Suite and SAP HCM as well as their relationship and mapping between each other. It also explains how these impact requirements related to multiple employment and job/talent history. It also provides recommendations for mapping the identifiers for both existing talent customers implementing EC as well as for green field EC implementations.

3 INTRODUCTION

With every SAP SuccessFactors implementation one of the topics that needs meticulous planning and design is the mapping of Employee identifiers. This document covers some of the important aspects involved in planning this activity.

4 BUSINESS REQUIREMENT

This section discusses the following functional requirements of employee ID mapping mainly in the following use cases.

4.1.1 *Greenfield Customers*

Customers who will implement SAP SuccessFactors for the first time, while they have always been using SAP on-premise as an HR core will need to align the employee IDs between different data models of SuccessFactors and SAP HCM on-premise. For example: In Employee Central it is possible to have another record against the same employment (same UserID) during an internal transfer of an employee whereas a standard implementation in SAP ERP will result in creation of new personnel number during international transfer. The recommendation on mapping of employee IDs for customers implementing either SuccessFactors Employee Central only or along with SuccessFactors Talent Suite is covered in Section 6.1 and Section 6.2 respectively.

4.1.2 *Existing SAP SuccessFactors Talent Suite Customers*

When SAP SuccessFactors is used only as a Talent Suite (without Employee Central) then all the employee data within SuccessFactors Employee Profile is non-effective dated, and only a single UserID will exist per each person in the Instance. Thus, only a single talent history per employee will be present in a SuccessFactors BizX instance.

Employee Central provides the option to customers to have multiple UserIDs per Employee in an instance. Every new employment will then create a new UserID in SuccessFactors instance (see section 6.1). Therefore,

Table 1. Employee Identifiers in Employee Central

Identifier	Description	Visibility - EC / Talent Suite
UserID	Identifier for an employment record in SuccessFactors. This field can be used in various scenarios (in Employee Central & Talent Modules). This field is immutable.	EC & Talent Suite
PersonID External	Identifier for a person. An employee can have multiple UserIDs with only single instance of person id external. This field is only relevant when Employee Central is implemented. This field is mutable.	EC Only
UserName	Value with which a user logs into the SuccessFactors instance. This field is mutable.	EC & Talent Suite
Assignment ID	Assignment ID (assignment_id_external) is a newly introduced mutable ID that identifies work relationship between the personnel and the company. The relationship could be employment relationship, contingent relationship, pensioner relationship, global assignment, intern or others. It is available from release Q3 2019. Objectively, Assignment ID is similar to the User ID assigned to all personnel in the company. However, Assignment ID is flexible to accommodate changes unlike UserID.	EC & Integration with SAP ERP HCM (limited adoption in Talent Suite)

there is a possibility to have a multiple instances of Talent history per employee. Section 6.2.2 covers the recommendation on mapping of employee IDs for customers who implement Employee Central over an existing Talent Suite.

5 SOLUTION OVERVIEW AND CONCEPTS

This section provides some basic information around important employee identifiers available in SuccessFactors and how they are managed and mapped to SAP HCM. This document discusses the most relevant employee identifiers listed in Table 1.

5.1 Employee IDs and Employments in SuccessFactors

When Employee Central is not active or not implemented at a customer's BizX Instance (for example, in the case of a customer deploying single modules like Performance and Goals, Learning, etc), the central repository for employee data in the BizX Instance is the Employee-Profile (EP). That means, for non-Employee Central customers, who are using Talent modules in BizX the employee hiring process will take place outside of BizX instance. Once the hiring is complete in the source system, the employee data is replicated into SuccessFactors (preferably by means of an available Integration Interface). In this scenario, only the Employee Profile fields UserID, Assignment ID External and Username are relevant identifiers for employees are available within the BizX Instance. In other words, for BizX customers without Employee Central, an employee will always be identified (in BizX) by a single UserID and a single Username.

When Employee Central is implemented and live in the customer's BizX instance, then during the new hire process in Employee Central, all the IDs mentioned above are generated, including the PersonID External. By default, UserID is auto-generated while Username and PersonID External are copied from UserID. In addition,

the newly added employee identifier assignment ID (assignment_id_external) from release Q3 2019, is created automatically by the system for users prior to Q3 2019. It's value is same as the UserID. Assignment ID can also be generated by business rules in Employee Central instance. In such a case, the assignment ID value is created based on the rule and not on the UserID. Thus, all the four fields can have the same value after new hire process is completed, though this default behavior can be changed via Business Rules, so that each one of them can get a specific value which can be different from each other (for a new hire Person ID External and user D will always be same). With Employee Central, an employee can have multiple instances of UserID, Assignment ID external, Username but only one single instance of PersonIDExternal. With every new employment for a Person, a new instance of UserID, Assignment ID and Username are created.

Usage of field Assignment ID is recommended for green field customers who are implementing SuccessFactors for the first time and it mainly address the following business cases:

Use cases of Assignment ID:

- **Employee Central Implementation After a Talent Hybrid Integration:** When Employee Central implementation is being implemented after a talent hybrid integration, the employee profile field Userid is mapped to either the infotype 709 or a central person in SAP ERP HCM. Now, with EC implementation, the customer would like to ensure that instead of this mapping they would like to map the personnel assignment(PERNR). In previous releases before 1908, the customer/partner had to request SAP Support to run the process of changing the UserIDs of all employees to have it mapped to personnel assignment(PERNR). With release 1908 onwards, customers can now take advantage of the field Assignment ID and the function import *convertAssignmentIdExternal* that is available to change the mapping by themselves without creating a SAP Support ticket to do. They can now run this function import to map personnel assignment(PERNR) to the assignment ID field in the basic user entity template.
- **Relocation:** Some customers have different User ID format for employees based on region. So, when an employee transfers to a different location, the customer requests a conversion. In order to prevent User ID conversion & requesting SAP Support to do it on their behalf, customers can instead use the Assignment ID and do the change themselves.
- **Mergers & Acquisitions:** Customer completes an acquisition and needs to standardize User ID across both the companies. After the acquisition, the customer imports users using old IDs to integrate the new employees into the BizX. At a later date, the customer wishes to standardize the User IDs. Such a standardization of User IDs could have been done by the customer itself had these companies had used Assignment IDs.
- **In case of Core Hybrid integration,** the use of Assignment ID (from EC) mapping to personnel number PERNR (in SAP ERP HCM) has the benefit of out-of-the-box (simpler & straight forward) mapping compared to mapping User ID to personnel number that needs the BAdI implementation ***Defining the PERNR and Central Person ID (ECPAO IN EXT PERNR MAP)*** for all new hires where external number ranges is maintained. When Assignment ID switch is activated in BIB and its value is used to map the value generated from EC for employee and organizational assignment replication, follow the chapter **Replicating Assignment ID from Employee Central** of the guide [*Replicating Employee Master Data and Organizational Assignments from Employee Central to SAP S/4HANA On Premise*](#). Usage of Assignment ID further simplifies the mapping of employments from EC to personnel number in SAP ERP HCM when several SAP ERP HCM systems are involved during replication. Usage of Assignment ID for Core Hybrid scenario should not be affected whether Assignment ID is supported by other SuccessFactors Talent modules.

The following table 2 lists some of the scenarios during which new UserIDs are created:

Business Process	BizX / EC / Both
New Hire (EC) or Basic User Upload (Employee Profile)	Both
Rehire with new Employment (Used for scenarios related to International Transfer)	EC Only
Global Assignment	EC Only
Concurrent Employment	EC Only

Table 2: Various Employments Scenarios

5.2 SAP SuccessFactors Employee Data Model

Let us now understand the employee data model in SAP SuccessFactors and SAP ERP HCM system in the coming sections and its impact for mapping in the integration.

The below mentioned figure 1. shows SAP SuccessFactors Data Model (with database tables) used in employee identifiers.

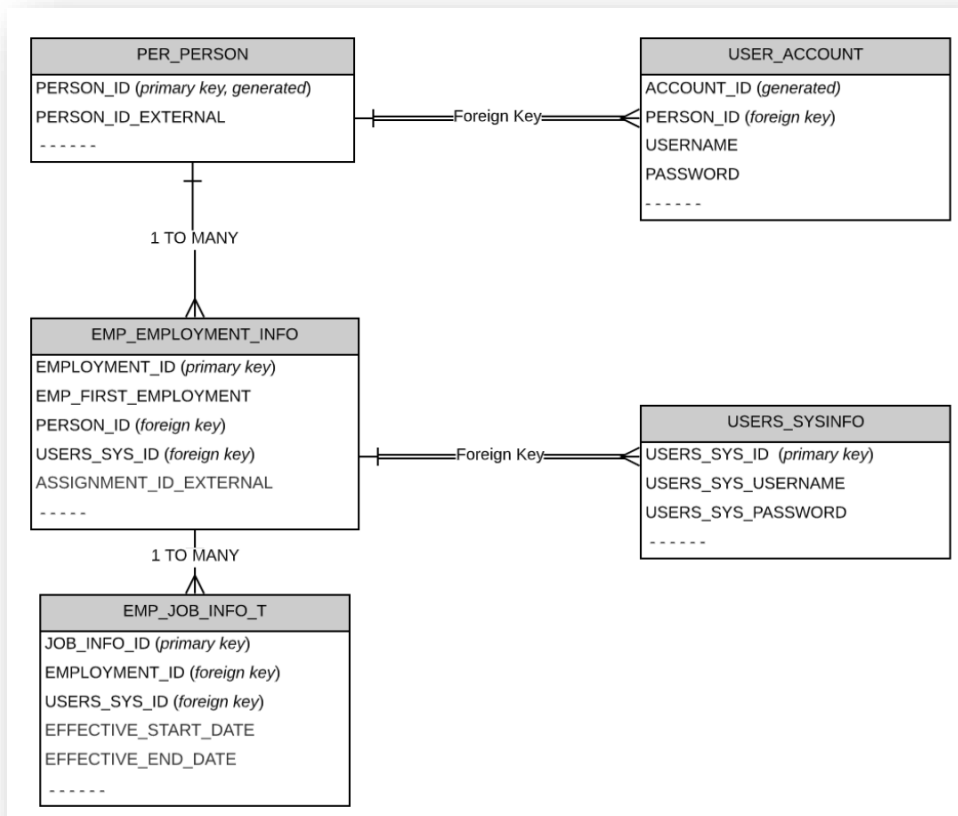


Figure 1: Employee Identifiers in SAP SuccessFactors Data Model*

*Disclaimer: The figure above is only a pictorial representation of backend SuccessFactors tables. Figure above should not be interpreted as an actual database structure. Also, note that the table structure can be subject to change anytime and is shown only for better understanding of the employee identifiers as of date of writing this document.

The identifiers *PERSON_ID* and *EMPLOYMENT_ID* are internal IDs within SuccessFactors. The only IDs relevant and available externally are:

- *USERS_SYS_ID* (UserID),
- *USERS_SYS_USERNAME* (User Name)
- *PERSON_ID_EXTERNAL* (PersonIDExternal – Relevant only when Employee Central is part of the Suite)
- *ASSIGNMENT_ID_EXTERNAL* (AssignmentID)

In a SuccessFactors environment (BizX instance) without EC, the table *USERS_SYS_INFO*, responsible for driving the Employee Profile data, is the only one relevant for storing employee identifiers. However, it is interesting to note that the user-related entries in Employee Central tables *EMP_EMPLOYMENT_INFO* and *PER_PERSON* are automatically created whenever new entries are added to *USER_SYS_INFO*, even if the customer has not even implemented nor has licenses for Employee Central yet.

In a SuccessFactors environment with EC, with every new employment for an already existing Person in the system, new records are created in tables: EMP_EMPLOYMENT_INFO, USERS_SYS_INFO. With every new Person to be added to the system, table PER_PERSON is updated. In a SuccessFactors environment with EC, the minimum entities (upload templates/APIs) that are required to create an employee are as below:

- Basic Import (basicUserInfolImport/UDF/User)
- Biographical Information (personInfolImport)
- Employment Details (employmentInfolImport)
- Personal Information (personallInfolImport)
- Job History (JobInfolImport)

In a SuccessFactors environment (BizX instance) without EC, only User entity (Basic User Import) is needed for user creation.

5.3 Comparison of Employee Data Models in SAP SuccessFactors EC and SAP ERP HCM

This section provides a comparison between data model of EC and SAP ERP HCM. Please note that the information provided in this section is for reference purposes only. Please refer the relevant implementation guides for detailed explanation. Employee Central Data Model is shown below:

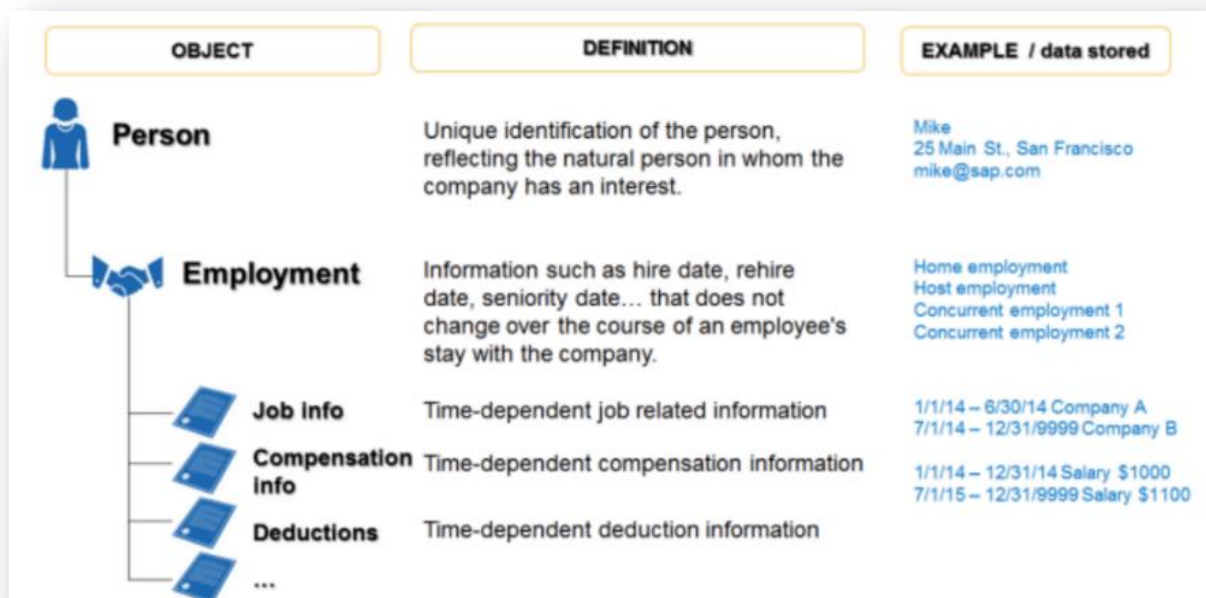


Figure 2: SAP SuccessFactors Data Model

SAP ERP Data model is depicted below in figure 3:

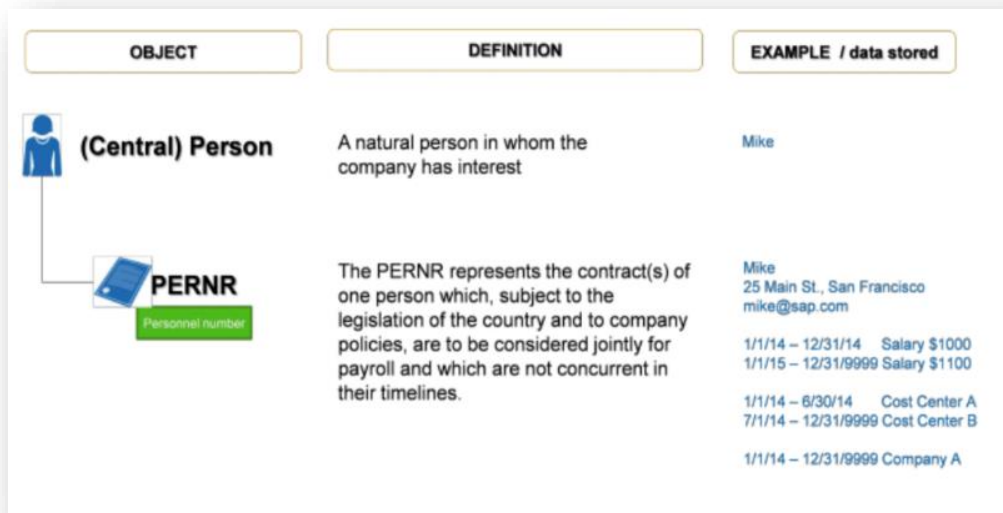


Figure 3: SAP ERP Data Model

5.4 HRIS Synchronization Job

In a SuccessFactors environment (BizX instance) without EC, Employee Profile (EP) is updated directly during user updates or is being fed with data from the masterdata source system via an integration interface. For example, SAP HCM employee data can be fed into BizX instance via Talent Hlybrid integration with the help of HRIS Sync Job. For Employee Central customers, EP is fed with data from EC Database tables via the use of BizX HRIS Synchronization job or HRIS Sync job.

6 DETAILED SOLUTION

6.1 Employee ID Mapping for Green Field Customers

6.1.1 Employee Central and SAP ERP HCM Integration

For all Employee Central integration with a SAP ERP HCM system, the following employee ID mapping is recommended:

SuccessFactors Employee Central	SAP ERP HCM
UserID	SAP ERP Personnel Number (PERNR)
Assignment ID	SAP ERP Personnel Number (PERNR)
PersonID External	SAP ERP Central Person object (CP) OR Infotype 709 field PERSONID_EXT (IT0709)
User Name	Infotype 105 and subtype 0001 (IT0105/0001)
Assignment ID	SAP ERP Personnel Number (PERNR). Customers can choose to map either User Id or Assignment ID to PERNR.

Table 3: Employee Central and SAP ERP HCM System Employee ID Mapping

A one-to-one mapping between SuccessFactors UserID (or Assignment ID) and SAP ERP Personnel number will ensure that any retroactive changes or change in time slices for an employee in SuccessFactors does not impact multiple SAP ERP Personnel numbers of the same person. Mapping of the field Assignment ID (

available in User Entity, Employment Entity and Global Assignment) is also possible with SAP ERP Personnel number. Creating a new employment has few implications in Employee Central because with every new employment, a new UserID is created, for which a new Talent History is associated. Section 6.1 explains the scenarios in which a new employment is created in SuccessFactors Employee Central.

Specifically, for mapping PersonID External, it is recommended that if IT0709 already exists in the system then you can use that number for mapping PersonID External or otherwise CP can be used. As explained in the section below, customers can use IT0002-PERID to update IT0709 in a standalone SAP ERP system. If this is the case then it is not recommended to use IT0709 for mapping SuccessFactors PersonID external field because this can be sensitive information, for example SSN number. With BIB based integrations, update of IT0709 is now optional and can be mapped with any Employee Central field.

- **Usage of Infotype 0709 (Person ID) in EC-ERP Productized Integrations**

In a standalone SAP ERP system, Infotype 0709 is relevant only when “Management of Global Employees” module is activated in SAP ERP. Please note that in SAP ERP, following options exist for the customer, for the Person ID generation rule using the *CCURE PIDGN* switch:

- (1) Same as the Central Person Object (CP)
- (2) Same as the number of the first personnel assignment (PERNR)
- (3) Same as the person ID stored in the Personal Data infotype (0002), field PERID.
- (4) Any customer-determined value, which can be achieved with Badi HR_CE_PERSONID_EXT

In BIB (Business Integration Builder) productized integration, customers need to explicitly configure and perform relevant field mapping in order to populate SAP ERP’s infotype 0709 from EC. Infotype 0709 is not a mandatory infotype required for the replication interface to work. In the legacy (non-BIB based), productized integrations, IT0709 is auto-updated with the value of SuccessFactors EC PersonIDExternal field.

- **Mapping of EC Identifiers with SAP ERP HCM involving Infotype 0709 (Person ID)**

In the figure below, you will find a diagram that illustrates the mapping and flows of Person and employments/assignments between EC and SAP ERP as per the productized EC-ERP integrations.

For customers moving from SAP ERP to Employee Central as their core HR system, you can also fill Assignment ID field as explained in below.

As shown in the figure below, during migration to SuccessFactors EC (see arrows 1, 2 and 3), SAP ERP personnel number is mapped to SuccessFactors UserID and IT0709 is mapped to EC PersonID External. See employment 1, in the figure above which shows that during migration the employee key mapping table (ECPAO_EE_KMAP) needs to be updated (before EC to SAP ERP employee replication is initiated) with the details from employment 1. The CP-PERNR (SAP ERP Central Person - SAP ERP Personnel number) relationship is expected to exist in the system. To include the assignment ID during the migration process, you need to enable the switch ERP to ER/EC to ERP (BIB): Activate Assignment ID External in the view V_ECPAO_CONSTANT on SAP ERP system. The AssignmentID External field is possible to be included in the User, Employment, and Global assignment entity during the migration of the employee data to EC.

For replication (EC to SAP ERP) same mapping is utilized (see arrows 4,5,6 and 7). In other words, SuccessFactors UserID (or Assignment ID) is replicated to SAP ERP Personnel number and SuccessFactors PersonID External is replicated to IT0709. During replication, the employee key mapping table (ECPAO_EE_KMAP) is updated with a new entry and also the CP & PERNR is also created accordingly. See employment 2, in the figure above.

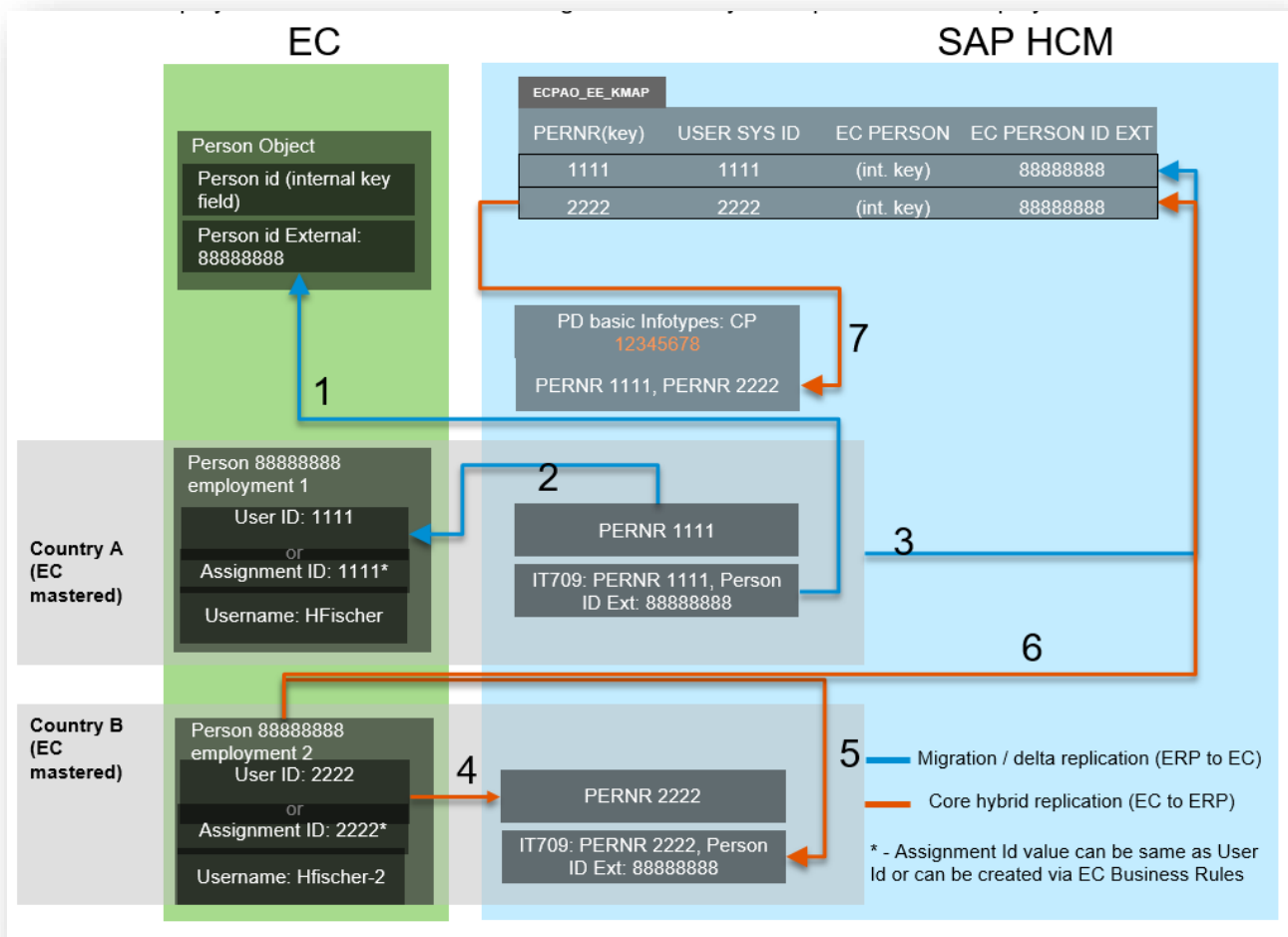


Figure 4: Replication with IT0709

Please refer to the Implementation guide *Replicating Employee Master Data and Organizational Assignment from Employee Central to SAP S/4* under the chapter 'Important Notes About Assignment ID in Employee Central Integration with an ERP system for further details' (under main section) to know how to handle Assignment ID during employee migration from SAP ERP and replication from EC to SAP ERP system.

○ Mapping of EC Identifiers with SAP ERP HCM excluding Infotype 0709 (Person ID)

In the figure below, you will find a diagram that illustrates an alternative (but also standard) version of the mappings and data flow for the integration between EC and SAP ERP HCM identifiers. This version does not include Infotype 0709 in the mappings.

As shown in the figure below, during migration to SuccessFactors EC (see arrows 1, 2 and 3), SAP ERP personnel number is mapped to SuccessFactors UserID (or Assignment ID) and SAP ERP Central Person object is mapped to EC PersonID External. See employment 1, in the figure above. During migration the employee key mapping table (ECPAO_EE_KMAP) is updated (before EC to SAP ERP replication is initiated) with the details from employment 1. The CP-P (SAP ERP Central Person - SAP ERP Personnel number) relationship is expected to exist in the system. For replication (EC to SAP ERP) same mapping is utilized (see arrows 4, 5, and 6). In other words, SuccessFactors UserID (or Assignment ID) is replicated to SAP ERP Personnel number. During replication, the employee key mapping table is updated with a new entry and also the CP-PERNR is also created accordingly.

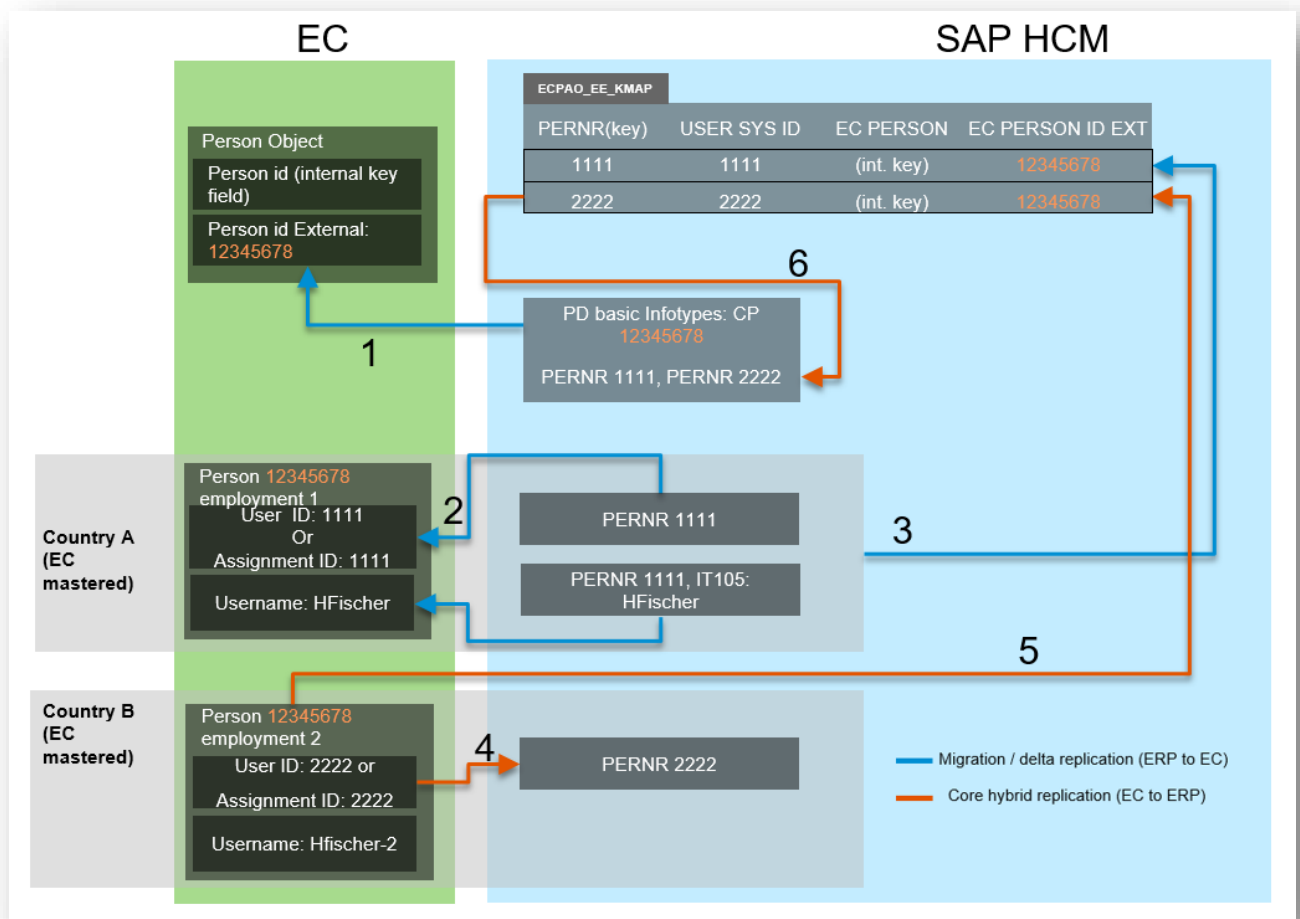


Figure 5: Replication without IT0709

Please refer the Implementation guide on *Replicating Employee Master Data and Organizational Assignment from Employee Central to SAP S/4* under the chapter 'Important Notes About Assignment ID in Employee Central Integration with an ERP system for further details' to know how to handle Assignment ID during migration from SAP ERP and replication to SAP ERP system.

6.1.2 SuccessFactors Talent Suite (without EC) and SAP ERP HCM

For all non-Employee Central Projects, we have the following recommendation for employee ID mapping:

SuccessFactors BizX	SAP ERP
UserID	PERNR OR CP
User Name	IT0105 subtype 0001

Table 4: BizX Suite ID Mapping with SAP ERP

Unless a customer wants to maintain multiple talent histories per employee, specifically for mapping UserID, it is recommended that customers should map it to SAP ERP Personnel Numbers only if they do not have employee mobility scenarios (such as global assignment and international transfers) in the company. For all other cases it is recommended that they can use SAP ERP Central Person as UserID in SuccessFactors. In all circumstances for such customers, it is recommended that customers only maintain single instance of the employee (single UserID) in SuccessFactors, against an employee in SAP ERP (with multiple Personnel numbers).

For customers requiring multiple talent records (one against each SAP ERP personnel number) in SuccessFactors, recommendation is to map UserID (or Assignment ID) to SAP ERP personnel number. Do note that these recommendations do not mean that SuccessFactors and SAP ERP have any hard checks that exactly validate these mappings. The recommendations are originating from the fact that it will be easier to map and find out employee in SuccessFactors if they were known by a specific employee id in SAP ERP. Similarly, if there are several ERP systems then it is recommended to perform the mappings which is same in most of the ERP systems.

6.2 Employee ID Mapping for Existing SuccessFactors Talent Suite Customers (Implementing Employee Central)

For Talent suite customers (without Employee Central deployed) the Employee Profile is the central employee masterdata repository within the BizX instance. The Employee Profile does not support effective-dated masterdata, and also the concept of multiple employments related to a person is not available. It is recommended that once Employee Central is live, none of the APIs or provisioning jobs that directly update employee profile user attributes should be used. See picture below for the jobs that can be used to import employee data. Do not use the provisioning job *Employees Import* if Employee Central is already implemented.

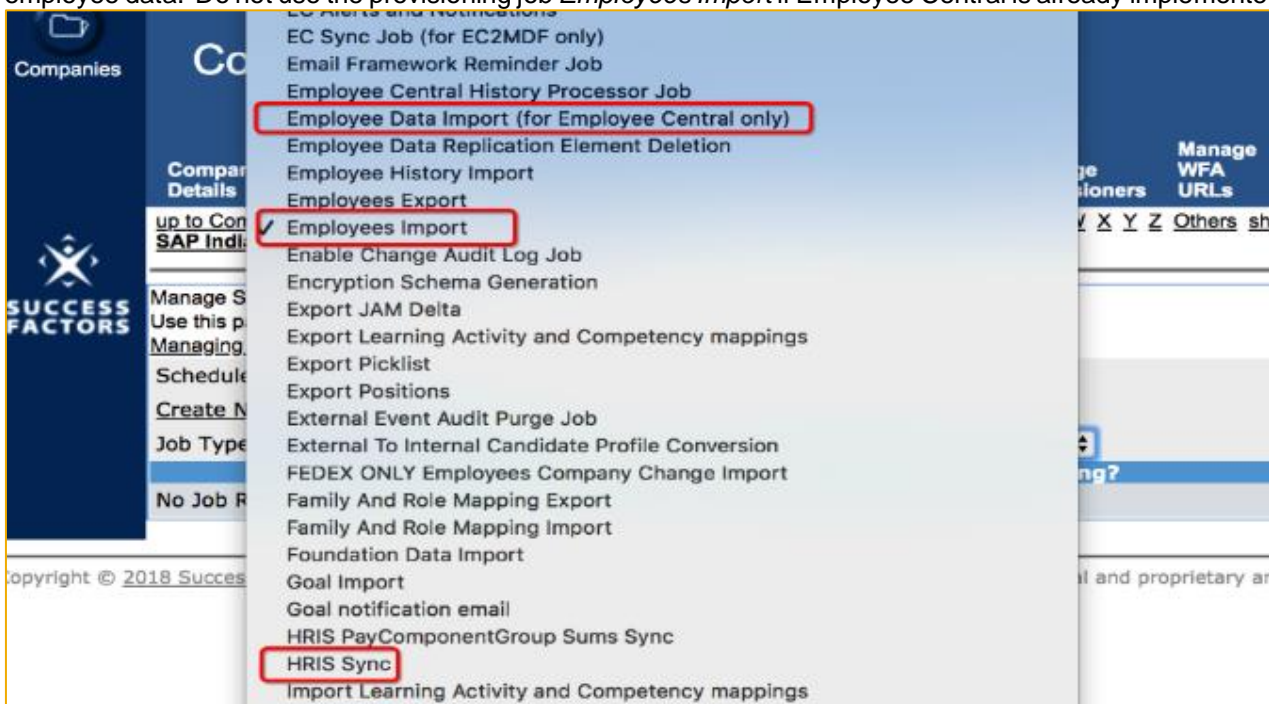


Figure 6: HRIS Synchronization Job

Such talent customers have either mapped Employee Profile users to the SAP ERP Central Person (CP) or to the SAP ERP Personnel Number. When implementing Employee Central after one or more Talent modules have been productively used, consideration needs to be given to the conversion and ongoing usage of Employee IDs and their conversion and mapping between Employee Central and SAP ERP.

6.2.1 Mapping Employee Identifiers in EC & Talent Suite Landscape

In case the talent suite customer had originally mapped the SAP ERP CP (or any other value) to SuccessFactors Users, the question arises on how to convert or map these UserIDs in BizX so that it can now match the values of SAP ERP Personnel Number. There are three options for achieving this conversion which is explained below:

6.2.1.1 Implement EC and Talent in new BizX instance

In this approach, Persons and employments (with the standard ID mapping) are uploaded/migrated to EC in a new instance and the talent data from the old instance is migrated to the new instance into the corresponding employee's main employment. This approach will require an evaluation of Talent and Learning configuration

which is being copied over as mapping Employee data from Employee Central will introduce some changes which need to be accounted for.

Points to consider for SAP SuccessFactors Learning Solution (note that this is not an exhaustive list):

- In Learning – an update to PERSON_GUID for all users based on a new one getting generated within Employee Central,
- modifying Assignment Profile rules to account for organizational and employee data coming in from Employee Central
- Examining integration set up since the source of employee and organizational data is changed.

Points to consider for talent (note that this is not an exhaustive list):

- RBP set up may require modifications to read data elements driven by Employee Central versus earlier Employee Profile sourced values.
- These are some of the generic changes expected, but an evaluation of each customer-specific set up will be required.
- This will also require customers to test all the implemented talent modules so that after conversion, users are still able to access and operate SuccessFactors Talent and Learning functionality as expected.

The advantage of this approach is that semantically every employee id is aligned according to the standard mapping between SuccessFactors and SAP ERP.

6.2.1.2 Perform UserID Conversion service in the Existing Instance

In this approach, SuccessFactors UserID conversion is performed at the database level. This service has to be scoped with SAP Professional Services and involves costs which will depend on the complexity of the corresponding case. SAP SuccessFactors does not recommend such database-level changes unless it is absolutely needed. In order to avoid such future cases requiring UserID conversion, the newly introduced field assignment ID should be used for all new customers implementing EC from Q3 2019 release.

Limitations: The User ID conversion service cannot be performed if the following functionality has already been implemented – Employee Central, MDF objects, Learning (LMS), Onboarding, WFA, Mobile; additionally, if the customer is using Data Privacy and Protection Reports (Change audit/Read audit/ Data subject information).

Please refer to KBA [2088176](#) - Manage Users: User ID Conversion process and frequently asked questions – Platform, for additional information related to this topic. Existing talent customers who implement Employee Central, can avoid User ID Conversion by making use of the Assignment ID field.

6.2.1.3 Implement EC in current Talent instance, retain current value (CP) as user ID (Recommended Approach)

This approach, does not involve UserID conversion in BizX and does not require a new BizX instance. The approach involves enriching the existing SuccessFactors UserID (whose value is same as CP) in Employee Central (as part of migration) with all the details from the latest personnel assignment (SAP ERP Personnel Number) in SAP ERP. By means of the employee mapping table ECPAO_EE_KMAP in ERP, the current UserID (whose value is same as CP) record in Employee Central is mapped to current active assignment (SAP ERP personnel number) of a person in SAP ERP. Subsequent employments (PERNRs) of the same person are mapped to EC with the standard approach (SuccessFactors UserID= PERNR, SuccessFactors PersonID External = SAP ERP CP/IT0709). The figure below explains this mapping logic for employee scenarios such as hire, transfers and global assignment in a SuccessFactors instance with (and without) Employee Central:

Scenario	SAP ERP		SuccessFactors without Employee Central (Before EC deployment)		SuccessFactors with Employee Central (same Instance, after EC deployment)		
	PERNR	CP	UserID	Assignment ID	UserID	PersonID External	Assignment ID
Employment							

New Hire / Existing Employment	123	673	673	673	673	673	673
International Transfer	456				456		456
Global Assignment/ Concurrent Employment	909				909		909

Table 5: Key Mapping by separate employments

In the example above, the latest employment (PERNR = 123) is mapped as SuccessFactors User ID (User ID = 673) in the existing SuccessFactors Talent Instance. Upon deployment of Employee Central (as part of migration), the existing User ID (User ID = 673) is enriched with the data from latest personnel assignment (PERNR = 123). Any future dated employments (such as PERNR = 456, 909) are then migrated with the same value in SuccessFactors Employee Central ((User ID = 456, 909). With the SuccessFactors Employee Central release Q3 2019 onwards, customers can leverage the benefits of assignment ID field. Assignment ID field helps prevent User ID conversion by allowing assignment ID to be editable through function import convertAssignmentIDExternal and at the same time keep the User ID values intact. Please refer the [ODATA API Reference Guide](#) on how to use this function import.

Please note in case of Core Hybrid scenario using standard productized integrations for EC-ERP integrations, the employee key mapping tables (ECPAO_EE_KMAP in SAP ERP) should correctly map SuccessFactors UserID with SAP ERP Personnel number, as in the case above SuccessFactors User ID 673 should be mapped to SAP ERP Personnel number 123.

A variant of above approach could also exist, in case the customer activates the option to assign multiple employments in ERP to a single employment record in EC. However, this option is as of 1811 no longer recommended. The option to keep employments separate (using Rehire with New Employment functionality) in-case of employee transfers is recommended going forward. The figure below shows how the ID mappings would look like, if employments in EC are re-used for multiple PERNRs:

Scenario	SAP ERP		SuccessFactors without Employee Central (Before EC deployment)	SuccessFactors with Employee Central (same Instance, after EC deployment)	
Employment	PERNR	CP	UserID	UserID	PersonID External
New Hire / Existing Employment	123	673	673		
International Transfer	456			673	673
Global Assignment/ Concurrent Employment	909			909	673

Table 6: Key Mapping with glued employments (contracts separated job info records)

- For customers who have previously implemented talent and are now implementing Employee Central as their Core HR system should consider to update Assignment ID field in Employee Central in the following manner:
 - Implement the note [2890408 - Assignment ID External in Employee Data Extraction for Talent Hybrid customers in SAP ERP](#)
 - Execute the standar report to update the key mapping table ECPAO_EE_KMAP for all employees who have been previously migrated using Talent hybrid. This also ensures that employee number(PERNR) is equal to Assignment ID. User the report ECPAO_TH_EC_MIGR_EEKMAP_UPDATE. More details can be found in the section '[Updating the Key Mapping Table for Talent Hybrid to EC Migration](#)' in the guide Integrating SAP ERP HCM with Employee Central Using the Side-by-Side Deployment Option.

- In the IMG customizing view for Company Settings 'V_ECPAO_CMPNY_EE', ensure the mapping mode for User id field is set to Standard mapping
- Execute the employee data extraction ECPAO_EMPL_EXTRACTION

SAP recommends the approach 4(if customer needs the Assignment ID external for all employments equal to the PERNR if this is not needed then option 3 can also be considered.) as shown in Table 7, in which no UserID conversion is needed at the database level in SuccessFactors. Advantages of this approach are that not only customer save the time and costs on UserID conversion but also any module verification/tests. In addition, the HRIS sync mapping need not be updated and will continue to be maintained as is and the key mapping table on SAP ERP is updated correctly for all employees

A comparison of the approaches is given below:

Options/Scenario	Option 1/2 – Convert/Migrate SF UserID to SAP ERP Personnel No.	Option 3 – No conversion, continue with same SuccessFactors UserID	Option 4 – Usage of Assignment ID
Project complexity	Increased project complexity: <ul style="list-style-type: none"> ❑ Migration of Configuration for current modules is required ❑ Data history conversion is required ❑ Regression testing of solution ❑ Additional costs in terms of UserID conversion process OR new production instance. 	Limited project complexity increase: <ul style="list-style-type: none"> ❑ No need to migrate configuration for modules but remediation is still required ❑ Simplified technical remediation ❑ Requires conversion of replication table (Key mapping) in SAP 	Relatively Less project complexity: <ul style="list-style-type: none"> ❑ Create a simple custom report to update key mapping table to ensure employees migrated using talent hybrid is captured ❑ Employee Key Mapping table updated correctly for all employee
Data and configuration	<ul style="list-style-type: none"> ❑ Not all historical data can be converted (performance forms can only be loaded as pdf and WFA) ❑ Clean configuration for future solution ❑ Consistent User ID definition for current/future EE 	<ul style="list-style-type: none"> ❑ All historical talent data remains available post go live ❑ Different User ID definition for current/future EE ❑ Reports may need to be remediated 	<ul style="list-style-type: none"> ❑ Reuse standard BIB configuration and employee extraction report ❑ Any future UserID conversion use cases can be tackled using the field Assignment ID

Table 7: Talent Suite to EC mapping options

6.2.2 Existing Talent Suite Customers requiring Downstream Integrations from EC

Based on the above points mentioned in the sections above, on existing BizX customers or net new customer implementing Employee Central, following are some of the recommendations for using employee ids in the downstream integrations:

- The best possible option is to use SuccessFactors UserID field for all downstream integrations. For example: If SAP ERP personnel numbers were used for all integrations, then with EC, personnel numbers can be mapped to SuccessFactors UserIDs. This will ensure that for integrations no value mappings, no additional logic and custom EC fields are required to be maintained.
- In addition to the SuccessFactors UserID, in case personnel numbers cannot be mapped exactly with UserID then Payroll-ID field in the EC compensation portlet can be used. Usage of this field makes most sense when most of the downstream integration use same id (such as personnel number) and UserID does not match with SAP ERP personnel number.

- See an example mapping the figure below.

Scenario	SAP ERP		EP (Before EC deployment)	Employee Central (Same Instance, after EC deployment)		
Employment	PERNR	CP	UserID	UserID	Person ID External	Payroll- ID
New Hire	123	673	673	673	673	123
Transfer	456					456
GA/ CC	909		673	909	673	909

• Table 8: Mapping with Payroll-ID field

- In case there are several downstream integrations and each one of them use a different identifier, then the recommendation will be to first check the possibility of mapping these ids in the 3rd party receiving system itself, so that in SuccessFactors UserID can be used or Assignment ID and there is no need for additional maintenance. In case this cannot be achieved, then one of the options is to create a user based custom MDF and write look ups in the integration layer to retrieve specific id for the 3rd party provider against a SuccessFactors UserID. An example of such an MDF is shown below.

Figure 7: Multiple identifiers per integration

Note: The names of the 3rd party systems and employee id format may not be same as the required by the actual system. Figure above is only used for informational purposes.

6.3 Handling User name for Login

Username is created by the SuccessFactors system every time a new employment gets created for the same person either due to hire, rehire, global assignment or concurrent employment. This field is available in Basic User Entity. A new username gets created automatically in the background by the system in the format person_id_external-n (where "n" is an incremented number representative of how many employments the person has).

USER_ACCOUNT is the database table that holds the Username at the person level. At any given time it can hold only one username despite many usernames that will exist at the employment level in case of global assignment, concurrent employment. When IAS is implemented in SAP SuccessFactors, then IAS relies on the username stored in this table for login. Please refer KBA [2722881 - Platform: User Account Decoupling](#) to understand about how the User Account decoupling works and refer [KBA-2495643](#) & [KBA-2493579](#) for more on different Employee IDs available in SAP SuccessFactors.

The flag setting 'Enable login with old user name in case of rehire with new employment' in transaction 'Company System & Logo Settings' which is highlighted in yellow in the image below will enable the user to use the old (or the initial) username to login even when there are multiple usernames as a result of creating new employments due to rehire, global assignment which creates different usernames for every new employment.

Recommendation is to enable this flag before the initial load/cutover to make this change effective (with basic user entity import). This ensures that the username that existed at the time of initial hire gets reused despite multiple usernames created during rehire, global/concurrent employment which means the employee can retain the initial username if this is how the company wants its employees to login.

During HRIS sync the username is updated from Basic User entity to User Account table. This maintains the link of the username at employment level & User Account level. This setting works for SAP Fieldglass integration also if the integration has been setup as recommended by SAP.

Company Logo

Use this page to set the company logo's URL

Logo Requirement
 Format: Transparent GIF (RGB Recommended)
 Dimensions: Should be no larger than 210 pixels wide by 40 pixels high

URL of the Company Logo

Company System Setting

Use this page to change the system setting for the company

☒ Outlook Calendar Integration
☒ Enable Centralized Services
☒ Enable Forward Propagation for Compensation Information (Note: Not applicable for Imports)
☐ Attach data with email for Import/Export jobs.
☐ Suppress update of identical records during Employee Central import for supported entities.
☐ Send result mail for Job Information import follow-up processing only if an error occurred
☐ Enable CSF support for Address in Emergency Contact and Personal Relationships Imports
☐ Leave Loading

Protect address from deletion (Employee address of following type cannot be deleted in the edit mode to ensure it is available for downstream process like payroll):

☐ Enable validations for mandatory fields in the Dependent's details section
☐ Enable validations for mandatory fields in the Emergency Contact's details section
☒ Enable Address Validations
☒ Enable National ID Validations
☒ Enable Bank Account Validations
☒ Enable Payment Information Validations
☐ Disable filter for custom fields of type Foundation Object. To activate this setting, upload any data model in provisioning.
☐ Calculate Range Penetration or Compa Ratio even if FTE and Standard Weekly Hours are null.
☐ Hide External Users from search results.

☐ Enable log in with old user name in case of a rehire with a new employment. (NOTE: The default system behavior will enforce the log in with the new user name that comes with every new employment.)

☒ Enable target group based filtering for Worker fields. If checked, Worker type fields value dropdown list will be based on the target group settings in role based permission. If not checked, all users will be available in the dropdown list.

Now, let us consider how enabling or disabling this flag with and without IAS in the landscape affects the user name to login. We mainly differentiate the EC system behavior when IAS is present in the landscape vs. When it is not along with the impact of the above mentioned 'Enable log in with older user name in case of rehire in new employment'.

The below example considers the employee Carla Grant with username CGRANT-1 during the initial hire, username CGRANT-2 during the rehire (after employment under CGRANT-1 was terminated) and username CGRANT-3 during global assignment.

6.3.1 Enabling/Disabling Flag without IAS in the Landscape

Case 1a: IAS is not implemented and flag is not enabled.

- **User can login with username CGRANT-2 or CGRANT -3 in this case.**
- Username at the User Account table gets updated whenever there is a rehire with new employment and will not be updated when global assignment or concurrent employment is created.
- If user logs in via username CGRANT-2, they would see details of this employment as well as the global assignment from CGRANT-3 user too available via employment switcher.

✓ **Flag Disabled**
 ✓ **IAS Not Implemented**

Username in User_Account Table (Person Level)		CGRANT-2
Username 1	Username 2	Username 3
New Hire	Rehire (Different Country)	Global Assignment/ Concurrent Employment
CGRANT-1	CGRANT-2	CGRANT-3

Case 1b: IAS is not implemented but flag is enabled.

- During the initial upload, the username of the initial hire employment username is updated in User Account table and remains constant despite multiple usernames from different employments.
- User account table (username) can only be updated if the initial (new hire) username gets updated (possible via API).
- **User can login with username CGRANT-1, username CGRANT-2 or username CGRANT-3 in such a case** (though CGRANT-1 inactive, this flag enables reuse of the inactive/initial username too).
- If all the three employments are terminated and the user is rehired with username CGRANT-4, then Username Account's username still remains CGRANT-1.
- **In the above case, user can login via CGRANT-1 and CGRANT-4 as other usernames are inactive.**
- Using transaction *Manage Login Accounts* you can map the username that needs to be used to login based on the different employments available. KBA [2859043](#) – Manage Login Accounts tool describe more details about how and when to use this tool.
- Also, note that though the flag is enabled to reuse old username the EC system will still create a new username respective to the employment but the flag enablement affects which username will be used for logging into the EC system.

✓ Flag Enabled ✓ IAS Not Implemented		
Username in User_Account Table (Person Level)		CGRANT-1
Username 1	Username 2	Username 3
New Hire	Rehire (Different Country)	Global Assignment/ Concurrent Employment
CGRANT-1	CGRANT-2	CGRANT-3

6.3.2 Enabling/Disabling Flag with IAS in the Landscape

- It is important to note User Account table will have the usernames of a user despite multiple employments from the initial username of the new hire employment or from username of the rehire.
- IPS uses the ODATA User API to fetch records from SAP SuccessFactors system. The transformation template mapping between IPS & IAS determines whether the username stored at User Account (SAP's recommendation) or from the employment is used.
- If the username stored in User Account table is used to map to IAS. Then this is the only username (from User Account table) through which the user can login regardless of the number of active usernames that exists from different employment.
- The username in IAS gets updated only if the job running between IAS to SuccessFactors updates the username field.
 - Minimum time to sync the above job in IAS is currently (b2011) 30 minutes.

Case 2a: IAS is implemented and flag is not enabled.

- **User can login with active user with username CGRANT-2 only.**

✓ Flag Disabled ✓ IAS Implemented		
Username in User_Account Table (Person Level)		CGRANT-2
Username 1	Username 2	Username 3
New Hire	Rehire (Different Country)	Global Assignment/ Concurrent Employment
CGRANT-1	CGRANT-2	CGRANT-3

Case 2b: IAS is implemented and flag is enabled.

- **User can login with only active user with username CGRANT-1.**

✓ Flag Enabled ✓ IAS Implemented		
Username in User_Account Table (Person Level)		CGRANT-1
Username 1	Username 2	Username 3
New Hire	Rehire (Different Country)	Global Assignment/ Concurrent Employment
CGRANT-1	CGRANT-2	CGRANT-3

6.4 Existing BizX Customers with Non-Standard Implementation in SAP ERP

This section is most relevant for all customers who followed a non-standard way of implementing the existing SAP ERP. SAP productized integrations do not support any integration with a system that follows non-standard way of SAP ERP implementation. On such example is manual changes to employee records in SAP ERP, rather than executing an international transfer, causing the same employee (with same personnel number) having records for multiple countries.

Therefore, for such customers, it is recommended that they upload the latest employment record (top of stack) in EC from SAP ERP and use an FTSD as late as possible. See an example below, Customer has been using same personnel number (PERNR = 1000), when the employee was in UK or US. In order to setup EC-ERP replication, latest employment record from ERP can be used to upload "New Hire" record in EC. From the example below, customer can use the employment when employee was in UK, as the record to be uploaded onto EC as the first employment. Henceforth, any changes to the employee record such as international transfer will follow standard process of creation of new personnel number. Therefore, when the same employee moved from UK to US, this will create new personnel number (PERNR = 2000) in ERP.

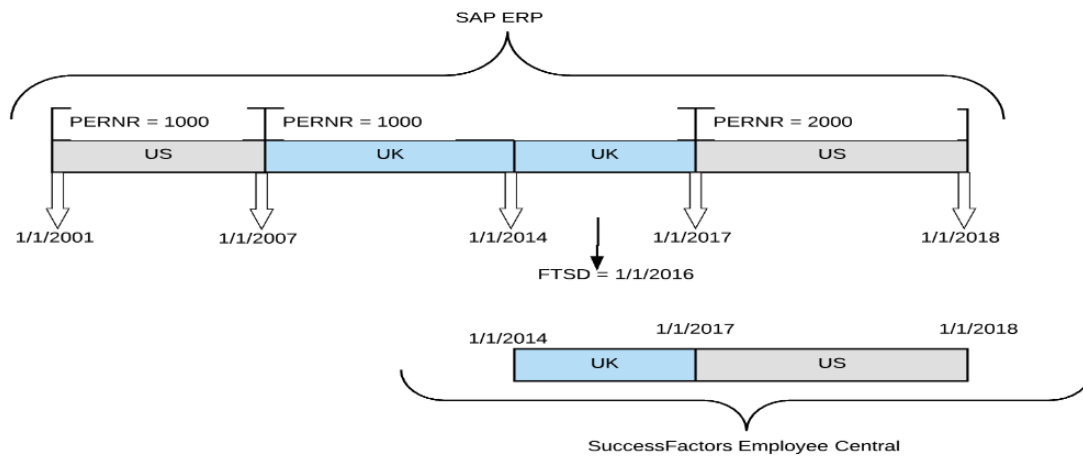


Figure 8: Setup for replication for non-standard implementation

Such a setup may require customer to re-configure existing ERP systems. This may also re-test some of the downstream integrations such as Identity access management for update of username and email, provided these integrations were triggered from ERP. Please note that the splits between the records falling within FTSD should be same on ERP and EC, otherwise, (only BIB based) productized integrations are designed to auto-split the records in ERP, during replication, with start date same as FTSD.

7 REFERENCES

SAP Help Portal

- [Replicating Employee Master Data and Organizational Assignments from Employee Central to SAP S/4HANA On Premise](#)
- [SAP SuccessFactors Platform - Managing User Information](#)
- [SAP SuccessFactors Platform - SAP SuccessFactors HXM Suite OData API: Reference Guide](#)

KBAs

- [2080728 - Employee Central: What is HRIS Sync?](#)
- [2507190 - HRIS Sync: Downstream Impacts to other SAP SuccessFactors HCM modules](#)
- [2722881 - Platform: User Account Decoupling](#)
- [2859043 – Manage Login Accounts tools](#)

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